



WashU Continuing & Professional Studies

2026–27

# Bulletin

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## About This Bulletin

The graduate and professional *Bulletins* are the catalogs of programs, degree requirements, courses that may be offered and course descriptions, pertinent university policies, and faculty of the following schools of Washington University in St. Louis: Architecture & Urban Design; Art; Arts & Sciences; Business; Engineering; Law; Medicine; Public Health; and Social Work & Social Policy.

The *WashU Continuing & Professional Studies Bulletin* is the catalog for WashU Continuing & Professional Studies (CAPS), the professional and continuing education division at Washington University in St. Louis. The catalog includes programs, degree requirements, course descriptions, and pertinent university policies for students earning a degree or taking courses through CAPS.

The 2026-27 *Bulletin* is entirely online but may be downloaded in PDF format for printing. Individual pages as well as information from individual tabs may be downloaded in PDF format using the PDF icon in the top right corner of each page. To download the full PDF, please choose from the following:

- Architecture & Urban Design Bulletin (PDF) (*to come*)
- Art Bulletin (PDF) (*to come*)
- Arts & Sciences Bulletin (PDF) (*to come*)
- Business Bulletin (PDF) (*to come*)
- Engineering Bulletin (PDF) (*to come*)
- Law Bulletin (PDF) (*to come*)
- Medicine Bulletin (PDF) (*to come*)
- Public Health Bulletin (PDF) (*to come*)
- Social Work & Social Policy Bulletin (PDF) (*to come*)
- School of Continuing & Professional Studies Bulletin (undergraduate & graduate) (PDF) (*to come*)

The degree requirements and policies listed in the 2026-27 *Bulletin* apply to students entering Washington University during the 2026-27 academic year. For more information, please visit the Catalog Editions (p. 9) page.

Every effort is made to ensure that the information, applicable key policies, and other materials presented in the *Bulletin* are accurate and correct as of the date of publication (July 1, 2026). To view a list of changes that have taken place after that date, visit the Program & Policy Updates page. Please note that the *Bulletin* highlights key university policies applicable to its students. Not all applicable university and departmental policies are included here.

Washington University reserves the right to make changes at any time without prior notice to the *Bulletin* and to university policies. Therefore, the electronic version of the *Bulletin* as published online is considered the official, governing document, and it may change from time to time without notice.

The next edition of the *Bulletin* will be published on July 1, 2027. Midyear changes to current courses (titles, descriptions, and credit units) are not reflected in this *Bulletin*. For more information about determining the appropriate edition of the *Bulletin* to consult, please visit the Catalog Editions page (p. 9) in the About This Bulletin section.

For the most current information about registration, visit the Plan for Next Semester Overview page of the Workday@WashU website. To view current semester course listings, consult the Class Schedule Search on the Office of the University Registrar website.

Degree progress is monitored in Workday based on program requirements as published in the *Bulletin* in the year of the student's matriculation. Students are responsible for reviewing their academic progress for accuracy and remaining credential requirements. Questions about degree requirements and course applicability should be directed to advisors.

Please email the Bulletin editor (bulletin@wustl.edu), Jennifer Etling Gann, with any questions concerning the *Bulletin*.

## Bulletin Policies

Policies related to this catalog include the following:

### Changes to the Bulletin

Every effort is made to ensure that the information, policies and other materials presented in the *Bulletin* are accurate and correct as of the date of publication. For more information about the content review process for the *Bulletin*, please visit the Catalog Editions page (p. 9).

The *Bulletin* for the upcoming academic year is published annually on July 1, and certain post-publication changes may be made until October 1. To view a list of changes that have taken place after the July 1 publication date, please visit the Program & Policy Updates page.

Washington University reserves the right to make changes at any time without prior notice. Therefore, the electronic version of the *Bulletin* and the policies set forth therein may change from time to time without notice. The governing document at any given time is the then-current version of the *Bulletin*, as published online, and then-currently applicable policies and information are those contained in that *Bulletin*.

### Discontinued Programs

Students enrolled in programs that discontinue admitting new students during their tenure are expected to meet degree requirements published in the *Bulletin* and in place during their year of matriculation. If a program's requirements change, a student may request to change to a subsequent version effective during their enrollment, which is subject to approval by their school. Students who leave the university may not be allowed to return to a discontinued program depending on the time frame the university has established that the program will teach out remaining students.

Students are held to other policies in effect and as published for the current academic year.

For more information, please visit the Prior Bulletins page (p. 9).

## Year of Matriculation

Students are expected to meet degree requirements published in the *Bulletin* and in place during their year of matriculation. If a program's requirements change, a student may request to change to a subsequent version effective during their enrollment, which is subject to approval by their school.

For more information, please visit the Catalog Editions page (p. 9).

## Course Numbering

Washington University adopted a new course labeling structure in Fall 2025. The first part is the subject code indicating the area of study: for example, ANTHRO for Anthropology or MEMS for Mechanical Engineering and Materials Science. The second part is a four-digit course number. Course numbers demonstrate a progression of difficulty and/or depth in coursework.

- 1000 to 1999 indicates an introductory undergraduate course, usually without prerequisites.
- 2000 to 2999 indicates an introductory or intermediate undergraduate course, sometimes with prerequisites.
- 3000 to 3999 indicates an upper-level undergraduate course, often with a prerequisite of a prior course or class standing (e.g., junior standing).
- 4000 to 4999 indicates an undergraduate course or seminar with advanced content, in which a graduate student may be eligible to register.
- 5000 to 9999 indicates a graduate course, in which advanced undergraduates may request to register.

The presence of a course in this *Bulletin* signifies that it is part of the curriculum currently offered and may be scheduled for registration.

## Curriculum Designators

The subject codes shown below are used in Washington University's course records and are listed here alphabetically.

### A

| Code    | Name                               |
|---------|------------------------------------|
| AAS     | Asian American Studies             |
| ACCT    | Accounting                         |
| AFAS    | African & African American Studies |
| AHBR    | Applied Health Behavior Research   |
| AMCS    | American Culture Studies           |
| ANESTH  | Anesthesiology                     |
| ANTHRO  | Anthropology                       |
| APL     | Applied Linguistics                |
| ARAB    | Arabic                             |
| ARC     | Archaeology                        |
| ARCH    | Architecture                       |
| ART     | Art                                |
| ARTARCH | Art History & Archaeology          |
| ASGS    | Arts & Sciences Graduate Studies   |

### B

| Code    | Name                                |
|---------|-------------------------------------|
| BBS     | Biology & Biomedical Sciences       |
| BDSAI   | Biomedical Data Science and AI      |
| BEYOND  | Beyond Boundaries                   |
| BIOCHEM | Biochemistry & Molecular Biophysics |
| BIOL    | Biology & Biomedical Sciences       |
| BME     | Biomedical Engineering              |
| BMI     | Biomedical Informatics              |
| BSDC    | Brown School Doctoral               |

### C

| Code         | Name                                      |
|--------------|-------------------------------------------|
| CAPS-AFAS    | CAPS - African & African American Studies |
| CAPS-AMCS    | CAPS - American Culture Studies           |
| CAPS-ANTHRO  | CAPS - Anthropology                       |
| CAPS-ARAB    | CAPS - Arabic                             |
| CAPS-ART     | CAPS - Art                                |
| CAPS-ARTARCH | CAPS - Art History & Archaeology          |
| CAPS-BIO     | CAPS - Biology                            |
| CAPS-BUS     | CAPS - Business                           |
| CAPS-CHEM    | CAPS - Chemistry                          |
| CAPS-CHINESE | CAPS - Chinese                            |
| CAPS-CIM     | CAPS - Computers & Information Management |



|                  |                                               |
|------------------|-----------------------------------------------|
| CAPS-CLASSICS    | CAPS - Classics                               |
| CAPS-COMM        | CAPS - Communications                         |
| CAPS-COMPLIT     | CAPS - Comparative Literature                 |
| CAPS-CRM         | CAPS - Clinical Research Management           |
| CAPS-CS          | CAPS - Computer Science                       |
| CAPS-DANCE       | CAPS - Dance & Somatic Movement Studies       |
| CAPS-DATASTUDIES | CAPS - Data Studies                           |
| CAPS-DRAMA       | CAPS - Drama                                  |
| CAPS-EASIA       | CAPS - East Asian Studies                     |
| CAPS-ECOMP       | CAPS - English Composition                    |
| CAPS-ECON        | CAPS - Economics                              |
| CAPS-EDUC        | CAPS - Education                              |
| CAPS-ELIT        | CAPS - English & American Literature          |
| CAPS-ELP         | CAPS - English Language Programs              |
| CAPS-EPSC        | CAPS - Earth & Planetary Sciences             |
| CAPS-FILM        | CAPS - Film & Media Studies                   |
| CAPS-FR          | CAPS - French                                 |
| CAPS-GERMAN      | CAPS - Germanic Languages & Literatures       |
| CAPS-GIS         | CAPS - Geographic Information Systems         |
| CAPS-GS          | CAPS - General Studies                        |
| CAPS-HCARE       | CAPS - Health Care                            |
| CAPS-HEBR        | CAPS - Hebrew                                 |
| CAPS-HINDI       | CAPS - Hindi                                  |
| CAPS-HIST        | CAPS - History                                |
| CAPS-HRM         | CAPS - Human Resources Management             |
| CAPS-IA          | CAPS - International Affairs                  |
| CAPS-IRISH       | CAPS - Irish Studies                          |
| CAPS-IS          | CAPS - International Studies                  |
| CAPS-ISLA        | CAPS - Integrated Studies in Liberal Arts     |
| CAPS-ITAL        | CAPS - Italian                                |
| CAPS-JAPAN       | CAPS - Japanese                               |
| CAPS-JME         | CAPS - Jewish, Islamic, & Middle East Studies |
| CAPS-JRN         | CAPS - Journalism                             |
| CAPS-KOREAN      | CAPS - Korean                                 |
| CAPS-LAS         | CAPS - Latin American Studies                 |
| CAPS-LING        | CAPS - Linguistics                            |
| CAPS-MATH        | CAPS - Mathematics & Statistics               |
| CAPS-MUS         | CAPS - Music                                  |
| CAPS-NPM         | CAPS - Nonprofit Management                   |
| CAPS-PHIL        | CAPS - Philosophy                             |
| CAPS-PHYS        | CAPS - Physics                                |
| CAPS-POLSCI      | CAPS - Political Science                      |
| CAPS-PORT        | CAPS - Portuguese                             |

|            |                                                   |
|------------|---------------------------------------------------|
| CAPS-PSYCH | CAPS - Psychological & Brain Science (Psychology) |
| CAPS-RELST | CAPS - Religious Studies                          |
| CAPS-RUSS  | CAPS - Russian                                    |
| CAPS-SCAN  | CAPS - Scandinavian                               |
| CAPS-SCI   | CAPS - Science                                    |
| CAPS-SOC   | CAPS - Sociology                                  |
| CAPS-SPAN  | CAPS - Spanish                                    |
| CAPS-SPCH  | CAPS - Speech                                     |
| CAPS-SUST  | CAPS - Sustainability                             |
| CAPS-WGSS  | CAPS - Women, Gender, & Sexuality Studies         |
| CFH        | Center for the Humanities                         |
| CHEM       | Chemistry                                         |
| CHINA      | Chinese                                           |
| CHST       | Children's Studies                                |
| CLASSICS   | Classics                                          |
| CLNV       | Clinical Investigation                            |
| CNST       | Construction Management                           |
| COMPLITTHT | Comparative Literature & Thought                  |
| CSE        | Computer Science & Engineering                    |
| CWP        | College Writing Program                           |
| CYBER      | Cybersecurity Management                          |

## D

| Code   | Name                                      |
|--------|-------------------------------------------|
| DANCE  | Dance                                     |
| DAT    | Data Analytics                            |
| DCDS   | Division of Computational & Data Sciences |
| DESIGN | Design                                    |
| DRAMA  | Drama                                     |

## E

| Code | Name                                          |
|------|-----------------------------------------------|
| EALC | East Asian Languages & Cultures               |
| ECON | Economics                                     |
| EDUC | Education                                     |
| EECE | Energy, Environmental, & Chemical Engineering |
| EEPS | Earth, Environmental, & Planetary Sciences    |
| EGS  | Engineering Graduate Studies                  |
| ELIT | English Literature                            |
| EMED | Emergency Medicine                            |
| EMGT | Engineering Management                        |
| ENGR | General Engineering                           |
| ENST | Environmental Studies                         |
| ESE  | Electrical & Systems Engineering              |
| ETEM | Engineering Management                        |



## F

| Code    | Name                 |
|---------|----------------------|
| FASHION | Fashion Design       |
| FILM    | Film & Media Studies |
| FIN     | Finance              |
| FRENCH  | French               |

## G

| Code     | Name                             |
|----------|----------------------------------|
| GENETICS | Genetics                         |
| GENST    | General Studies                  |
| GERMAN   | Germanic Languages & Literatures |
| GLOBAL   | Global Studies                   |
| GNOUN    | Genetic Counseling               |
| GREEK    | Greek                            |

## H

| Code    | Name                   |
|---------|------------------------|
| HBRW    | Hebrew                 |
| HCO     | Health Care Operations |
| HINDI   | Hindi                  |
| HISTORY | History                |

## I

| Code   | Name                                         |
|--------|----------------------------------------------|
| IMSE   | Institute of Materials Science & Engineering |
| INFO   | Information Management                       |
| INTERD | Interdisciplinary Studies                    |
| INTL   | International Studies                        |
| IPMS   | Movement Science                             |
| ITAL   | Italian                                      |

## J

| Code  | Name                                   |
|-------|----------------------------------------|
| JAPAN | Japanese                               |
| JCE   | Joint Civil Engineering                |
| JCHE  | Joint Chemical Engineering             |
| JCS   | Joint Intro to Computing               |
| JEC   | Joint Engineering Communications       |
| JEE   | Joint Electrical Engineer              |
| JEMT  | Joint Engineering Math                 |
| JIMES | Jewish, Islamic, & Middle East Studies |
| JME   | Joint Mechanical Engineering           |

## K

| Code  | Name   |
|-------|--------|
| KOREA | Korean |

## L

| Code     | Name                   |
|----------|------------------------|
| LANDARCH | Landscape Architecture |
| LATAM    | Latin American Studies |
| LATIN    | Latin                  |
| LAW      | Law                    |
| LAWO     | Law Online             |
| LING     | Linguistics            |
| LWST     | Legal Studies          |

## M

| Code      | Name                                       |
|-----------|--------------------------------------------|
| MAIR      | Military Aerospace Science                 |
| MARM      | Military Science                           |
| MATH      | Mathematics & Statistics                   |
| MBIO      | Molecular Biology                          |
| MBIOPHARM | Molecular Biology & Pharmacology           |
| MEC       | Managerial Economics                       |
| MEDH      | Medical Humanities                         |
| MEDICINE  | Internal Medicine                          |
| MEDINTER  | Medicine Interdisciplinary                 |
| MEDPHASE1 | Medicine Phase 1                           |
| MEDPHASE2 | Medicine Phase 2                           |
| MEDPHASE3 | Medicine Phase 3                           |
| MEDPHYS   | Medical Physics                            |
| MEDRSRCH  | Medicine Research                          |
| MEMS      | Mechanical Engineering & Materials Science |
| MGS       | Medicine Graduate Studies                  |
| MGT       | Management                                 |
| MKT       | Marketing                                  |
| MSB       | Biostatistics & Genetic Epidemiology       |
| MUSIC     | Music                                      |

## N

| Code     | Name                 |
|----------|----------------------|
| NEUROL   | Neurology            |
| NEUROSCI | Neuroscience         |
| NEUROSUR | Neurological Surgery |
| NRSSI    | Nursing Science      |



## O

| Code  | Name                            |
|-------|---------------------------------|
| OB    | Organizational Behavior         |
| OBGYN | Obstetrics & Gynecology         |
| OPHTH | Ophthalmology & Visual Sciences |
| ORTHO | Orthopedic Surgery              |
| OSP   | Overseas Programs               |
| OT    | Occupational Therapy            |
| OTO   | Otolaryngology                  |

## P

| Code      | Name                                            |
|-----------|-------------------------------------------------|
| PACS      | Audiology & Communication Sciences              |
| PATH      | Pathology                                       |
| PBPMSTUDY | Biological & Physical Sciences for PBPM         |
| PE        | Physical Education                              |
| PEDS      | Pediatrics                                      |
| PHCC      | Public Health Concentration Courses             |
| PHDC      | Public Health Doctoral                          |
| PHEL      | Public Health Electives                         |
| PHFN      | Public Health Foundation                        |
| PHIL      | Philosophy                                      |
| PHPC      | Public Health Practicum                         |
| PHRS      | Public Health Research                          |
| PHS       | Population Health Sciences                      |
| PHSL      | Public Health Skill Lab                         |
| PHTPS     | Public Health Transdisciplinary Problem Solving |
| PHYSICS   | Physics                                         |
| PHYTHER   | Physical Therapy Program - Grad                 |
| PNP       | Philosophy-Neuroscience-Psychology              |
| POLSCI    | Political Science                               |
| PORTUG    | Portuguese                                      |
| PRJM      | Project Management                              |
| PSY       | Psychiatry                                      |
| PSYCH     | Psychological & Brain Sciences                  |
| PUBLTHSOC | Public Health & Society                         |

## R

| Code     | Name                 |
|----------|----------------------|
| RADIOL   | Radiology            |
| RADONC   | Radiation Oncology   |
| RELPOL   | Religion & Politics  |
| REPRSCI  | Reproductive Science |
| RESEARCH | Research             |
| REST     | Religious Studies    |
| RUSS     | Russian              |

## S

| Code    | Name                                     |
|---------|------------------------------------------|
| SCOT    | Supply Chain, Operations, & Technology   |
| SDS     | Statistics & Data Science                |
| SLU     | Saint Louis University                   |
| SOC     | Sociology                                |
| SPAN    | Spanish                                  |
| SPCN    | Social Policy Concentration              |
| SPFN    | Social Policy Foundation                 |
| SPGN    | Social Policy General                    |
| SPHR    | Speech & Hearing                         |
| SURGERY | Surgery                                  |
| SWCP    | Social Work Concentration Practicum      |
| SWDT    | Social Work Doctoral                     |
| SWEL    | Social Work Electives                    |
| SWEV    | Social Work Evaluation                   |
| SWFN    | Social Work Foundation                   |
| SWHS    | Social Work History & Professional Theme |
| SWLM    | Social Work Leadership & Management      |
| SWPM    | Social Work Practice Methods             |
| SWSL    | Social Work Skill Lab                    |
| SWSP    | Social Policy                            |
| SWTH    | Social Work Theory                       |

## T

| Code | Name                  |
|------|-----------------------|
| TIPM | Industrial Management |

## U

| Code   | Name                             |
|--------|----------------------------------|
| UMSL   | University of Missouri-St. Louis |
| URBDES | Urban Design                     |
| URST   | Urban Studies                    |

## W

| Code    | Name                               |
|---------|------------------------------------|
| WGSS    | Women, Gender, & Sexuality Studies |
| WRITING | Writing                            |

# Catalog Editions

The courses and policies listed in this *Bulletin* are subject to change at any time through normal approval channels within Washington University. New courses, changes to existing coursework, and new policies are initiated by the appropriate institutional departments, committees, or administrators. Academic policy revisions are generally implemented in the next academic year following notification thereof. Washington University publishes a new edition of the *Bulletin* each July, and its contents apply to the subsequent fall, spring, and summer terms. Occasionally a policy or requirement must be changed and implemented during the same academic year (e.g., in the case of relevant external requirements, such as state regulations). All changes must be approved by college or school personnel who oversee academic curriculum and policies.

Washington University students are expected to meet degree requirements published in the *Bulletin* and in place during their year of matriculation. Undergraduates who initially enroll in a summer term to pursue a special program follow requirements for the subsequent fall term. Students will need to check their school's processes to potentially change applicable catalog years or alter their degree requirements.

Students should review specific Washington University and individual school policies related to transfer credit, changing programs, leaves of absence, and military service.

# Prior Bulletins

To find program details, course descriptions, and relevant policies, choose the year of enrollment below to find the available *Bulletins*.

If the required year is not shown or the school's *Bulletin* is not available, please email the Office of the University Registrar ([registrar@wustl.edu](mailto:registrar@wustl.edu)) with specifics of what information is needed.

## 2025-2026

- Graduate Architecture & Urban Design Bulletin (HTML) (PDF)
- Graduate Art Bulletin (HTML) (PDF)
- Graduate Arts & Sciences Bulletin (HTML) (PDF)
- Graduate Business Bulletin (HTML) (PDF)
- Graduate Engineering Bulletin (HTML) (PDF)
- Law Bulletin (HTML) (PDF)
- Medicine Bulletin (HTML) (PDF)
- Public Health Bulletin (HTML) (PDF)

- Social Work & Social Policy Bulletin (HTML) (PDF)
- Undergraduate Bulletin (HTML) (PDF)
- School of Continuing & Professional Studies Bulletin (HTML: Undergraduate, Graduate) (PDF)

## 2024-2025

- Graduate Architecture & Urban Design Bulletin (HTML) (PDF)
- Graduate Art Bulletin (HTML) (PDF)
- Graduate Arts & Sciences Bulletin (HTML) (PDF)
- Graduate Business Bulletin (HTML) (PDF)
- Graduate Engineering Bulletin (HTML) (PDF)
- Law Bulletin (HTML) (PDF)
- Medicine Bulletin (HTML) (PDF)
- Social Work & Public Health Bulletin (HTML) (PDF)
- Undergraduate Bulletin (HTML) (PDF)
- School of Continuing & Professional Studies Bulletin (HTML: Undergraduate, Graduate) (PDF)

## 2023-2024

- Graduate Architecture & Urban Design Bulletin (HTML) (PDF)
- Graduate Art Bulletin (HTML) (PDF)
- Graduate Arts & Sciences Bulletin (HTML) (PDF)
- Graduate Business Bulletin (HTML) (PDF)
- Graduate Engineering Bulletin (HTML) (PDF)
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- Social Work & Public Health Bulletin (HTML) (PDF)
- Undergraduate Bulletin (HTML) (PDF)
- School of Continuing & Professional Studies Bulletin (HTML: Undergraduate, Graduate) (PDF)

## 2022-2023

- Graduate Architecture & Urban Design Bulletin (HTML) (PDF)
- Graduate Art Bulletin (HTML) (PDF)
- Graduate Arts & Sciences Bulletin (HTML) (PDF)
- Graduate Business Bulletin (HTML) (PDF)
- Graduate Engineering Bulletin (HTML) (PDF)
- Law Bulletin (HTML) (PDF)
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- Social Work & Public Health Bulletin (HTML) (PDF)
- Undergraduate Bulletin (HTML) (PDF)
- University College Bulletin (HTML: Undergraduate, Graduate) (PDF)

## 2021-2022

- Graduate Architecture & Urban Design Bulletin (HTML) (PDF)
- Graduate Art Bulletin (HTML) (PDF)
- Graduate Arts & Sciences Bulletin (HTML) (PDF)
- Graduate Business Bulletin (HTML) (PDF)
- Graduate Engineering Bulletin (HTML) (PDF)
- Law Bulletin (HTML) (PDF)
- Medicine Bulletin (HTML) (PDF)
- Social Work & Public Health Bulletin (HTML) (PDF)
- Undergraduate Bulletin (HTML) (PDF)
- University College Bulletin (HTML: Undergraduate, Graduate) (PDF)

## 2020-2021

- Graduate Architecture & Urban Design Bulletin (HTML) (PDF)
- Graduate Art Bulletin (HTML) (PDF)
- Graduate Arts & Sciences Bulletin (HTML) (PDF)
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- Undergraduate Bulletin (HTML) (PDF)
- University College Bulletin (HTML: Undergraduate, Graduate) (PDF)

## 2019-2020

- Graduate Architecture & Urban Design Bulletin (HTML) (PDF)
- Graduate Art Bulletin (HTML) (PDF)
- Graduate Arts & Sciences Bulletin (HTML) (PDF)
- Graduate Business Bulletin (HTML) (PDF)
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- Law Bulletin (HTML) (PDF)
- Medicine Bulletin (HTML) (PDF)
- Social Work & Public Health Bulletin (HTML) (PDF)
- Undergraduate Bulletin (HTML) (PDF)
- University College Bulletin (HTML: Undergraduate, Graduate) (PDF)

## 2018-2019

- Graduate Architecture & Urban Design Bulletin (HTML) (PDF)
- Graduate Art Bulletin (HTML) (PDF)
- Graduate Arts & Sciences Bulletin (HTML) (PDF)
- Graduate Engineering Bulletin (HTML) (PDF)

- Law Bulletin (HTML) (PDF)
- Medicine Bulletin (HTML) (PDF)
- Social Work & Public Health Bulletin (HTML) (PDF)
- Undergraduate Bulletin (HTML) (PDF)
- University College Bulletin (HTML: Undergraduate, Graduate) (PDF)

## 2017-2018

- Graduate Architecture & Urban Design Bulletin (HTML) (PDF)
- Graduate Art Bulletin (HTML) (PDF)
- Graduate Arts & Sciences Bulletin (HTML) (PDF)
- Graduate Engineering Bulletin (HTML) (PDF)
- Law Bulletin (HTML) (PDF)
- Medicine Bulletin (HTML) (PDF)
- Social Work & Public Health Bulletin (HTML) (PDF)
- Undergraduate Bulletin (HTML) (PDF)
- University College Bulletin (HTML: Undergraduate, Graduate) (PDF)

## 2016-2017

- Graduate Architecture & Urban Design Bulletin (HTML) (PDF)
- Graduate Art Bulletin (HTML) (PDF)
- Graduate Arts & Sciences Bulletin (HTML) (PDF)
- Graduate Engineering Bulletin (HTML) (PDF)
- Medicine Bulletin (PDF)
- Undergraduate Bulletin (HTML) (PDF)
- University College Bulletin (HTML: Undergraduate, Graduate) (PDF)

## 2015-2016

- Graduate Arts & Sciences Bulletin (HTML) (PDF)
- Medicine Bulletin (PDF)
- Undergraduate Bulletin (HTML) (PDF)

## 2014-2016

- University College Bulletin (undergraduate & graduate) (PDF)

## 2014-2015

- Medicine Bulletin (PDF)
- Undergraduate Bulletin (HTML) (PDF)

## 2013-2014

- Medicine Bulletin (PDF)
- Undergraduate Bulletin (HTML) (PDF)

## **2012-2015**

- Graduate Arts & Sciences Bulletin (PDF)

## **2012-2014**

- University College Bulletin (undergraduate & graduate) (PDF)

## **2012-2013**

- Medicine Bulletin (PDF)
- Undergraduate Bulletin (HTML) (PDF)

## **2011-2012**

- Medicine Bulletin (PDF)
- Undergraduate Bulletin (HTML) (PDF)

## **2010-2011**

- Medicine Bulletin (PDF)
- Undergraduate Bulletin (PDF)

## **2009-2012**

- Graduate Arts & Sciences Bulletin (PDF)

## **2009-2010**

- Medicine Bulletin (PDF)

## **2008-2010**

- Undergraduate Bulletin (PDF)

## **2008-2009**

- Medicine Bulletin (PDF)

## **2006-2009**

- Graduate Arts & Sciences Bulletin (PDF)  
and accompanying 2008 Update (PDF)

## **2006-2008**

- Undergraduate Bulletin (PDF)

# About Washington University in St. Louis

## Who We Are Today

Washington University in St. Louis — a medium-sized, independent university — is dedicated to challenging its faculty and students alike to seek new knowledge and greater understanding of an ever-changing, multicultural world. The university is counted among the world's leaders in teaching and research, and it draws students from all 50 states, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands. Students and faculty come from more than 100 countries around the world.

The university offers more than 250 programs and 5,500 courses leading to associate, bachelor's, master's, and doctoral degrees in a broad spectrum of traditional and interdisciplinary fields, with additional opportunities for minor concentrations and individualized programs. For more information about the university, please visit the About WashU page of our website.

## Enrollment by School

For enrollment information, please visit the University Facts page of our website.

## Our Mission Statement

**The mission of Washington University in St. Louis is to act in service of truth through the formation of leaders, the discovery of knowledge, and the treatment of patients for the betterment of our region, our nation, and our world.**

*At WashU, we generate, disseminate, and apply knowledge. We foster freedom of inquiry and expression of ideas in our research, teaching, and learning.*

We aim to create an environment that encourages and supports wide-ranging exploration at the frontier of discovery by embracing diverse perspectives from individuals of all identities and backgrounds. We promote higher education and rigorous research as a fundamental component of an open, vibrant society. We strive to enhance the lives and livelihoods not only of our students, patients, and employees but also of the people of the greater St. Louis community and beyond. We do so by addressing scientific, social, economic, medical, and other challenges in the local, national, and international realms.

### Our goals are:

- to foster excellence and creativity in our teaching, research, scholarship, patient care, and service
- to welcome students, faculty, and staff from all backgrounds to create an inclusive, equitable community that is nurturing and intellectually rigorous

- to cultivate in students habits of lifelong learning and critical and ethical thinking, thereby enabling them to be productive members and leaders of a global society
- to contribute positively to our home community of St. Louis, and to effect meaningful, constructive change in our world

### To this end we intend:

- to hold ourselves to the highest standards of excellence
- to educate aspiring leaders of great ability from diverse backgrounds
- to encourage faculty and students to be innovative, bold, independent, critical thinkers
- to build an inclusive, equitable, respectful, ethically-principled environment for living, teaching, learning, and working for the present and future generations
- to focus on meaningful and measurable outcomes for all of our endeavors

*Mission statement endorsed by the Faculty Senate Council in April 2021 and approved by the Board of Trustees on October 1, 2021.*

# Trustees & Administration

## Board of Trustees

Washington University's Board of Trustees is the chief governing body of Washington University in St. Louis. Current members of the board include the following:

**Andrew Bursky**  
*Chair*

**Andrew E. Newman**  
*Vice Chair*

**Penny Pennington**  
*Vice Chair*

Nick Barto (*Ex Officio*)

Chris Boerner

Blackford F. Brauer

Corinna Cotsen

Lori Coulter

Arnold W. Donald

Jeffrey L. Fox

Gaurav Garg

Avram A. Glazer

John Hamilton

Stacey Hightower

Thomas Hillman

Carrie A. Johnson

Lal Karsanbhai

David W. Kemper

Jerald Kent

Alaina Maciá

Andrew D. Martin (*Ex Officio*)

Vicki Match Suna

Susan B. McCollum

Alicia S. McDonnell

James M. McKelvey, Jr.

Steven "Cash" Nickerson

Michael W. Riney

Anthony W. Ryan

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Mary Danforth Stillman

Kurt A. Summers

Barbara Schaps Thomas

Lawrence E. Thomas

David A. Ulevitch

Eric B. Upin

Henry D. Warshaw

Joseph F. Wayland

Dean Yamamoto

Nicholas S. Zeppos

Please visit the Board of Trustees website for more information.

## University Administration

In 1871, Washington University co-founder and then-Chancellor William Greenleaf Eliot sought a gift from Hudson E. Bridge, a charter member of the university's Board of Directors, to endow the chancellorship. Soon after this endowment was received, the position was renamed the "Hudson E. Bridge Chancellorship."

The officers of the university administration are currently led by Chancellor Andrew D. Martin. University leadership is detailed on the Washington University website.

**Andrew D. Martin**

*Chancellor*

**Mark D. West**

*Provost*

## Academic Calendar

The academic calendar of Washington University in St. Louis is designed to provide an optimal amount of classroom instruction and examination within a manageable time frame, facilitating our educational mission to promote learning among both students and faculty. The dates listed here are the outline of the standard semester calendar, applicable to traditional undergraduate and many graduate programs. Certain schools or programs may have varying calendars due to the nature of particular fields of study. Please refer to the Academic Calendar page of the Office of the University Registrar's website for more information.

## Fall Semester 2026

| Date                        | Day                | Description                     |
|-----------------------------|--------------------|---------------------------------|
| August 24                   | Monday             | First day of classes            |
| September 7                 | Monday             | Labor Day holiday (no classes)  |
| October 3-6                 | Saturday-Tuesday   | Fall Break (no classes)         |
| November 25-<br>November 29 | Wednesday-Sunday   | Thanksgiving Break (no classes) |
| December 7                  | Monday             | Last day of classes             |
| December 8-9                | Tuesday-Wednesday  | Reading days                    |
| December 10-16              | Thursday-Wednesday | Final exams                     |

## Spring Semester 2027

| Date        | Day                | Description                                  |
|-------------|--------------------|----------------------------------------------|
| January 18  | Monday             | Martin Luther King, Jr. holiday (no classes) |
| January 19  | Tuesday            | First day of classes                         |
| March 14-21 | Sunday-Sunday      | Spring Break (no classes)                    |
| May 3       | Monday             | Last day of classes                          |
| May 4-5     | Tuesday-Wednesday  | Reading days                                 |
| May 6-12    | Thursday-Wednesday | Final exams                                  |

## Commencement

| Date   | Day    | Description                |
|--------|--------|----------------------------|
| May 21 | Friday | Class of 2027 Commencement |

## Summer Semester 2027

| Date      | Day      | Description                                    |
|-----------|----------|------------------------------------------------|
| May 24    | Monday   | First Summer Session begins                    |
| May 31    | Monday   | Memorial Day holiday (no classes)              |
| July 5    | Monday   | Independence Day holiday observed (no classes) |
| August 19 | Thursday | Last Summer Session ends                       |

## Religious Holiday Class Absence Policy

As home to students, faculty, and staff of all the world's major religions and as a non-sectarian institution, Washington University in St. Louis values the rich diversity of spiritual expression and practice found on campus. It is therefore the policy of the university that students who miss class, assignments, or exams to observe a religious holiday should be accommodated as follows:

1. Absences should be counted as excused in any course in which attendance is a measure of academic performance;
2. Reasonable extensions of time should be given, without academic penalty, for missed assignments; and
3. Exams should be reasonably rescheduled without academic penalty.

To ensure that accommodations may be made, students who plan to miss class for a religious holiday must inform their instructors in writing *before the end of the third week of class* or as soon as possible if the holiday occurs during the first three weeks of the semester. Instructors should inform students on their syllabus and/or at the start of the class how they would like students to notify them of any accommodation needs related to religious observance.

Absence for religious reasons does not lessen students' responsibility for coursework or material covered during their absence. It is incumbent on the student who misses a class to catch up on any material discussed and assignments given during that class period. If a student believes that they have not received a reasonable accommodation despite engaging with their instructor on the topic, they should follow the course grievance process outlined by their school.

The Office for Religious, Spiritual & Ethical Life provides a list of Religious & Spiritual Holidays that fall within the academic year. This list is not a designation of religious holidays recognized by the university, and it is not meant to be comprehensive; it is simply a guide to help students and instructors plan their courses and assignments.

## For Faculty

*Every effort should be made to avoid scheduling exams on religious holidays, particularly those with work restrictions as noted on the holiday calendar.*

Faculty should be supported in establishing a teaching schedule that allows them to avoid conflict with their observance of religious holidays. Where this is not possible, faculty should make up any missed class(es) in the method most appropriate to student learning in their course (e.g., rescheduling for an alternate time, providing asynchronous material, engaging a guest lecturer). Appropriate advance notice should be provided to students.

Any instructor with concerns regarding either a given holiday or the academic implications of a particular student's religious observance of holidays may seek guidance from the chair of their department, the dean of their school, or the Director for Religious, Spiritual & Ethical Life.

## Campus Resources

### Student Support Services

#### The Learning Center

The Learning Center, located on the lower level of the Mallinckrodt Center and housed within the Center for Teaching and Learning, is the hub of academic support at Washington University in St. Louis. The Learning Center's programs are designed to support students in their course work by helping them develop the lifelong skill of "learning how to learn" and by stimulating their independent thinking. All services are free (with the exception of MCAT prep), and each year more than 1,800 students participate in one or more of our programs.

The Learning Center offers support for foundational courses through Peer-Led Team Learning and our drop-in mentoring programs (Residential Peer Mentoring and Drop-In Academic Mentoring). Individual peer-led coaching is available for academic skills such as time management, study strategies, note-taking, accessing resources, and managing test anxiety. Other services offered include small group mentoring for eligible students and an MCAT preparation program.

For more information, visit the Learning Center website or call 314-935-2066.

#### Disability Resources

Disability Resources supports students with disabilities by fostering and facilitating an equal access environment for the Washington University community of learners. Disability Resources partners with faculty and staff to facilitate academic and housing accommodations for students with disabilities on the Danforth Campus. Students enrolled in the School of Medicine should contact their program's director. Please visit the Disability Resources website or call 314-935-5970 for more information.

#### TRIO: Student Support Services

TRIO is a federally funded program that provides customized services for undergraduate students who are low income, who are the first in their family to go to college, and/or who have a documented disability. Services include academic coaching, academic peer mentoring, cultural and leadership programs, summer internship assistance and post-graduation advising. First-year and transfer students are

considered for selection during the summer before they enter their first semester. Eligible students are encouraged to apply when they are notified, because space in this program is limited. For more information, visit the TRIO Program website.

## Medical Student Support Services

For information about Medical Student Support Services, please visit the School of Medicine website.

## Office for International Students and Scholars

The Office for International Students and Scholars (OISS) is dedicated to fostering an inclusive environment that celebrates our international students' and scholars' diverse experiences, cultures, and aspirations. OISS plays a pivotal role in cultivating a vibrant, intercultural atmosphere on our campus, extending support to international students, scholars, faculty, and staff through immigration sponsorship. OISS commits to ensuring a seamless integration process for those who are admitted, appointed, or employed by Washington University. Grounded in the belief that education can shape global perspectives, the OISS mission is to empower the Washington University international community with the knowledge and resources needed to navigate U.S. immigration compliance while guiding them with care and compassion at every step.

OISS has locations on both the Danforth Campus and the Medical Campus. For information about OISS locations, office hours, staff, and services, visit the Office for International Students and Scholars website, email [oiss@wustl.edu](mailto:oiss@wustl.edu), or call 314-935-5910.

## Office of Military and Veteran Services

This office serves as the university's focal point for military and veteran matters, including transitioning military-connected students into higher education, providing and connecting students with programs and services, and partnering across campus and in the community. Services include advising current and prospective students on how to navigate the university and maximize Department of Defense and Veterans Affairs (VA) educational benefits, transition support, Veteran Ally training for faculty and staff, veteran-unique programming, and connecting students to campus and community resources. Military-connected students include veterans, military service members, spouses, dependent children, caregivers, survivors and Reserve Officer Training Corp cadets. There are two university policies that apply to students who still serve in the Armed Forces and students who use VA educational benefits:

- The Policy on Military Absences, Refunds and Readmissions applies to students serving in the U.S. Armed Forces and their family members when military service forces them to be absent or withdraw from a course of study.

- The Policy on Protections for VA Educational Benefit Users applies to students using VA education benefits when payments to the institution and the individual are delayed through no fault of the student.

The Office of Military and Veteran Services is located in Umrath Hall on the Danforth Campus. Please visit the Military and Veteran Services website or send an email to [veterans@wustl.edu](mailto:veterans@wustl.edu) for more information.

## Relationship and Sexual Violence Prevention (RSVP) Center

The RSVP Center offers free and confidential services including 24/7 crisis intervention, counseling services, resources, support and prevention education for all students on the Danforth Campus. The RSVP Center operates from a public health model and uses trauma-informed practices to address the prevalent issues of relationship and sexual violence. By providing support for affected students, it is our goal to foster post-traumatic growth and resilience and to help ensure academic retention and success. Our prevention efforts call for community engagement to engender an intolerance of violence and an active stance toward challenging cultural injustices that perpetuate such issues. Learn more at the RSVP Center website.

## WashU Cares

WashU Cares assists the university with handling situations involving the safety and well-being of Danforth Campus students. WashU Cares is committed to fostering student success and campus safety through a proactive, collaborative and systematic approach to the identification of, intervention with and support of students of concern while empowering all university community members to create a culture of caring. If there is a concern about the physical or mental well-being of a student, please visit the WashU Cares website to file a report.

## The Writing Center & Speaking Studio

The Writing Center & Speaking Studio — a free service — offers writing and public speaking support to all Washington University undergraduate and graduate students. Tutors will read and discuss any kind of work in progress, including student papers, senior theses, application materials, dissertations and oral presentations. The Writing Center staff is trained to work with students at any stage of the writing process, including brainstorming, developing and clarifying an argument, organizing evidence, and improving style. Rather than editing or proofreading, tutors will emphasize the process of revision and teach students how to edit their own work.

The Writing Center is located in Mallinckrodt Center on the lower level. Appointments are preferred and can be made online, but walk-ins will be accepted if tutors are available. Dedicated Undergraduate Walk-in Hours are held in the second half of each semester (after fall break and spring break) on Tuesday and Wednesday afternoons. Questions? Email [writing@wustl.edu](mailto:writing@wustl.edu).

## Student Health and Well-Being Services, Danforth Campus

The Student Health Center – Danforth Campus provides medical, psychiatric, and health promotion services for undergraduate and graduate students on the Danforth Campus. Please visit the Student Health Center – Danforth Campus website for more information about Health Center services and staff members.

### Hours:

Monday, Tuesday, Thursday, and Friday: 8 a.m. - 5 p.m.

Wednesday: 10 a.m. - 5 p.m.

Saturday, Sunday, and university holidays: Closed

For after-hours care, students should access TimelyCare.

## Medical Services

Medical Services staff members provide care for the evaluation and treatment of an illness or injury, preventive health care and health education, immunizations, nutrition counseling, sports medicine, travel medicine, and sexual health services. Student Psychiatry Services staff provide ongoing medication management for students to address their mental health concerns. Student Health Center providers are participating members of the Washington University in St. Louis Physician's Network. Any condition requiring specialized medical services will be referred to an appropriate specialist. The Health Center accepts health insurance plans that have met waiver criteria for the Student Health Insurance Plan and will be able to bill the plan according to plan benefits. The Student Health Insurance Plan requires a referral for medical care any time care is not provided at Student Health (except in an emergency). Call 314-935-6666 or visit the Student Health Center – Danforth Campus website to schedule an appointment.

Appointments are also available for the assessment and referral of students struggling with substance use.

The Student Health Center lab provides full laboratory services. Some tests can be performed in house. The remainder of all testing that is ordered by Student Health is completed by LabCorp. LabCorp serves as Student Health's reference lab, and it is a preferred provider on the student health insurance plan. This lab can perform any test ordered by Student Health Center providers or outside providers.

All incoming students must provide proof of immunization for measles, mumps, and rubella (i.e., two vaccinations after the age of one year old; a titer may be provided in lieu of the immunizations). Proof of receiving a meningococcal vaccine on or after the age of 16 is

required for all incoming undergraduate students. A TB test in the past six months is required for students entering the university who screen positive on the TB questionnaire found on the student portal. It is also recommended that before beginning their studies at WashU, all students will have received the tetanus diphtheria pertussis immunization, the hepatitis A vaccine series, the hepatitis B vaccine series, the HPV vaccine series, the meningitis B vaccine, and the varicella vaccine. Failure to complete the required forms will delay a student's registration and prevent their entrance into housing assignments. Please visit the Student Health Center website for complete information about immunization requirements and deadlines.

## Health Promotion Services

Health Promotion Services staff and Peer Health Educators provide free programs and risk reduction information related to mental health, sexual health, alcohol/other drugs, and community care. For more information, visit the Zenker Wellness Suite in Sumers Recreation Center, consult the Health and Wellbeing Digital Library, follow us on Instagram (@washu\_healthpromotion), and/or email [wellness@wustl.edu](mailto:wellness@wustl.edu). In 2018, this department launched the WashU Recovery Community to provide an opportunity for students in recovery from substance use to connect with other students with similar experiences.

## Center for Counseling and Psychological Services (CCPS)

### Hours:

Monday, Tuesday, Thursday, and Friday: 8 a.m. - 5 p.m.

Wednesday: 10 a.m. - 5 p.m.

Saturday, Sunday, and university holidays: Closed

For after-hours mental health support, students should access the TimelyCare app and request a "Talk Now" visit.

Located in the Student Health Center-Danforth Campus, CCPS is staffed by licensed professional staff members who work with students to resolve personal and interpersonal difficulties. These may include conflicts with or worry about friends or family, concerns about eating or drinking patterns, and feelings of anxiety and depression. Services include individual, group, and couples counseling; crisis counseling; and referral for off-campus counseling when students' needs can be better met outside of CCPS. All full-time students who pay the university health and wellness fee as part of their tuition are eligible for services. Visit the CCPS website or call 314-935-6695 to schedule an appointment during business hours. For additional information, visit the CCPS website or send an email to [ccpscoordinator@wustl.edu](mailto:ccpscoordinator@wustl.edu).

## Important Information About Health Insurance and Fees for Danforth Campus Students

All full-time, degree-seeking WashU students are automatically enrolled in the Student Health Insurance Plan upon completion of registration. Students may opt out of this coverage and receive a refund of the health insurance fee if they provide proof of existing comprehensive insurance coverage that meets all university requirements. Information concerning opting out of the student health insurance plan can be found online after June 1 of each year. All students must request to opt out by September 5 of *every year* in which they wish to be removed from the Student Health Insurance Plan. The Student Health Center provides billing services to many of the major insurance companies in the United States. Specific fees and copays apply to students using Medical Services and Student Psychiatric Services; these fees are billable to the students' insurance plans. More information is available on the Student Health Center – Danforth Campus website.

In addition, WashU has a health and wellness fee designed to improve the health and well-being of the campus community. It is assessed by the university, and it is entirely separate from health insurance. This fee helps support membership to the Summers Recreation Center, health education/prevention efforts, the Center for Counseling and Psychological Services, and TimelyCare.

## Student Health Services, Medical Campus

For information about student health services on the Medical Campus, please visit the Student & Occupational Health Services page of the School of Medicine website.

## Campus Security

The Washington University campus is among the most attractive in the nation, and it enjoys a safe and relaxed atmosphere. Personal safety and the security of personal property while on campus is a shared responsibility. Washington University has made safety and security a priority through our commitment to a full-time professional police department, the use of closed-circuit television, card access, extensive lighting initiatives based on Crime Prevention Through Environmental Design (CPTED) practices, shuttle services, emergency telephones, and ongoing educational safety awareness programs. The vast majority of crimes that occur on college campuses are crimes of opportunity, which can be prevented.

The best protection against crime is an informed and alert campus community. Washington University has developed several programs to help make everyone's experiences here safe and secure. An extensive network of emergency telephones — including more than 200 "blue light" telephones — is connected directly to the University Police

Department and can alert the police to a person's exact location. In addition to the regular shuttle service, an evening student walking/mobile escort service known as "Bear Patrol" and a mobile Campus Circulator shuttle are available on the Danforth Campus.

The Campus2Home shuttle will provide a safe ride home for those living in four designated areas off campus — Skinker-DeBaliviere, Loop South, north of the Loop, and just south of the campus — within these boundaries:

- North – Olive Blvd
- South – Clayton Road
- East – Union Blvd
- West – Hanley Road

Shuttles will run from 7:00 p.m. to 4:00 a.m. seven days a week during academic sessions. Rides should be requested via the TripShot app. Pickup locations to choose from are the Mallinckrodt Center, the Summers Welcome Center, and the Knight Center. The shuttle takes passengers directly to the front doors of their buildings. Shuttle drivers will then wait and watch to make sure passengers get into their buildings safely.

The University Police Department is a full-service organization staffed by certified police officers who patrol the campus 24 hours a day throughout the entire year. The department offers a variety of crime prevention programs, including a high-security bicycle lock program, computer security tags, personal safety classes, and security surveys. Community members are encouraged to download and install the WashU Safe personal safety app on their phones; this app allows users to call for help during emergencies, to use Friend Walk to track their walks on and off campus, and to access many additional safety features. For more information about these programs, visit the Washington University Police Department website.

WashU PD also has comfort dogs — Bear, Brookie, Misty, and Archie — on campus to support our students, faculty, and staff. In addition, there is a decompression/comfort room inside the police station at 6615 Shepley Drive on the South 40. This room offers a supportive, stress-free, and welcoming environment designed to promote wellness and connection with the officers and the comfort dogs. Students are welcome to walk in at any time, or they can schedule a visit by emailing [wupddogs@wustl.edu](mailto:wupddogs@wustl.edu) to secure a dedicated time with the dogs.

In compliance with the Campus Crime Awareness and Security Act of 1990, Washington University publishes an annual report entitled *Safety & Security: Guide for Students, Faculty, and Staff — Annual Campus Security and Fire Safety Reports and Drug & Alcohol Abuse Prevention Program*. This report is available to all current and prospective students on the Danforth Campus and to university employees on the Danforth, North and West campuses. To request a hard copy, contact the Washington University Police Department, 6615 Shepley Drive, Clayton, MO 63105, 314-935-5555.

For information regarding protective services at the School of Medicine, please visit the Campus Safety page of the Washington University Operations & Facilities Management Department.

## Student Complaints

WashU provides students with different processes to handle complaints depending on the nature of the complaint. The Student Feedback & Complaint Form provides information on the different avenues available, as well as a web-form for submitting complaints. Complaints submitted through the form are reviewed by the Office of the Vice Chancellor for Student Affairs and forwarded to the University office or department that would be responsible for addressing the complaint. Complaints may be made anonymously, but students have the option of providing contact information to receive a response regarding steps taken to resolve the complaint. The University's Whistleblower Protection Policy applies to students making good-faith complaints regarding violations of policy or unethical acts.

If a student has a complaint related to distance education, as a participant in the National Council for State Authorization Reciprocity Agreements (NC-SARA), WashU follows the SARA policy that provides for the resolution of complaints resulting from distance education courses, activities, and operations delivered by WashU to students who participate in such courses outside of the state of Missouri (including the District of Columbia, Puerto Rico, and the US Virgin Islands, but excepting California, which is not a member of NC-SARA). Under NC-SARA Policy Section 4.5 (Process for Resolving Complaints), students are asked to seek resolution of complaints first through WashU, as described above. If the complaint is not resolved, distance education students should contact the Missouri State Portal Entity:

Joshua Fischer, Program Specialist  
Email: [joshuafischer@dhewd.mo.gov](mailto:joshuafischer@dhewd.mo.gov)  
Phone: 573-751-2361  
Missouri Department of Higher Education and Workforce Development  
PO Box 1469  
Jefferson City, MO 65102-1469

Students who participate in distance education courses and who reside in California may contact the Bureau for Private Postsecondary Education.

## University Policies

Washington University has various policies and procedures that govern our faculty, staff and students. Highlighted below are several key policies of the university. Web links to key policies and procedures are available on the Office of the University Registrar website and on the University Policies page. Please note that the policies identified on these websites and in this *Bulletin* do not represent an entire repository of university policies, as schools, offices, and departments may implement policies that are not listed. In addition, policies may be amended throughout the year.

## Application to Graduate

Students are required to apply for program completion in Workday, by the deadline relevant to the semester in which they intend to graduate, in order to be eligible for degree conferral. Additional information is available from the Office of the University Registrar.

## Compliance with Section 103 of the Veterans Benefits and Transition Act of 2018

It is WashU's policy to not impose penalties on individuals using Veteran Education Benefits, including the assessment of late fees, the denial of access to classes, libraries or other institutional facilities, or the requirement to borrow additional funds to cover the student's inability to meet his or her financial obligations to the institution due to the delayed disbursement of a payment by the VA. This applies to individuals who submit their Certificate of Eligibility for entitlement to educational assistance to their VA School Certifying Official (SCO).

1. Students should submit a Certificate of Eligibility not later than the first day of a course for which the student wishes to use the entitlement for educational assistance. The SCO will advise the student to provide additional Documentation and information necessary for the proper certification of enrollment.
2. If a student does not receive their Certificate of Eligibility from the VA by the start of the academic term, the student should notify their SCO of their intent to use Veteran Education Benefits and should submit additional Documentation and forms as requested.
3. In cases where a student is unable to meet a financial obligation to the university because the amount of a disbursement from the VA is less than anticipated, the university will require additional payment from the student and will provide the student with a timeline for payment before assessing late fees. Students should contact their SCO for assistance.
4. Students may request certification for previous academic terms if they were eligible for benefits at the time for which they want to be certified. In cases where Veteran Education Benefits are used to certify previous academic terms, students are responsible for any late fees incurred prior to the date of the certification request. This excludes Yellow Ribbon benefits, which are not retroactive for previous fiscal years.

## Courses and Credit

### Academic Calendar

Washington University in St. Louis primarily follows a standard semester-based academic calendar: a fall and spring semester, each spanning 16 calendar weeks, including sessions of half-semester lengths and intersessions beginning before the term start date, and

a summer term of 13 weeks, including sessions of half-term length, an intersession beginning before the term start date, and 3-, 5- and 8-week lengths. The Doctor of Medicine program follows a yearlong calendar supporting modular curriculum delivery.

## Credit Measure

Credit hours for undergraduate and graduate programs are awarded as “units” based on the University Statement on Credit, which is in alignment with the Federal definition found in 34 CFR 600.2.

## Email Communication

Email is the mechanism for official communication with students at Washington University. Students are expected to read email communications from the university in a timely fashion.

All students will be individually assigned a University email address, which will be maintained in the University email directory. Official University communications will be sent to the student's University email address in order to ensure such communications reach the intended recipient.

With the exception of School of Medicine students, a student may have email forwarded from their assigned University email address to another email address of the student's choice. School of Medicine students are prohibited from forwarding their University-assigned email address to an email address external to the University other than @bjc.org and @va.gov email domains. Students who choose to have email forwarded to another email address do so at their own risk. The University is not responsible for email forwarded to any other email address. A student's failure to read official University communications sent to the student's University email address does not absolve the student of responsibility for awareness of and compliance with the content of the official communication. Faculty and administrators should use a student's University email address when communicating via email with the student. This policy will ensure that all students will be able to comply with course and other requirements communicated to them by email from course instructors and administrators.

## Graduate Student Academic Integrity

### Authority of Schools Over Graduate and Graduate Professional Students

1. Each school at the university may establish an academic integrity officer and/or a panel to hear and decide cases of alleged academic or professional misconduct by its graduate or graduate professional students. Schools that so choose are required to create procedures to govern the process of investigating and adjudicating the complaints filed.

- a. The school dean, or a designee, determines the composition of such a panel and the scope of the panel's authority, which will not exceed the parameters set out immediately below.
  - b. The panel has authority to impose or recommend appropriate sanctions to the school dean, including suspension or expulsion, if academic or professional misconduct is determined.
  - c. Appeals of decisions made by an academic and professional integrity panel of a school may be made to the school dean, whose decision is final. This includes decisions of a school's academic and professional integrity panel, where the panel is vested with such authority, and the panel's decision is to impose the sanctions of suspension or expulsion. Schools are permitted, but not required, to establish an intermediate level of appeal that must be completed before a final appeal to the dean.
  - d. Except for cases falling within the immediately preceding sub-bullet, any appeal from a decision of a dean of a school to suspend or expel a student will be made in accordance with the provisions of Section VI of the Code.
2. If a school does not establish an academic integrity officer or panel or if an established officer or panel fails to function, complaints of academic or professional misconduct against graduate or graduate professional students may be heard by Academic Integrity in the Office of the Provost, the Academic Integrity Board, or the Student Conduct Board.

Source: Washington University Student Conduct Code IVA.6

## International Travel

WashU is concerned with the health, safety, and security of all members of our community while they are traveling outside of the United States of America.

The WashU International Travel Policy has been adopted to ensure a consistent set of travel standards to be followed by all units of the university. The policy applies to all international travel that is sponsored by, that is funded in any part by, or that involves registered academic experiences at Washington University in St. Louis.

The full text of the International Travel Policy is available on the WashU Global website.

## Involuntary Leave

### Policy Statement

The primary goals of this Involuntary Leave Policy (“policy”) are to protect the well-being and safety of Washington University students and the university community and to preserve the integrity of the university's academic, residential and administrative functions.

An involuntary leave under this policy will not be invoked unless the student's behavior is of such a serious nature that the continued presence of the student at the university is judged to threaten the safety, well-being or health of that student and/or others in the WashU community, or the ability of that student or others to engage in customary functions and activities at the university.

Examples of circumstances where this policy may be invoked include: suicidal threats; self-starvation or purging behavior; substance abuse or addiction; threats of harm to self or others; or disturbing, disruptive or destructive behavior.

This policy is not intended to replace disciplinary actions taken in response to violations of other university policies, including the university Student Conduct Code (SCC). A student who commits a violation of any university policy before taking voluntary leave or being placed on involuntary leave may be required to defend such charges before being considered for re-admission. Temporary suspension may also be issued in accordance with the SCC and this policy.

## Policy Procedures

The vice chancellor for student affairs, the dean of any school or the designees of any of the aforementioned (referred to herein as "administrator") may be alerted to a student's concerning behavior from a variety of sources on campus including the student's advisor, a college dean, residential life staff, student affairs staff, health care providers or other faculty members. If the administrator deems it appropriate, the following procedures may be initiated.

1. **Notification:** Whenever possible, the administrator will notify the student that involuntary leave is under consideration and attempt to meet with the student to discuss his or her behavior. The administrator will provide the student with a copy of this policy. During the meeting, the administrator may choose to encourage the student to take a voluntary leave of absence, thereby eliminating the need to complete the procedures for involuntary leave. If the administrator believes that the student's well-being may be in imminent danger, he or she may proceed with a case conference without notifying and/or meeting with the student.
2. **Assembly of Case Conference Committee:** If the student is unable or chooses not to meet with the administrator, or if the student chooses not to take a voluntary leave of absence and the administrator still believes that involuntary leave may be appropriate, the administrator will convene a Case Conference Committee ("committee") of appropriate individuals or their designates to conduct a case conference regarding the need for an involuntary leave of absence. The committee may include the following:
  - The dean of the student's college or school
  - The assistant/associate vice chancellors for student affairs
  - Student conduct administrator
  - Director of the Student Health Center, Danforth Campus
  - Director of Counseling and Psychological Services
  - Assistant director of sorority and fraternity life
  - Executive director of Campus Life

- Chief of police
- Residential Life staff
- Director of the Office of International Students & Scholars
- Office of the General Counsel
- The student's advisor(s) or academic dean
- Professors, instructors, or staff who have observed the student's behavior of concern

3. **Committee Consideration:** The administrator should convene a Case Conference as soon as possible. During this conference, the committee should address whether and to what extent the student engages in, or is judged to be likely to engage in, behavior described in this policy. Where deemed necessary by the committee to facilitate a more informed recommendation, the committee may consult with other university administrators, faculty or staff familiar with the student. The committee may seek additional information from the student or enlist the assistance of other university faculty or staff members familiar with the student to consult with the student on behalf of the committee. If contacted, the student may refuse to provide information, but such refusal shall not limit the right of the committee to make a recommendation under this policy, nor limit the right of the university to mandate an involuntary leave.
4. **Committee Recommendation:** Following the Case Conference and the review of relevant information, the committee will make a written recommendation to the administrator. In lieu of recommending involuntary leave, the committee may make recommendations as to other conditions and/or requirements under which the student may remain at the university.
5. **Decision:** After review of the committee's recommendation, the administrator will decide whether to mandate an involuntary leave of absence, to mandate other requirements if the student remains at the university, or to permit the student to remain at the university with no additional requirements. The administrator will give the student written notice of this decision. This notice will provide (1) a brief summary of the reasons for decision, (2) the duration of the leave or a description of the requirements for the student to remain on campus, and (3) the steps that the student must take to request readmission if involuntary leave is invoked. The administrator may notify a parent or guardian, in accordance with the Family Educational Rights & Privacy Act ("FERPA"). Pursuant to FERPA, the administrator may also notify a spouse or partner upon obtaining the student's consent. Where an involuntary leave is mandated, the student must leave campus within the time frame established in the notice. In that event, the student's parent(s), guardian(s) or other persons may be asked to make arrangements for the safe removal of the student from the university community.

## Option of Voluntary Leave

At any time prior to the administrator's decision, the student may choose to take voluntary leave. The university expects students to notify family members when they voluntarily withdraw from the university. However, when permitted by FERPA, the university retains the discretion to notify parents, guardians, spouses or partners if the student chooses to leave.

## Records and Tuition

Leave may affect academic grades, credits and access to university housing or other facilities. Tuition, financial aid, and housing costs will be refunded in accordance with university policy. Regardless of whether leave is voluntary or involuntary, the student's status at the university will be updated in student systems to reflect a leave of absence, which includes a notation on the transcript indicating: "Leave of Absence" and the start date. When involuntary leave is not mandated, but a student is required to fulfill certain requirements to remain on campus, the student's in-progress status is unchanged and no notation will be made on the transcript.

## Safety and Security

In cases involving serious and imminent threat to the safety, well being or health of the student or other members of the campus community, or to the ability of others in the university community to conduct their customary university functions and activities, the administrator may take immediate action to remove the student from the university community. In such event, the administrator may immediately notify the student's parent, guardian, spouse, partner, or other relevant individuals in accordance with FERPA. The parent, guardian or other person may be asked to make arrangements for the safe removal of the student from the university community pending a decision on involuntary leave.

## Request for Re-Enrollment

When a student is placed on involuntary leave or accepts voluntary leave, a letter from the administrator to the student will outline the conditions for re-enrollment. Conditions for re-enrollment are at the discretion of the administrator. If the leave was for health or medical reasons, the administrator will work with the director of health services or his/her designate to formulate appropriate conditions of return, which may include requirements and/or guidance regarding treatment. A copy of this letter will be forwarded to the academic dean of the student's college or school and, where health-related, to the director of the Student Health Center.

When a student's voluntary or involuntary leave is not health-related, the procedures to request re-enrollment will be outlined in the administrator's letter.

The following process will guide re-enrollment for all students taking involuntary or voluntary leave of absence for a health-related reason:

1. The student must contact in writing both the academic dean and the director of the Student Health Center to request re-enrollment between June 1 and July 1 for the upcoming fall semester or November 1 and December 1 for the spring semester.
2. The student's health status must be reviewed by the director of the Student Health Center or his/her designate. As part of the review, the student may be asked to present written evidence that the student has been evaluated and completed follow-up measures recommended by the student's treating health care professional. This evidence may include a recitation of the health care professional's credentials, a description of their contact with the student, the evaluation method, the diagnosis, the recommended follow-up measures and the student's efforts to complete them. The student's efforts to complete those follow-up measures will be evaluated to determine whether the student used the time away from the university to address the issues that led to the separation and to acquire skills to facilitate a successful return to the university.
3. A recommendation regarding medical eligibility for re-enrollment will be made by the director of the Student Health Center or his/her designate and forwarded to the student's academic dean and the administrator. The academic dean, in consultation with the administrator, will determine academic eligibility for re-enrollment and will communicate in writing the final decision and any conditions to the student.

## Appeal of Administrator Decisions

A student may submit, within 24 hours of receiving the written decision from the administrator, a written appeal to the provost who will review the written record only. A decision to affirm or reverse the administrator's decision will be rendered within 48 hours. The decision of the administrator will be affirmed if supported by substantial information appearing in the record of the case. The decision of the provost is final.

## Confidentiality

The university will strive to protect, to the greatest extent possible, the confidentiality of students involved in matters of voluntary or involuntary leave. Because the university has an obligation to preserve the security of its community, the university cannot guarantee complete confidentiality where it would conflict with the university's obligation to investigate meaningfully matters which may threaten a student's health or safety or the safety and security of the university community. When some disclosure of the university's information or sources is necessary, that disclosure will be limited to the extent possible. Medical records of a student will be protected in accordance with the WashU Student Health Center Notice of Privacy Practices. The university will, to the extent permitted by law, keep confidential all records of committee reviews. The records maintained by the Case Conference Committee will be available only to the administrator.

and other university officials in accordance with FERPA. All records will be destroyed after a period of ten (10) years from the date of final decision on involuntary leave or the student's decision to take voluntary leave.

## Nondiscrimination Statement

Washington University encourages and gives full consideration to all applicants for admission, financial aid, and employment. The university does not discriminate in access to, treatment during, or employment in its programs and activities on the basis of race, color, national origin (including shared ancestry or ethnic characteristics), citizenship (where prohibited by federal law), age, religion, sex, sexual orientation, gender identity or expression, veteran status, disability, or genetic information.

## Policy on Discrimination and Harassment

Washington University is committed to having a positive learning and working environment for its students, faculty, and staff. University policy prohibits discrimination on the basis of race, color, age, religion, sex, sexual orientation, gender identity or expression, national origin (including shared ancestry or ethnic characteristics), citizenship (where prohibited by federal law), veteran status, disability, or genetic information. Harassment based on any of these classifications is a form of discrimination; it violates university policy and will not be tolerated. In some circumstances, such discriminatory harassment may also violate federal, state, or local law. A copy of the Discrimination and Harassment Policy is available on the Human Resources website.

## Conduct Prohibited by Title VI

Title VI of the Civil Rights Act of 1964 prohibits discrimination based on race, color, or national origin in programs that receive federal financial assistance. Discrimination on the basis of race, color, or national origin includes discrimination or harassment based on a person's actual or perceived 1) shared ancestry or ethnic characteristics; or 2) citizenship or residency in a country with a dominant religion or distinct religious identity (such as individuals who are Hindu, Jewish, Muslim, Buddhist, or Sikh). Such conduct is prohibited by the Discrimination and Harassment Policy.

## Sexual Harassment

Sexual harassment is a form of discrimination that violates university policy and will not be tolerated. It is also illegal under state and federal law. Title IX of the Education Amendments of 1972 prohibits discrimination based on sex (including sexual harassment and sexual violence) in the university's educational programs and activities. Title IX also prohibits retaliation for asserting claims of sex discrimination. The university has designated the Title IX Coordinator identified below to coordinate its compliance with and response to inquiries concerning Title IX.

For more information or to report a violation under the Policy on Discrimination and Harassment, please contact the following individuals:

## Discrimination and Harassment Response Coordinators

Apryle Gladney, Vice Chancellor and Chief Human Resources Officer  
Phone: 314-935-1252  
apryle.gladney@wustl.edu

Gillian Lawson, Director of Investigations, Office of Institutional Equity  
Phone: 314-935-1139  
oie-investigations@wustl.edu; gillian.boscan@wustl.edu

Office: The Link in the Loop  
Address: 621 N. Skinker Blvd., Suite 300, St. Louis, MO 63130

WashU University Reporting Hotline

## Title IX Coordinator

Jessica Kennedy, Director & Title IX Coordinator, Office of the Provost  
Phone: 314-935-3118  
jwkennedy@wustl.edu

Office: Umrath Hall, Room 001  
Address: One Brookings Drive, MSC 1175-0153-0B, St. Louis, MO 63130

Inquiries or complaints regarding civil rights may also be submitted to the United States Department of Education's Office of Civil Rights at 400 Maryland Avenue, SW, Washington, DC 20202-1100; by visiting the U.S. Department of Education website; or by calling 800-421-3481.

## Student Academic Records and Transcripts

Under the Family Educational Rights and Privacy Act of 1974 (FERPA) — Title 20 of the United States Code, Section 1232g, as amended — current and former students of the university have certain rights with regard to their educational records. Washington University's FERPA policy is available via the Office of the University Registrar's website.

All current and former students may request official Washington University transcripts of their academic records from the Office of the University Registrar. Current students may print unofficial transcripts for their personal use from Workday. Instructions and additional information are available on the Office of the University Registrar's website.

Washington University does not release nor certify copies of transcripts or other academic documents received from other schools or institutions. This includes test score reports and transcripts submitted to Washington University for purposes of admission or evaluation of transfer credit.

Academic records may not be altered after degree conferral, at which time records are considered closed or sealed.

## Student Conduct

The Washington University in St. Louis Student Conduct Code (“the Code”) sets forth community standards and expectations for university students. These community standards and expectations are intended to foster an environment conducive to working, learning, and inquiry. Each student is held to the expectations outlined in the Code.

Freedom of thought and expression as well as respect for different points of view are essential to the university’s academic mission. Nothing in the Code should be construed to limit the lawful, free, and open exchange of ideas and viewpoints, even if that exchange proves to be offensive, distasteful, or disturbing to some. However, such speech must conform to university policies.

The Code also describes general procedures that may be used to ensure that these standards and expectations are upheld by all students. The university is committed to ensuring that students adhere to university policies, take responsibility for their actions, and recognize how their choices may affect others.

Complaints against students that include allegations of sex-based discrimination — including sexual harassment, sexual assault, dating violence, domestic violence and stalking — in violation of the Student Conduct Code are governed by the procedures found on the Gender Equity and Title IX Compliance Office website. These procedures are also available in hard copy from the Title IX Coordinator or the director of the Office of Student Conduct and Community Standards.

Students may be accountable to both governmental authorities and to the university for acts that constitute violations of law and the Student Conduct Code.

For a complete copy of the Student Conduct Code, visit the Student Affairs website.

For more information, visit the Student Conduct and Community Standards website.

## Student Financial Responsibility

### Communication

Washington University in St. Louis uses University-assigned email accounts and University-supported systems for communication with students and authorized users. Washington University will also contact students via personal email addresses, cellular phone numbers, or wireless devices from time to time regarding the Student Account or other general information. Students are responsible for reading University communications in a timely manner.

### Promise to Pay

When students register for any course at or receive any service from Washington University in St. Louis, they accept full responsibility to pay all tuition, fees, and other associated charges assessed as a result of registration and/or receipt of services such as housing, dining, and other University-provided items that exceed financial support provided by the University, the University payment plan, and/or third parties by the scheduled due dates shown on the WebSTAC student account. Failure to attend class or receive a bill does not absolve students of financial responsibility as described above.

### Failure to Pay

University policies regarding Student Accounts (including payment options, late fees, holds, and refunds) are published on the University’s Financial Services website. If a student fails to pay the Student Account balance by the scheduled due dates, the University will place a financial hold preventing the student from registering for future courses and could assess a late fee on the past due portion until the past due amount is paid in full. Failure to pay will result in a Delinquent Student Receivable Account. Delinquent Student Accounts will be referred to University’s Collection Services department. Collection Services may report the Delinquent Student Account to one or more national credit bureaus, refer the Delinquent Student Account to a third-party collection agency, and pursue all legal and equitable remedies to collect the monies owed to the University.

## Student Health

### Drug and Alcohol Policy

Washington University is committed to maintaining a safe and healthy environment for members of the university community by promoting a drug-free environment as well as one free of the abuse of alcohol. Violations of the Washington University Drug and Alcohol Policy will be handled according to existing policies and procedures concerning the conduct of faculty, staff, and students. This policy is adopted in accordance with the Drug-Free Workplace Act and the Drug-Free Schools and Communities Act.

### Tobacco-Free Policy

Washington University is committed to providing a healthy, comfortable and productive work and learning environment for all students, faculty, and staff. Research shows that tobacco use in general, including smoking and breathing secondhand smoke, constitutes a significant health hazard. The university strictly prohibits all smoking and other uses of tobacco products within all university buildings and on university property, at all times. A copy of our complete Tobacco-Free and Smoke-Free Policy is available on the Washington University Human Resources website.

## Medical Information

Entering students in Danforth Campus programs must provide medical information to the Student Health Center – Danforth Campus. This will include the completion of a health history and a record of all current immunizations.

If students fail to comply with these requirements prior to registration, they must obtain the required vaccinations and tests at the Student Health Center – Danforth Campus or in the community. Students will be assessed the costs of the vaccinations and/or tests. Students will be unable to complete registration for classes until all health requirements have been satisfied.

Noncompliant students may be barred from classes and from all university facilities, including housing units, if in the judgment of the university their continued presence would pose a health risk to themselves or to the university community.

Medical and immunization information is to be given via the student health portal on the Student Health Center – Danforth Campus website. All students who have completed the registration process should access the student health portal on the website. Students should fill out the form and follow the instructions for transmitting it to the Student Health Center – Danforth Campus. Student information is treated securely and confidentially.

Entering students in Medical Campus programs must follow the requirements as outlined on the WashU Medicine Student Health Services website.

## Student Status: Expulsion and Dismissal

The terms *expulsion* and *dismissal* are used to indicate distinct types of involuntary separation of a student from the university or from their program of study.

- *Expulsion* refers to a permanent removal from the university. A student who is expelled is not eligible to return to a prior program of study nor to enter a new program of study.
- *Dismissal* refers to a permanent separation from a specific program of study or school. A student may apply to begin a different program of study and may or may not be admitted according to the standards and practices of that program or school.

## Time Away and Reinstatement

Degree-seeking students may be eligible to request a leave of absence for health or other personal reasons (e.g., family, military service, professional obligations, religious mission). The mechanism and process are described on the Office of the University Registrar's website. Such leaves may exceed no more than two years from the effective date of the leave; individual programs' policies may limit

students to shorter leaves. Students must verify their school and program policies and any other relevant requirements related to immigration or financial aid/support policies. Students who have not requested and received approval for reinstatement after two years will have their records withdrawn.

Required enrollment reporting to the federal government will reflect a leave of absence for 180 days after it is enacted; any longer duration of institutional leave is recorded in their systems as a withdrawal.

Students on approved leave of absence will retain access to their Washington University email addresses, and to Workday to review their records. Access to other University privileges such as recreation facilities and libraries as well as participation in activities are paused during a leave of absence.

Students are expected to request reinstatement to in-progress status to resume studies via the process outlined on the Office of the University Registrar's website. Depending on the nature of their leave, additional steps or documentation may be required and must be provided to appropriately consider the request. Students whose records have been withdrawn as a result of two years of inactivity may be allowed, depending on program-specific policies regarding the maximum time allowed to complete the program of study, to request to re-enter their programs. In these cases, additional items may be required of the student depending on the circumstances, the length of time away, and whether their program of study has undergone curricular revisions since their enrollment.

## Undergraduate Student Academic Integrity

Effective learning, teaching, and research all depend upon the ability of members of the academic community to trust one another and to trust the integrity of work that is submitted for academic credit or conducted in the wider arena of scholarly research.

Such an atmosphere of mutual trust fosters the free exchange of ideas and enables all members of the community to achieve their highest potential.

In all academic work, the ideas and contributions of others must be appropriately acknowledged, and the work of a student that is presented as original must be, in fact, original. Faculty, students, and administrative staff all share the responsibility of ensuring the honesty and fairness of the intellectual environment at Washington University in St. Louis.

## Scope and Purpose

This statement on academic integrity applies to all undergraduate students at Washington University. Graduate students may be governed by policies in each graduate school or division. To the extent a graduate school or program has not adopted its own academic integrity policy, the provisions of this policy will apply. All students are expected to adhere to the highest standards of behavior.

The purpose of the statement is twofold:

1. To clarify the university's expectations with regard to undergraduate students' academic behavior; and
2. To provide specific examples of academic misconduct (the examples are only illustrative, *not* exhaustive).

This policy and statement were endorsed by the Faculty Senate Council. Any changes to the policy are to be reviewed by the Faculty Senate Council, as described in the Faculty Senate Council bylaws.

## **Violations of This Policy Include but Are Not Limited to the Following:**

### **1. Plagiarism**

Plagiarism consists of taking someone else's ideas, words or other types of work product, and presenting them as one's own. To avoid plagiarism, students are expected to be attentive to proper methods of documentation and acknowledgement. To avoid even the suspicion of plagiarism, a student must always:

- Enclose every quotation in quotation marks and acknowledge its source.
- Cite the source of every summary, paraphrase, abstraction or adaptation of material originally prepared by another person and any factual data that is not considered common knowledge. Include the name of author, title of work, publication information and page reference.
- Acknowledge material obtained from lectures, interviews or other oral communication by citing the source (name of the speaker, the occasion, the place and the date).
- Cite material from the internet or material generated by an artificial intelligence as if it were from a traditionally published source. Follow the citation style or requirements of the instructor for whom the work is produced.

### **2. Cheating on an Examination**

A student must not receive or provide any unauthorized assistance on an examination. During an examination, a student may use only materials authorized by the faculty.

### **3. Copying or Collaborating on Assignments Without Permission**

When a student submits work with their name on it, this is a written statement that credit for the work belongs to that student alone. If the work was a product of collaboration, each student is expected to clearly acknowledge in writing all persons or artificial intelligences who contributed to its completion.

Unless the instructor explicitly states otherwise, it is dishonest to collaborate with others when completing any assignment or test, performing laboratory experiments, writing and/or documenting computer programs, writing papers or reports, and completing problem sets.

If the instructor allows group work in some circumstances but not others, it is the student's responsibility to understand the degree of acceptable collaboration for each assignment and to ask for clarification if necessary.

To avoid cheating or unauthorized collaboration, a student should never:

- Use, copy, or paraphrase the results of another person's work or material generated by an artificial intelligence and represent that work as their own, regardless of the circumstances.
- Refer to, study from, or copy archival files (e.g., old tests, homework, solutions manuals, or backfiles) that were not approved by the instructor.
- Copy another's work or to permit another student to copy their work.
- Submit work as a collaborative effort if they did not contribute a fair share of the effort.

### **4. Fabrication or Falsification of Data or Records**

It is dishonest to fabricate or falsify data in laboratory experiments, research papers, reports or in any other circumstances; to fabricate source material in a bibliography or "works cited" list; or to provide false information on a résumé or other document in connection with academic efforts. It is also dishonest to take data developed by someone else and present them as one's own.

Examples of falsification include:

- Altering information on any exam, problem set, or class assignment being submitted for a re-grade.
- Altering, omitting, or inventing laboratory data to submit as one's own findings. This includes copying laboratory data from another student to present as one's own; modifying data in a write-up; and providing data to another student to submit as their own.

### **5. Other Forms of Deceit, Dishonesty, or Inappropriate Conduct**

Under no circumstances is it acceptable for a student to:

- Submit the same work, or essentially the same work, for more than one course without explicitly obtaining permission from all instructors. A student must disclose when a paper or project builds on work completed earlier in their academic career.
- Request an academic benefit based on false information or deception. This includes requesting an extension of time, a better grade or a recommendation from an instructor.
- Make any changes (including adding material or erasing material) on any test paper, problem set or class assignment being submitted for a re-grade.
- Willfully damage the efforts or work of other students.
- Steal, deface, or damage academic facilities or materials.
- Collaborate with other students planning or engaging in any form of academic misconduct.

- Submit any academic work under someone else's name other than their own. This includes but is not limited to sitting for another person's exam; both parties will be held responsible.
- Violate any rules or conditions of test-taking or other course assessment (e.g., bringing materials or devices into an exam room when disallowed).
- Engage in any other form of academic misconduct not covered here.

This list is not intended to be exhaustive. To seek clarification, students should ask the professor or teaching assistant for guidance.

## Reporting Misconduct

### Faculty Responsibility

Faculty and instructors are strongly encouraged to report incidents of student academic misconduct to the academic integrity coordinators in the Office of the Provost in a timely manner (normally within five business days of discovery) so that the incident may be handled fairly and consistently across schools and departments. Teaching assistants and assistants in instruction are expected to report instances of student misconduct to their supervising instructors. Faculty members are expected to respond to student concerns about academic integrity violations in their courses.

### Student Responsibility

If a student observes others violating this policy, they are strongly encouraged to report the misconduct to the instructor, to seek advice from the academic integrity coordinator in the Office of the Provost, or to address the student(s) directly.

### Exam Proctor Responsibility

Exam proctors are expected to report incidents of suspected student misconduct to the course instructor and/or the Disability Resources staff, if applicable.

## Procedure

### Jurisdiction

This policy covers all undergraduate students, regardless of their college of enrollment, as well as graduate and professional students whose schools and programs do not have a separate policy and procedure. Cases will be heard by a panel drawn from an Academic Integrity Board made up of faculty and students representing the undergraduate schools and participating graduate programs.

## Student Rights and Responsibilities in a Hearing

A student accused of an academic integrity violation, whether by a professor, teaching/graduate assistant, academic integrity coordinator or student is entitled to:

- A presumption of non-responsibility unless and until a panel determines that, based upon the evidence, it is more likely than not that the student engaged in a violation of academic integrity under this policy.
- Request a mediation/facilitation session prior to a hearing.
- Review the written evidence in support of the charge.
- Ask relevant questions.
- Offer an explanation as to what occurred.
- Present relevant material that would cast doubt on the correctness of the charge.
- Determination of the validity of the charge by an unbiased and objective panel and generally without reference to any past record of misconduct.

When responding to a charge of an academic integrity violation, a student may:

- Deny the charges and request a hearing in front of an Academic Integrity Board panel.
- Admit the charges and request a hearing to determine recommended sanction(s).
- Admit the charges and accept the imposition of sanctions by the academic integrity coordinator without a committee hearing.
- Request a leave of absence from the university. The academic integrity matter must be resolved prior to re-enrollment. A notation will be placed on the student's transcript indicating there is an unresolved academic integrity matter pending.
- Request to withdraw permanently from the university with a transcript notation that there is an unresolved academic integrity matter pending.

A student has the following responsibilities in resolving the charge of academic misconduct:

- Admit or deny the charge. This will determine the course of action to be pursued.
- Provide truthful information regarding the charges. It is a student code violation to provide false information to the university or anyone acting on its behalf.

## Sanctions

### If Found *Not* in Violation of the Academic Integrity Policy

If the charges of academic misconduct are not proven, no record of the allegation will appear on the student's transcript.

## If Found in Violation of the Academic Integrity Policy

If, after a hearing, a student is found responsible for violation of the academic integrity policy or if a student has admitted to the charges prior to a hearing, the academic integrity coordinator may impose sanctions, including but not limited to the following:

- Issue a formal written reprimand.
- Impose educational sanctions, such as completing a workshop on plagiarism or academic ethics.
- Recommend to the instructor that the student fail the assignment. (A grade is ultimately the prerogative of the instructor.)
- Recommend to the instructor that the student fail the course.
- Recommend to the instructor that the student receive a course grade penalty less severe than failure of the course.
- Place the student on disciplinary probation for a specified period of time or until defined conditions are met. The probation will be noted on the student's transcript and internal record while it is in force.
- Impose suspension or expulsion.

Additional educational sanctions may be imposed. This list is not intended to be exhaustive.

A hearing panel may also elect to refer their recommended sanctions to the SCB Chairperson for determination if, for example, the recommendation departs from their standard recommendations.

Withdrawing from the course will not prevent the academic integrity coordinator or hearing panel from adjudicating the case, imposing sanctions, or recommending grade penalties, including a failing grade in the course.

A copy of the sanction letter will be placed in the student's academic file and may be reported in accordance with the Policy on Reporting of Student Conduct Violations.

## Appeals

If a student believes the panel did not conduct a fair hearing or if a student believes the sanction imposed is excessive (i.e., suspension or expulsion), they may seek an appeal within 14 days of the original decision. For cases in which the decision resulted in suspension or expulsion, the appellate officer will be the Vice Provost of Educational Initiatives or the Vice Provost for Graduate Education. For all other cases, the appellate officer will be the Chair of the Student Conduct Board. Appeals are governed by Section VI of the university Student Conduct Code.

## Administrative Record-Keeping Responsibilities

It is the responsibility of the academic integrity coordinators to keep accurate, confidential records concerning academic integrity violations. When a student has been found responsible for an academic integrity violation, a letter summarizing the allegation, the outcome, and the sanction will be placed in the student's official conduct file and may be reported out in accordance with the Policy on Reporting of Student Conduct Violations.

In addition, a report of the outcome of every formal accusation of student academic misconduct will be shared with the director of university student conduct programs, who shall maintain a record of each incident.

## Multiple Offenses

When a student is formally accused of academic misconduct and a hearing is to be held, the academic integrity coordinator shall query the Office of Student Conduct and Community Standards (OSCCS) about the student(s) accused of misconduct. OSCCS shall provide any information in the OSCCS records concerning prior code violations of that student to the integrity coordinator. Such information will be used in determining sanctions if the student is found responsible for an academic integrity violation in the present case. Evidence of past misconduct generally may not be used to resolve the issue of whether a student has committed a violation in a subsequent case unless the hearing chair deems it relevant.

## Reports to Faculty and Student Body

Periodic (at least annual) reports will be made to the students and faculty of their school concerning accusations of academic misconduct and the outcomes, without disclosing specific information that would allow identification of the student(s) involved.

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*Endorsed by the Faculty Senate Council on March 16, 2010  
Effective July 1, 2010  
Updated December 4, 2014*

*Endorsed by the Faculty Senate Council on October 18, 2023  
Updated April 18, 2024*

# University Affiliations

The accrediting organizations and memberships of the different areas of Washington University are listed below.

Additional information about professional and specialized accreditation can be found on the Office of the Provost website.

## Washington University in St. Louis

### Accreditation

- Higher Learning Commission

### Memberships

- American Academy of Arts & Sciences
- American Association of Colleges & Universities
- American Council of Learned Societies
- American Council on Education
- Association of American Universities
- Hispanic Association of Colleges and Universities
- Independent Colleges and Universities of Missouri
- National Association of Independent Colleges and Universities
- National Council for State Authorization Reciprocity Agreements
- Universities Research Association

## College of Arts & Sciences

### Memberships

- American Academy of Physician Associates
- American Camp Association
- Association for Pre-College Program Directors
- Association of University Summer Sessions
- Diversity Abroad
- Forum on Education Abroad
- Higher Education Protection Network
- International Center for Academic Integrity
- International Educational Exchange
- Midwest Association of Pre-Law Advisors
- National Academic Advising Association
- National Association of Advisors for the Health Professions
- National Association of Fellowships Advisors
- North American Association of Summer Sessions
- Professional and Organizational Development Network

## Office of Graduate Studies, Arts & Sciences

### Accreditation — Office of Graduate Studies

- American Psychological Association Commission on Accreditation
- Psychological Clinical Science Accreditation System

### Memberships

- American Academy of Physician Associates
- Association of Graduate Schools  
(Founding member)
- Council of Graduate Schools  
(Founding member)
- Midwest Association of Pre-Law Advisors
- Pod Network
- Student Affairs Administrators in Higher Education
- The Council of Independent Colleges

## Sam Fox School of Design & Visual Arts

### Accreditation — College of Art

- National Association of Schools of Art & Design  
(Founding member)

### Accreditation — College of Architecture

- Master of Architecture: National Architectural Accrediting Board
- Master of Landscape Architecture: Landscape Architectural Accreditation Board

### Membership — College of Architecture

- Association of Collegiate Schools of Architecture

### Accreditation — Mildred Lane Kemper Art Museum

- American Alliance of Museums

## Membership — Mildred Lane Kemper Art Museum

- Association of Academic Museums and Galleries
- Association of Art Museum Directors
- College Art Association

## Olin Business School

### Accreditation

- Association to Advance Collegiate Schools of Business International  
(Charter member since 1921)

## McKelvey School of Engineering

### Accreditation

- In the McKelvey School of Engineering, many of the undergraduate degree programs are accredited by the Engineering Accreditation Commission of ABET.

### Membership

- American Society for Engineering Education

## School of Law

### Accreditation

- American Bar Association

### Memberships

- American Association of Law Libraries
- American Society of Comparative Law
- American Society of International Law
- Association of Academic Support Educators
- Association of American Law Schools
- Central States Law Schools Association
- Clinical Legal Education Association
- Equal Justice Works
- Mid-America Association of Law Libraries
- Mid-America Law Library Consortium

- National Association for Law Placement
- National Association of Law Student Affairs Professionals
- Southeastern Association of Law Schools

## School of Medicine

### Accreditation

- American Speech-Language-Hearing Association, Council on Academic Accreditation in Audiology and Speech-Language Pathology (ASHA CAA)
- Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC)
- Liaison Committee on Medical Education
- Council on Education of the Deaf (CED)
- Missouri Department of Elementary and Secondary Education (DESE)
- American Occupational Therapy Association, Accreditation Council for Occupational Therapy Education (ACOTE)
- American Physical Therapy Association, Commission on Accreditation in Physical Therapy Education (CAPTE)
- Accreditation Council for Genetic Counseling (ACGC)
- Accreditation Council for Continuing Medical Education (ACCME)
- Accreditation Council for Pharmacy Education (ACPE)
- American Nurses Credentialing Center (ANCC)
- Association of Regulatory Boards of Optometry's Council on Optometric Practitioner Education (ARBO/COPE)
- Joint Accreditation for Interprofessional Continuing Education
- Accreditation Council for Graduate Medical Education (ACGME)

### Membership

- Association of American Medical Colleges

## School of Public Health

### Accreditation

- Council on Education for Public Health

### Affiliation

- Association of Schools and Programs of Public Health

## Brown School

### Accreditation

- Council on Social Work Education

## School of Continuing & Professional Studies

### Memberships

- American Association of Collegiate Registrars and Admissions Officers
- Council for Adult and Experiential Learning
- International Center for Academic Integrity
- National Academic Advising Association
- National Association of Student Personnel Administrators
- University Professional and Continuing Education Association

**Note:** Business-related programs in the School of Continuing & Professional Studies are not accredited by the Association to Advance Collegiate Schools of Business International.

## University Libraries

### Membership

- Association of Research Libraries



## Graduate Policies

Please expand the sections below for more information about WashU's graduate policies and guidelines.

### Academic Load Status for Financial Aid, Immigration, and Enrollment Verification

#### Graduate (Fall, Spring)

| Status              | Enrolled Units of Credit |
|---------------------|--------------------------|
| Full time           | 9+ units                 |
| Half time           | 4.5-8.99 units           |
| Less than half time | Fewer than 4.5 units     |

#### Graduate (Summer)

| Status              | Enrolled Units of Credit |
|---------------------|--------------------------|
| Full time           | 6+ units                 |
| Half time           | 3-5.99 units             |
| Less than half time | Fewer than 3 units       |

Certain courses may, due to appropriate curriculum and monitoring circumstances, be encoded to carry a load value higher than the actual academic credit awarded. Examples include certain engineering co-op experiences, doctoral research study and select clinical or practicum courses.

### Registration in Courses

Registration dates are published in advance on the Office of the University Registrar's website. Late registration after the term begins is permitted only until the "add/drop" deadline relevant to a student's program. Students will not earn credit for courses in which they are not duly registered. Students may not register in courses that have conflicting meeting times.

Students may drop a course by the published deadline found on the Office of the University Registrar's website; dropped courses do not appear on the permanent academic record, and no grade is recorded. Students may withdraw from a course after the drop deadline and until the published withdrawal deadline. A withdrawal will result in a W notation associated with the course on the permanent record, including the transcript. Students who wish to drop or withdraw from a course are expected to follow steps to do so by the appropriate deadline. Failure to drop a course or withdraw by the published deadline may result in a failure of the course, and the transcript will reflect the failing grade.

### Transfer Credit

Transfer credit is recorded on a student's permanent record. Courses transferred from other institutions of higher education do not have grades or grade points awarded and therefore do not apply toward a student's GPA.

Institutionally, Washington University participates in the Inter-University Exchange Program (p. 180). Courses taken at Saint Louis University and the University of Missouri–St. Louis, according to the parameters documented, are approved to transfer to Washington University. The School of Law has a specific agreement in place with Saint Louis University for JD students only and under certain circumstances. Other transfer credit policies vary by school and program. Details may be found in the relevant academic sections of this *Bulletin*.

### Tuition and Cost of Attendance

The cost of a Washington University education varies by school and, in some cases, by program. Tuition rates and fees are available through the Office of Financial Planning and Budget and are typically listed in greater detail (including fees and financial support options and procedures) on school websites.

### Withdrawals and Refunds

If a student withdraws from Washington University after classes have begun, they must promptly file a request to withdraw in order to have appropriate registration and refund policies apply. These timelines vary by school and, in some cases, by program. Students should refer to the appropriate sections of this *Bulletin* for details.

# University PhD Policies & Requirements

## Academic PhD Programs

The following university-wide policies and practices apply to all PhD students regardless of school affiliation. They are specific to PhD program administration and PhD student experience. Schools/divisions may set stricter standards for students within their ambit, but they may not set standards that fall below university-wide policies. This page *does not* include those policies and practices that apply to the student community as a whole (e.g., the University Student Conduct Code).

## Academic and Professional Integrity for PhD Students

The Academic and Professional Integrity Policy for PhD Students (PDF) continues to apply to all PhD students on the Danforth and Medical campuses, including dual-degree students when one of the degree programs is a PhD program.

## Involuntary Leave of Absence

The Involuntary Leave of Absence Policy that applies to undergraduates was adopted to apply to all PhD students in 2014.

## PhD Student Support Policies and Resources

### New Child Leave

Full-time PhD students may request a New Child Leave to assume care for a new child. They should maintain their full-time student status. Students on New Child Leave are not expected to participate in mentored teaching or research experience for up to 60 consecutive calendar days (8 weeks) and will receive their current stipend support during this 60-day period. Students may request additional time off via a leave of absence without receiving a stipend (for up to a full semester) if approved by the student's department/program.

New Child Leave does not affect the student's full-time status and will not appear on the student's official transcript. New Child Leave must be taken within the first year after the child's date of birth or adoption. Students should contact their department/program to request a New Child Leave. Students who receive support from external agencies should consult the policies and guidelines of the sponsor as well as their Vice Dean or designee before requesting a New Child Leave.

## Child Daycare Subsidy

The Child Daycare Subsidy is sponsored by WashU, and its purpose is to help PhD students with children under their care (who meet the requisite eligibility criteria) to meet the costs of child daycare while they pursue their studies.

The amount of the Child Daycare Subsidy awarded to eligible applicants is based on their financial need, the number of children they have enrolled in child daycare facilities, their child daycare expenses, and available funding. Eligible PhD students can expect the following:

- For one child, the maximum award is \$3,550 per Fall/Spring semester.
- For two children, the maximum award is \$4,550 per Fall/Spring semester.
- For three or more children, the maximum award is \$5,550 per Fall/Spring semester.

The subsidy amount cannot exceed the cost of the daycare facility.

The application is available on the Office of the Provost website.

## Financial Policies

### PhD Student Minimum Financial Award

The education of PhD students represents a significant commitment on the part of both WashU and the students admitted/enrolled. WashU typically funds most full-time PhD students for a minimum of five years (with the exception of post-professional PhD programs in the School of Medicine). Funding typically consists of full tuition scholarship and financial support to defray living expenses. Financial support may also be referred to as stipends or fellowships. Such financial support may be sourced internally from university-wide fellowships such as the Olin Chancellor's Fellowship (OCF), the McDonnell International Scholars Academy (p. 99), or school/program/department funds or from external sources (e.g., external research contracts and grants, external fellowships such as NSF GRFP).

The minimum PhD financial support rate for the 2026-27 academic year is \$37,853 annually, dispersed on a monthly basis while the student is enrolled full time. The rate applies to all PhD programs with the exception of post-professional specialty programs in the School of Medicine. Departments, schools, cross-school interdisciplinary programs, and other fellowship programs may choose to offer a rate higher than the established minimum, but they must do so for all students in their cohort. The eligibility criteria for PhD students receiving such financial support are outlined in the PhD Student Funding section below.

Students admitted to a part-time PhD program or on a part-time basis are not eligible for this minimum financial award.

## PhD Student Funding

Financial support at or above the university-wide PhD minimum stipend rate allows PhD students to focus on their programmatic requirements, enabling them to make expeditious progress toward degree completion. This section predominantly pertains to PhD students, but it may apply to other graduate and professional students receiving financial support from the university.

## Eligibility and Status

Students receiving university financial support must do the following:

- Enroll and maintain full-time student status in a graduate or professional program during the academic year;
- Make satisfactory academic progress in accordance with their degree program requirements; and
- Report to their degree program and university fellowship program (if applicable) any additional financial award(s) they receive or employment they engage in as outlined in this policy.

Because graduate students sometimes receive funding from multiple sources, it is the responsibility of the student, the student's department/degree program, and the Principal Investigator (if applicable) to understand and abide by the terms and conditions of each funding source.

## Funding From Multiple Sources

Eligible students are encouraged to seek additional fellowships from external agencies. In addition to the funding amount, which can be more generous than that of a university financial award, these external fellowships are prestigious; they provide valuable training, experiences, and resources, and they enhance future career opportunities. In addition, securing external funding to support training and research is often an important component of the professional development of graduate students.

PhD students receiving university financial support who also receive an external fellowship or stipendiary award *may not* combine or "stack" the external award with the university financial support.\* Students receiving an external fellowship or stipendiary award have two options.

### Option 1: Supplementation of an External Fellowship or Stipendiary Award

If the sum of all external fellowship or stipendiary awards is less than the university financial support, the university funds may supplement the total amount of external funding to bring the student up to their guaranteed university fellowship or to the minimum university financial support for PhD students.

Students who receive external fellowship or stipendiary awards providing annual stipends that total more than the university financial support will retain the full external award(s) and will receive no additional university financial support for the duration of the external award.

- *Example One:* A student has a university award of \$38,000. The student receives a \$34,000 external award; the university will supplement the external award by \$4,000 to bring the student up to their university award of \$38,000.
- *Example Two:* A student has a university award of \$38,000. The student receives an external foundation award of \$42,000. Since the external award is greater, no university funds will be distributed while the student is supported by the external award.

### Option 2: Deferral of University Fellowship or Stipendiary Award

Students receiving an external fellowship or stipendiary award during years one through five of study may, with program approval, defer up to one year of the university fellowship or stipendiary award made at the time of admission, if permissible based upon the award criteria from the external funding agency.

The university fellowship program and/or the student's home department or program can assist students when considering the benefits of each option. For cases in which a student has access to multiple sources of funding, external funds must be used before university funds are applied. University, school, and degree program funds will be the last source of funds to be applied to a student's financial support.

Schools and departments/programs may choose to offer an additional financial incentive to students who are awarded competitive external funding. Any such incentives must be uniformly awarded to all qualifying students within a degree program. Incentive awards given by school or degree programs to students who win external awards do not count toward the total university financial support; these incentive awards are in addition to the fellowship or stipendiary award.

All financial support will be applied in accordance with the terms and conditions of each funding source. In consultation with the student, departments/programs should ensure financial support is dispersed in the correct amount and in accordance with applicable policy.

\* Limited exceptions may occur for instances in which the external award is explicitly contingent on the continuation of the university stipendiary award. In such instances, the decision on stacking is at the discretion of the school dean or their designee for support provided by the school or by a cross-school interdisciplinary program and at the discretion of the fellowship administrator for university-wide fellowships (e.g., OCF, MISA).

## PhD Student Employment

### Full-Time Employment

University financial support that is provided at or above the university-wide PhD minimum stipend rate is intended to enable students to focus exclusively (i.e., full time) on their studies. Students who receive university financial support at or above the university-wide minimum PhD stipend rate are not permitted to hold full-time employment.

Students who perform full-time employment during the summer term will have their university fellowship or stipendiary award stopped for the duration of their full-time employment. Students are also subject to any school or program-based policies regarding employment, which may be more restrictive. Students should consult their school and degree program for approval.

### Part-Time Employment

To ensure that students receiving university financial support can focus on their programmatic requirements and make expeditious progress toward degree completion, part-time employment should not exceed an average of 10 hours per week. This allowance may be restricted by schools/departments/programs to a smaller number of hours per week to conform with a student's funding source policies and with federal time and effort reporting guidelines (as applicable).

If a student and that student's advisor(s) believe that additional part-time employment will enhance the student's outcomes and is unlikely to hinder timely progress toward degree completion, the student may request approval for an exception through their school's graduate program office. Any such exceptions will be documented and kept on file in the school. For students supported on federal grants, it is the school's responsibility to ensure adherence to any constraints derived from time and effort reporting.

To reiterate, students are also subject to any school or department/program-based policies regarding employment, which may be more restrictive. Students should consult their school and degree program for approval prior to undertaking any part-time employment.

### Implications for International Students

International students attending WashU on a visa must consult with the Office for International Students and Scholars (OISS) before accepting any external or internal employment, either full-time or part-time.

### Tax Implications

Please visit WashU's Financial Services website for more information about the taxability of stipend payments. Students are encouraged to consult a personal tax advisor to ensure that they are adhering to federal and state laws and Internal Revenue Service (IRS) regulations.

## PhD General Requirements and Policies

To earn a PhD at WashU, a student must complete all courses required by their department/program; maintain satisfactory academic progress; pass certain examinations; fulfill residence and mentored experience requirements; write, defend, and submit a dissertation; and file an Intent to Graduate in Workday Student. **Note:** Individual schools and departments/programs may have more restrictive policies than the university-wide policies stated herein.

### Residence Requirement

Each full-time PhD student must spend at least one academic year enrolled full-time at Washington University in St. Louis. Any exceptions must be approved by the dean of the student's respective school and the Vice Provost for Graduate Education.

Students admitted to a part-time PhD program must be enrolled in at least 3 units for each Fall/Spring semester until the unit requirements for their program are satisfied

### Time Limit for PhD Enrollment Eligibility

Full-time PhD students are eligible for enrollment at Washington University in St. Louis for a maximum of 14 Fall/Spring semesters (seven years). Enrollment includes traditional course registration and 0-unit courses that carry a full-time enrollment status. Semesters of approved leaves of absence do not count toward this time limit.

Students admitted to a part-time PhD program are eligible for enrollment at Washington University in St. Louis for 18 Fall/Spring semesters (nine years). Semesters of approved leaves of absence do not count toward this time limit.

Full-time PhD students and those admitted to part-time PhD programs may petition for an enrollment eligibility extension for a maximum of one academic year. Petitions must be directed to the student's dean or their designee. Supplemental petitions will not be permitted. In unusual circumstances, the dean or their designee may appeal to the Vice Provost for Graduate Education on behalf of a particular student.

### Qualifying Examinations

Progress toward the PhD is contingent upon the student passing examinations that are variously called *preliminary*, *qualifying*, *general*, *comprehensive*, or *major field exams*. The qualifying examination process varies considerably according to the department/program, and the structure and schedule of the qualifying exam are set by the department/program in accordance with best practices within their field. The department/program is responsible for documenting the process properly and ensuring the process is clearly outlined to their students. Each PhD program is responsible for notifying the school registrar or the appropriate record custodian of the student's outcome, whether successful or unsuccessful.

## Mentored Experience Requirement

As part of the university-wide degree requirements, PhD students and some master's students (i.e., MFA in Writing and MFA in Dance) at WashU must complete a department-/program-defined Mentored Experience Requirement (MER). The MER is an accomplishment that is noted on the student's academic record when complete. Each department/program established a Mentored Experience Implementation Plan (MEIP) in which required MER units and pathways for completion are defined and specified. The MEIP typically consists of Mentored Teaching Experiences (mentored activities designed to achieve competencies in teaching at basic and advanced levels) and/or Mentored Professional Experiences (mentored activities focused on the development of skills relevant to individual, intended career and professional outcomes). Students enroll in Mentored Teaching Experience courses and/or Mentored Professional Experience courses to signify progression toward completing the MER.

## Dissertation

As evidence of the mastery of a specific field of knowledge and of the capacity for original scholarly work, each candidate must complete a dissertation. Each PhD candidate will form a Research Advisory Committee (RAC) approved by their department/program and by their school's graduate program oversight body. The RAC will approve the subject and approach of the dissertation, which will be evidenced by the student's completion of the Title, Scope and Procedure requirement.

The RAC should consist of at least three full-time Washington University in St. Louis faculty members who are authorized to supervise PhD students and who have appropriate expertise in the proposed field of study. One of these faculty members must be the student's primary research advisor/mentor. Additional members, including external members with active research programs at outside institutions, may serve on the RAC subject to approval by the school's graduate program oversight body.

- For cross-school/interdisciplinary PhD programs, the approvals referenced above should be obtained from the graduate program oversight body of the school of the primary research advisor/mentor.
- For a PhD program offered in partnership with an external academic institution, one full-time faculty member of the partner institution who is authorized to supervise PhD students and who has appropriate expertise in the proposed field of study may serve on the RAC as part of the three-member minimum requirement.

A Title, Scope and Procedure form for the dissertation must be signed by the RAC members and by the program chair. Full-time students must submit the Title, Scope and Procedure form to the school registrar or the appropriate record custodian at least six months before the degree is expected to be conferred or before the beginning of the fifth year of full-time enrollment, whichever is earlier. Students enrolled in a part-time PhD program must submit the Title, Scope

and Procedure form to the school registrar or the appropriate record custodian at least six months before the degree is expected to be conferred or before the beginning of the sixth year of enrollment, whichever is earlier.

A Doctoral Dissertation Guide and a template that provides instructions regarding the format of the dissertation are available through the website of the Office of the Provost; both of these should be read carefully at every stage of dissertation preparation.

Each student is required to make the full text of the dissertation available to the committee members for their review at least one week before the dissertation defense. Most degree programs require two or more weeks for the review period; students should check their department/program's policies.

## Dissertation Defense

Approval of the written dissertation by the Research Advisory Committee (RAC) is strongly recommended before the student can orally defend the dissertation. The doctoral dissertation committee that examines the student during the defense consists of at least five members. Normally, the members of the RAC also serve on the Doctoral Dissertation Committee. The dissertation committee is then additionally augmented to ensure that the following criteria are met:

1. Three of the five members (or a similar proportion of a larger committee) must be full-time Washington University in St. Louis faculty members or, for programs offered by Washington University in St. Louis-affiliated partners, full-time members of a Washington University in St. Louis-affiliated partner institution who are authorized to supervise PhD students and who have appropriate expertise in the proposed field of study. One of these three members must be the PhD student's primary thesis advisor, and one may be a member of the emeritus faculty.
2. All other committee members must be active in research/scholarship and have appropriate expertise in the proposed field of study whether at Washington University in St. Louis, at another university, in government, or in industry.
3. At least one of the five members must bring expertise outside of the student's field of study to the committee, as judged by the relevant school's graduate program oversight body.

The approval processes outlined under RAC in the Doctoral Council bylaws also apply to the doctoral dissertation committee, including approval of each dissertation committee by the host school's graduate program oversight body/bodies.

The student is responsible for making the full text of the dissertation accessible to their committee members for their review in advance of the defense according to program rules. Washington University in St. Louis community members and guests of the student who are interested in the subject of the dissertation are normally welcome to attend all or part of the defense but may ask questions only at the discretion of the committee chair. Although there is some variation among degree programs, the defense ordinarily focuses on the dissertation itself and its relation to the student's field of expertise.

Attendance by a minimum of four members of the Doctoral Dissertation Committee, including the committee chair and an outside member, is required for the defense to take place. This provision is designed to permit the student's defense to proceed in case of a situation that unexpectedly prevents one of the five members from attending. Students should not plan in advance to only have four members in attendance; if one of those four cannot attend, the defense must be rescheduled. The absence of all outside members or of the committee chair would necessitate rescheduling the defense.

Students, with the support of their Doctoral Dissertation Committee chair, may opt to hold their dissertation defense in-person or by utilizing a virtual or hybrid format.

## Dissenting Vote(s) at a Dissertation

Faculty members of the Doctoral Dissertation Committee normally will examine the PhD candidate and vote on whether to approve the dissertation. In the vast majority of cases, these votes are unanimously for approval. In the rare case that there are faculty concerns that cannot be resolved through subsequent revisions and which therefore result in dissenting (negative) vote(s), the committee chair will refer the case to the Vice Provost for Graduate Education for resolution.

In the case of a single dissenting vote, the committee chair and the dissenting voter will be asked to explain the reasons for the dissent in a letter to the Vice Provost for Graduate Education. After consulting with these and other members of the committee, the Vice Provost for Graduate Education may then decide to accept the majority opinion and approve the dissertation, or they may seek the opinion of an additional reader. After considering this additional evidence, the Vice Provost for Graduate Education may approve or decline to approve the dissertation.

In the case of two or more dissenting votes, the committee chair and the dissenting voters will again be asked to explain the reasons for the dissent. The Vice Provost for Graduate Education may then decide to decline to approve the dissertation. Alternatively, they may ask the department or graduate program to name a Resolution Committee, consisting of three tenured or tenure-track professors at Washington University in St. Louis or elsewhere who did not serve on the original committee, to reexamine the dissertation and the candidate. A unanimous positive recommendation from this committee will be required in order for the Vice Provost for Graduate Education to approve the dissertation. Failure of a department or graduate program to identify three faculty members to serve on this Resolution Committee will be tantamount to a rejection of the dissertation.

## Dissertation Submission

After the successful defense of their dissertation, the student must submit an electronic copy of the dissertation online to the university by the established deadline for their graduation term. Dissertations must be submitted no later than three months after the oral defense of the dissertation. Petitions for an extension to the three-month limit may be submitted to the Director of Graduate Studies for consideration and approval. The submission website requires students

to choose from among publishing and copyrighting services offered by ProQuest ETD Administrator, but the university permits students to make whichever choices they prefer. Washington University in St. Louis doctoral students may initially request to embargo the public release of their dissertation for a specified period of six months, one year, or two years. Renewals beyond the initial embargo may be granted by the Vice Provost for Graduate Education. Students are asked to submit the Survey of Earned Doctorates separately. The degree program is responsible for delivering the final approval form, signed by the committee members at the defense and then by the department/program chair or director, to the school registrar or the appropriate record custodian. Students who complete all degree requirements and defend their dissertations successfully have not completed their PhD requirements; they finish earning their degree only when their dissertation submission has been accepted by their school of record.

## Degree Candidacy Extension

Degree Candidacy Extension (DCE) refers to a non-enrolled status available, under exceptional circumstances, to full-time PhD students who have completed all PhD degree requirements with the exception of the dissertation.

Extended degree candidates are not registered for any courses, have no enrollment status, and are ineligible for financial awards or support, benefits, and resources available to enrolled Washington University in St. Louis students. Once a student enters DCE, they may not register or enroll with Washington University in St. Louis as a student in their intended degree program in a future term.

DCE status may be assigned to full-time students in a variety of situations, including but not limited to the following:

- PhD students who do not complete their dissertation after exhausting the time allowable for PhD enrollment status due to circumstances beyond their control (see Time Limit for PhD Enrollment Eligibility earlier on this page);
- PhD students who secure full-time employment prior to the completion of their dissertation and who have established a timeline for the completion of the dissertation requirement; and
- PhD students who have exhausted their university financial support period as defined by their school or program prior to the completion of their dissertation and who have established a timeline for the completion of the dissertation requirement.

DCE status may be inappropriate for international students dependent on a U.S. visa, and such students may not be eligible for this status. International students should always consult with an OISS advisor prior to making an enrollment status change. In addition, students admitted as part-time PhD students are not eligible for DCE status.

DCE status is not the rule. Rather, it is assigned as an exception. Students must obtain the recommendation of their department/program leadership and petition the Vice Dean for Graduate Education (or equivalent) within their school to request to enter DCE status. If the petition is successful, the DCE status is conferred for the period of one year, after which an additional petition should be made and approved. Students seeking to remain in DCE status are obligated to provide a written report on their dissertation's progress annually to



their department to secure their approval for subsequent petitions. Individual departments may require additional checkpoints to ensure progression. Students may remain a PhD candidate in this status for a maximum of three calendar years.

If three calendar years pass from the first semester in which a student was placed on DCE and the student has not successfully completed all degree requirements, then that student has officially forfeited their eligibility to earn the PhD degree. Under these circumstances, the student may petition the Vice Provost of Graduate Education with the support of their department chair and school vice dean to be allowed to complete the degree outside of the three-year extension period. The petition will include a timeline for completion. The Vice Provost of Graduate Education reserves the right to deny any such request.

# PhD Mentored Experiences

## The Mentored Experience Requirement (MER)

As part of the university-wide degree requirements, PhD students and students in certain master's programs (i.e., MFA in Writing and MFA in Dance) at Washington University in St. Louis must complete a program-defined Mentored Experience Requirement (MER). The MER is an accomplishment that is noted on the student's academic record when complete. Each program established a Mentored Experience Implementation Plan (MEIP) in which required MER units and pathways for completion are defined and specified. The MEIP typically consists of Mentored Teaching Experiences (mentored activities designed to achieve competencies in teaching at basic and advanced levels) and/or Mentored Professional Experiences (mentored activities focused on the development of skills relevant to individual, intended career, and professional outcomes). Students enroll in Mentored Teaching Experience (MTE) courses and/or Mentored Professional Experience (MPE) courses to signify progression toward completing their MER.

## Mentored Experience Implementation Plan (MEIP)

An MEIP is a program-defined plan for students to complete their MER and engage in mentored teaching activities and/or mentored professional activities. MEIPs include the philosophy related to the role of teaching or professional experiences within the discipline, the program's plan for preparatory engagement, the normal sequence of opportunities for a student, and the number of MER units required. Each of these terms are defined within this section.

MEIPs were updated by programs during the 2024-25 academic year, and new plans are available under each program's "Mentored Experience Implementation Plan" tab in the *Bulletin*. Plans were effective as of Fall 2025 and applied to all students who had not yet completed their MER. Any revised plans in this Bulletin would be effective for students entering their program in Fall 2026.

## Preparatory Engagement

Preparatory Engagement activities represent an introduction to the foundational skills associated with teaching or communication. Preparatory Engagement represents an important foundational component to training in pedagogy. As such, all MEIPs contain required pedagogical preparation before students are permitted to engage in assisting or teaching in a classroom.

## Mentored Teaching Experiences (MTEs)

An MTE represents a collaborative engagement between a student and a faculty mentor wherein the student reflects on and interprets disciplinary knowledge; identifies multiple ways to represent disciplinary content; adapts content to students' abilities and prior knowledge; and develops methods to assess and improve the teaching and learning process in a discipline. A student engaged in an MTE will have an assigned faculty mentor supporting the student's development into an educator able to communicate and/or evaluate disciplinary knowledge.

Two categories of MTE exist at WashU: Assistantships in Instruction (AI) and Mentored Independent Teaching (MIT). Each MTE engagement is weighted by MER units to recognize the different levels of effort involved.

### Assistant in Instruction (AI)

An AI experience is one in which the student is directly engaged in the organization, instruction, and/or support of a semester-long course *primarily taught by a faculty member*. During the AI, the student receives mentorship from the faculty member in best practices in classroom engagement, instruction in the field, interpersonal engagement, and other relevant skills. Students receive regular informal feedback or evaluation from the mentor throughout the semester, as well as a final evaluation from the mentor and course evaluations from students enrolled in the course as part of the normal course evaluation process.

The student is formally listed as instructional support via Workday in the course listings. In general, AI assignments connect to undergraduate courses or to lower-level graduate courses that the student has taken previously.

MER units for AI experiences are determined by the program based on the level of activity needed for each assignment:

- 5 MER units are equivalent to an average of 5 hours per week of engagement; students enroll in their program's course numbered 8005 during the semester of engagement.
- 10 MER units are equivalent to an average of 10 hours per week of engagement; students enroll in their program's course numbered 8010 during the semester of engagement.
- 15 MER units are equivalent to an average of 15 hours per week of engagement; students enroll in their program's course numbered 8015 during the semester of engagement.

## Mentored Independent Teaching (MIT)

An MIT is a semester-long experience for students who engage as the primary instructor or co-instructor of a course *under the mentorship of a faculty member* as part of their MER. Throughout the semester, students receive regular feedback from a faculty mentor based on classroom observation conducted a few times per semester or other acceptable review mechanisms. The student should ask for guidance and support from the faculty mentor while navigating the responsibilities of independent teaching. Faculty mentors are also required to complete the final evaluation for the student.

An MIT experience may not be a requirement or option under every program's MEIP. Each MIT engagement will equate to 20 MER units. The 20 MER unit assignment accounts for the considerable level of preparation and consultation each PhD student needs to engage in as part of this introductory experience toward acquiring the skills required for independent teaching. Students enroll for the semester of engagement under their program's course numbered 8020.

## Mentored Professional Experiences (MPEs)

MPEs are unpaid experiences that allow students to develop skills and experiences relevant to their intended career outcomes. These experiences could include, for example, opportunities in industry, communication and outreach, government or policy, consulting, or higher education administration. The duties and responsibilities of the MPE should be intellectually substantive and offer opportunities for the student to develop new skills and experiences.

An MPE experience may not be a requirement or option under every program's MEIP. Each MPE engagement will equate to 20 MER units. The 20 MER unit assignment accounts for the considerable level of preparation and time needed for this engagement. An MPE should involve at least 150 hours (and not more than 180 hours) per engagement. Students enroll for the semester of engagement under their program's course 8120.

## Optional MER Activities

Some programs allow for students to participate in additional, optional MTE or MPE engagements. If allowed, the program's MEIP will list the requirements for a Teaching Intensive Pathway (TIP) or a Professional Intensive Pathway (PIP).

### Teaching Intensive Pathway (TIP)

The TIP is an optional pathway for those students whose career interests lie in academia or another field that would benefit from extended MTEs. This immersive experience allows students to further explore the breadth and depth of teaching best practices and pedagogy related to their respective field.

Students who are interested in participating in this elective experience must formally request to participate, which is subject to program approval. Due to this experience being an elective, unpaid experience, students who participate in the TIP will not receive compensation.

### Professional Intensive Pathway (PIP)

The PIP is an optional pathway for those students whose career interests lie outside of academia or want to benefit from MPEs. An MPE is an unpaid professional experience for PhD students that allows students to develop skills and experiences relevant to their intended career outcomes. Students and mentors complete a mentorship plan prior to the start of each MPE. Students who are interested in participating in this elective experience must formally request to participate, which is subject to program approval. Similar to normal MPE experiences, students who participate in the PIP do not receive compensation associated with their MPE.

## Post-MER Completion Teaching Activities

To be eligible to participate in an additional teaching activity at WashU, students must complete their MER as defined by their program's MEIP prior to undertaking optional elective instructional activity. Any independent teaching for pay that occurs after the completion of the MER must meet the spirit of the part-time employment policy or otherwise students must request an exception.

### Instructional Support

At the completion of the student's MER as defined in the MEIP, students may elect to pursue additional instructional opportunities at WashU as a non-MTE AI or a similarly situated role. These additional opportunities are subject to the approval of their primary advisor and their department/program as well as the existence of such a position. These students will be paid an hourly rate.

### Instructor or Co-Instructor of Record

At the completion of a student's MER requirements as defined in the MEIP, the student may elect to pursue instructor opportunities at WashU as an independent instructor. These opportunities are subject to the approval of the student's primary advisor and their department/program as well as the existence of such a position. Students who have completed their MERs must demonstrate the requisite experience and training in pedagogy to engage in teaching at the fully independent level. These students are eligible for compensation in accordance with the adjunct professor collective bargaining agreement.

## Current MEIPs

### Arts & Sciences

- Anthropology, PhD, Archeology Concentration
- Anthropology, PhD, Biological Anthropology Concentration
- Anthropology, PhD, Sociocultural Anthropology Concentration
- Art History & Archaeology, PhD
- Chemistry, PhD
- Classics, PhD
- Comparative Literature, PhD
- Dance, MFA
- Earth, Environmental, and Planetary Sciences, PhD
- East Asian Languages and Cultures, PhD
- Ecology and Evolutionary Biology, PhD
- Economics, PhD
- Education, PhD
- English and American Literature, PhD
- English and Comparative Literature, PhD
- French and Francophone Studies and Comparative Literature, PhD
- French and Francophone Studies, PhD
- German and Comparative Literature, PhD
- Germanic Languages and Literatures, PhD
- Hispanic Studies and Comparative Literature, PhD
- Hispanic Studies, PhD
- History, PhD
- Mathematics, PhD
- Music, PhD, Music Theory Concentration
- Music, PhD, Musicology Concentration
- Philosophy, PhD
- Philosophy-Neuroscience-Psychology, PhD
- Physics, PhD
- Political Science, PhD
- Psychological & Brain Sciences, PhD
- Sociology, PhD
- Statistics and Data Sciences, PhD
- Writing, MFA

### Business

- PhD Program

### Engineering

- Biomedical Engineering PhD
- Biomedical Engineering PhD-MD
- Computational & Data Sciences, PhD
- Computer Engineering, PhD

- Computer Science, PhD
- Electrical Engineering, PhD
- Energy, Environmental, & Chemical Engineering, PhD
- Imaging Science, PhD
- Materials Science & Engineering, Interdisciplinary PhD
- Mechanical Engineering, PhD
- Systems Science & Mathematics, PhD

### Medicine

- Division of Biology & Biomedical Sciences Programs
  - Biochemistry, Biophysics & Structural Biology, PhD
  - Biomedical Informatics & Data Science, PhD
  - Cancer Biology, PhD
  - Computational & Systems Biology, PhD
  - Developmental, Regenerative, & Stem Cell Biology, PhD
  - Immunology, PhD
  - Molecular Cell Biology, PhD
  - Molecular Genetics & Genomics, PhD
  - Molecular Microbiology & Microbial Pathogenesis, PhD
  - Neurosciences, PhD
  - Plant & Microbial Biosciences, PhD
- Medical Physics, PhD
- Movement Science, PhD
- Nursing Science, PhD
- Rehabilitation and Participation Science, PhD
- Speech and Hearing Sciences, PhD

### Public Health

- Public Health Sciences, PhD

### Brown School

- Social Work, PhD

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Additional information including forms, resources, and FAQs are available on the Mentored Experiences page of the Office of the Provost website.



## WashU Continuing & Professional Studies - Graduate

WashU Continuing & Professional Studies (CAPS) is the division for modern learners at Washington University in St. Louis. The division offers a wide range of courses in a variety of interdisciplinary and professional areas of study. Part-time and full-time study options in undergraduate degree programs, master's degree programs, certificate programs, and professional development are available. CAPS is also home to the WashU Prison Education Project (PEP), which offers credit-bearing college courses and degrees to incarcerated students at two regional Missouri prisons; the English Language Program (ELP), which helps WashU students who speak English as an additional language achieve academic and professional success; and the EMPOWER program for English language development in workforce certification. For more information regarding any of these programs, visit the WashU CAPS website.

Since 1931, CAPS has been a cornerstone of career advancement and professional development in the St. Louis region. Their mission is to empower modern learners — those balancing education with work and personal responsibilities — with flexible, high-quality educational pathways to career success.

CAPS offers a variety of degree and certificate programs tailored to meet the demands of the regional job market. A dynamic curriculum, developed in collaboration with industry leaders, ensures learners gain the skills and knowledge employers are seeking. Whether learners are looking to upskill, reskill, or achieve a new qualification, CAPS provides the practical, career-focused education they need to thrive.

Flexible learning options, including online courses, hybrid programs, and in-person classes, allow students to pursue their educational goals on their terms. CAPS is committed to supporting students' success with a range of resources and personalized coaching. With the support of dedicated instructors, recruiters, student success navigators, and career specialists, students have the resources and guidance needed to succeed.

## Graduate Study

WashU Continuing & Professional Studies (CAPS) administers several master's degree programs (p. 41), generally consisting of 30 to 36 units of graduate-level coursework.

## Graduate Degrees in WashU Continuing & Professional Studies

- Master of Applied Computer Science (MACS) (p. 43)
- Master of Arts (AM) in Human Resources Management (p. 50)
- Master of Arts (AM) in International Affairs (p. 53)
- Master of Arts (AM) in Nonprofit Management (p. 61)
- Master of Arts in Teaching and Learning (MATL) (p. 63)
- Master of Data Analytics & Applications (MDAA) (p. 48)
- Master of Science (MS) in Clinical Research Management (p. 45)

## Contact Information

WashU Continuing & Professional Studies  
Washington University in St. Louis  
MSC 1064-134-100  
One Brookings Drive, January Hall, Suite 100  
St. Louis, Missouri 63130  
Phone: 314-935-6700  
Toll-Free: 866-340-0723  
Fax: 314-935-6744  
WashU Continuing & Professional Studies website  
Email: caps@wustl.edu

## Master's Degrees

WashU Continuing & Professional Studies (CAPS) administers several master's degree programs, generally consisting of 30 to 36 units of graduate-level coursework.

CAPS offers the following master's degrees, all of which are eligible for financial aid.

## Master's Programs

- Applied Computer Science (p. 43)
- Clinical Research Management (p. 45)
- Data Analytics & Applications (p. 48)
- Human Resources Management (p. 50)
- International Affairs (p. 53)
- Nonprofit Management (p. 61)
- Teaching and Learning (p. 63)

## Admissions Requirements

Admission into a graduate program includes the following *minimum* requirements:

1. Applicant has earned a baccalaureate degree or equivalent from an accredited U.S. institution of higher education or its equivalent from a foreign institution.
2. Applicant has earned a 3.0 GPA or better in all coursework attempted to fulfill baccalaureate degree requirements *or* earned a 3.0 GPA or better in the last 60 hours of coursework attempted to fulfill baccalaureate degree requirements.

Each graduate program may have additional requirements for admission, which can include the following:

1. Letter(s) of recommendation
2. Resume or CV
3. Writing sample
4. Personal, goal, and/or professional statement
5. Test scores
6. Other relevant supporting materials requested and approved by CAPS

If the student's transcripts are from a college or university outside of the United States, a course-by-course transcript evaluation is required. Evaluations will be accepted from World Education Services (WES), Spantran, or another member institution of the National Association of Credential Evaluation Services (NACES). For Spantran evaluations, students must use this Evaluation Request Form.

In addition to the above requirements, international students must show proficiency in written and spoken English. For more information about WashU's English Language Proficiency requirements, please visit WashU's English Language Proficiency page.

Admission to a program may be offered in one of two categories: regular or contingent.

- **Regular status:** The applicant has met all requirements and has no additional requirements for admission.
- **Contingent status:** If the applicant has not met the minimum requirements for admission, they may be required to successfully complete 6 to 9 credit units of graduate coursework either within or outside of the core requirements of the program, with a grade of B or higher, before being converted to regular admission. If the applicant has met all minimum admission requirements but is missing one or more of the required documents (e.g., the final transcript), the applicant must fulfill the relevant condition(s) by the first day of classes.

Applicants may appeal an admissions decision through the CAPS general appeal policy.

A maximum of 6 units of related, comparable, graduate-level coursework, completed with a grade of B or higher, may be transferred from another university or from a related graduate program at WashU with the approval of the relevant program's director. These must be graduate-level units not used to fulfill undergraduate degree requirements. CAPS approval is required.

Only courses taken for a letter grade may be applied to a graduate program of study. Courses taken as Pass/No Pass or Audit will not count toward a graduate program of study.\* Grades below C will not count toward a graduate program of study. Learners are responsible

for knowing the specific grading criteria and course requirements set by individual instructors. A minimum cumulative grade point average of 3.0 and at least a C in all program of study courses are required to graduate.

## Non-Degree-Seeking Status

Individuals seeking to enroll in graduate-level courses outside of formal application to a program must apply for admission to CAPS as graduate non-degree-seeking student. These applicants must meet the minimum admissions requirements and provide the following supporting documentation:

1. Professional Statement
  - a. Please include answers to the following questions, in a statement that is two pages or shorter:
    - i. What are your areas of interest?
    - ii. Are there any specific courses in which you plan to enroll? Why?
    - iii. What are your personal/professional or academic strengths?
    - iv. If applying for contingent admission (if you do not meet the minimum requirements for admission), why should we consider you for admission?

Please visit the CAPS website or call 314-935-6700 for more detailed information, requirements, and policies concerning specific graduate degree programs.

\* WashU Continuing & Professional Studies (CAPS) learners may apply a maximum of 6 units of Pass/No Pass credit from graduate-level coursework in the Olin Business School to a master's degree program at CAPS. The coursework must be authorized by CAPS, and the student must have received a grade of Pass or High Pass in the Olin course. Courses with grades of Low Pass are not eligible. This policy applies only to courses completed on a Pass/No Pass basis in the Olin Business School prior to a student's admission to a CAPS graduate program of study administered and conferred by CAPS. Once admitted to a CAPS program of study, learners who are authorized to take courses in Olin Business School and apply them toward their program of study are required to convert Pass/No Pass grades to letter grades at the time of registration.

## Reinstatement

Graduate students who decide not to enroll continuously (from one term to the next) as full-time or part-time students will have a hold placed on their record or be discontinued from their program of study.

- One semester of non-enrollment will result in a hold being placed on the student's record. Students must connect with a Student Success Navigator to discuss re-enrollment options and request removal of the hold.



- 6 continuous terms of non-enrollment (including summer) will result in the student being discontinued from their program of study. Students must connect with a Student Success Navigator and apply for reinstatement to return to their program of study.

For further reinstatement information, students should contact caps@wustl.edu. Students seeking reinstatement may be required to submit additional documentation to support their application for reinstatement.

## Applied Computer Science

The number of computer and information technology positions is projected to grow 15% from 2021 to 2031, much faster than the average for other occupations. The **Master of Applied Computer Science (MACS)** degree is designed to provide a strong, interdisciplinary foundation in computer science for working professionals who come from non-mathematical or non-engineering disciplines and who want to enter the field of computing.

CAPS also offers an **Advanced Certificate in Applied Computer Science**: a two-part bridge program for those seeking an introduction to computer science without committing to a master's degree.

Offered in collaboration between the McKelvey School of Engineering's Sever Institute and WashU Continuing & Professional Studies (CAPS), these flexible online programs help working professionals acquire the skills they need to advance in the field of computer science.

The program focuses on in-demand, practical, and hands-on computational skills including databases, networks, web development, security, systems administration, and software development. Online course delivery provides a flexible educational experience for working adults.

|          |                                                                                                                                                                                           |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact: | CAPS                                                                                                                                                                                      |
| Phone:   | 314-935-6700                                                                                                                                                                              |
| Email:   | caps@wustl.edu                                                                                                                                                                            |
| Website: | <a href="https://caps.washu.edu/programs/graduate-programs/master-of-applied-computer-science/">https://caps.washu.edu/programs/graduate-programs/master-of-applied-computer-science/</a> |

## Degree Requirements

- Advanced Certificate in Applied Computer Science (p. 74)
- Master of Applied Computer Science (p. 44)

## Courses

Courses for this new program will be developed and listed soon. Visit the CAPS website for up-to-date program course listings.

### CAPS-CS 5000 Foundations of Computer Science and Programming

An introduction to software concepts and implementation, emphasizing problem solving through abstraction and decomposition using a contemporary programming language. Introduces processes and algorithms, procedural abstraction, data abstraction, encapsulation, and object-oriented programming. Recursion, iteration, and simple data structures are covered. Concepts and skills are mastered through programming projects, many of which employ graphics to enhance conceptual understanding.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

### CAPS-CS 5001 Foundations of Discrete Math and Structures

Introduces elements of logic and discrete mathematics that allow reasoning about computational structures and processes. Generally, the areas of discrete structures, probability, and computational models are covered. Topics include propositional and predicate logic; sets, relations, functions and graphs; finite state machines and regular languages; and introduction to discrete probability, expected value, and variance. Concepts will be reinforced and applied through a contemporary programming language assignments.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

### CAPS-CS 5005 Foundations of Object-Oriented Programming

This course offers a comprehensive introduction to the principles and practices of Object-Oriented Programming (OOP). Through a combination of theory and hands-on exercises, students will gain a strong foundation in OOP concepts such as encapsulation, inheritance, and polymorphism. Students will learn how to design and implement object-oriented programs, create classes and objects, and employ advanced features such as constructors, methods, and inheritance hierarchies.

Credit 3 units.

Typical periods offered: Fall, Spring

### CAPS-CS 5006 Introduction to Cloud Computing

This course provides an in-depth introduction to cloud computing, one of the most rapidly evolving fields in technology today. Students will learn about the key concepts and components of cloud computing, including virtualization, infrastructure as a service (IaaS), platform as a service (PaaS), and software as a service (SaaS). Students will also explore the benefits and challenges of cloud computing, such as scalability, flexibility, security, and cost efficiency. Throughout the course, students will work on practical exercises and projects that will enable them to apply their knowledge of cloud computing in real-world scenarios.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

### CAPS-CS 5020 Full-Stack Software Development

This course teaches students the necessary skills needed to build database-backed APIs and web applications. Students will be able to design and build databases for software applications, create and deploy database-backed web APIs, and secure and manage user authentication and access control for an application backend. Students will also learn how to deploy a web application to the cloud using containerization.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

## CAPS-CS 5023 Introduction to Development Security Operations (DevSecOps)

This course introduces students to DevSecOps: the practice of integrating security into every phase of the software development lifecycle. Students will learn to design, build, and operate secure CI/CD pipelines; automate security testing; secure containerized and cloud-native workloads; and foster a culture of shared security responsibility. The course is hands-on: students gain experience with industry-standard tools for CI/CD, static and dynamic analysis, container and infrastructure-as-code security, and supply chain security, building a progressively hardened pipeline over the semester that culminates in a final project.

**Non-curricular prerequisites:** Working knowledge of Linux, Git, and at least one programming language (Python, Java, etc.). Prior exposure to cloud computing (e.g., Intro to Cloud Computing) strongly recommended.

Credit 3 units.

Typical periods offered: Fall, Spring

## CAPS-CS 5025 Database Programming and Development

This course explores analysis of data stored in relational and non-relational database systems to power strategic decision-making. Students will learn to determine, create, and execute SQL and NoSQL queries that manipulate and dissect large scale datasets. Students will learn SQL commands, functions, and data cleaning methodologies to join, aggregate, and clean tables, as well as complete performance tune analysis to provide strategic business recommendations.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

## CAPS-CS 5035 Data Engineering Foundations

This course provides an overview of the discipline of data engineering. It introduces software and systems for data analytics & applications and software development as required in the design of data-intensive applications. Students learn about algorithms, data structures, and technologies for storing and processing data. Students gain experience with open-source software, text editors, integrated development environments, and cloud systems. Students employ best practices in software development, utilizing tools for syntax checking, testing, debugging, and version control. The course also introduces formal models for algorithm and system performance.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

# Master of Applied Computer Science

The Master of Applied Computer Science consists of 30 units of graduate coursework.\*

## Required Courses

Learners must complete the 21 units in the list below. Several of these courses are new; their course numbers are TBD:

| Code               | Title                                                         | Units     |
|--------------------|---------------------------------------------------------------|-----------|
| CAPS-CS 5005       | Foundations of Object-Oriented Programming (Bridge II course) | 3         |
| CAPS-CS 5006       | Introduction to Cloud Computing (Bridge II course)            | 3         |
| CAPS-CS 5035       | Data Engineering Foundations (Bridge II course)               | 3         |
| CAPS-CS 5025       | Database Programming and Development                          | 3         |
| Course # TBD       | Full-Stack Software Development                               | 3         |
| Course # TBD       | Introduction to Agile Development and Scrum                   | 3         |
| Course # TBD       | Applied Computer Science Practicum                            | 3         |
| <b>Total Units</b> |                                                               | <b>21</b> |

## Elective Courses

Learners select 9 units from the following list. These courses are new, and their related course numbers are TBD:

- Modern Data Architecture (3 Units)
- Introduction to Development Security Operations (DevSecOps) (3 Units)
- Web Development (3 Units)
- Introduction to Machine Learning (3 Units)
- Introduction to Cybersecurity (3 Units)
- Applied Research Study (3 Units)

*This program is offered fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

\* New students without evidence of programming and discrete math proficiency will be required to take up to two introductory bridge courses (Bridge part I). The two bridge courses, CAPS-CS 5000 Foundations of Computer Science and Programming and CAPS-CS 5001 Foundations of Discrete Math and Structures, will provide necessary knowledge for students with no previous education in computer science through foundational coursework in programming and relevant math. Additional bridge courses (Bridge part II) are included as the first three core courses required in the program. Upon successful completion of the Bridge part I courses, the student is automatically admitted to the Master of Applied Computer Science program.



## Clinical Research Management

The **Master of Science in Clinical Research Management** is designed for experienced professionals working in academic research centers or private industry who seek greater depth and breadth of study in the science and business of clinical research.

The curriculum encompasses in-depth coverage of essential skills and processes required for the management of studies that develop drugs, devices, and treatment protocols for patient care. Major topics include regulatory requirements, ethical issues, product development, the business of clinical research, grant funding and manuscripts, epidemiologic principles and tools, research design, and data analysis, all in the context of human subjects in clinical trials.

This program is completed entirely online.

Contact: CAPS  
Phone: 314-935-6700  
Email: [caps@wustl.edu](mailto:caps@wustl.edu)  
Website: <https://caps.wustl.edu/programs/graduate-programs/master-of-science-in-clinical-research-management/>

### Degree Requirements

## Master of Science in Clinical Research Management

The Master of Science in Clinical Research Management is a 30-unit program that includes 24 units of required coursework and 6 units of authorized electives.

### Required Courses: 24 units

| Code               | Title                                                     | Units     |
|--------------------|-----------------------------------------------------------|-----------|
| CAPS-CRM 5000      | Fundamentals of Clinical Research Management              | 3         |
| CAPS-CRM 5050      | Advanced Data & Information Management in Health Sciences | 3         |
| CAPS-CRM 5070      | Medical Writing for Clinical Research                     | 3         |
| CAPS-CRM 5080      | Drug and Device Development                               | 3         |
| CAPS-CRM 5110      | Compliance, Legal, and Regulatory Issues                  | 3         |
| CAPS-CRM 5161      | Introduction to Project Management in Clinical Research   | 3         |
| CAPS-CRM 5230      | Epidemiology for Clinical Research                        | 3         |
| CAPS-CRM 5270      | Principles of Pharmaceutical Safety                       | 3         |
| <b>Total Units</b> |                                                           | <b>24</b> |

### Electives: 6 units

Learners choose from authorized electives in Clinical Research Management or other appropriate graduate programs at CAPS that address individual interests such as device trials, ethics, and/or advanced research. Electives may include independent study.

*This program is offered fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

### Courses

#### CAPS-CRM 5000 Fundamentals of Clinical Research Management

This course provides the basic foundation for the application, concepts and theories of clinical research. We explore the historical evolution of research, linking it to current regulations and guidelines for good clinical practice. Additional course topics include research roles and responsibilities, institutional review boards, phases of drug development, the informed consent process, human subject protections, and an overview of study conduct. Students will complete institutional review board paperwork, including writing an informed consent and developing source documents. Undergraduate students register for CAPS-CRM 2000/2001.

Credit 3 units.

Typical periods offered: Fall, Spring

#### CAPS-CRM 5005 Current and Emerging Topics in Clinical Research

This course will explore current and emerging advances in clinical research design and conduct review and discussion of recent guidance documents from the FDA in response to the 21st Century Cures Act and other sources. Students will gain familiarity with the Act and its implementation via exploration and critical review of recent FDA Guidance Documents and supplemental materials. Additional emerging topics may be identified and explored by the instructor and students. At the conclusion of this course students will be able to effectively communicate recent and emerging innovative and technological advances in clinical research design and conduct, and identify key implications and application. Prerequisite can be waived for students with established clinical research experience and instructor's approval.

Credit 3 units.

Typical periods offered: Summer

#### CAPS-CRM 5025 Global Health & International Regulatory Affairs in Clinical Research

This course provides an applied overview of global health considerations and international regulatory frameworks impacting clinical research. Students will explore diverse regulatory pathways, ethics review structures, global trial design, cross-border logistics,

data governance, and the responsibilities of academic and non-traditional sponsors operating internationally. Using real-world case studies, students will gain practical skills to plan, manage, and evaluate multinational research studies across a variety of geopolitical, cultural, and regulatory environments.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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#### **CAPS-CRM 5030 Health and Society**

This course examines topics of how public and personal health are affected by societal and institutional forces. We will use a historical perspective to explore the complex interplay between individual genetic susceptibilities and an evolving environment, where traditional metabolic signals are not always operative, often replaced by synthetic materials that the receptors have not encountered before through evolution. We will explore how sleep, food, and leisure have been changed by industrial, economic, political, and cultural developments (globalization). We will take a close look at the roles of urban planning, industrial farming, industrial food production / processing, animal husbandry, and the attendant evolving role of the family as well as the education of the individual. We will scrutinize global climate change, as it influences infectious disease vectors, pandemics, pollution, and related political and economic forces that do not promote societal health and well-being. Finally, we will focus on the role of the mind-brain in communication with the environment and needed in health and healing. Through critical reading of medical journal articles and newspapers we will discuss related ethical and policy questions relevant to disease prevention and public health.

Credit 3 units.

Typical periods offered: Fall

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#### **CAPS-CRM 5050 Advanced Data & Information Management in Health Sciences**

This course will cover the education and training in data and information management as it applies to Health Sciences, pulling from aspects of different fields: domain specific (clinical or public health) and analytic (biostatistics and database management) using different software tools. The class will examine data types and data repositories to include best practices in data acquisition and management. This course will scrutinize tools for data storage and data manipulation and delve into relational and non-relational databases. Concepts in epidemiology and biostatistics will be presented along with discussion on health informatics.

Credit 3 units.

Typical periods offered: Fall, Spring

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#### **CAPS-CRM 5070 Medical Writing for Clinical Research**

This is a graduate-level intensive writing course that will guide students in developing a competitive research grant proposal. Written work, guided by each student's needs and interests, will cover all sections of a research grant application, manuscript writing, progress reports, and other forms of reporting scientific findings to the public. We also will compose mock NIH grant applications. By the end of the course, each student will produce a comprehensive portfolio that includes a grant proposal, manuscript, and press release to the public.

Credit 3 units.

Typical periods offered: Spring

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#### **CAPS-CRM 5080 Drug and Device Development**

This course will provide an overview of the commercial development pathways for both pharmaceuticals and medical devices, from inception to market. Through lectures and discussions, students will gain an appreciation for the role clinical study programs play in the broader scope of product development. Class topics will include preclinical, clinical, regulatory, and marketing factors which influence discovery and development of new medical products.

Credit 3 units.

Typical periods offered: Fall, Spring

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#### **CAPS-CRM 5110 Compliance, Legal, and Regulatory Issues**

This course will examine the legal framework governing clinical research with human subjects in the United States. An overview of the legal system including U.S. sources of law, the interplay between the federal and state systems and the role of case law, legislatures and regulatory agencies in shaping current law and policy will be provided. Federal and state law governing clinical research from proposal to completion will be examined. At the conclusion of this course, students will be able to identify the current sources of law, policy and persuasive authority in clinical research compliance. Students will also be able to identify areas of concern and potential new or amended regulation in clinical research.

Credit 3 units.

Typical periods offered: Fall, Spring

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#### **CAPS-CRM 5120 Research Ethics and Regulatory Affairs**

This course will provide an understanding of the ethical guidelines, issues, and challenges of conducting research on human subjects. We will explore issues such as conflicts of interest, genetic testing, limits of confidentiality, risk, and the distinction between compliance and ethics. As we learn about protecting research groups and interests and explaining rights and liabilities, we will study health care legislation and regulations, guidelines, contractual matters, and the complex regulatory framework that governs human subject research. Finally, we will learn to use an ethical problem-solving model in clinical research.

Credit 3 units.

Typical periods offered: Spring

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#### **CAPS-CRM 5125 Drug-Induced Diseases: Detection, Prevention, and Management**

A drug-induced disease (DID) is the unintended effect of a drug that results in mortality or morbidity with symptoms sufficient to prompt a patient to seek medical attention and/or require hospitalization. There have been great advances in drug therapy that have had tremendous beneficial impact on patient outcomes. However, the effects of drugs are not always beneficial; drugs are also capable of causing new diseases or exacerbating those that already exist. Some of these diseases are well known and transient (e.g., diarrhea, weight gain). Others, like liver disease and diabetes, are neither. This course will explore these issues in a novel, disease-specific way that will be accessible to a wide range of students: clinical research managers, medical students, nurses, pharmacists and other allied health professionals. The course will include weekly readings from the textbook or other sources. Regular group discussions will be important, addressing how this new knowledge can be applied to students' professional or personal practices.

Credit 3 units.

Typical periods offered: Fall, Spring

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**CAPS-CRM 5155 Principles of Management in Health Care**

This course enables students to explore the theoretical framework and practical application of classic management principles so that they can function effectively in a variety of organizational settings in the provision of health care services. Topics include the management process; managerial decision making and planning; negotiation skills; organization design; and leadership.

Credit 3 units.

Typical periods offered: Fall, Spring

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**CAPS-CRM 5160 The Business of Clinical Research**

An overview of the business elements of clinical research, this course covers drug and device development, the regulatory environment, finance, corporate structures, and the clinical trials office. Students will consider stakeholders including pharmaceutical and device industries, academic and private research centers, government agencies such as the National Institutes of Health, nonprofit agencies and a variety of other organizations such as American Diabetes Association and the National Cancer Institute. They also will study local, state, and federal regulations, as well as international and global issues that impact the business of clinical research.

Credit 3 units.

Typical periods offered: Fall, Spring

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**CAPS-CRM 5161 Introduction to Project Management in Clinical Research**

This course aims to explore basic concepts of project management with direct application to clinical research. Students will better understand criteria defining a project and product (versus operations), roles and responsibilities of a project manager, various methodologies (e.g. agile, waterfall, etc.), and planning tools (e.g. Microsoft Project, Jira, Teams). Student experiences in clinical research will be integrated into course discussions to explore application of project management skills and practice important team-building skills (e.g. effective meeting principles). Additionally, the course will incorporate a variety of learning resources from the Project Management Institute (PMI), LinkedIn, and professional research organizations (e.g. ACRP) into class discussions and project assignments. One or more (modified) research protocols will be used for hands-on experience applying project management strategies.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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**CAPS-CRM 5175 CRM Independent Study: Fundamentals I**

This introductory course provides the basic foundation for clinical research. We examine the historical evolution of research, linking it to the current regulations and guidelines for good clinical practice. Course material includes research roles and responsibilities, institutional review boards, phases of drug development, the informed consent process, human subject protections, and an overview of study conduct. For students in the Master of Science in Clinical Research Management and by advisor permission, only. Students enrolled in CAPS-CRM 5175 and 5178 join the foundational courses CAPS-CRM 2000 and 2001 for 1.5 units each, in place of taking CAPS-CRM 5000 for 3 units.

Credit 1.5 units.

Typical periods offered: Fall

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**CAPS-CRM 5178 CRM Independent Study: Fundamentals II**

This course focuses on the application of principles and theories covered in Fundamentals of Clinical Research Management I. Students will develop and complete documents for a specific assigned protocol. This will include completing institutional review board paperwork, writing an informed consent, developing source documents, and critiquing research articles. Prerequisite: Fundamentals of Clinical

Research Management I or instructor permission. For students in the Master of Science in Clinical Research Management and by permission, only. Students enrolled in CAPS-CRM 5175 and 5178 join the foundational courses CAPS-CRM 2000 and 2001 for 1.5 units each, in place of taking CAPS-CRM 5000 for 3 units.

Credit 1.5 units.

Typical periods offered: Spring

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**CAPS-CRM 5210 Leadership and Change in Health Care Services**

Students engage in the advanced study of leadership, integrating theory, research, and application in a diagnostic approach. Leadership skills for managing planned organizational change are developed through group discussions, class exercises, case studies, and the application of organizational approaches to change and innovation. Topics include personal effectiveness, team building, and creating learning environments in organizations.

Credit 3 units.

Typical periods offered: Fall, Spring

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**CAPS-CRM 5230 Epidemiology for Clinical Research**

The purpose of this course is to provide individuals an understanding of the use of epidemiological concepts and methods both to in clinical research, in clinical issues, and in understanding medical literature concerning these issues. The course includes 1) discussion of theoretical concepts related to the application of epidemiology in clinical research, and 2) practical applications of the concepts covered.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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**CAPS-CRM 5245 Introduction to Immunology**

This course covers basic molecular and cellular aspects of the vertebrate immune system emphasizing specific and nonspecific host defense against disease, the nature of immunological specificity, and its underlying molecular genetics. The course also covers immunologic memory and vaccination, pathogen evasion of the immune system, allergic and hypersensitivity reactions, and autoimmune disease, among other topics.

Credit 3 units.

Typical periods offered: Spring

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**CAPS-CRM 5270 Principles of Pharmaceutical Safety**

The purpose of this course is to present fundamentals on pharmacovigilance within the pharmaceutical industry, and application of these approaches within clinical research and for overall patient safety regarding medications and medical devices. Students will learn how pharmacovigilance operates throughout the clinical trial process, as well as throughout the life cycle of a medication or medical device once it is US Food & Drug Administration (FDA)-approved.

Credit 3 units.

Typical periods offered: Summer

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**CAPS-CRM 5999 Independent Study in Clinical Research Management**  
For Graduate Students. Requires completed proposal form, permission from CAPS

Credit 1-3 units.

Typical periods offered: Fall, Spring, Summer

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## Data Analytics & Applications

Data is an essential component of many industries, and creating meaningful insights from the information pulled from that data can lead to better processes and outcomes. If a professional is looking to advance their career in this field, the **Master of Data Analytics & Applications** will provide the knowledge base and expertise they need to construct data systems that improve efficiencies and profit margins for organizations.

Offered in collaboration between the McKelvey School of Engineering's Sever Institute and WashU Continuing & Professional Studies (CAPS), this flexible online program will help working professionals acquire the skills they need to advance in a data-driven environment.

In this program, modern learners will acquire relevant and practical knowledge of the data analytics and applications field, improve their critical thinking and communication skills, and develop the leadership acumen needed to be successful in demanding senior management roles.

This program is fully online.

Contact: CAPS  
Phone: 314-935-6700  
Email: caps@wustl.edu  
Website: <https://caps.wustl.edu/items/mdaa/>

### Degree Requirements

## Master of Data Analytics & Applications

The Master of Data Analytics & Applications program requires the successful completion of 30 units of graduate coursework, including 21 units of required core courses and 9 units of electives. New students without evidence of math and programming proficiency will be required to take an additional 6 units of bridge courses.\*

### Required Courses: 21 units

| Code                    | Title                                | Units |
|-------------------------|--------------------------------------|-------|
| CAPS - DATASTUDIES 5013 | Data Visualization and Story Telling | 3     |
| CAPS - DATASTUDIES 5018 | Enterprise Data Management           | 3     |
| CAPS - DATASTUDIES 5020 | Data Analytics Applications          | 3     |
| CAPS - DATASTUDIES 5021 | Data Engineering Foundations         | 3     |
| CAPS - DATASTUDIES 5040 | Applied Machine Learning             | 3     |

|                         |                                                          |           |
|-------------------------|----------------------------------------------------------|-----------|
| CAPS - DATASTUDIES 5015 | Introduction to Relational Databases and SQL Programming | 3         |
| CAPS - DATASTUDIES 5045 | Foundations of Data Analytics                            | 3         |
| <b>Total Units</b>      |                                                          | <b>21</b> |

### Elective Courses: 9 units

| Code                                                                      | Title                                                   | Units |
|---------------------------------------------------------------------------|---------------------------------------------------------|-------|
| CAPS - DATASTUDIES 5045                                                   | Applications of Deep Neural Networks                    | 3     |
| CAPS - DATASTUDIES 5045                                                   | AI/ML Ops                                               | 3     |
| INFO 5559                                                                 | Applications of Generative AI and Large Language Models | 3     |
| More elective courses to be added as this develops and program progresses |                                                         |       |

*This program is offered fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

- \* Proficiency in 1) introductory statistics and linear algebra and 2) basic programming is required for admittance into this program. There are two introductory bridge courses covering these subject areas. Students who have earned a 3.0 GPA or better in introductory statistics and linear algebra and/or a programming course can have one or both bridge courses waived.
- 1. Foundations of Programming for Data Analytics & Applications (CAPS-DATASTUDIES 5001): Students with proficiency in Python may have the requirement to take Foundations of Programming for Data Analytics & Applications waived. Proficiency is established with a B or better in an introductory Python programming course or relevant work experience (as evaluated by the program director or delegated evaluator).
- 2. Foundations of Mathematics for Data Analytics & Applications (CAPS-DATASTUDIES 5002): Students with proficiency in introductory statistics and linear algebra may have the requirement to take Foundations of Mathematics for Data Analytics and Applications waived. Proficiency is demonstrated with a B or better in Introduction to Statistics and Linear Algebra courses.

## Courses

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### **CAPS - DATASTUDIES 5001 Foundations of Programming for Data Analytics & Applications**

Programming is an increasingly important skill, whether you aspire to a career in software development or in other fields. This course introduces core programming concepts and problem-solving using Python. Students will learn the principles of software development, style, and testing. Topics include an operational model of Python execution, procedures and functions, iteration, recursion, lists, strings, algorithms, exceptions, object-oriented programming, and GUIs (graphical user interfaces). As the course progresses, students will learn to work with packages, data structures, object-oriented programming, and tools for data science and cybersecurity.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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### **CAPS - DATASTUDIES 5002 Foundations of Mathematics for Data Analytics & Applications**

This course introduces the fundamental concepts, theorems, and tools used in data science and machine learning, including probability, optimization and calculus, linear algebra, discrete mathematics, and statistics. Applications of the theory to data science and machine learning will be developed with mathematical concepts being applied in Python.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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### **CAPS - DATASTUDIES 5013 Data Visualization and Story Telling**

This course begins with a review of human perception and cognition, drawing upon psychological studies of perceptual accuracy and preferences. The course reviews principles of computational graphic design, what makes for a good graph, and why some data visualizations effectively present information and others do not. It considers visualization as a component of systems for data analytics and applications and presents examples of exploratory data analysis, visualizing time, networks, and maps. Students learn methods for static and interactive graphing and become familiar with tools for building web-browser-based presentations. Prerequisites: None

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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### **CAPS - DATASTUDIES 5025 Enterprise Data Management**

Organizations have begun generating, collecting, and accumulating more data at a faster pace than ever before. The advent of Big Data has proven to be both opportunity and challenge for contemporary organizations who are awash-even drowning-in data but starved for knowledge. Unfortunately, organizations have not developed comprehensive enterprise data management (EDM) practices that treat data as a strategic imperative. EDM is a comprehensive approach to defining, governing, securing, and maintaining the quality of all data involved in the business processes of an organization. EDM enables data-driven applications and decision-making by establishing policies and ownership of key data types and sources. The ultimate goals are to create a strategic context for the technology underpinnings of data life cycle management and ensure good stewardship of an organization's data. This course will cover the critical components of building an enterprise data management practice including, but not limited to, data strategy, data governance, data security, data architecture, data quality, data ownership, and metadata management. This course includes case studies, lectures, and group activities to enhance the textbook material.

Credit 3 units.

Typical periods offered: Spring

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### **CAPS - DATASTUDIES 5030 Analytics Applications**

This course focuses on the strategic, operational, tactical, and practical use of data analytics to inform decisions within an organization across a range of industry and government sectors as well as within organizational functions. Students will be introduced to specific analytics techniques that are used currently by practitioners in areas of diagnostic, descriptive, predictive, and prescriptive analytics. Students will learn the critical phases of analytics including data preparation, model development, evaluation, validation, selection, and deployment. In so doing, students will learn to apply data analytics in order to optimize organizational processes, improve performance, and inform decision-making.

Credit 3 units.

Typical periods offered: Spring

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### **CAPS - DATASTUDIES 5035 Data Engineering Foundations**

This course provides an overview of the discipline of data engineering. It introduces software and systems for data analytics & applications and software development as required in the design of data-intensive applications. Students learn about algorithms, data structures, and technologies for storing and processing data. Students gain experience with open-source software, text editors, integrated development environments, and cloud systems. Students employ best practices in software development, utilizing tools for syntax checking, testing, debugging, and version control. The course also introduces formal models for algorithm and system performance.

Credit 3 units.

Typical periods offered: Fall, Spring

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### **CAPS - DATASTUDIES 5040 Applied Machine Learning**

This course introduces machine learning with business applications. It provides a survey of statistical and machine learning algorithms and techniques including the machine learning framework; regression; classification; regularization and reduction; tree-based methods; unsupervised learning; and fully connected, convolutional, and recurrent neural networks. Students implement machine learning models with open-source software for data analytics and applications. They explore data and learn from data, finding underlying patterns useful for data reduction, feature analysis, prediction, and classification.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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### **CAPS - DATASTUDIES 5045 Applications of Deep Neural Networks**

Deep learning is a group of exciting new technologies for neural networks. Through a combination of advanced training techniques and neural network architectural components, it is now possible to create neural networks of much greater complexity. Deep learning allows a neural network to learn hierarchies of information in a way that is like the function of the human brain. This course will introduce the student to computer vision with Convolution Neural Networks (CNN), time series analysis with Long Short-Term Memory (LSTM), classic neural network structures and application to computer security. High Performance Computing (HPC) aspects will demonstrate how deep learning can be leveraged both on graphical processing units (GPUs), as well as grids. Focus is primarily upon the application of deep learning to problems, with some introduction mathematical foundations. Students will use the Python programming language to implement deep learning using Google TensorFlow and Keras. It is not necessary to know Python prior to this course; however, familiarity with at least one programming language is assumed.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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**CAPS - DATASTUDIES 5300 Introduction to Relational Databases and SQL Programming**

The purpose of this course is to introduce the essential concepts behind relational databases, and help students acquire and apply foundational knowledge of the SQL language and Relational Database Management Systems (RDBMS). Students will study relational data models and discover how they are created and what benefits they bring, plus how to apply them to their own data. Additionally, students are exposed to other types of datastores like NoSQL and graph databases, and how to work with them. The emphasis in this course is on practical and hands-on learning. Through a series of labs, students will practice building and running SQL queries.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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**CAPS - DATASTUDIES 5740 Foundations of Data Analytics**

Organizations are rapidly transforming the way they ingest, integrate, store, and serve data and perform analytics. In this course, students will learn the steps involved with designing and implementing data analytics and applications projects. Topics addressed include ingesting and parsing data from various sources, dealing with messy and missing data, transforming and engineering features, building and evaluating models, and visualizing results. Using Python, as well as other tools, students will complete assignments learning the process of building a data model as well as a variety of analytics techniques and under what situations they are best employed. Through lectures and practical exercises, students will become familiar with the computational mathematics that underpin analytics; the elements of statistical modeling and machine learning; model interpretation and assessment; and structured and unstructured data analysis.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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**CAPS - DATASTUDIES 5750 AI/ML Ops**

This course provides students with an advanced understanding of artificial intelligence (AI) and machine learning operations (MLOps). It focuses on the end-to-end lifecycle of AI/ML models, from development to production, covering data engineering, model training, deployment, monitoring, and continuous integration/continuous deployment (CI/CD). Students will learn best practices for scaling AI/ML workflows, building pipelines, monitoring models in production, and managing versioning and reproducibility. Students taking this course should have foundational knowledge of AI/ML algorithms, basic programming skills (Python, Bash scripting), and introductory knowledge of DevOps (containers, CI/CD pipelines). A working knowledge of Databricks Community Edition would also be helpful.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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**INFO 5559 Applications of Generative AI and Large Language Models**

This course covers the dynamic world of Generative Artificial Intelligence providing hands-on practical applications of Large Language Models (LLMs) and advanced text-to-image networks. Using Python as the primary tool, students will interact with OpenAI's models for both text and images. The course begins with a solid foundation in generative AI principles, moving swiftly into the utilization of LangChain for model-agnostic access and the management of prompts, indexes, chains, and agents. A significant focus is placed on the integration of the Retrieval-Augmented Generation (RAG) model with graph databases, unlocking new possibilities in AI applications. As the course progresses, students will delve into sophisticated image generation and augmentation techniques, including LoRA (Low-Rank Adaptation), and learn the art

of fine-tuning generative neural networks for specific needs. The final part of the course is dedicated to mastering prompt engineering, a critical skill for optimizing the efficiency and creativity of AI outputs. Ideal for students, researchers, and professionals in computer science or related fields, this course offers a transformative learning experience where technology meets creativity, paving the way for innovative applications in the realm of Generative AI. Note: This course will require the purchase of up to \$100 in OpenAI API credits to complete the course.

Credit 3 units.

Typical periods offered: Fall, Spring, Summer

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## Human Resources Management

Human resources managers are integral parts of the leadership teams charged with directing complex organizations and a diverse workforce. Managing people and organizations requires both functional skills in human resources as well as expertise in strategic planning and organizational development. The **Master of Arts in Human Resources Management** prepares individuals in a variety of employment settings to join other organizational leaders at the table of decision makers.

The Human Resources Management graduate program provides learners with skills and information in key operational areas such as human relations and communications, compensation and benefits, training and development, employee and labor relations, and staffing and retention. In addition, the program teaches professionals how to contribute to organizational development, change, risk management and strategic planning.

This program can be completed entirely online.

|          |                                                                                                                                                                     |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact: | CAPS                                                                                                                                                                |
| Phone:   | 314-935-6700                                                                                                                                                        |
| Email:   | <a href="mailto:caps@wustl.edu">caps@wustl.edu</a>                                                                                                                  |
| Website: | <a href="http://caps.wustl.edu/programs/graduate/masters-human-resources-management">http://caps.wustl.edu/programs/graduate/masters-human-resources-management</a> |

## Degree Requirements

## Master of Arts in Human Resources Management

The Master of Arts in Human Resources Management consists of 36 units of graduate coursework.



## Required Courses (21 units)

| Code               | Title                                               | Units     |
|--------------------|-----------------------------------------------------|-----------|
| CAPS-HRM 5000      | Organizational Behavior and Management              | 3         |
| CAPS-HRM 5005      | Human Resources Management                          | 3         |
| CAPS-HRM 5200      | Compensation Management                             | 3         |
| CAPS-HRM 5280      | HR Metrics                                          | 3         |
| CAPS-HRM 5285      | Strategy Formation and Organizational Effectiveness | 3         |
| CAPS-HRM 5321      | Legal Aspects of Human Resources Management         | 3         |
| CAPS-HRM 5980      | Integrative Capstone Project for Human Resources    | 3         |
| <b>Total Units</b> |                                                     | <b>21</b> |

## Elective Courses

Students select 15 units from the following courses:

| Code                                                                  | Title                                                                              | Units |
|-----------------------------------------------------------------------|------------------------------------------------------------------------------------|-------|
| CAPS-HRM 5015                                                         | Consulting Skills for Human Resources and Organizational Development Professionals | 3     |
| CAPS-HRM 5081                                                         | Coaching and the Modern Organization                                               | 3     |
| CAPS-HRM 5110                                                         | Organizational Communication in Human Resources Management                         | 3     |
| CAPS-HRM 5185                                                         | Great Books in Leadership                                                          | 3     |
| CAPS-HRM 5205                                                         | Diversity and Inclusion in the Workplace                                           | 3     |
| CAPS-HRM 5305                                                         | Building High Performance, Team-Based Organizations                                | 3     |
| CAPS-HRM 5332                                                         | Principles of Finance                                                              | 3     |
| Other Human Resources or Nonprofit Management courses with permission |                                                                                    |       |

*This program is offered fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

## Courses

### CAPS-HRM 5000 Organizational Behavior and Management

This is a survey course focusing on the individual, group, organizational and environmental factors relevant to understanding and managing behavior in complex organizations. It considers behavior from structural, human resources, political and symbolic perspectives.

Credit 3 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall

### CAPS-HRM 5005 Human Resources Management

This course develops a comprehensive understanding of the human resources function in an organization. Particular attention is given to selection, performance management, training, wage and salary administration, career development, human resource planning, and the federal regulations impacting on the function.

Credit 3 units. UColl: HRP

Typical periods offered: Fall, Summer 3, Spring

### CAPS-HRM 5015 Consulting Skills for Human Resources and Organizational Development Professionals

In this course, we will learn essential internal and external consulting skills. Topics include phases in the consulting process, differences in consulting models, creating a business plan, estimating costs, consulting ethics, and cultivating relationships. Students will acquire the skills needed to build strong partnerships within organizations. This course is designed for people who consult within an organization or who are pursuing consulting as a profession.

Credit 3 units. UColl: HRP

Typical periods offered: Fall, Summer

### CAPS-HRM 5081 Coaching and the Modern Organization

Coaching overall has seen a dramatic increase in recent years as individuals and organizations have seen the impact coaching can have both personally and professionally. Coaching is a collaborative partnership between the coach and coachee focused on listening and development. It is also used in organizations to support richer conversations and to support ongoing development. In this course you will learn about the ways coaching can be used in modern organizations, the professionalism dedicated to a coaching approach, and the development of your own coaching techniques.

Credit 3 units.

Typical periods offered: Spring

### CAPS-HRM 5110 Organizational Communication in Human Resources Management

This course identifies the major theories and methods of communication at the individual, group, and organizational levels. Particular attention is devoted to the role of communication in achieving long-term organizational effectiveness. Strategy and tactics relevant to interpersonal communication, negotiation, and consensus building are also analyzed.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

### CAPS-HRM 5120 Principles of Project Management

This course provides students with a foundation in project management centered on developing their skills and capabilities. Students will gain competencies in planning, controlling, scheduling, resource allocation, budgeting, and performance measurements, utilizing tools and techniques to manage challenges throughout the project life cycle. Students will also examine the roles of the project

manager, project teams, and stakeholders in the development of the project scope, up to and until project closure. A hands-on group project will provide students with the experience of managing a project.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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#### **CAPS-HRM 5185 Great Books in Leadership**

This course critically engages with influential books written by leading scholars and practitioners who are shaping contemporary conversations about leadership. The focus is cross-disciplinary and spans industries and organizational types. Students will explore multiple perspectives on what leadership means, how it should be practiced, and the impact it has on people, culture, and performance. Rather than concentrating on a single model or theory, the course encourages students to compare ideas, question assumptions, and examine how leadership principles apply in diverse organizational contexts. By the end of the course, students will develop a broader, practical understanding of leadership that can be applied effectively across sectors and roles.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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#### **CAPS-HRM 5200 Compensation Management**

The methods of rewards for employee availability, capability, and performance. Topics include measures of performance and employment market issues; skill-building and design of compensation packages of money and benefits to improve employees' work quality and productivity.

Credit 3 units. UColl: HRP

Typical periods offered: Fall, Spring

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#### **CAPS-HRM 5205 Diversity and Inclusion in the Workplace**

In this course, we examine the history of diversity in the workplace and the demographic changes that drive diversity. We will study how inclusion affects business outcomes in areas such as talent, engagement, productivity, and innovation. Students will also explore diversity dimensions and unconscious biases in themselves and then apply these findings to the workplace by developing a business case for diversity and inclusion that includes defining return on investment, strategy, organizational alignment, accountability, and measurement. Successful diversity and inclusion initiatives will be addressed, including best practices for recruitment, development, training, mentoring, resource groups, benefits, and policies.

Credit 3 units. UColl: HRP

Typical periods offered: Spring, Summer

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#### **CAPS-HRM 5280 HR Metrics**

This course provides a foundation for measuring the effectiveness of human resources management (HRM) policies, programs, and processes. The class will study basic measurement indices and research methods to better demonstrate outcomes such as cost savings, cost avoidance, and return on investment for the major HRM functional areas.

Credit 3 units.

Typical periods offered: Fall, Spring

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#### **CAPS-HRM 5285 Strategy Formation and Organizational Effectiveness**

This course focuses on developing and implementing a strategy to sustain a competitive advantage in business. The process specifies mission, vision, and values, develops projects and programs, and allocates resources to achieve organizational goals. This course will give special attention to the allocation of human resources to achieve organizational effectiveness. Most principles taught in this course are transferable to nonprofit organizations.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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#### **CAPS-HRM 5293 Human Resource Planning**

The linkage between business goals and human resource requirements. Includes environmental scanning, human resource forecasting, strategies, individual assessment, career planning, and individual development techniques.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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#### **CAPS-HRM 5305 Building High Performance, Team-Based Organizations**

This course examines the factors that are most critical in developing high-performance, team-based organizations. We pay particular attention to the assessment of organizational climate, and analyze steps organizational leaders must take to make the transition to a team-based approach. We also examine important systems and processes that support this design.

Credit 3 units.

Typical periods offered: Summer

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#### **CAPS-HRM 5321 Legal Aspects of Human Resources Management**

This course will provide a general legal framework for human resources practices in organizations. Particular attention will be given to legal issues regarding employment, personnel practices, wages and salary, benefits, family and medical leave, workers with disabilities, terminations and unions.

Credit 3 units. UColl: HRP

Typical periods offered: Fall, Spring

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#### **CAPS-HRM 5332 Principles of Finance**

This course offers HR professionals training in basic financial management methods and evaluation techniques used to assess overall organizational financial and business performance. Students will acquire: an ability to evaluate capital investments, capital acquisitions, and capital budgets; an understanding of uncertainty (risk) and risk management; knowledge of cash and credit management techniques; knowledge of the costs of alternative sources of short-, intermediate-, and long-term financing (both debt and equity); and an understanding of financial statement analysis.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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#### **CAPS-HRM 5980 Integrative Capstone Project for Human Resources**

The overall objective of this capstone course is for master's students in Human Resources Management to integrate the program course work through a substantial, independent applied project conducted in a host organization. Students will demonstrate their professionalism through a written and oral presentation of their materials. Students should be in their final semester of study or have permission of the program coordinator.

Credit 3 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall




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## CAPS-HRM 5994 Human Resources Internship

Requires signed proposal on file at CAPS.

Credit 3 units.

Typical periods offered: Fall, Summer

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## CAPS-HRM 5999 Independent Study in Human Resources

### Management

Requires permission and signed proposal on file.

Credit 1-3 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall

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# International Affairs

Sweeping changes in political, economic, and social relations have taken place over the past several centuries. Living and working in a rapidly changing global environment presents great opportunities to advance the human condition, promote growth and development, create political liberties, recast bargains between governments and their societies, transform social welfare, and advance the boundaries of knowledge and scientific exploration. However, these same topics also present great risks as people fear loss of identity, worry about economic subordination and loss to those beyond their borders, encounter environmental degradation, and confront potential decline in personal and social autonomy. Our heightened economic, political, social, cultural, and environmental interdependence generates serious challenges in areas such as social justice, health, security, development, human rights, social welfare, inequality, diversity, and technology. These challenges create the possibility for conflict but also for cooperation and compromise.

The **Master of Arts in International Affairs** offers an interdisciplinary approach to understanding these global issues. The program draws on teaching and expertise from WashU faculty and experienced practitioners in the St. Louis region, and it provides knowledge and skills for understanding and working with some of the most difficult international and cross-cultural problems faced by states, societies, and communities. Learners have the opportunity to tailor their studies to explore topics such as global politics, global economics, development, international security and conflict, international business, human rights, the role of gender, the environment and sustainability, and issues of regional importance.

Contact: CAPS  
Phone: 314-935-6700  
Email: [caps@wustl.edu](mailto:caps@wustl.edu)  
Website: <http://caps.wustl.edu/programs/graduate/masters-international-affairs>

## Degree Requirements

# Master of Arts in International Affairs

**Total Units Required:** 30 units

## Required Core Courses: 21 units

The Master of Arts in International Affairs is a 30-unit program that includes seven core courses, two electives, and a capstone course. The purpose of the required core courses is to develop a coherent structure underpinning the MA by ensuring some common theoretical foundations, knowledge, and language shared by individuals in this program and with graduates of similar programs around the world. This contributes to the building of a professional community and identity.

One required course is **Foundations in Social Science for International Affairs** (course number TBD), a core course that introduces learners to the behaviors of states, individuals, institutions, and other actors in the international arena and helps them build skills in collecting and organizing research resources, interpreting and critically assessing academic research articles, and writing literature reviews that integrate their own analyses.

The other core courses provide a theoretical and substantive foundation for the analysis and understanding of international affairs. These courses are designed to enable learners to develop expertise and understanding of dominant analytical frameworks, tools, and common language in the field of international affairs so that they are better prepared to engage with other professionals in the field.

## Required Core Courses (21 units)

| Code               | Title                                                     | Units     |
|--------------------|-----------------------------------------------------------|-----------|
| CAPS-IA 5276       | Diplomacy                                                 | 3         |
| CAPS-IA 5277       | National Security Decision-Making                         | 3         |
| CAPS-IA 5311       | American Foreign Policy                                   | 3         |
| CAPS-IA 5380       | Alternative Analytic Techniques for International Affairs | 3         |
| CAPS-IA 5560       | Politics of Global Finance                                | 3         |
| CAPS-IA 5665       | International Relations                                   | 3         |
| CAPS-IA 5595       | Inside the Intelligence Community                         | 3         |
| <b>Total Units</b> |                                                           | <b>21</b> |

## International Affairs Electives (6 units)

These courses may be chosen from additional International Affairs courses or, with permission, from CAPS graduate-level courses in other subjects.

## Required Capstone (3 units)

After completing their formal coursework, all students are required to complete a capstone research project under the supervision of a WashU faculty member.

## Courses

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### CAPS-IA 5000 Process and Design of Research

This course introduces students in the International Affairs Program to research design and methods and to the relationship of theory to research in the Social Sciences, with the aim of preparing students for writing research papers. Areas to be explored include overall research design, case selection, and literature reviews. The importance of theory is stressed.

Credit 3 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall

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### CAPS-IA 5001 Foundations in Social Science for International Affairs

How do we know what we know about international affairs? What are the advantages and disadvantages of different social scientific approaches to understanding behaviors of states, individuals, institutions, and other actors in the international arena? In this course, students will build skills in collecting and organizing research resources, interpreting and critically assessing academic research articles, and writing literature reviews that integrate one's own analyses. The class will build these skills using an applied approach with international affairs topics and major theoretical frameworks, and students will have the opportunity to complete a literature review on an international affairs topic that fits their interests.

Credit 3 units. UColl: IAC

Typical periods offered: Fall, Spring

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### CAPS-IA 5006 Why Were We in Vietnam?

Until the Afghan War, the American war in Vietnam was the United States' longest and most costly war in blood and treasure. This course will investigate the origins and ideological context of this war more than 45 years after its end. How and why did the American commitment begin? How did the conflict unfold? How did it end, and at what price? How did the American effort affect U.S. national security and American interests in Asia?

Credit 3 units.

Typical periods offered: Fall

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### CAPS-IA 5007 The Mexico-U.S. Paradigm: The Southern Neighbor and the Scenes of Contemporary International Affairs

Since the foundation of both republics and up to the present, the relationship between Mexico and the United States has played a central role in defining a variety of paradigms in international affairs. In addition, Mexico's unique approach to diplomacy is at the core of various economic and diplomatic doctrines influential

across the Global South. This course explores the ways in which this relationship helps us think about questions of development, international security, immigration and political intervention. The first part of the course looks at the relationship historically, focusing on the complex relationship between the two countries in the Cold War as well as Mexico's role as a negotiator with Cuba and the Soviet Union. The historical section will also discuss the role that Mexico played in the creation of developmental paradigms from the 1930s onward. The second part of the course looks at the three hot-button issues between the two countries: trade, immigration, and the Drug War. It will discuss the ways in which Mexico is an essential laboratory for policies related to security and commerce in the United States. The course will allow students to rethink ideas about economics, security, and other questions in international affairs from a unique yet fundamental point of view.

Credit 3 units. UColl: CD

Typical periods offered: Spring

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### CAPS-IA 5015 Writing Papers for International Affairs

In this course, students will develop skills necessary for effective written communication in international affairs. Students will consider how best to position their writing for a variety of audiences, including the government, the public, and academics. Students will review writing examples in each genre and learn the format, style, and conventions used in each of the genres. In addition, students will learn and practice the necessary skills to focus, organize, write, and revise their own work for each of these audiences.

Credit 3 units.

Typical periods offered: Summer

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### CAPS-IA 5023 International Organizations

This course examines the role of major international organizations in the modern world--the UN, EU, NATO, IMF, WTO, MERCOSUR, and others. We explore the background for the creation of these organizations, the purposes they serve, and those whose interests they promote. We also consider how they adapt and evolve over time. Our survey centers on three broad areas of investigation: first, we examine how international organizations promote and maintain international security. Second, we consider organizations designed to regulate and promote economic growth and development. This entails a focus upon the process of globalization and the challenges presented in an era of heightened economic interdependence. Finally, we examine growing efforts at regional cooperation through the emergence of organizations such as NAFTA, the EU, and MERCOSUR.

Credit 3 units. UColl: IAC

Typical periods offered: Fall, Summer

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### CAPS-IA 5030 Levels of Analysis: Thinking Theoretically

A theory is a set of propositions and concepts that combine to explain phenomena by specifying the relationships among the propositions. Theory's ultimate goal is to predict phenomena. Good theory can explain events across space and time (e.g., it works just as well in Iran as in Columbia; and just as well today as in the Peloponnesian War). Theories provide a framework through which to understand everyday events in international relations, and to answer the basic foundational questions in the field--how can human nature be characterized? What's the relationship between the individual and society? What are the characteristics and role of the state? How's the international system organized? Theories abound in international relations: classical realism, structural realism, liberalism, constructivism, Critical Theory, Feminism, English School, post-structuralism, post-modernism, to name some of the more prominent ones. These different theoretical approaches help us see international relations from different viewpoints. No single approach can capture all the complexity of contemporary world politics. The list of possible explanations a theory provides can be usefully organized according to three levels



of analysis-individual, state, international. Dividing the analysis of international politics into levels helps orient our questions and suggests the appropriate type of evidence to explore. Each level privileges certain variables, while abstracting others. This workshop explores the value of thinking theoretically in international relations; highlights what we gain (and lose) with theory; and analyzes the utility of each level of analysis for what it illuminates (and what it neglects). The written assignment will involve applying the three levels of analysis to a contemporary event.

Credit 1 unit.

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### **CAPS-IA 5050 U.S. Law and International Relations**

This course examines how law and politics interact to define the limits on government authority in foreign policy. Separation of powers is a key tenet of the U.S. political system, and nowhere is this principle challenged more than in the realm of foreign policy. All three branches of our government struggle with the inherent tension between the need for decisive action and secrecy on the one hand and the desire for democratic deliberation and accountability on the other. These tensions have been with us since the beginning of the nation, but they have become even more prominent with recent changes in technology, new international threats, and increased globalization.

Credit 3 units. UColl: IAC

Typical periods offered: Summer

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### **CAPS-IA 5054 Cultural Policy and the Politics of Culture in Latin America**

This course will examine cultural policy making in Latin America, which has developed from the close relationship between the state and a nation's writers, intellectuals, and artists. Focusing on case studies from Mexico, Argentina, and Brazil, we will explore ways in which the arts have connected with civil society and the public sphere, in turn becoming engines of economic development, political mobilization, and social intervention. We also will examine the evolution of Latin American media and the manner in which public intellectuals have shaped public opinion in the region. Authors include Mary Coffey, George Yudice, Néstor García Canclini, Nicola Miller, and Anne-Marie Stock, among others.

Credit 3 units. UColl: CD

Typical periods offered: Spring

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### **CAPS-IA 5055 Politics of the European Union**

This course provides a political overview of the European Union and its 27 member states. Attention is paid to the emergence of European supranational governance in the 1950s and its trajectory to the present day. We also consider the interplay of geographical, economic, and cultural factors, together with an assessment of the EU and its place in the larger global political sphere.

Credit 3 units. UColl: PSC, PSI

Typical periods offered: Spring

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### **CAPS-IA 5060 The United Nations and International Security**

The aim of this course is to gain a deeper understanding of the United Nations (UN) and its role in world politics. Beginning with an examination of the history of the UN and its precursors, we will discuss the UN's structure and its three-part mission as outlined in the UN Preamble: international peace and security; human rights; and development. We will assess the strengths and weaknesses of the UN and its agencies in these three substantive areas, within the context of a rapidly shifting geopolitical climate. Attention will be paid to the ongoing debate among proponents and detractors of the UN, and the unique role played by the US in this debate.

Credit 3 units. UColl: IAC, PSI

Typical periods offered: Spring

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### **CAPS-IA 5065 Statistics and Research Design in Nonprofit Management**

This course emphasizes the application of basic behavioral and social science research methods in the evaluation and management of nonprofit programs. Students learn the tools available to evaluate and report the effectiveness of programs and organizations, including program evaluation, survey design, and qualitative and quantitative research methods.

Credit 3 units.

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### **CAPS-IA 5071 International Law and Human Rights**

This course takes a critical perspective of international law and human rights, by examining the foundational codes and conventions, and asking how relevant they are today in light of a changing society. It will consider how paradigms have shifted regarding who is deserving of human rights, as well as the problems of enforcement when state governments are themselves perpetrators of human rights violations. Readings, films, and interactive data sets will focus on human rights as embedded in intersectionalities of class, caste, race, ethnicity, gender, sexuality, and disability. Topics will include issues like: How was Facebook implicated in the genocide of Rohingya in Burma? Why has the Chinese government confined millions of ethnic minority Uighurs in concentration camps? What are food deserts and food apartheid? Have transnational agribusinesses solved world hunger, or have their pesticides and genetically-modified seeds compromised the global ecosystem? Why is the legal system making so little progress on labor and sex trafficking?

Credit 3 units. UColl: CD, IAC, ML

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall

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### **CAPS-IA 5075 New Cold War, 1991-2018**

Credit 3 units. UColl: HTR, HUS

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### **CAPS-IA 5077 The Entrepreneurial Edge: Navigating International Affairs through Innovation**

This course explores the transformative power of innovation and entrepreneurship in addressing global challenges and driving sustainable development. Students will engage with case studies and real-world examples to understand how innovation reshapes industries, societies, and economies. Topics include technology, social entrepreneurship, sustainable practices, and the role of policy in fostering the global good. As global challenges increase, it is essential to develop a mindset of flexibility, creativity, and resourcefulness, traits central to entrepreneurship. The course will include various dynamic guest speakers from around the world, experts in their fields, who will offer valuable insights and real-world perspectives on global innovation. Students will also explore how organizations, governments, and social enterprises scale their ventures, with a focus on collaboration across sectors. The course will equip students with tools to evaluate and measure the impact of innovations in creating lasting, positive change. By the end of the course, students will have gained both a deep understanding of how entrepreneurial thinking and innovation drive global progress, and the skills to lead projects that can make a meaningful impact on the world's biggest challenges.

Credit 3 units.

Typical periods offered: Fall, Spring, Spring Intersession

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### **CAPS-IA 5085 International Trade and Globalization**

This course will explore globalization in the context of international trade and cross-border investments. Course topics include: forces driving globalization; economic consequences; trends in international trade and investment; effects of protectionism; government's

role in world trade; international institutions such as World Trade Organization, European Union, and International Monetary Fund. In each of these areas we will consider how current global events and questions impact the international business environment.  
Credit 3 units. UColl: CD

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**CAPS-IA 5123 Humanitarian Intervention in International Society**

One of the more striking features of post-Cold War international society has been the development of a theory and practice of humanitarian intervention. This course explores the background, causes, nature, and limits of these changes. The course is interdisciplinary in nature, combining legal, moral, and political analysis, with an emphasis on the legal question of whether today there is so-called legal right of humanitarian intervention. The course does not assume prior background in international relations. We therefore also spend time introducing a few central concepts and issues in international relations, in order to provide a theoretical framework for our substantive inquiries into humanitarian intervention.  
Credit 3 units.

Typical periods offered: Fall, Summer

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**CAPS-IA 5155 International Growth and Development, Inequality, and Transitional Justice**

This course will explore contemporary trends in transnational inequality, and the strategies proposed to address them. We'll look at the expanding wealth divide between global north and south countries, and inquire about the sources. Why is there a rising number of billionaires (who can end global poverty seven times over), and what are the policies that enable them to park and hide their wealth internationally? Do lending institutions like the World Bank and International Monetary Fund help rectify these problems, or make them worse? Will small dose micro-credit loans help women and their families out of poverty? How have population programs derailed women's reproductive power, and supported heteronormative conceptions of the family? We will critically examine why development continues to be the main model for international aid programs. In addition, we'll ask about the alternatives, and how can we move from development to social and economic justice.

Credit 3 units. UColl: IAC

Typical periods offered: Summer

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**CAPS-IA 5182 International Economics**

This course provides an analysis of the international economy, the economic theories that help explain it, and analysis of important current issues of international economic policy. When David Ricardo proposed his famous theory of comparative advantage in 1821, he set out to explain why England exported cloth to and imported wine from Portugal. Today, international trade is much more complex. Apple devices are designed in Silicon Valley while their most expensive component, the hard drive, is manufactured by Toshiba in Philippines before it is finally assembled in China. Can Ricardo's theory explain today's patterns of international production and trade? Today, the number of these currencies has been reduced through the formation of the European Union. What are the cost and benefits of currency unions?

Credit 3 units. UColl: IAC

Typical periods offered: Summer

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**CAPS-IA 5224 Latin American History and Culture**

A survey of Latin American history and culture from the time of the European conquest to the present. A focus on specific periods and events, including the conquest, the wars of independence, the emergence of authoritarianism, the Mexican and Cuban Revolutions,

and the struggle to establish democratic institutions. Designed to acquaint students with the evolution of Latin American culture within an historical framework. Course materials include historical texts and essays, fictional literature, and videos. (Same as U85 IA 475).  
Credit 3 units.

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**CAPS-IA 5233 The Law of the Sea: Governing the Oceans and Marine Resources**

Credit 3 units.

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**CAPS-IA 5234 Portraits of Indigenous People in Latin American Culture and Literature**

Credit 3 units. UColl: CD, HUM

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**CAPS-IA 5243 Data Analysis for International Affairs**

This course is an introduction to the concepts, tools, and procedures for quantitative analysis that is specifically tailored for application in International Affairs. Students will learn to locate, collect, clean, and store quantitative data relevant to international affairs; download, install, and perform basic tasks using the statistical software R; use descriptive statistics to visualize data for a variety of professional formats including oral presentations, written memos, and public websites; and understand the basic principles of statistical analysis to fit models of data using ordinary least squares and generalized linear models. The course is designed for adult learners and addresses the fear of math that prevents them from developing these important skills. It serves as an optional Part II for the mandatory Process and Design of Research course, preparing students for their directed research projects and developing their competency in a high-demand skill that will broaden their employment opportunities after graduation.

Credit 3 units.

Typical periods offered: Spring

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**CAPS-IA 5265 Environmental Ethics**

Credit 3 units.

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**CAPS-IA 5274 Palestine, Israel, and the Arab-Israeli Conflict**

This course examines the history of the Arab-Israeli conflict from the mid-nineteenth century to the present. Topics include: Palestine in the late Ottoman period; the development of modern Zionism; British colonialism and the establishment of the Palestine Mandate; Arab-Jewish relations during the Mandate; the growth of Palestinian nationalism and resistance; the establishment of the state of Israel and the dispersion of the Palestinians in 1948; the Arab-Israeli wars; both Palestinian uprisings; and the peace process.

Credit 3 units.

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**CAPS-IA 5276 Diplomacy**

Students in this course will delve into the world of US diplomacy and the role it plays in international affairs. They'll be introduced to the diplomatic profession through readings, simulations and frequent interaction with professionals in and around the US government. Through multi-party negotiations, case studies, press briefings and cable writing, students will emulate the work of those building relationships to address complex issues and advance American interests in a dynamic world.

Credit 3 units.

Typical periods offered: Fall, Spring



## **CAPS-IA 5277 National Security Decision-Making**

This course will both simulate and seek ways to improve our national security decision-making process. Students will embody the various perspectives and priorities of strategic decision-makers, gaining an appreciation for the interagency process and the challenges of making foreign policy in a complex and fast-paced environment. Students will hone professional writing, oral presentation, negotiation and collaboration skills as we explore complicated challenges in cyber, climate and human security. We will explore both traditional and newer, more diverse voices in the international relations realm, in an effort to broaden both our concept of national security and the ranks of those who are making decisions about it.

Credit 3 units. UColl: IAC

Typical periods offered: Fall, Spring

## **CAPS-IA 5300 Modern Middle East**

This course will explore the rapidly changing role of the media in Arab and Muslim societies in reporting about revolts and conflicts, the 'Arab Spring,' and the chronic impasse between Israel and the Palestinians. We will study the impact of social media, which have afforded greater access to 'real-time' images of the Syrian civil war than was possible with previous conflicts. We will investigate the formation of public opinion in the Arab and Muslim worlds-- in particular, the role of state-supported media operations such as Al Jazeera. We will compare the style and substance of Israeli and Arab media sources and the role of professional versus citizen journalists in covering newsworthy events.

Credit 3 units.

Typical periods offered: Fall

## **CAPS-IA 5311 American Foreign Policy**

This course begins with a survey of the historical foundations of American foreign policy. Having established a broad understanding of the issues that have confronted the nation, we closely examine the current political climate and the challenges that the United States faces in terms of its economic and physical security. Finally, we consider strategies for dealing with the threats and challenges that beset this nation.

Credit 3 units. UColl: IAC

Typical periods offered: Spring

## **CAPS-IA 5312 Environmental and Energy Issues**

This course considers the major issues in these increasingly important areas of public policy. We discuss the importance of political processes and actors on such phenomena as global warming, endangered species, and public lands. This course emphasizes the American experience but also considers international implications.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

## **CAPS-IA 5353 Post-Conflict Reconstruction and International Coordination**

This is an intensive, two-day seminar examining the practice and theory of post-conflict reconstruction and nation-building. The centerpiece of the seminar is a simulation centered on the case of Afghanistan circa 2002 in which students will play the roles of various international and local actors. Prior to the seminar, students will complete readings from academic and policy sources covering the primary elements of reconstruction and background information specific to the case of Afghanistan. Students also will be provided with materials on their specific role and will submit a position paper prior to the simulation. Day one is a full-day simulation. Students will play their roles to coordinate on major issues in reconstruction including conflict resolution, constitutional design, electoral systems, rule of law, security issues, human rights, and economic development. Day two is a seminar and debrief. Students will analyze their decisions in

light of the academic and policy literature and compare their decisions to those made in the real world. Following the seminar, students will submit a final reflection essay drawing on the reading, the simulation, and the seminar to communicate lessons learned and make policy recommendations for future post-conflict reconstruction issues.

Credit 1 unit.

## **CAPS-IA 5355 NGOs in the International System**

Over the past several decades, NGOs (non-governmental organizations) have become an integral part of international politics, addressing crucial problems pertaining to environmental degradation, human rights, immigration, poverty, disease, and so forth. This course will explore ways in which NGOs influence the shaping and execution of policy in international affairs. We will first consider the rise of NGOs and the rationale for their emergence, then examine - through case studies in Africa, Asian, South America, and the former Soviet Union - how they have approached their mission and whether they have succeeded.

Credit 3 units.

Typical periods offered: Summer

## **CAPS-IA 5375 The Global Village in the 21st Century**

More than 50 years ago, McLuhan predicted that humans across the globe would become part of a global village linked by various forms of communications. With the internet and telecommunications, that day has arrived. This online course will explore how global communications systems have evolved, how they work, and how they affect vital policies of nation-states as well as central banks, political leaders, and ordinary citizens. We will explore the ways in which hackers can penetrate secure systems (e.g., elections) and create misleading images and impressions as well as how to counteract those actions. A research paper is required.

Credit 3 units.

Typical periods offered: Summer

## **CAPS-IA 5380 Alternative Analytic Techniques for International Affairs**

This course instills analytic rigor and imagination into the consideration of our most pressing national security issues. Based on structured analytic techniques employed in the Intelligence Community, students in this course will hone critical thinking skills, consider overlooked ideas and develop unique perspectives. Students will be given the tools to recognize and overcome biases, mental shortcuts and unstated assumptions, and challenge conventional wisdom, through analysis of US foreign and counter-terrorism policy and current events in the Middle East, China and North Korea.

Credit 3 units. UColl: IAC

Typical periods offered: Fall, Spring

## **CAPS-IA 5383 Introduction to Public Policy**

In this course students will learn the structures, processes, and actors comprising policy making in the United States at the national and state level. Using various models of the policy process students will gain understanding of policies in a variety of policy arenas. The core project of the course will help students develop their analytic and writing skills by applying the models learned in class to a specific policy debate within one of the areas discussed in the course.

Credit 3 units. UColl: PSA

**CAPS-IA 5395 Indian Barbie, Asian Tigers, and IT Dreams: Politics of Globalization and Development in South Asia**

This course will explore how South Asia is at the heart of current debates about globalization, development, empire, gender, sexuality, and ethnic identity. We'll ask how changes in technology, medicine, and the economy correspond with those in society and human rights. Topics include the growth of markets, religious fundamentalism, bio-piracy and water wars, farmer suicides, consumerism, and reproductive technology. Readings, films, and discussions will take us to countries of Bangladesh, Nepal, Pakistan, Sri Lanka, and India. Assignments include weekly written critiques of the readings, and several short papers.

Credit 3 units. UColl: CD

**CAPS-IA 5415 Drones, Surveillance, and Biometrics: Global Cyberwar in the 21st Century**

This course examines how the practice of militarism is changing worldwide through the development of new technologies. How are governments reshaping the practice of war and diplomacy with the use of unmanned drones to fight wars, biometric eye and finger scanners to patrol borders and immigration, wiretapping on civilian populations to conduct surveillance of foreign terrorists, etc.? How are civilians and nonstate actors engaging in cyberwar, as in the network attacks from China on major corporations like Google? What does it mean that anyone (from militants to humanitarian groups) can now buy drones on the market from private firms? How has a former judge in Montana posed online as an Iraqi cyberspy for the US government? We will assess theories and implications of these developments in readings from sociology, international relations, and science and technology studies. Guest speakers will be invited from institutions around the St. Louis region, such as the National Geospatial-Intelligence Agency, Boeing, legal specialists, and privacy advocates.

Credit 3 units.

Typical periods offered: Fall

**CAPS-IA 5483 International Environmental and Resource Management**

Interdisciplinary seminar on prudent management of global environment and resources. Strategy and policy issues and options. Corporate environmentalism; economic globalization and environment. Problems and potential of international treaties; the role of U.N. agencies; resource wars. Population, resources, and environment. Common property resource management. Climate change and energy futures; transboundary pollution; ocean and coastal resource degradation; global deforestation and land degradation; fresh water scarcity. Food security, genetic resources, and species diversity. (Same as U85 IA 445).

Credit 3 units.

**CAPS-IA 5485 Current Issues in International Affairs**

Topic varies from semester to semester. Refer to section publication for current term's topic.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

**CAPS-IA 5512 Social Entrepreneurship**

This course links the passion of a social mission with the discipline and skills of successful business performance to explore the issues, concepts, and processes associated with social entrepreneurship. Students learn to design an economically sustainable business model that also addresses an existing social problem. In learning to apply

skills and strategies that produce a successful bottom line, both financially and socially, each student develops a business plan for a social entrepreneurial venture or evaluates the business model of an existing social entrepreneurial business venture.

Credit 3 units.

**CAPS-IA 5524 Planetary Problems: International Competition and Cooperation in Outer Space**

This course will explore the crucial role of outer space in global affairs and the challenge of confronting potentially dire consequences of an increasingly crowded orbital environment. We will study three key decisions that shaped the American manned space program: Kennedy's Apollo program; Nixon's space shuttle; and Reagan's space station. We will also examine the role of the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS). Most broadly, we will consider the growing importance of space to humanity at large and the attendant challenges that confront the international community.

Credit 3 units.

**CAPS-IA 5554 Geopolitics in the 21st Century**

In this course we undertake a conceptual history of geopolitics. The term geopolitics emerged near the end of the 19th century in relation to new forms of nationalism and imperialist competition in Europe and beyond. During the Cold War, geopolitics was used to denote a global struggle between the capitalist Western bloc and the Soviet Eastern bloc, which finally ended with the collapse of the Soviet Union. Today, geopolitics is more relevant than ever as new global power struggles characterize the post-post-Cold War world. The realm of geopolitics has expanded in the 21st century to include issues and questions previously ignored during the Cold War: civilizational clashes, global warming, social movement struggles, global finance, and transnational communication networks. Geopolitics now implicates global environmental degradation and ethnonationalism. We will examine the history, concepts, policies, and practices of geopolitics from the late 19th century to the present. We will also critically investigate the new geopolitics of an emerging multipolarity, the return to Great Power politics, and the renewed interest in geopolitical narratives of the 21st century.

Credit 3 units.

Typical periods offered: Fall

**CAPS-IA 5556 Leadership in the Nonprofit Sector**

Students will examine leadership in the nonprofit sector and develop their own leadership style. Students will study traditional leadership styles including authoritarian, participative, and delegative; examine the differences in leadership in the nonprofit, for-profit, and government sectors; and explore the distinctive roles of nonprofit leaders, including the relationship between the nonprofit executive director and the board of directors, and the relationship between nonprofit leaders, volunteers, and staff. In addition to readings, student research will include interviews and discussions with real-world nonprofit leaders.

Credit 3 units.

**CAPS-IA 5560 Politics of Global Finance**

Global finance has undergone stunning transformations over the past 40 years. These changes contribute to interdependence, challenge national sovereignty, alter state-society relations, affect economic development, and influence the distribution of wealth and power in the global political economy. This seminar examines the political economy of monetary relations, the globalization of capital markets, and their effects upon domestic and international affairs.

Credit 3 units. UColl: IAC



## **CAPS-IA 5562 Tropical Field Biology and Primatology**

Credit 0 units.

## **CAPS-IA 5582 Domestic Politics and U.S. Foreign Policy Decision Making**

This course examines U.S. foreign policy from the perspective of domestic politics, with the aim of understanding how our political institutions affect foreign policy outcomes. The first section of the course provides an overview of the paradigms that have been used to understand foreign policy decision-making and examines the electoral and interest group pressures that influence decisions. The second section studies the chief political branches of government (executive, legislative, judicial) and their role in foreign policy. The final section covers the major bureaucratic agencies involved in foreign policy decisions.

Credit 3 units.

## **CAPS-IA 5595 Inside the Intelligence Community**

This class will provide an in-depth look at the United States Intelligence Community (IC) - the different agencies of which the IC is composed, and their varying missions, priorities and resources - and how intelligence informs national security decision-making. Students will analyze long-term national security issues on which the government would like to focus, and the short-term crisis issues on which the government must focus. We will write strategic analytical products and simulate inter-agency coordination and testimony before Congress.

Credit 3 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall

## **CAPS-IA 5600 The Nativist Dimension in Modern Japanese Culture**

This course will explore the domain of nativist expression in modern Japan. Through a wide-ranging survey of cultural artifacts and texts that promote the notion of Japanese uniqueness, we will consider the question of Japanese identity and the key role of invented traditions in its construction. Our study will take into account the evolving historical context within which the discourse on nativism was played out. We will also consider the manner in which foreigners have contributed to this uniqueness discourse over the past 150 years.

Credit 3 units.

## **CAPS-IA 5625 Globalism and Neoliberalism in Latin American Culture**

This course examines the ways in which Latin American culture has engaged with new global realities and the neoliberal policies of the 1990s. We will use political, economic and cultural theory to assess various artistic explorations of newly globalized Latin America cultural identities from the Caribbean to Argentina. The course will include extensive theoretical readings and a series of novels and films that create productive dialogues with that theory. Authors to be considered include, among others, Fredric Jameson, Edmundo Paz Soldán, Ricardo Piglia, Junot Díaz, and Alberto Fuguet.

Credit 3 units. UColl: CD

## **CAPS-IA 5644 The Indochina Wars**

The Vietnam wars of the twentieth century were more accurately Indochinese wars. They were intimately intertwined with broader Indochinese anti-colonial and anti-imperialist struggles, civil wars, and socialist and communist revolutions. This course will probe deeply into the causes, processes, and outcomes of the Indochina wars and will highlight the roles of regional states (Vietnam, Cambodia, Laos, Thailand) and non-state actors (e.g. social, cultural, and anti-imperialist networks and movements). It will elucidate the influence of imperial powers (France, Japan, US, China) while prioritizing the agency, experience, perceptions, and understandings of Vietnamese, Laotian,

Cambodian, and Thai peoples. The articulation of ethnic, gender, class, religious, and national identities, the Cambodian genocide, and the postwar development of Southeast Asia in the 21st century will also receive analytical treatment.

Credit 3 units. Arch: HUM Art: HUM BU: IS EN: H

## **CAPS-IA 5653 Korea: History, Culture, and People**

This course will provide a comprehensive overview of Korea-- its long history, its cultural heritage, its people-- and the complexity of Korea's place within East Asia and in the larger global context. Topics will include: the Korean War and its aftermath, the fraught North-South relationship, national and cultural identity, the gender question, collective memory, and the tension between tradition and modernization/globalization.

Credit 3 units. UColl: CD

## **CAPS-IA 5665 International Relations**

Globalization, the accelerating rate of interaction between people of different countries, creates a qualitative shift in the relationship between nation-states and national economies. Conflict and war is one form of international interaction. Movement of capital, goods, services, production, information, disease, environmental degradation, and people across national boundaries are other forms of international interactions. This course introduces major approaches, questions, and controversies in the study of international relations. In a small group seminar we will examine the building blocks of world politics, the sources of international conflict and cooperation, and the globalization of material and social relations.

Credit 3 units. UColl: IAC

Typical periods offered: Fall

## **CAPS-IA 5700 Global Leadership**

This course will study leadership issues in various global and multicultural settings. We will focus on developing an understanding of global leadership skills and the means of fostering such skills. Attention will be paid to practices that advance ethical awareness, diversity, and effective conflict management. We will discuss exemplary leaders such as Bill Clinton, Bill Gates, and Nelson Mandela. The course will feature an in-depth coverage of relevant theories and research on leadership in global and multicultural organizations. We will discuss team leadership and team collaboration skills within a culturally diverse world, as well as current events relating to global leadership.

Credit 3 units.

## **CAPS-IA 5701 Topics in Politics: The United States of Europe?**

Credit 3 units. UColl: PSC

## **CAPS-IA 5773 State Failure, State Success and Development**

This course takes an interdisciplinary approach to examining the role governments play in development and economic outcomes. We will look at some of the competing arguments about governments in failed and successful states and compare those arguments to the empirical world, or data. In so doing we will recognize that how governments affect development and economic outcomes in society is neither straightforward nor consistent with any of the ideological screeds that often dominate public discourse.

Credit 3 units. UColl: IAC

## **CAPS-IA 5800 Modern Russia and the International Community: New Cold War**

The Cold War supposedly ended in the late 1980s, yet the United States and Russian Federation are on the brink of another period of escalating tensions. In a recent press conference the President of the Russian Federation, Vladimir Putin, issued a dire warning to the United

States and its NATO allies. He said the forward deployment of U.S. Aegis Ashore missiles in Romania posed an offensive threat to Russia, and for this reason the world is in great danger. This course examines how this new era of strained relations between nuclear powers came to pass with special emphasis on U.S.-Russian relations from 1989 to 2016. Ancillary topics include the Ukraine crisis and Erdogan's volte-face with Moscow.

Credit 3 units.

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**CAPS-IA 5851 Topics in Jimes: Israeli Politics in an Era of Polarization**

This course is an introduction to Israeli politics, set within the tension between a Jewish, liberal, and democratic nation-state and serving as a case study for politics in polarized and divided societies. Following an introduction to the Jewish and democratic state, the course will include three main sections: a theoretical introduction to Israeli society, an overview of the Israeli political system, and a focus on several policies illuminating challenges within polarized and divided societies. Throughout the course, we will analyze various policy drivers, mechanisms, and implications and discuss their relevance for other democratic states with divided societies. Together, we will try to make sense of real-time news coming from Israel as we deepen our knowledge of polarization, politics, and Israel and gain skills to participate in political conversations. Please note: L75 385 is intended for Undergraduate students; L75 585A is the section for Graduate Students.

Credit 3 units. Arch: HUM Art: HUM BU: IS EN: H

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**CAPS-IA 5863 Virtual Money Makes the World Go Round: Paypal, Bitcoin, and the Global Politics of Demonetization**

Markets are shifting from paper to virtual currencies, but are the benefits experienced evenly around the world? This course will examine the transformation to cryptocurrencies like Bitcoin and mobile payment systems like Paypal. It will ask how state governments and policymakers are responding and the impact for communities of the poor, ethnic minorities, and women in the global south. Can mobile money circumvent broadscale governmental corruption, or does it solidify the power of elites? Are farmers in Kenya able to use their phones to get better prices for their harvests, or do mobile payment apps submerge them in debt to financial institutions? Why does the demonetization program in India, which removed lower-currency paper bills from circulation, rob rural women of their life savings? Who are the hidden workers of these new industries, like villagers in outsourcing centers who process financial data for the global north? What is the impact on the environment, as Bitcoin servers around the world collectively consume as much energy as the country of Denmark? What does it mean that widespread cryptocurrencies are operating completely outside of state regulations and oversight? We will bring in financial and international development experts and explore local debates in St. Louis, such as the role of our tech hub in designing mobile payment apps and the activist campaigns against payday lenders.

Credit 3 units.

Typical periods offered: Fall, Summer

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**CAPS-IA 5882 Against Development: International Affairs Otherwise**

One of the key tenets of 20th-century geopolitics -- from various models of modernization theory to contemporary understandings of neoclassical and neoliberal theory -- has been the ideal of development as a key goal to address economic and political inequalities in the world system. This course focuses on different lines of thinking that challenge this worldview. We examine the work of both global north dissident thinkers and global south traditions of thinking, such as dependency theory, decolonialism, and liberation philosophy. The course will depart from critiques of the idea of development as an extension of colonialism and imperialism by authors like John Patrick Leary and Arturo Escobar. It will continue to

discuss critiques of the contemporary geopolitical and geo-economic orders from the perspective of global south countries through concepts such as necropolitics (Achille Mbembe), gore capitalism (Sayak Valencia) and slow violence (Rob Nixon). The course will conclude with the study of theories that propose postdevelopmental and counterdevelopmental models of economic organization and political engagement, including decolonialism (Macarena Gómez Barris and others), Epistemologies of the South (Boaventura de Sousa Santos) and Neoliberalism from Below (Verónica Gago).

Credit 3 units. UColl: CD

Typical periods offered: Fall, Spring

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**CAPS-IA 5883 Israel and the Middle East**

Places Israeli political issues and events within the context of existing political theories. Discusses the politics and ideology of pre-state Israel and the foundation of the state. The creation of modern Israel political institutions, elections, and government coalitions. Also, Israeli foreign policy and international involvement. This is a fully online course. Only University College students may receive credit for online courses.

Credit 3 units.

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**CAPS-IA 5990 Directed Research Project in International Affairs**

An independent research project under the direction of a member of the faculty in the International Affairs program. Approved proposal must be presented at the time of registration. Required for M.A. degree. Open only to students admitted to International Affairs Program.

Credit 3 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall

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**CAPS-IA 5991 Masters Thesis**

An independent research project under the direction of a member of the faculty in the International Affairs program. Approved proposal must be presented at the time of registration. Open only to students admitted to International Affairs Program. Prerequisite: U85-502.

Credit 3 units.

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**CAPS-IA 5994 Internship in International Affairs**

Credit 3 units.

Typical periods offered: Fall, Spring, Summer

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**CAPS-IA 5999 Independent Study in International Affairs**

An independent research project under the supervision of a member of the faculty of the International Affairs program. Approved proposal must be presented at the time of registration.

Credit 3 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall

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**CAPS-IA 6000 Continuing Masters Research**

Required for Master of Arts Students with incomplete work. Must be taken as Audit.

Credit 0 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall



# Nonprofit Management

Nonprofit organizations confront the challenges and opportunities that mission-driven organizations face today in areas such as succession planning, volunteerism, resource development, and competitive funding. The **Master of Arts in Nonprofit Management** addresses these areas, drawing on the expertise of experienced practitioners in the St. Louis area.

The graduate program in nonprofit management provides a range of courses that address the major responsibilities and challenges of nonprofit and human resources management. It prepares learners to work effectively in the field, and it enhances the management skills of those seeking careers in related fields.

The program provides individuals with the skills and resources needed to lead mission-driven organizations as productive examples of social entrepreneurship. Studies are grounded in the historical context of nonprofit management and philanthropy, and students acquire skills in all operational areas of nonprofit management, including financial management, law, grant writing, volunteer management, resource development, research and statistical analysis, and marketing communications. At the strategic level, the program teaches leadership, organization development, strategic planning, and the skills of social entrepreneurship.

This program can be completed entirely online.

Contact: CAPS  
Phone: 314-935-6700  
Email: caps@wustl.edu  
Website: <https://caps.wustl.edu/programs/graduate/masters-nonprofit-management>

## Degree Requirements

## Master of Arts in Nonprofit Management

The Master of Arts in Nonprofit Management consists of 36 units of graduate course work, covering all aspects of nonprofit administration and management, in a combination of nonprofit and human resources management courses; 27 units are required courses and 9 units are chosen from a selection of elective courses.

## Required Courses

| Code          | Title                                  | Units |
|---------------|----------------------------------------|-------|
| CAPS-HRM 5000 | Organizational Behavior and Management | 3     |
| CAPS-HRM 5005 | Human Resources Management             | 3     |
| CAPS-NPM 5015 | Management in Nonprofit Organizations  | 3     |

|                    |                                                        |           |
|--------------------|--------------------------------------------------------|-----------|
| CAPS-NPM 5020      | Resource Development for Nonprofit Organizations       | 3         |
| CAPS-NPM 5030      | Statistics and Research Design in Nonprofit Management | 3         |
| CAPS-NPM 5085      | Financial Management of Nonprofit Organizations        | 3         |
| CAPS-NPM 5145      | Leadership in the Nonprofit Sector                     | 3         |
| CAPS-NPM 5185      | Legal Issues Impacting Nonprofit Organizations         | 3         |
| CAPS-NPM 5980      | Integrative Capstone Project for Nonprofit Management  | 3         |
| <b>Total Units</b> |                                                        | <b>27</b> |

The remaining courses (9 credits total) consist of a selection of nonprofit and nonprofit-related electives.

*This program is offered fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

## Courses

### CAPS-NPM 5015 Management in Nonprofit Organizations

Effective mission-driven leadership is central to the success of a nonprofit organization. This core course provides an overview of fundamental principles of management, governance, and leadership in nonprofit organizations. Particular attention is given to issues of motivation, supervision, evaluation of professional staff and volunteers, and working with the board of directors.

Credit 3 units.

Typical periods offered: Fall, Spring

### CAPS-NPM 5020 Resource Development for Nonprofit Organizations

This course concentrates on effective fund-raising management, accenting the practice, principles, process, and programs of fund raising from the private sector. A special focus of the course is an examination of the historical, legal, ethical, and theoretical contexts for fund raising. A comprehensive review and analysis is provided of annual and major gift programs, together with planned giving and capital campaign strategies. The course includes a choice of a preparation of a 12-month fund-raising plan or a paper chronologically describing a completed capital campaign.

Credit 3 units.

Typical periods offered: Fall

**CAPS-NPM 5030 Statistics and Research Design in Nonprofit Management**

This course emphasizes the application of basic behavioral and social science research methods in the evaluation and management of nonprofit programs. Students learn the tools available to evaluate and report the effectiveness of programs and organizations, including program evaluation, survey design, and qualitative and quantitative research methods.

Credit 3 units.

Typical periods offered: Spring

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**CAPS-NPM 5085 Financial Management of Nonprofit Organizations**

This course focuses on important financial and accounting principles and techniques, with particular attention to operational and project budgeting, financial statement analysis, cash flow projections, endowment building and investment management, and strategic financial planning. Course content is designed to help non-accountants understand standard accounting concepts and procedures, manage the record keeping function, make effective financial decisions and report financial status to key constituents.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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**CAPS-NPM 5105 Topics in Nonprofit Management: Emerging Research**

In this course students read, analyze, and discuss research on the nonprofit sector released within the past five years, compare this new information to the sector's historically identified best practices, and determine how this affects the future success of nonprofit organizations.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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**CAPS-NPM 5111 Marketing and Communications for Nonprofit Organizations**

Examines concepts and techniques for marketing nonprofit organizations to diverse audiences. Emphasis is on strategic marketing planning, with topics including market research, positioning media relations, sponsorship, communication strategies and tactics, and evaluation.

Credit 3 units.

Typical periods offered: Spring

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**CAPS-NPM 5135 Leading and Engaging Volunteers in Nonprofit Organizations**

Students will explore and develop practical strategies for effective program planning, volunteer recruitment and retention, staff and volunteer relations, program evaluation, volunteerism trends within a global context, and ethical practices. This course will provide an introduction to the core competencies of volunteer resource management as presented by the Council for Certification in Volunteer Administration (CCVA) through its credentialing program.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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**CAPS-NPM 5145 Leadership in the Nonprofit Sector**

Students will examine leadership in the nonprofit sector and develop their own leadership style. Students will study traditional leadership styles including authoritarian, participative, and delegative; examine the differences in leadership in the nonprofit, for-profit, and government sectors; and explore the distinctive roles of nonprofit leaders, including the relationship between the nonprofit executive

director and the board of directors, and the relationship between nonprofit leaders, volunteers, and staff. In addition to readings, student research will include interviews and discussions with real-world nonprofit leaders.

Credit 3 units.

Typical periods offered: Fall

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**CAPS-NPM 5185 Legal Issues Impacting Nonprofit Organizations**

This course focuses on the opportunities and requirements placed on nonprofit organizations under federal and state laws. We explore how nonprofits are organized, governed, operated, and financed within this legal framework.

Credit 3 units.

Typical periods offered: Fall, Spring

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**CAPS-NPM 5980 Integrative Capstone Project for Nonprofit Management**

This capstone course provides the opportunity to integrate the program course work through 1) a substantial independent project conducted in a host organization, and 2) the review of several important trends affecting organizations and human resources management.

Credit 3 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall

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**CAPS-NPM 5994 Internship in Nonprofit Management**

Requires completed form and CAPS permission.

Credit 3 units.

Typical periods offered: Fall Intercession, Summer 3, Spring, Summer Intercession, Spring Intercession, Fall

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**CAPS-NPM 5996 Nonprofit Management Elective - 500 Level**

To be used for transfer credit, only.

Credit 3 units.

Typical periods offered: Fall Intercession, Summer 3, Spring, Summer Intercession, Spring Intercession, Fall

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**CAPS-HRM 5000 Organizational Behavior and Management**

This is a survey course focusing on the individual, group, organizational and environmental factors relevant to understanding and managing behavior in complex organizations. It considers behavior from structural, human resources, political and symbolic perspectives.

Credit 3 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall

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**CAPS-HRM 5005 Human Resources Management**

This course develops a comprehensive understanding of the human resources function in an organization. Particular attention is given to selection, performance management, training, wage and salary administration, career development, human resource planning, and the federal regulations impacting on the function.

Credit 3 units. UColl: HRP

Typical periods offered: Fall, Summer 3, Spring



# Teaching and Learning

WashU Continuing & Professional Studies (CAPS) collaborates with Teach St. Louis to train both current and aspiring teachers through the **Master of Arts in Teaching and Learning (MATL)**. Graduates are prepared to become leaders in their schools and classrooms, expanding opportunity for students in public schools in St. Louis.

## MATL Program Pathways

### Teacher Leadership Program

This pathway supports certified teachers currently working in high-needs schools in the St. Louis region. Candidates in the Teacher Leadership Program have the opportunity to improve their craft and develop instructional expertise, deepening their impact on students and modeling best practices within their school communities.

The Teacher Leadership Program offers two options to accommodate the varied experience and background of teachers. Teachers can work toward the Master of Arts in Teaching and Learning or pursue a one-year, 15-credit Certificate in Instructional Excellence. Participants in both pathways receive high-quality instructional coaching from Teach St. Louis as well as content-specific coursework.

### Teacher Residency

The Teacher Residency offers an innovative pathway for candidates to enter the teaching profession, earning both initial licensure and a master's degree in two years. This educator preparation model blends a rigorous, full-year classroom apprenticeship with a carefully aligned sequence of academic coursework.

During the first year of the program, resident teachers receive instructional coaching from a mentor teacher and Teach St. Louis staff and a stipend from their school to support their training in the classroom. During the second year, residents work as full-time lead teachers, receiving support and coaching from Teach St. Louis. Participants also continue coursework, leading to completion of the MATL at the end of year two.

### Alternative Certification

The Alternative Certification program provides a rigorous and supportive pathway for teachers to earn their initial licensure and a master's degree while serving as the teacher-of-record in their classroom. Teachers attend classes designed to make connections between their work in the classroom and the latest in education theory and practice. Coursework incorporates weekly structured practice and role plays, ensuring that participants can plan and deliver lessons effectively and engage learners. Coursework is designed to meet the needs of a lead teacher, and it is facilitated in hybrid,

asynchronous, and in-person formats over the course of two academic years. Candidates will meet the requirements for initial licensure after year one of the program, and they will finish the program in year two with the full MATL.

### Eligibility

Prospective students begin the admissions process with Teach St. Louis. Additional program and eligibility requirements are available on the Teach St. Louis website.

|          |                                                                                                                                                     |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact: | CAPS                                                                                                                                                |
| Phone:   | 314-935-6700                                                                                                                                        |
| Email:   | <a href="mailto:caps@wustl.edu">caps@wustl.edu</a>                                                                                                  |
| Website: | <a href="https://caps.wustl.edu/programs/graduate/masters-teaching-learning">https://caps.wustl.edu/programs/graduate/masters-teaching-learning</a> |

### Degree Requirements

## Master of Arts in Teaching and Learning

### Teacher Leadership Program (30 units total)

#### Required Courses: 15 units

| Code               | Title                                                               | Units     |
|--------------------|---------------------------------------------------------------------|-----------|
| CAPS-EDUC 5015     | Intentional Classroom Planning: A Survey of Theory and Application  | 3         |
| CAPS-EDUC 5020     | Advanced Content Methods: Elementary - Fall                         | 1.5       |
| or CAPS-EDUC 5025  | Advanced Content Methods: Secondary English/Language Arts - Fall    |           |
| or CAPS-EDUC 5066  | Advanced Content Methods: Secondary STEM - Fall                     |           |
| CAPS-EDUC 5050     | Advanced Content Methods: Elementary - Spring                       | 1.5       |
| or CAPS-EDUC 5055  | Advanced Content Methods: Secondary English/Language Arts -- Spring |           |
| or CAPS-EDUC 5067  | Advanced Content Methods: Secondary STEM - Spring                   |           |
| CAPS-EDUC 5070     | MATL Capstone Seminar I                                             | 3         |
| CAPS-EDUC 5075     | MATL Capstone Seminar II                                            | 3         |
| CAPS-EDUC 5350     | The American School - MATL                                          | 3         |
| <b>Total Units</b> |                                                                     | <b>15</b> |

#### Elective Courses (15 units)

Students tailor their degree by taking additional courses in education or in subject-specific areas such as English, math, or biology.

Experienced teachers who would like to qualify to serve as mentor teachers in the program must complete these 6 units as part of their elective coursework:

| Code               | Title                                    | Units    |
|--------------------|------------------------------------------|----------|
| CAPS-EDUC 5081     | MATL Instructional Coaching Practicum I  | 1.5      |
| CAPS-EDUC 5231     | MATL Instructional Coaching Practicum II | 1.5      |
| CAPS-EDUC 5350     | The American School - MATL               | 3        |
| <b>Total Units</b> |                                          | <b>6</b> |

## Teacher Residency and Alternative Certification Programs (36 units total)

### Required Courses (33 units)

| Code              | Title                                                              | Units |
|-------------------|--------------------------------------------------------------------|-------|
| CAPS-EDUC 5011    | MATL Teaching Seminar I                                            | 3     |
| CAPS-EDUC 5012    | MATL Content Methods I: Elementary                                 | 1.5   |
| or CAPS-EDUC 5014 | MATL Content Methods I: Secondary ELA                              |       |
| or CAPS-EDUC 5017 | MATL Content Methods I: Secondary Math                             |       |
| or CAPS-EDUC 5019 | MATL Content Methods I: Secondary Science                          |       |
| CAPS-EDUC 5013    | MATL Content Methods II: Elementary                                | 1.5   |
| or CAPS-EDUC 5016 | MATL Content Methods II: Secondary ELA                             |       |
| or CAPS-EDUC 5018 | MATL Content Methods II: Secondary Math                            |       |
| or CAPS-EDUC 5021 | MATL Content Methods II: Secondary Science                         |       |
| CAPS-EDUC 5015    | Intentional Classroom Planning: A Survey of Theory and Application | 3     |
| CAPS-EDUC 5020    | Advanced Content Methods: Elementary - Fall                        | 1.5   |
| or CAPS-EDUC 5025 | Advanced Content Methods: Secondary English/ Language Arts - Fall  |       |
| or CAPS-EDUC 5066 | Advanced Content Methods: Secondary STEM - Fall                    |       |
| CAPS-EDUC 5027    | MATL Content Methods IV: Elementary                                | 1.5   |
| or CAPS-EDUC 5028 | MATL Content Methods IV : Secondary ELA                            |       |
| or CAPS-EDUC 5029 | MATL Content Methods IV: Secondary Math                            |       |
| or CAPS-EDUC 5033 | MATL Content Methods IV: Secondary Science                         |       |
| CAPS-EDUC 5031    | Social and Cultural Foundations of Education I                     | 1.5   |
| CAPS-EDUC 5032    | Social and Cultural Foundations of Education II                    | 1.5   |

|                    |                                                                      |           |
|--------------------|----------------------------------------------------------------------|-----------|
| CAPS-EDUC 5034     | MATL Teaching Seminar II                                             | 3         |
| CAPS-EDUC 5037     | MATL Content Methods III: Elementary                                 | 1.5       |
| or CAPS-EDUC 5024  | MATL Content Methods III : Secondary ELA                             |           |
| or CAPS-EDUC 5023  | MATL Content Methods III: Secondary Math                             |           |
| or CAPS-EDUC 5026  | MATL Content Methods III: Secondary Science                          |           |
| CAPS-EDUC 5050     | Advanced Content Methods: Elementary - Spring                        | 1.5       |
| or CAPS-EDUC 5055  | Advanced Content Methods: Secondary English/ Language Arts -- Spring |           |
| or CAPS-EDUC 5067  | Advanced Content Methods: Secondary STEM - Spring                    |           |
| CAPS-EDUC 5070     | MATL Capstone Seminar I                                              | 3         |
| CAPS-EDUC 5075     | MATL Capstone Seminar II                                             | 3         |
| CAPS-EDUC 5555     | MATL Clinical Practicum: Teaching & Instructional Coaching           | 3         |
| CAPS-EDUC 5556     | MATL Advanced Clinical Practicum: Teaching & Instructional Coaching  | 3         |
| <b>Total Units</b> |                                                                      | <b>33</b> |

### Elective Courses (3 units)

Students tailor their degree by taking one additional course in education or in a subject-specific area such as English, math, or biology.

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

## Courses

### CAPS-EDUC 5001 Independent Study - MATL

For MATL students only. Signed Proposal Required.

Credit 6 units.

Typical periods offered: Fall, Summer 3, Spring

### CAPS-EDUC 5002 Independent Study in Education

CPAS permission required. Credit to be determined in each case. Maximum 6 credit units.

Credit 6 units.

Typical periods offered: Fall, Spring, Summer



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### **CAPS-EDUC 5004 Educational Psychology**

This is a course in psychological concepts relevant to education that is organized around four basic issues: (1) how humans think and learn; (2) how children, adolescents, and adults differ in their cognitive and moral development; (3) the sense in which motivation and intention explain why people act as they do; and (4) how such key human characteristics as intelligence, motivation, and academic achievement can be measured. Offered fall and spring semesters.

Credit 3 units.

Typical periods offered: Summer

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### **CAPS-EDUC 5008 Teaching the Process of Scientific Investigation**

This course is intended for in-service teachers. Participants will engage in the process of scientific investigation while developing hands-on lessons for their students that support their ability to understand the nature of the scientific process of problem solving. The focus will be on pedagogical strategies that help foster independent investigation among students. Classroom project is required. Credit variable, maximum 3 units.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Summer Intersession

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### **CAPS-EDUC 5011 MATL Teaching Seminar I**

Teaching Seminar I is a survey course that introduces educators to pedagogical practices grounded in the science of learning and educational psychology. Taking inspiration from the approach outlined in McDonald, Kazemi, and Kavanagh (2013), the course melds the knowledge needed for teaching alongside core teacher practices. Participants will follow the learning cycle, first being introduced to core practice, next practicing their application, then implementing the practices in their classrooms, and finally reflecting on their efficacy and areas for continued improvement.

Credit 3 units.

Typical periods offered: Fall

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### **CAPS-EDUC 5012 MATL Content Methods I: Elementary**

This module introduces residents to the fundamentals of teaching elementary math. They will learn the components of daily lesson plans, and will get the opportunity to see examples of key points and objectives in order to support them in writing their own key points and objectives. They will learn about formative assessment and how to effectively plan for gradual release during student practice.

Credit 1.5 units.

Typical periods offered: Fall Half A, Fall

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### **CAPS-EDUC 5013 MATL Content Methods II: Elementary**

This module is designed to build residents' ability to teach skills-based ELA lessons that align with grade-level standards and support student success in literary analysis. The first sessions focus on integrating ELA standards into lesson design, enabling residents to develop effective instructional strategies. In subsequent sessions, residents will delve into teaching literary analysis skills and learn how to identify key points in a text while crafting evidence-based questions to enhance student comprehension. The final sessions introduce various reading systems, such as AIR, Choral Reading, and Read Aloud, offering strategies to engage students and deepen their understanding through shared reading activities.

Credit 1.5 units.

Typical periods offered: Fall Half B, Fall

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### **CAPS-EDUC 5014 MATL Content Methods I: Secondary ELA**

This mini-course introduces teachers to the fundamentals of teaching secondary ELA. They will learn the components of daily lesson plans, and will get the opportunity to see examples of key points and objectives in order to support them in writing their own key points and objectives. They will learn about formative assessment and how to effectively plan for gradual release during student practice.

Credit 1.5 units.

Typical periods offered: Fall Half A, Fall

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### **CAPS-EDUC 5015 Intentional Classroom Planning: A Survey of Theory and Application**

Dynamic classrooms that provide individualized support and authentic opportunities to engage in rigorous content require a teacher to intentionally plan for all aspects of the classroom, whether for classroom community, student investment, family involvement, or high-quality lessons. In this survey course, we strive to address the problem of enactment by combining theories of education, teaching, and learning alongside or in partnership with the application of such theories to the classroom. For each of the topics addressed, students will first seek to understand the educational, socio-political, and psychological evidence informing teachers and instructional strategies. Then, students will be asked to use these theories to inform applied intentional planning outputs for use in their classrooms. Topics covered will include goal-setting and progress monitoring, student motivation and investment, family and community engagement, classroom community and culture, backwards planning, and using data strategically to support and differentiate instruction. Students must have instructor approval to register.

Credit 3 units.

Typical periods offered: Summer, Summer Intersession

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### **CAPS-EDUC 5016 MATL Content Methods II: Secondary ELA**

This mini-course focuses on Shared Reading and Independent Reading strategies to aid students in analyzing and comprehending texts. Residents will plan an ELA lesson focused on an RL or RI standard, with a focus on choosing the most appropriate reading strategies to support time-on-text and reading comprehension. In this course, teachers will learn about how students become better readers, and the role and importance of the breadth and complexity of texts utilized in a strong ELA class. They will learn approaches to scaffold reading for all students, but especially for struggling readers, including how to support and balance shared and independent reading, and how to plan scaffolds for comprehension.

Credit 1.5 units.

Typical periods offered: Fall Half B, Fall

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### **CAPS-EDUC 5017 MATL Content Methods I: Secondary Math**

This module introduces residents to the fundamentals of teaching secondary math. They will learn the components of daily lesson plans, and will get the opportunity to see examples of key points and objectives in order to support them in writing their own key points and objectives. They will learn about formative assessment and how to effectively plan for gradual release during student practice.

Credit 1.5 units.

Typical periods offered: Fall Half A, Fall

**CAPS-EDUC 5018 MATL Content Methods II: Secondary Math**

Math residents will learn how to design problem-based lessons in order to develop conceptual understanding and direct instruction lessons to reinforce procedural skills and fluency. Residents will also learn the problem-solving framework for the guided practice portion of their math lessons to increase student understanding of the content.

Credit 1.5 units.

Typical periods offered: Fall Half B, Fall

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**CAPS-EDUC 5019 MATL Content Methods I: Secondary Science**

This course introduces novice teachers to the essential elements for effective middle-grades science instruction, grounded in the NGSS standards and three-dimensional, inquiry driven teaching and learning. Residents will learn about inquiry-driven instruction that supports student engagement in rigorous content. They will take a backwards planning approach to planning for inquiry lessons and cycles, using formative assessment in science to articulate student outcomes. Teachers will consider how to build cohesion across an inquiry lesson by connecting key activities to the AP, and checking for key understandings at the conclusion of each instructional activity

Credit 1.5 units.

Typical periods offered: Fall Half A, Fall

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**CAPS-EDUC 5020 Advanced Content Methods: Elementary - Fall**

In this course, students will continue to refine their vision for high quality instruction in an elementary Language Arts and Mathematics classroom. Language Arts: students will build upon their understanding of best practices in elementary literacy by designing the structure for a Balanced Literacy block in their classrooms. These literacy blocks include instructional time devoted to explicit phonics instruction, shared reading, guided reading, read-aloud instruction, and vocabulary instruction. Students will also focus on writing instruction and will implement writing mini-lessons and student conferences in their classrooms. Mathematics: This course will also build on students' understanding of effective mathematics instruction and their knowledge of both direct instruction and inquiry-based approaches to learning. Students will explore effective instructional strategies through the lens of content, with a core focus in Basic Operations (addition, subtraction, multiplication, and division); Geometry, Fractions and Measurement; & Problem-Solving, Algebra, and Graphing. By analyzing instruction through the lens of specific mathematical concepts, students will have the opportunity to design lessons that focus on the connections between mathematical content as well as the standards for mathematical practice. Students must have instructor approval to register.

Credit 1.5 units.

Typical periods offered: Fall

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**CAPS-EDUC 5021 MATL Content Methods II: Secondary Science**

This course will focus on defining critical literacy skills in a science classroom, and building effective pedagogical techniques for supporting and scaffolding literacy development. Teachers will focus on incorporating reading lessons that support fluency and comprehension. They will also learn best practices for vocabulary development, focused on using active practice of the words, building words in context, and working toward active control with retrieval practice.

Credit 1.5 units.

Typical periods offered: Fall Half B, Fall

**CAPS-EDUC 5022 MATL Content Methods III : Secondary ELA**

In the College and Career Readiness Standards for Writing, the authors note the importance of developing students' abilities as writers, stating: "For students, writing is a key means of asserting and defending claims, showing what they know about a subject, and conveying what they have experienced, imagined, thought, and felt. To be college- and career- ready writers, students must take task, purpose, and audience into careful consideration, choosing words, information, structures, and formats deliberately. They need to know how to combine elements of different kinds of writing—for example, to use narrative strategies within argument and explanation within narrative—to produce complex and nuanced writing."

In this course, participants will be introduced to the key components of writing instruction. Participants will develop a vision for students' writing performance at each grade-level, and work to deeply understand the three types of writing that are prioritized in an ELA classroom: Argumentative, Informative/Explanatory, and Narrative. From there, participants will study strong tasks and rubrics, developing a high-quality prompt and rubric to implement with their students in Quarter 4. The culminating Mastery Task for the module consists of a writing lesson that incorporates best practices and the Writer's Workshop model.

Credit 1.5 units.

Typical periods offered: Spring Half A

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**CAPS-EDUC 5023 MATL Content Methods III: Secondary Math**

This course will focus on the second key aspect of rigor in a math classroom—procedural fluency. In the first asynchronous session, candidates will be re-introduced to procedural and computational fluency and set a vision for the role that procedural fluency should play in a secondary math classroom. The final sessions will focus on specific strategies that residents can use to remediate fluency skills from previous grade levels and develop procedural fluency with new skills that are introduced throughout the academic year.

Credit 1.5 units. EN: H

Typical periods offered: Spring Half A

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**CAPS-EDUC 5024 MATL Content Methods III : Secondary ELA**

In the College and Career Readiness Standards for Writing, the authors note the importance of developing students' abilities as writers, stating: "For students, writing is a key means of asserting and defending claims, showing what they know about a subject, and conveying what they have experienced, imagined, thought, and felt. To be college- and career- ready writers, students must take task, purpose, and audience into careful consideration, choosing words, information, structures, and formats deliberately. They need to know how to combine elements of different kinds of writing—for example, to use narrative strategies within argument and explanation within narrative—to produce complex and nuanced writing."

In this course, participants will be introduced to the key components of writing instruction. Participants will develop a vision for students' writing performance at each grade-level, and work to deeply understand the three types of writing that are prioritized in an ELA classroom: Argumentative, Informative/Explanatory, and Narrative. From there, participants will study strong tasks and rubrics, developing a high-quality prompt and rubric to implement with their students in Quarter 4. The culminating Mastery Task for the module consists of a writing lesson that incorporates best practices and the Writer's Workshop model.

Credit 1.5 units.

Typical periods offered: Spring Half A



## **CAPS-EDUC 5025 Advanced Content Methods: Secondary English/Language Arts - Fall**

In this course, students will continue to refine their vision for high quality English/language arts instruction in a secondary classroom. This course will build upon students' understanding of effective novel studies and writing units by focusing on the fundamentals of close reading, word study, embedded non-fiction, and writing for reading strategies. Sophisticated discussions are also one of the hallmarks of advanced practice in ELA classrooms. Middle and high school students must be able to fluently use academic language and internalize habits of discussion. This course will also focus on the role of discussion in an ELA classrooms, and students will implement multiple discussion formats, including Socratic Seminars and Literature Circles. Students in this course will also revisit the concept of rigor in a secondary ELA classroom by discussing the importance of text selection, studying text attributes and leveling systems, and analyzing the text selections embedded in their school's curriculum. Students must have instructor approval to register.

Credit 1.5 units.

Typical periods offered: Fall

## **CAPS-EDUC 5026 MATL Content Methods III: Secondary Science**

In this course, teachers will set a vision for what discourse can look like in the science classroom. They will delve into the multiple purposes that discourse can play in situating students as sense-makers in the classroom and in deepening their thinking and reasoning. Teachers will have the opportunity to analyze videos of student discourse in science classrooms, experience discourse, and plan and rehearse discourse. The module will culminate in teachers planning, implementing, and reflecting on discourse in their own classrooms.

Credit 1.5 units.

Typical periods offered: Spring Half A

## **CAPS-EDUC 5027 MATL Content Methods IV: Elementary**

This course explores the critical role of computational and procedural fluency in fostering mathematical understanding in the elementary classroom. Participants will learn how to develop systems that build fluency in their students, ensuring they can apply mathematical procedures with confidence and accuracy. The module also delves into effective strategies for planning and facilitating guided practice that prepare students for independent work, uncovering and addressing student misunderstandings along the way. Additionally, educators will discover how to use well-designed tasks to help students uncover new concepts and grasp big ideas in mathematics, enhancing their overall problem-solving abilities.

Credit 1.5 units.

Typical periods offered: Spring Half B

## **CAPS-EDUC 5028 MATL Content Methods IV : Secondary ELA**

Participants will be introduced to essential instructional practices to teach the Language and Speaking and Listening Standards. The first session addresses core practices for explicit and implicit vocabulary instruction and identifies strategies to systematize these practices in classrooms. In the first Mastery Task for this module, participants will plan an explicit vocabulary instruction mini-lesson and implement the lesson with their students. Following an introduction to vocabulary instruction, students will close the year by focusing on Speaking and Listening and best practices for collaborative learning. The culminating Mastery Task for the year asks participants to incorporate these strategies through the facilitation of small group discussion in their classrooms.

Credit 1.5 units.

Typical periods offered: Spring Half B

## **CAPS-EDUC 5029 MATL Content Methods IV: Secondary Math**

This course builds on the foundation of Problem-Based Learning by exploring how strong tasks can deepen conceptual understanding in the secondary math classroom. Participants will learn how to select, design, and implement tasks that both introduce new content and promote critical thinking. The latter part of the course will focus on facilitating rich mathematical discussions, introducing five core practices to support meaningful student engagement and discourse around problem-solving.

Credit 1.5 units.

Typical periods offered: Spring Half B

## **CAPS-EDUC 5030 Advanced Teaching Methods: Secondary Mathematics - Fall**

In this course, students will continue to refine their vision for high quality mathematics instruction in a secondary classroom. Students will revisit the fundamental design elements present in inquiry-based lessons, focusing on the development of their students' conceptual understandings. The course will also focus on the importance of computational and procedural fluency, and students will create a backwards plan that allows for daily fluency practice within their classrooms. Moving beyond fundamental lesson planning and assessment structures, students in this course will learn specific strategies to develop and assess students' problem-solving skills and abilities and implement effective discourse in their mathematics classrooms. Students will design instructional activities that allow their students to explore and discuss challenging problems and tasks through structures such as problem-solving seminars and performance-based assessments.

Credit 1.5 units.

Typical periods offered: Fall

## **CAPS-EDUC 5031 Social and Cultural Foundations of Education I**

An effective educator needs to develop mastery of disciplinary content and acquire pedagogical skills, but also understand the historical, political, and social context of education. This course explores critical aspects of the educational landscape, including the complexities of school choice, the dynamics of the teaching workforce, the influence of the Standards and Accountability Movement, and the pivotal role of finances in education. Participants will gain a comprehensive understanding of these elements and their implications. The course concludes with a reflective session, encouraging participants to connect their learnings to broader educational contexts, both within and beyond St. Louis. This course builds on prior work that teachers have done to understand the historical and political factors that have shaped the education landscape in St. Louis, and extends their knowledge to additional areas.

Credit 1.5 units.

Typical periods offered: Fall

## **CAPS-EDUC 5032 Social and Cultural Foundations of Education II**

An effective educator needs to develop mastery of disciplinary content and acquire pedagogical skills, but also must develop mindsets, beliefs, and perspectives that will enable them to advance educational equity in their schools and communities. Participants in this course will reflect on their experiences as educators, and build skills to establish strong, asset-based relationships with students, colleagues, and families. Instruction will focus on beliefs and mindsets necessary to commit to justice-oriented education, and will grapple with challenges encountered along the way. This course will have two primary learning strands. In the Culturally and Linguistically Sustaining Pedagogy strand, participants will develop mindsets, beliefs, and perspectives that will enable them to advance educational equity in their schools and communities. The second strand will work, as professional learning community, to reflect upon and synthesize learning from the course topic and apply that the work of teaching.

Credit 1.5 units.

Typical periods offered: Spring

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**CAPS-EDUC 5033 MATL Content Methods IV: Secondary Science**

In the final content methods course of the year, science teachers will revisit the science and engineering practices, considering how the NGSS align and spiral the skills over multiple grade levels and within grade bands. Teachers will learn more about how to embed explicit instruction around SEPs using exemplars, rubric norming, and modeling, with a focus on scientific explanation and argumentation. Teachers will practice collecting short writing samples, analyzing them with a rubric, and developing a mini-lesson to support students in building the targeted SEP skill. The final topic of this course is the engineering design process. Teachers will learn what it is and best practices for supporting engineering design

Credit 1.5 units.

Typical periods offered: Spring Half B

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**CAPS-EDUC 5034 MATL Teaching Seminar II**

MATL Teaching Seminar II is a survey course that introduces educators to pedagogical practices grounded in the science of learning and educational psychology. Taking inspiration from the approach outlined in McDonald, Kazemi, and Kavanagh (2013), the course melds the knowledge needed for teaching alongside core teacher practices. Participants will follow the learning cycle, first being introduced to core practice, next practicing their application, then implementing the practices in their classrooms, and finally reflecting on their efficacy and areas for continued improvement. Teaching Seminar II consists of three primary modules, each building knowledge and skill around a primary topic: Backwards Planning Units of Instruction, Eliciting and Responding to Student Thinking II, and Supporting Special Populations.

Credit 3 units.

Typical periods offered: Spring

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**CAPS-EDUC 5035 Advanced Teaching Methods: Secondary Science - Fall**

In this course, students will continue to refine their vision for high quality science instruction in a secondary classroom. Moving beyond fundamental lesson planning and assessment structures, students in this course will learn specific strategies to develop and assess students' problem-solving skills and abilities and implement effective discourse in their science classrooms. Students will design instructional activities that allow their students to explore and discuss challenging problems and tasks through structures such as problem-solving seminars and performance-based assessments. Students must have instructor approval to register.

Credit 1.5 units.

Typical periods offered: Fall

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**CAPS-EDUC 5036 Understanding Urban Communities**

This course will introduce students to key issues in the urban context. It will use readings from history, sociology, and political science (as well as the popular media) to provide students with a deeper understanding of the larger social and political processes that shape cities and their communities. While students will learn about the challenges facing urban communities, a key focus of the course will be identifying strengths and assets within urban communities and countering the "deficit" narrative that dominates popular perceptions of these areas. Another key focus will be on identifying promising policies and practices within organizations serving urban communities. For this reason, students will conduct research on possible policy interventions, study a particular intervention in depth, and write about that intervention.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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**CAPS-EDUC 5037 MATL Content Methods III: Elementary**

This course emphasizes the vital role of vocabulary and context in reading comprehension, providing candidates with strategies to effectively teach and integrate vocabulary into their instruction. Participants will practice selecting and defining key words, and learn both implicit and explicit methods for teaching vocabulary. Additionally, the module highlights the importance of building context and schema to support students' understanding of grade-level texts.

Credit 1.5 units.

Typical periods offered: Spring Half A

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**CAPS-EDUC 5040 Advanced Content Methods: Project-Based Learning & Assessment**

This course is designed to strengthen students' pedagogical content knowledge, including an emphasis on authentic assessment design. Students will create cohesive project-based learning units (developed using the Understanding by Design framework) and rigorous assessments that require students to demonstrate mastery of multiple skills and standards. Students will begin the course by completing content-specific work, unbundling and unpacking NGSS performance expectations and evidence statements (science) or Common Core State Standards (math and ELA). Residents will develop criteria for success and create an authentic assessment that serves as evidence for mastery. Finally, residents will create a coherent unit of instruction, centered on rigorous project-based learning and assessment. Residents will learn strategies necessary for guiding student projects, including cooperative learning strategies, facilitating group work, planning and tracking projects, giving feedback, and developing aligned and meaningful rubrics.

Credit 3 units.

Typical periods offered: Summer, Summer Intersession

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**CAPS-EDUC 5045 Creating a Teaching Portfolio**

This introductory course will provide guidelines and skills for creating and maintaining a record of each student's professional growth as a teacher that reflects his/her philosophy, knowledge, teaching expertise and experience. Students will examine and reflect on their teaching practice as it relates to personal goals as well as state and national standards for teaching excellence. Permission of instructor required.

Credit 2 units.

Typical periods offered: Fall, Summer 3, Spring

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**CAPS-EDUC 5050 Advanced Content Methods: Elementary - Spring**

In this course, students will continue to refine their vision for high quality instruction in an elementary Language Arts and Mathematics classroom. Language Arts: students will build upon their understanding of best practices in elementary literacy by designing the structure for a Balanced Literacy block in their classrooms. These literacy blocks include instructional time devoted to explicit phonics instruction, shared reading, guided reading, read-aloud instruction, and vocabulary instruction. Students will also focus on writing instruction and will implement writing mini-lessons and student conferences in their classrooms. Mathematics: This course will also build on students' understanding of effective mathematics instruction and their knowledge of both direct instruction and inquiry-based approaches to learning. Students will explore effective instructional strategies through the lens of content, with a core focus in Basic Operations (addition, subtraction, multiplication, and division); Geometry, Fractions and Measurement; & Problem-Solving, Algebra, and Graphing. By analyzing instruction through the lens of specific



mathematical concepts, students will have the opportunity to design lessons that focus on the connections between mathematical content as well as the standards for mathematical practice. Students must have instructor approval to register.

Credit 1.5 units.

Typical periods offered: Spring

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### **CAPS-EDUC 5055 Advanced Content Methods: Secondary English/Language Arts -- Spring**

In this course, students will continue to refine their vision for high-quality English/language arts instruction in a secondary classroom. This course will build upon students' understanding of effective novel studies and writing units by focusing on the fundamentals of close reading, word study, embedded non-fiction, and writing for reading strategies. Sophisticated discussions are also one of the hallmarks of advanced practice in ELA classrooms. Middle and high school students must be able to fluently use academic language and internalize habits of discussion. This course will also focus on the role of discussion in an ELA classroom, and students will implement multiple discussion formats, including Socratic Seminars and Literature Circles. Students in this course will also revisit the concept of rigor in a secondary ELA classroom by discussing the importance of text selection, studying text attributes and leveling systems, and analyzing the text selections embedded in their school's curriculum. Prerequisite: Permission of instructor.

Credit 1.5 units.

Typical periods offered: Spring

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### **CAPS-EDUC 5060 Advanced Teaching Methods: Secondary Mathematics -- Spring**

In this course, students will continue to refine their vision for high-quality mathematics instruction in a secondary classroom. Students will revisit the fundamental design elements present in inquiry-based lessons, focusing on the development of their students' conceptual understandings. The course will also focus on the importance of computational and procedural fluency, and students will create a backwards plan that allows for daily fluency practice within their classrooms. Moving beyond fundamental lesson planning and assessment structures, students in this course will learn specific strategies to develop and assess students' problem-solving skills and abilities and to implement effective discourse in their mathematics classrooms. Students will design instructional activities that allow their students to explore and discuss challenging problems and tasks through structures such as problem-solving seminars and performance-based assessments.

Credit 1.5 units.

Typical periods offered: Spring

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### **CAPS-EDUC 5061 Transforming Policies for Language & Literacies**

When K12 educators plan to establish curricula, lessons, or even to set up new schools, they are responding to policies that influence their decisions and also affect learners' future in local, national, and global contexts. This course provides K12 educators with an introduction to the field of language planning and policy, which is situated in the broader field of sociology of language. It develops educators' knowledge and critical awareness about language and literacy policy and planning efforts. Over the semester, students will consider selected case studies in U.S. educational contexts which provide a basis for examining issues such as: language education policies, the interface of ideology with language planning, family language planning, multidialectal literacy movements, policies for assessment and special education, as well as language shift and death in local communities. Contemplation of these studies will support teachers

and school leaders to effectively design curriculum development or research projects that advocate for changes to current policy or planning efforts, doing so in service to the culturally and linguistically diverse learners in their schools.

Credit 3 units.

Typical periods offered: Fall

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### **CAPS-EDUC 5065 Advanced Teaching Methods: Secondary Science -- Spring**

In this course, students will continue to refine their vision for high-quality science instruction in a secondary classroom. Moving beyond fundamental lesson planning and assessment structures, students in this course will learn specific strategies to develop and assess students' problem-solving skills and abilities and implement effective discourse in their science classrooms. Students will design instructional activities that allow their students to explore and discuss challenging problems and tasks through structures such as problem-solving seminars and performance-based assessments.

Credit 1.5 units.

Typical periods offered: Spring

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### **CAPS-EDUC 5066 Advanced Content Methods: Secondary STEM - Fall**

For MATL students, only. This course is one part of a two-semester series. Moving beyond fundamental lesson planning and assessment structures, students in this course will learn specific strategies to develop and assess their students' STEM academic skills and abilities and implement effective discourse in their classrooms. Students will design instructional activities that allow their students to explore and discuss challenging problems and tasks through structures such as problem-solving seminars and performance-based assessments. Students will use a framework to plan and implement instructional practices, and gather evidence to reflect on and analyze key takeaways as a mode for improving their own teaching practice. Students must have instructor approval to register.

Credit 1.5 units.

Typical periods offered: Fall

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### **CAPS-EDUC 5067 Advanced Content Methods: Secondary STEM - Spring**

This course is part of a two-semester series. Moving beyond fundamental lesson planning and assessment structures, students in this course will learn specific strategies to develop and assess their students' STEM academic skills and abilities and implement effective discourse in their classrooms. Students will design instructional activities that allow their students to explore and discuss challenging problems and tasks through structures such as problem-solving seminars and performance-based assessments. Students will use a framework to plan and implement instructional practices, and gather evidence to reflect on and analyze key takeaways as a mode for improving their own teaching practice. Students must have instructor approval to register.

Credit 1.5 units.

Typical periods offered: Spring

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### **CAPS-EDUC 5068 Technology in the Classroom**

This course is designed to provide students with strategies for integrating technology into the classroom. Topics include using technology as a communication tool, creating technology-based lessons, engaging students in technology, utilizing assistive technology, and using technology as an organizational tool. Technology for educators challenges students to think about the underlying principles, terms, and concepts of educational technology. Students are introduced to the different methods teachers can use to integrate technology into classroom instruction for varying grade levels and

content areas. In this course, students will have the opportunity to interact with digital tools used in today's classrooms. They will be given hands-on experience with technological tools that will improve their instruction and assist their students in meeting learning standards. Credit 3 units.

Typical periods offered: Summer

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**CAPS-EDUC 5069 Improving Content and Instruction Through Meaningful Assessments**

This course will focus on the various forms of assessments and how to create assessments aligned with standards, while also ensuring student growth is measured. The course will offer a variety of topics including: how to produce meaningful assessments; rigor vs. real-world applications and assessment; the similarities and differences in proficiency scales, scoring guides, & rubrics; how to assess when differentiating lessons; equity in assessments for students, including students with special needs, alternative assessments, and student empowerment in assessments; the purpose and importance of written feedback; performance based assessment; and using pre-post assessments to direct teaching. An understanding of how these topics are synthesized to create a coherent assessment system designed to gather evidence of student learning and provide guidance on how to instructionally respond will be developed. This system includes summative, formative, and self-assessment, as well as both formal and informal approaches to assessment.

Credit 3 units.

Typical periods offered: Fall, Summer, Summer Intersession

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**CAPS-EDUC 5070 MATL Capstone Seminar I**

The first semester of the year-long Capstone course will focus on the foundations of building a goal-driven classroom. When the school year begins, students will embark upon the important work of getting to know their students and their school setting. Building on their knowledge of data-driven instruction, students will use the information gained about their teaching placement and their students in order to set ambitious goals both for their classroom as a whole and for individual students. Students will also use investment and engagement strategies to launch their vision and goals with their students. Throughout the semester, students will acquire new skills related to data analysis and remediation. Students will be asked to develop a classroom vision, academic and social-emotional goals, systems to track and share progress, and a classroom management and investment plan. An important component of the Capstone course will be one-on-one instructional coaching. The Capstone coach will support each student as they work to apply the content of the course to their individual schools and classrooms. The coaching cycle will consist of a classroom observation, a coaching conversation, and follow-up action steps, and this will occur on a biweekly basis.

Credit 3 units.

Typical periods offered: Fall

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**CAPS-EDUC 5075 MATL Capstone Seminar II**

During semester two of the Capstone Seminar, students will begin drafting their Master's Capstone. Students will curate a Capstone portfolio, displaying their best work from the past two years of teaching. Students will also report on their students' final achievement and socio-emotional growth results. In sum, the final Capstone will consist of the Capstone portfolio, a film of an outstanding lesson, the presentation of a data narrative, and the delivery of an oral defense. For the oral defense, students will present and defend their K-12 students' growth and achievement data, as well as key learnings from their residency and master's course work, to faculty members and guests. Prerequisite: Instructor approval.

Credit 3 units.

Typical periods offered: Spring

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**CAPS-EDUC 5081 MATL Instructional Coaching Practicum I**

For MATL students only. Instructor approval required. The Instructional Coaching Practicum is a year-long course that will be taught over the course of two semesters. It prepares students to effectively demonstrate the key instructional coaching competencies and support the development of a novice educator. In this practicum, highly-effective veteran teachers will develop the knowledge, skills, and mindsets needed for instructional coaching, with an emphasis on instructional coaching of novice teachers. During this practicum, candidates will host a novice teacher resident in their classroom as a co-teacher for the school year. They will set goals for the novice teacher's development, and build coaching skills to support the candidate's development over the course of the school year. Candidates in the practicum must hold a current Missouri state teaching license and have taught for at least three years.

Credit 1.5 units.

Typical periods offered: Fall

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**CAPS-EDUC 5090 Supporting Special Populations**

This course will focus primarily on the skills teachers need to effectively serve students with disabilities and English Language Learners. The course will first focus on developing the foundational knowledge, skills, and strategies for teaching students with special needs. Candidates will explore special education history and laws, theoretical concepts, and instructional practices that facilitate the integration and support of students with special needs in the general education classroom. This course focuses on the inclusion of students with high-incidence disabilities, with the understanding that an inclusive framework can be applied to support students with other disabilities and a variety of learning needs. In this course, students will also be introduced to the historical, political, and legal foundations of educational programs for English learners. The course will provide an overview of theories of second language learning and research on the effectiveness of various means of promoting academic achievement in linguistically diverse contexts. Students will also be equipped with a repertoire of methods to facilitate and measure students' growth in English language and literacy, and to create learning environments that promote content area learning through the use of integrated ELD.

Credit 3 units.

Typical periods offered: Summer 3, Summer, Summer Intersession

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**CAPS-EDUC 5138 Expanding Mindsets and Supports for Exceptional Learners**

Teaching exceptional learners is one of the best growth opportunities for teachers to diversify their strategies and skill sets. Although accommodations and modifications can often feel overwhelming or simply like a mandate where the box must be checked by federal law, it also presents an opportunity for teachers to learn, grow, and serve all learners better. In this course, we will dissect and reflect on the core principles of instruction, high-impact teaching strategies, cognitive learning strategies, and school experiences to put ourselves in the shoes of an exceptional learner in a modern-day inclusive classroom. We will explore and analyze different strategies for creating compelling, engaging, creative, and individualized accommodations and modifications. For each topic addressed, students will be asked to approach assignments from their lens and the lens of an exceptional learner. Through this process, teachers will uncover the power of profoundly understanding individual learning needs and their students' social-emotional relationship with learning to create effective accommodations and modifications that allow them to accelerate student learning.

Credit 3 units.

Typical periods offered: Summer 3, Summer, Summer Intersession



## **CAPS-EDUC 5150 Practicum in Teaching and Learning**

For current students admitted to the Master of Arts in Teaching and Learning. Requires concurrent enrollment.

Credit 0 units.

Typical periods offered: Summer 4, Summer 3, Spring, Summer 2, Fall, Summer

## **CAPS-EDUC 5200 Applications of Neuroscience to PK-12 Teaching & Learning**

This course is designed to explore the intersection of neuroeducation and creative writing in today's educational landscape as a pathway to high academic achievement and personal growth for students in PK-12 learning spaces. Grounded in principles of synaptic plasticity, teachers will examine how repetition and emotional engagement are critical for reinforcing neural connections through dynamic and meaningful learning experiences. James W. Pennebaker's founding research in expressive writing is reviewed to gain deeper insights into the benefits of expressive writing as a regulation tool; however, we will delve into creative writing as a mechanism to extend these ideals, thereby cultivating critical thinking and creativity as a transformative instructional practice for student and school success. To enhance the teachers' understanding, participants will examine archival artifacts from a nationally recognized school, including teacher-developed curricula, field experience activities, and other educational materials designed by exemplary teachers. Components of the Schön's Reflective Practice Model will help to engage teachers in self-reflection as a way to recognize the impact of reflective practice during real-world experiences. The Schön's Reflective Practice Model is also implemented to deepen metacognitive awareness, thereby strengthening pedagogical decision-making for intentional application in PK-12 learning spaces. By the end of the course, current classroom teachers will be able to apply neuroeducation-informed practices, specifically synaptic plasticity, and creative writing as an educational approach to create a more dynamic, rich, and thriving learning experience for all students.

Credit 3 units.

Typical periods offered: Summer 3

## **CAPS-EDUC 5201 Technology for Critical Thinking**

This course is designed to provide students with frameworks to examine how technologies shape teaching and learning, and equip them with practical strategies for using digital tools to foster deeper analysis, problem-solving, and informed decision-making. Students explore the underlying principles and philosophies of using educational technology to address digital inequities and cultivate essential digital citizenship skills for K-12 learners. The course examines the complexities of integrating technology into education, including AI's potential to enhance teaching efficiency alongside critical concerns about algorithmic bias, data privacy, and surveillance, to recognize that these technologies have uneven consequences for different student populations. Students will develop skills in interpreting educational data critically, evaluating media and information sources, and promoting digital well-being and responsible digital footprints for K-12 students. Through hands-on exploration of digital tools, readings, case studies, and collaborative inquiry, participants will build capacity to create classroom cultures where technology serves as a catalyst for critical thinking rather than passive consumption. The summative goal of this course is to build students' capacity to think more clearly and analytically about technology and its integration in their teaching and students' learning.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

## **CAPS-EDUC 5212 Language Essentials for Teachers of Reading and Spelling, Volume I**

Lexia LETRS stands for: Language Essentials for Teachers of Reading and Spelling. LETRS is a professional learning course for instructors of reading, spelling, and related language skills. It provides educators with in-depth knowledge and tools that they can use with any reading program. LETRS is composed of two volumes of content: Volume 1 (Units 1-4) and Volume 2 (Units 5-8). As part of the LETRS (Language Essentials for Teachers of Reading and Spelling) cohort, teachers will learn the science of reading in order to apply research in the classroom and meet the literacy needs of early learners. Teachers will gain practical strategies to use regardless of curriculum or program currently in place. LETRS Volume I introduces teachers to the science of reading through understanding theoretical frameworks for how people learn to read, and how to apply evidence-based strategies to support reading acquisition. After learning about these frameworks, participants discuss common challenges in learning to read, what happens in our brains when we read, and how language and literacy are related. Next, the course delves into phonological skill development. Combining both theory and application, participants are then prepared for teaching early phonics, word recognition, and spelling in an elementary classroom. Candidates will practice analyzing and facilitating effective phonics instruction, and will also prepare to support advanced decoding, spelling, and word recognition. Finally, the course will discuss assessment systems to support reading acquisition, including how to utilize universal screeners, diagnostic assessments, and systems for progress monitoring.

Credit 3 units.

Typical periods offered: Summer, Summer Intersession

## **CAPS-EDUC 5222 Language Essentials for Teachers of Reading and Spelling Volume 2**

Lexia LETRS® stands for: Language Essentials for Teachers of Reading and Spelling. LETRS is a professional learning course for instructors of reading, spelling, and related language skills. It provides educators with in-depth knowledge and tools that they can use with any reading program. LETRS is composed of two volumes of content: Volume 1 (Units 1-4) and Volume 2 (Units 5-8). As part of the LETRS (Language Essentials for Teachers of Reading and Spelling) cohort, teachers will learn the science of reading in order to apply research in the classroom and meet the literacy needs of early learners. Teachers will gain practical strategies to use regardless of curriculum or program currently in place. LETRS Volume II specifically focuses on the language comprehension strand of Scarborough's reading rope. Teachers will study and learn about how students approach and comprehend texts, and the pedagogical strategies and supports that teachers can implement to support student reading comprehension. They learn how to create vocabulary rich environments, and make strategic decisions around the introduction and support for vocabulary acquisition, both explicitly and implicitly. Finally, teachers will explore the reading/writing connection, with a focus on how to support the development of writing a paragraph to multi-paragraph writing outputs, and how to scaffold and support writing development.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Summer Intersession, Fall, Summer

## **CAPS-EDUC 5231 MATL Instructional Coaching Practicum II**

For MATL students only. Instructor approval required. The Instructional Coaching Practicum is a year-long course that will be taught over the course of two semesters. It prepares students to effectively demonstrate the key instructional coaching competencies and support the development of a novice educator. In this practicum, highly-effective veteran teachers will develop the knowledge, skills, and mindsets needed for instructional coaching, with an emphasis on instructional coaching of novice teachers. During this practicum,

candidates will host a novice teacher resident in their classroom as a co-teacher for the school year. They will set goals for the novice teacher's development, and build coaching skills to support the candidate's development over the course of the school year. Candidates in the practicum must hold a current Missouri state teaching license and have taught for at least three years.

Credit 1.5 units.

Typical periods offered: Spring

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**CAPS-EDUC 5250 Inclusive and Anti-Ableist Education**

The purpose of this course is to introduce students to foundational concepts, issues, and strategies of inclusive education and disability studies. Students will begin to develop a critical understanding of ability/disability in educational contexts. They will learn the tools of classroom analysis and instruction necessary to teach learners in inclusive (general education) settings. This course combines theoretical approaches to thinking about disability as a form of diversity with practical teaching approaches and strategies that promote the participation and progress, both socially and academically, of students with different abilities. In particular, the class will discuss how and why some students are identified as having disabilities based on their individual learning, behavioral, communicative, or physical patterns. We will question and analyze the constructs of "normalcy" and "exceptionality" that underpin traditional special education discourses and practices. Students will develop an understanding of special education law and policy and how these legal measures play out in classrooms and schooling institutions, as well as in the context of ongoing education reform agendas. By reading narrative and autobiographical accounts by disabled authors, students will develop an understanding of how particular physical, cognitive, sensory, behavioral, and psychiatric disabilities are experienced within schooling and beyond. Throughout the course, we will discuss and exercise specific pedagogies and practices of inclusive classroom instruction, lesson planning, assessment, and classroom management. By the end of the semester, students will have developed an in-depth understanding of disability as a social, political, cultural, and historicized construct and will be able to use this understanding of disability to think about educational problems and possibilities.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Summer Intersession, Fall

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**CAPS-EDUC 5275 Evidence-Based Writing Instruction**

Writing requires students to simultaneously (1) coordinate multiple skills and forms of knowledge, (2) adapt language to meet different rhetorical demands, and (3) adhere to the norms and conventions for communicating in a community. Although writing [and teaching it] is challenging, research provides clear guidance on instructional practices that support students' writing development. This course examines four perspectives on writing instruction—sociocognitive, sociocultural, disciplinary, and critical—and the evidence base underlying associated instructional practices. Teachers will analyze, adapt, and design writing instruction for ELA, science, and social studies contexts, with particular attention to scaffolding complex tasks, designing authentic assessments, integrating dialogue and multimodal composition, and creating language-rich classrooms that support all learners.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Summer Intersession, Fall

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**CAPS-EDUC 5350 The American School - MATL**

In this course students analyze the development of American schooling within the context of American social history. The course's focus is on three general themes: the differing conceptions of schooling held by some American political, social, and cultural thinkers; the changing relationships among schools and other educational institutions such as the church and the family; and the policy issues and arguments

that have shaped the development of schooling in America. The class spends considerable time studying the history of schooling in relation to the enduring challenges and dilemmas of marginalized groups including but not limited to systemic racial inequalities, access to schooling and inequitable schooling experiences.

Credit 3 units. A&S IQ: HUM Arch: HUM Art: HUM BU: BA, ETH, HUM EN: H

Typical periods offered: Summer, Summer Intersession

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**CAPS-EDUC 5555 MATL Clinical Practicum: Teaching & Instructional Coaching**

This practicum course is required for any candidate pursuing an initial teaching license through a Teach St. Louis certification route. In the clinical practicum, certification candidates will apply the pedagogical skills and approaches from coursework within the classroom setting. Additionally, candidates will engage in bi-weekly instructional coaching cycles with a faculty advisor. Instructional coaching cycles will typically consist of a classroom observation and a coaching meeting in which the faculty coaches the candidate on applied skills from coursework. Instructional coaching bridges the learning in coursework to the individual context of the school and the needs of the candidate.

Credit 3 units.

Typical periods offered: Fall

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**CAPS-EDUC 5556 MATL Advanced Clinical Practicum: Teaching & Instructional Coaching**

This practicum course is required for any candidate pursuing an initial teaching license through a Teach St. Louis certification route. In the clinical practicum, certification candidates will apply the pedagogical skills and approaches from coursework within the classroom setting. Additionally, candidates will engage in bi-weekly instructional coaching cycles with a faculty advisor. Instructional coaching cycles will typically consist of a classroom observation and a coaching meeting in which the faculty coaches the candidate on applied skills from coursework. Instructional coaching bridges the learning in coursework to the individual context of the school and the needs of the candidate.

Credit 3 units.

Typical periods offered: Spring

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**CAPS-EDUC 5996 Education Elective - 5000 Level**

This course listing is to be used for transfer credit, only.

Credit 1-6 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring Half B, Spring Half A, Spring, Spring Intersession, Fall Half B, Fall Half A, Fall

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**CAPS-EDUC 6035 Advanced Scientific Inquiry for Educators**

This course is designed to prepare teachers to strengthen skills associated with the delivery of a successful inquiry-based science curriculum in the K-8 classroom. Through laboratory experiences and discussions teachers will work on developing questioning strategies, sequencing activities to support the various experiential levels of students and developing relevant lessons and activities from student questions. Classroom project required. Course is intended for in-service teachers. Prerequisite: permission of instructor.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring



## **CAPS-EDUC 6120 Scientific Inquiry: Advanced Pedagogy for Educators - MATL**

This course is designed to prepare teachers to strengthen skills associated with the delivery of a successful inquiry-based science curriculum in the K-8 classroom. Through laboratory experiences and discussions, teachers will work on a variety of pedagogical skills including developing questioning strategies and sequencing activities to support the various experiential levels of students. Participants will conduct an implementation project at their school or learning site. Scientific themes, structured in accordance with national and state standards, vary by semester.

Credit 1.5 units.

Typical periods offered: Summer 3, Spring, Summer Intersession, Fall

## **CAPS-EDUC 6122 Scientific Inquiry for the Classroom Teacher - MATL**

A inquiry-based course for practicing teachers in the elementary and middle school, grades K-8. Teachers will strengthen their conception of inquiry-based teaching as they learn to create a culture of inquiry in their classroom to nourish 21st century learners through STEM. Teachers will learn how to incorporate thinking routines as they encourage students to explain phenomena and design solutions to real-world problems. Teachers will learn strategies for encouraging collaboration and active learning. The continuum of inquiry will be explored as teachers learn how to move to student-centered learning that encourages lifelong learning through inquiry. A school-based implementation project will be required. Topics to vary by semester.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Summer Intersession, Fall

## **CAPS-EDUC 6130 Improving Content and Instruction: Algebra - MATL**

This course will focus on topics in Algebra, focusing on topics covered in the national framework standards document, grades 4-9. Prerequisite: Must be a practicing teacher and have approval of the instructor to enroll.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Summer Intersession, Fall

# Additional Programs

WashU Continuing & Professional Studies offers the following additional graduate programs:

- Combined Bachelor's/Master's Program (p. 73)
- Advanced Certificate in Applied Computer Science (p. 74)

# Combined Bachelor's/Master's Program

The Combined Bachelor's/Master's Degree Program at WashU Continuing & Professional Studies (CAPS) is designed for students who wish to pursue rigorous and accelerated study that will lead to both a Bachelor of Science and either a Master of Arts or Master of Science in areas of study for which there are degree programs at CAPS.

## Eligibility Requirements

Eligibility requirements for the Combined Bachelor's/Master's Degree Program in CAPS include the following:

- Admission to a Bachelor of Science degree program in CAPS.
- Completion of a minimum of 90 units toward the Bachelor of Science degree, including transfer credit, with a 3.0 or higher cumulative grade point average.
- Completion of a minimum of 15 units of undergraduate course work in CAPS, at least 12 of which must be at the advanced level (3000- and 4000-level courses), with a 3.0 or higher cumulative grade point average.
- Completion of a Combined Bachelor's/Master's Degree Program application for contingent admission.
- Statement of Intent (no more than one page) focusing on why this degree pathway was chosen and what goals are for the future.
- Writing sample: this should be a research paper with citations that is a minimum of 10 to 12 pages long, with references.
- Two letters of recommendation (at least one academic).

## Program Requirements

Students who meet the eligibility requirements should meet with a CAPS Student Success Navigator to complete the Combined Bachelor's/Master's Degree Program application. After they have been granted contingent admission, students must do the following:

- Complete of a minimum of 135 units of coursework (undergraduate and graduate), including all residency requirements for the Bachelor of Science degree.
- Complete all requirements in the relevant graduate program, including a final written project where required, and in accordance with all academic policies and procedures for undergraduate and graduate study in CAPS.
- Continue their master's degree coursework in the semester (fall or spring) immediately following completion of the bachelor's degree.

- Students receiving contingent admission are required to submit a graduate application during their final 30 to 36 units of undergraduate study, at which time their academic performance and potential for continued graduate study will be reevaluated.

A maximum of 15 to 18 units of graduate coursework (depending on the specific master's program) at the 4000 and 5000 levels may count toward requirements for the graduate degree and as unrestricted electives for the undergraduate degree.

For more information or to schedule an appointment to discuss the program, please call 314-935-6700.

# Advanced Certificate in Applied Computer Science

The Advanced Certificate in Applied Computer Science consists of 15 units of graduate coursework.

| Code               | Title                                                             | Units     |
|--------------------|-------------------------------------------------------------------|-----------|
| CAPS-CS 5000       | Foundations of Computer Science and Programming (Bridge I course) | 3         |
| CAPS-CS 5001       | Foundations of Discrete Math and Structures (Bridge I course)     | 3         |
| CAPS-CS 5005       | Foundations of Object-Oriented Programming (Bridge II course)     | 3         |
| CAPS-CS 5006       | Introduction to Cloud Computing (Bridge II course)                | 3         |
| CAPS-CS 5035       | Data Engineering Foundations (Bridge II course)                   | 3         |
| <b>Total Units</b> |                                                                   | <b>15</b> |

*This program is offered fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

# Cross-School Interdisciplinary PhD Programs

There are certain graduate programs that span more than one school at Washington University. Please visit the following pages to learn more about these programs:

- Division of Biology & Biomedical Sciences (p. 75)
- Division of Computational & Data Sciences (p. 88)
- Institute of Materials Science & Engineering (p. 91)

## Division of Biology & Biomedical Sciences

The Roy and Diana Vagelos Division of Biology & Biomedical Sciences at Washington University offers exceptional doctoral education at one of the nation's preeminent biomedical research centers. The Division includes 11 doctoral programs:

- Biochemistry, Biophysics, & Structural Biology
- Biomedical Informatics & Data Science
- Cancer Biology
- Computational & Systems Biology
- Developmental, Regenerative, & Stem Cell Biology
- Immunology
- Molecular Cell Biology
- Molecular Genetics & Genomics
- Molecular Microbiology & Microbial Pathogenesis
- Neurosciences
- Plant & Microbial Biosciences

A collaborative, interdisciplinary approach to research and education is a hallmark of Washington University and the Division. As a university-wide consortium, the Division transcends departmental lines and removes traditional boundaries of scientific fields. Faculty and graduate students regularly cross disciplines, devising novel questions and approaches that might otherwise go unexplored. The Division consists of over 700 PhD and MD/PhD students, with more than 700 faculty members from 39 departments.

Washington University in St. Louis provides unique opportunities for translating basic science into practical application. In addition, the Division's associations with internationally prominent local institutions provide exciting opportunities. Students in the biomedical sciences enrich their work with the clinical perspective of our outstanding

medical school; students also benefit from our close affiliation with the internationally renowned Missouri Botanical Garden, as well as the Saint Louis Zoo, the Tyson Research Center, the National Great Rivers Research & Education Center, and the Donald Danforth Plant Science Center.

To help prepare graduates for careers in academia, government, industry or another field of their choice, educational opportunities are offered for skill development and career exploration. The Division offers a career-planning curriculum where students can pursue noncredit elective credentials to build transferable professional skills in four areas that apply to a wide variety of scientific careers: leadership, entrepreneurship, science communication, and teaching. Through the Next Generation of Science Scholars, students are provided networking and community-building events, professional development seminars, and scientific community outreach opportunities. Professionals from a variety of fields (e.g., biotech startups, patent law) provide presentations and Q&A sessions to students throughout the year. In addition, the DBBS holds partnerships with groups such as the Center for Teaching and Learning, the Center for Career Engagement, and student organizations such as ProSPER, InPrint, the Balsa Group, and the Young Scientist Program. Students have multiple opportunities to develop experiences relevant to their future career goals.

DBBS students can reference the DBBS Student Handbook for student guidelines across all Division programs.

Email: [DBBS-Info@email.wustl.edu](mailto:DBBS-Info@email.wustl.edu)

Website: <http://dbbs.wustl.edu>

## Faculty

### Associate Dean for Graduate Education

#### Steven Mennerick

John P. Feighner Professor of Neuropsychopharmacology, Professor of Psychiatry, Associate Dean for Biology and Biomedical Sciences, Professor of Neuroscience  
PhD, Washington University in St. Louis

### Associate Directors

#### Eric Herzog

Professor of Biology, Professor of Neuroscience, Viktor Hamburger Distinguished Professor  
PhD, Syracuse University

#### Heather True

Professor of Cell Biology and Physiology, David English Smith Professorship in Medicine  
PhD, University of Illinois-Urbana-Champaign

## **Faculty Program Directors: Biochemistry, Biophysics, & Structural Biology**

### **Thomas Brett**

Associate Professor of Medicine, Associate Professor of Biochemistry and Molecular Biophysics, Associate Professor of Cell Biology and Physiology

PhD, University of Nebraska – Lincoln

### **Eric Galburt**

Associate Professor of Biochemistry and Molecular Biophysics  
PhD, University of Washington

## **Faculty Program Directors: Biomedical Informatics & Data Science**

### **Philip Payne**

Professor of Medicine, Director, Institute for Informatics, Professor, Professor of Computer Science and Engineering, Associate Dean for Health Information and Data Science for the School of Medicine, Chief Scientist for the School of Medicine, Janet and Bernard Becker Professor of Medicine

PhD, Columbia University

### **Po-Yin Yen**

Associate Professor of Medicine, Division of General Medicine & Geriatrics, Associate Professor, Goldfarb School of Nursing, Barnes Jewish College

PhD, Columbia University

## **Faculty Program Directors: Cancer Biology**

### **Grant Challen**

Professor, Division of Oncology, Department of Medicine  
PhD, University of Queensland, Brisbane, Australia

### **Jason Weber**

Professor, Departments of Medicine, Cell Biology & Physiology, and Biology

PhD, Saint Louis University

## **Faculty Program Directors: Computational & Systems Biology**

### **Gautam Dantas**

Professor of Pathology and Immunology, Co-Division Chief - Division of Laboratory and Genomic Medicine, Professor of Biomedical Engineering, Professor of Molecular Microbiology, Professor of Pediatrics, Conan Professorship in Laboratory and Genomic Medicine  
PhD, University of Washington – Seattle

### **Nancy Saccone**

Associate Professor of Genetics  
PhD, Brown University

## **Faculty Program Directors: Developmental, Regenerative, & Stem Cell Biology**

### **Mayssa Mokalled**

Associate Professor of Developmental Biology  
PhD, UT Southwestern Medical Center at Dallas

### **Andrew Yoo**

Phil and Sima Needleman Distinguished Professor of Developmental Biology

PhD, Columbia University

## **Faculty Program Director: Immunology**

### **Eynav Klechevsky**

Associate Professor of Pathology and Immunology  
PhD, Israel Institute of Technology, Haifa, Israel and The Baylor Institute for Immunology Research

## **Faculty Program Directors: Molecular Cell Biology**

### **Ben Major**

Alan A. and Edith L. Wolff Professorship in Cell Biology and Physiology, Professor of Cell Biology and Physiology, Professor of Otolaryngology  
PhD, University of Utah

**Maria Remedi**

Professor of Medicine and Cell Biology & Physiology  
PhD, National University of Cordoba, Argentina

## Faculty Program Directors: Molecular Genetics & Genomics

**John Edwards**

Associate Professor of Medicine  
PhD, Columbia University

**Jim Skeath**

Professor of Genetics, Assistant Dean Academic Pathway Programs  
PhD, University of Wisconsin – Madison

## Faculty Program Directors: Molecular Microbiology & Microbial Pathogenesis

**Megan Baldrige**

Associate Professor of Medicine, Associate Professor of Molecular  
Microbiology  
MD/PhD, Baylor College of Medicine

**Andrew Kau**

Associate Professor, Division of Allergy and Immunology, Associate  
Division Chief - Research  
MD/PhD, Washington University in St. Louis

## Faculty Program Directors: Neurosciences

**Martha Bagnall**

Associate Professor of Neuroscience  
PhD, University of California – San Diego

**Alexxai Kravitz**

Associate Professor of Psychiatry, Interim Division Director for  
Basic Neuroscience, Associate Professor of Neuroscience, Associate  
Professor of Anesthesiology  
PhD, University of Pennsylvania

## Faculty Program Directors: Plant & Microbial Biosciences

**Barbara Kunkel**

Professor of Biology, Associate Chair of Undergraduate Education  
PhD, Harvard University

**Xuehua Zhong**

Professor of Biology, Dean's Distinguish Professorial Scholar  
PhD, The Ohio State University

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DBBS mentors and educators are key to our training mission. Those who serve as primary mentors are DBBS Program Members, and others who participate in the educational mission are General Members.

Visit the DBBS website to learn about DBBS Faculty Membership or to search DBBS Faculty by last name, program, or expertise.

## Degree Requirements

- Biochemistry, Biophysics, & Structural Biology, PhD
- Biomedical Informatics & Data Science, PhD
- Cancer Biology, PhD
- Computational & Systems Biology, PhD
- Developmental, Regenerative, & Stem Cell Biology, PhD
- Immunology, PhD
- Molecular Cell Biology, PhD
- Molecular Genetics & Genomics, PhD
- Molecular Microbiology & Microbial Pathogenesis, PhD
- Neurosciences, PhD
- Plant & Microbial Biosciences, PhD

## Courses

For questions about course listings, please email  
[dbbscurriculum@wustl.edu](mailto:dbbscurriculum@wustl.edu).

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**BBS 5011 Ethics & Research Science**

This course prepares DBBS graduate students to analyze and address ethical and professional issues across the range of their professional roles and responsibilities. The primary goals are for students to recognize complex situational dynamics and ethical issues and to develop professional and ethical problem-solving skills. The course examines ethical challenges related to research design and data collection, management, ownership, security, sharing, analysis, interpretation, and reporting while providing practical guidance on these issues. The course also examines the fundamentals of the broader research environment, including principles of ethics in genetics and human and animal subjects research, regulatory issues in biological and biomedical research, publication and authorship, and collaboration in science.

Credit 1 unit.

Typical periods offered: Spring Half B, Spring Half A, Spring, Spring Intersession, Summer

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**BBS 5014 Biotech Industry Innovators**

Late one Friday afternoon in April 1976, the late venture capitalist Robert Swanson met with biochemist Herb Boyer, PhD, at his UCSF lab. Swanson had requested 10 minutes of Boyer's time; when the meeting ended, three hours later, the foundations had been laid for the formation of Genentech, the first biotechnology company, and the beginnings of the biotechnology industry. This course, The Basics of Bio-Entrepreneurship, investigates issues and choices that inventor/scientists encounter when considering the applications and commercialization of early stage scientific discoveries. This course is intended for anyone interested in working in the medical device, life-, bio-, or pharma-sciences industries as a founder, scientist, entrepreneur, manager, consultant, or investor. It focuses on the decision processes and issues that researchers and their business partners face when considering how a discovery might best be moved from academia to successful commercialization.

Credit 3 units.

Typical periods offered: Fall, Spring

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**BBS 5053 Immunobiology I**

Immunobiology I is taught by the faculty members of the Immunology Program. This course covers in depth modern immunology and are based on Janeway's Immunobiology 10th Edition textbook. The topics include: basic concepts in immunology, innate immunity: the first lines of defense, the induce responses of innate immunity, antigen recognition by B-cell and T-cell receptors, the generation of lymphocyte antigen receptors, antigen presentation to T lymphocytes and signaling through immune system receptors.

Credit 4 units.

Typical periods offered: Fall

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**BBS 5054 Immunobiology II**

Immunobiology II is taught by the faculty members of the Immunology Program. This course covers in depth modern immunology and are based on Janeway's Immunobiology 10th Edition textbook. The topics include: the development and survival of lymphocytes, T cell-mediated immunity, the humoral immune response, dynamics of adaptive immunity, the mucosal immune system, failures of host defense mechanisms, allergy and allergic diseases, autoimmunity and transplantation, and manipulation of the immune response.

Credit 4 units.

Typical periods offered: Spring

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**BBS 5068 Fundamentals of Molecular Cell Biology**

This is a core course for incoming graduate students in Cell and Molecular Biology programs to learn about research and experimental strategies used to dissect molecular mechanisms that underlie cell structure and function, including techniques of protein biochemistry. Enrolling students should have backgrounds in cell biology and biochemistry. The format is two lectures and one small group discussion section per week. Discussion section focuses on original research articles.

Credit 4 units.

Typical periods offered: Fall

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**BBS 5075 Introduction to Coding and Statistical Thinking for Genetics and Genomics**

This course is designed for first-year DBBS students who have had little to no prior experience in programming or statistics. The course will cover common statistical practices and concepts in the life sciences, such as error bars, summary statistics, probability and distributions,

and hypothesis testing. The class will also teach students basic programming skills for statistical computation, enabling them to retrieve and analyze small and large data sets from online databases and other sources.

Credit 2 units.

Typical periods offered: Fall

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**BBS 5084 Single Molecule Biophysics Journal Club**

Molecular motors in the cell harness chemical energy to generate mechanical work in a host of processes including cell motility, DNA replication and repair, cell division, transcriptional regulation, and intracellular transport. The purpose of this course is to discuss recent advances in the field of molecular motors. Special emphasis will be placed on understanding and critically evaluating single molecule studies. The course will consist of both journal club presentations and small group discussions.

Credit 1 unit.

Typical periods offered: Spring

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**BBS 5098 Graduate Research Fundamentals**

This course introduces first-year Ph.D. students to the foundational skills, knowledge, and habits of mind required of successful independent biological scientists: 1) Social dynamics in the scientific research enterprise 2) Epistemology and ethics of bioresearch methods 3) Development and communication of research questions and results 4) Interdisciplinary scientific thinking. Class sessions and homework introduce these topics; major assignments prompt student to connect them with the broader scope of graduate training in lab rotations, course work, and interdisciplinary scientific seminars. The interactive, student-driven class structure facilitates autodidactic development while integrating small group activities and peer mentoring from advanced DBBS students.

Credit 0.5 units.

Typical periods offered: Fall

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**BBS 5123 Experimental Hematopoiesis Journal Club**

Journal club in which papers that describe significant advances in the field of experimental hematopoiesis are discussed. Students are expected to present one paper per semester and attend the weekly (1 hour) session.

Credit 1 unit.

Typical periods offered: Fall, Spring

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**BBS 5137 TriMED: Membrane Excitability and Disease**

TriMED consists of seminars, work-in-progress talks and journal club presentations. It meets Monday lunchtime (1-2pm, with lunch provided) from Jan - end April and from Sept - end November (1 credit each semester). Any student signed up for credit has to attend regularly and make one half hour presentation (either of their own research, or of a paper). The attendees are a mix of students, post-docs and faculty, but the goal is for trainee experience. The course is designed to fulfil interest in membrane proteins or signaling, ion channels, electrophysiology, neurobiology or excitability more broadly.

Credit 1 unit.

Typical periods offered: Fall, Spring

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**BBS 5138 Journal Club for the Molecular Mechanism of Aging**

Why do we age? What causes aging? How is our life span determined? This journal club will address such fundamental, but challenging questions of aging and longevity. Recent studies on aging and longevity are now unveiling regulatory mechanisms of the complex biological phenomenon. We'll cover the latest progress in this exciting field

and stimulate discussions on a variety of topics including aging-related diseases. One hour of paper presentation or research talk and discussion per every two weeks. Registered students are expected to have at least one presentation for 1 unit credit.

Credit 1 unit.

Typical periods offered: Fall, Spring

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**BBS 5146 Principles and Applications of Biological Imaging**

Principles and Applications of Biological Imaging will introduce the interdisciplinary nature of the imaging sciences and conduct a comprehensive survey of the array of interrelated topics that define biological imaging. The course will cover the basics of the optical, magnetic resonance, CT, SPECT and PET imaging modalities, and microscopy, while focusing on applications of imaging to different disease states, such as oncology, neurology, cardiology and pulmonary diseases.

Credit 3 units.

Typical periods offered: Fall

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**BBS 5147 Contrast Agents for Biological Imaging**

Contrast Agents in Biological Imaging will build the chemistry foundations for the design and use of contrast agents in imaging applications such as nuclear medicine, magnetic resonance imaging (MRI) and optical imaging. The course will include lectures on the design of radiopharmaceuticals for gamma scintigraphy and positron emission tomography, MRI contrast agents and agents for optical imaging, including bioluminescence and fluorescence microscopy. One year of general chemistry, one semester of organic chemistry required.

Credit 3 units.

Typical periods offered: Spring

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**BBS 5148 Metabolism Journal Club**

The purpose of the Metabolism Journal Club is to introduce the graduate students to advanced topics spanning the biochemistry, cell biology and genetics of cellular and whole body metabolism. Under the guidance of the course directors, students will select recent topical articles for discussion in the weekly journal club. Students will be expected to provide a succinct introduction to the topic and lead discussion of the data presented in the journal article. Students will be evaluated on the basis of their presentation and their participation in the seminar throughout the semester.

Credit 1 unit.

Typical periods offered: Fall, Spring

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**BBS 5152 Rad Journal Club (Regeneration, Aging, and Development)**

Focuses on developing a dialog around current topics in developmental and regenerative biology at the molecular, cellular and systems levels.

Credit 1 unit.

Typical periods offered: Fall, Spring

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**BBS 5191 Pathobiology of Human Disease States**

Three human disease states will be discussed in detail. Topics will include background clinical and epidemiological information, followed by a detailed examination of the molecular and cellular events that underlie the disease state. Examples of pertinent topics include Alzheimer's disease, AIDS, leukemia, cystic fibrosis, sickle cell anemia, diabetes, etc.

Credit 2 units.

Typical periods offered: Fall

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**BBS 5192 Cancer Biology Journal Club**

This journal club covers current papers in molecular oncology, cancer genetics and contemporary molecular biology. Presentations will be given by students, post-docs and faculty, then discussed.

Credit 1 unit.

Typical periods offered: Fall, Spring

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**BBS 5196 Special Emphasis Pathway in Cancer Biology**

This course is designed to present pre- and postdoctoral trainees with an organized educational format to explore major contemporary topics in cancer biology. The elective will provide an integrated view of cancer research including basic science, translational science, and clinical investigation. Approximately 60 minutes will be devoted to a didactic presentation by a faculty member with interaction by the participants. The remaining 30 minutes will be used to discuss a pivotal research paper from this field, preselected by the faculty member. Outside reading (30-60 min/week) will be required.

Credit 2 units.

Typical periods offered: Spring

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**BBS 5201 Membrane Protein Biophysics Journal Club**

Cells are encapsulated by lipid bilayers providing a physical barrier for the passage of charged molecules and ions in and out of the cell. The proteins that reside within this layer of oil are called membrane proteins, and they act as the molecular gatekeepers, controlling the passage of ions, nutrients, waste products and signaling elements, across cell membranes. This journal club focuses on examining key literature in the field that investigates how membrane proteins fold, adopt certain structures, and how they function inside of the strange environment of the lipid membrane. The papers will be selected from biophysical studies that combine new and notable research with key historical work, for a broad perspective of the science being conducted in this complex and emerging field. Special emphasis will be placed on emerging topics, such as regulation of protein function by lipid composition, membrane protein synthesis and folding, cutting-edge developments in membrane biophysics. The course will consist of both journal club presentations, as well as small group discussions in the form of chalk-talks.

Credit 1 unit.

Typical periods offered: Spring

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**BBS 5217 Special Topics in Microbial Pathogenesis**

Primarily for graduate and MSTP students, this course involves oral presentation and discussion of current research articles on pathogenic microorganisms (bacteria, viruses, parasites, and fungi). Discussion will include design of specific aims for research proposals. Emphasis will be on literature that addresses the cellular and molecular basis of host-pathogen interactions. Students are expected to prepare all articles covered and to participate actively in each discussion. Class meets twice per week for 1.5 hours each.

Credit 2 units.

Typical periods offered: Spring

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**BBS 5224 Molecular, Cell and Organ Systems**

This course will introduce Ph.D. and MSTP students to fundamental problems in cell and molecular biology at the systems level. The course is divided into 5 themes: 1) microbial systems; 2) organ development and repair; 3) cardiovascular system and disease; 4) tumor & host systems; and 5) metabolic systems and disease. Topics within each theme highlight current research concepts, questions, approaches and findings at the molecular, cellular and physiological levels. Students will write an original research grant proposal on a topic of their choosing in one of the 5 themes. Students will critique proposals anonymously in an NIH-like study section.

Credit 3 units.

Typical periods offered: Spring

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**BBS 5235 Genetics Journal Club**

This journal club will be focused on the Genetics department seminar series. Students will present one or a few recent papers by the seminar speaker scheduled for that week. Students will provide a brief written evaluation (on a form that will be provided) of their peers' presentations, and the faculty advisors will meet with each student after the presentation to provide feedback.

Credit 1 unit.

Typical periods offered: Fall, Spring

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**BBS 5255 Experimental Skeletal Biology Journal Club**

The journal club, which meets weekly, focuses on cellular and molecular biology of the skeleton. Emphasis is placed on gaining insights into normal skeletal homeostasis as well as systemic disorders of bone. Papers presented for review are selected from the most competitive journals. Participants are encouraged to think outside of the box and discuss novel molecular discoveries that may impact bone cell function.

Credit 1 unit.

Typical periods offered: Fall, Spring

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**BBS 5272 Advanced Topics in Immunology**

This course uses a journal club format to discuss contemporary issues in the cell and molecular biology of the immune system. Discussions focus on the use of current approaches to analyze the cellular and molecular basis of immunity. Topics include mechanisms of antigenic specificity, diversity, cell communication, differentiation, activation, and effector activity.

Credit 2 units.

Typical periods offered: Fall

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**BBS 5282 Chromatin Structure and Gene Expression**

This special topics course will use *Epigenetics* ed. by Allis, Jenuwein, Reinberg, and Caparros (2007, Cold Spring Harbor Laboratory Press) as the organizing text. Each week a faculty member will provide a background lecture on an important topic or model system, and a student will present and lead discussion of a paper from the current scientific literature related to the previous week's background lecture. Topics to be considered will include background on chromatin structure, histone modifications and histone variants; epigenetic regulation in yeast, other fungi, ciliates, flies, mammals and plants; dosage compensation in different systems; DNA methylation and imprinting in mammals; stem cells, nuclear transplantation and reprogramming; and the epigenetics of cancer and other human diseases (some variation in topics in different years). Students enrolled in the course will be required to present one paper and to come prepared to each session, with a question for discussion.

Credit 2 units.

Typical periods offered: Spring

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**BBS 5284 Current Research in Chromatin, Epigenetics and Nuclear Organization**

This journal club considers papers from the current literature on chromatin structure and function, with an emphasis on regulation of transcription, epigenetics and genomics. Presentations are given by students, postdocs and faculty, with discussion by all. Students enrolled for credit are expected to attend regularly, and to present a minimum of one paper during the term, with consultation and critique from the faculty.

Credit 1 unit.

Typical periods offered: Spring

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**BBS 5285 Current Topics in Human and Mammalian Genetics**

This course aims to provide both biologists and those with mathematical backgrounds with a basis in mammalian genetics. The course will include the following modules: Nucleic acid biochemistry; Gene and chromosome organization; Introduction to Human Genetics; Mutations and DNA repair; Cancer Genetics; Genomic methodologies; Biochemical genetics; Murine Genetics; Epigenetics; Neurodegenerative diseases; Mitochondrial disorders; Pharmacogenetics; Introduction to human population genetics; Applications of modern human genetics; Introduction to web-based informatics tools for molecular genetics. One of the required courses in the Quantitative Human Statistical Genetics graduate program.

Credit 3 units.

Typical periods offered: Fall

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**BBS 5288 Special Topics in Molecular Genetics**

A special topics course with lectures and discussion on the molecular basis of cancer including cell cycle regulation, tumor suppressor genes, tumor invasion, angiogenesis, immune evasion, resistance to apoptosis, signaling, imaging, gene expression, chromosomal translocations, and viral oncology.

Credit 2 units.

Typical periods offered: Spring

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**BBS 5303 Protein NMR Journal Club**

This journal club covers the recent literature on protein NMR with a focus on using NMR to study protein function, NMR dynamics, and novel methods that expand the range of systems accessible to solution NMR studies. Students, postdocs and faculty discuss a recent paper and present background information on the relevant technical aspects of NMR. Students receive 1 credit for participation and presenting one paper.

Credit 1 unit.

Typical periods offered: Fall

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**BBS 5311 Dynamics in Mesoscopic Molecular Systems**

This course will provide a background in the theory of the dynamics of mesoscopic systems and introduction to methods for measuring the dynamics of these systems. It will include measurement methods, some of which are in common use and others that have only recently been introduced. This course would be useful for biophysics students and others that are interested in molecular processes and mechanisms in small systems such as cells.

Credit 3 units.

Typical periods offered: Spring

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**BBS 5312 Macromolecular Interactions**

This course will cover equilibria, kinetics and mechanisms of macromolecular interactions from a quantitative perspective. Thermodynamics, multiple binding equilibria (binding polynomials), linkage phenomena, cooperativity, allostery, macromolecular assembly, analysis of binding isotherms, enzyme catalysis and mechanism, steady-state and pre-steady-state kinetics, kinetic simulation, and isotope effects.

Credit 3 units.

Typical periods offered: Spring

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**BBS 5318 DNA Repair**

This course is an advanced graduate course that explores all aspects of DNA damage and the cellular responses to DNA damage. It is designed for graduate students who have a working knowledge of chemistry, molecular biology and cellular biology, and for interested postdocs and researchers. Specific topics that will be covered are: The chemical basis

of DNA damage, specific DNA repair mechanisms, cell cycle responses to damage, translesion DNA replication and mutagenesis, and human diseases related to defects in DNA damage response. The course consists of a lecture module, open to all, and a discussion module for registered students. In addition, several invited speakers in the field of DNA repair will give seminars and meet with registered students for discussion. Students will present and discuss research papers. Grades will be given based on student presentation and participation. Prerequisite: Permission of instructor.

Credit 2 units.

Typical periods offered: Spring

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**BBS 5319 Molecular Foundations of Medicine**

This course will cover fundamental aspects of biochemistry and cell biology from a medical perspective. The course begins with a treatment of protein structure and the function of proteins in the cytoskeleton and cell motility. The principles of enzyme kinetics and regulation are then discussed and basic pathways for the synthesis and metabolism of carbohydrates and lipids are introduced. This leads in to a discussion of membrane structure and the function cellular organelles in biological processes including energy production, protein degradation and protein trafficking.

Credit 3 units.

Typical periods offered: Fall

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**BBS 5327 Optical Spectroscopy: Theory and Applications**

Spectroscopic methods to be covered include fluorescence, both ensemble and single molecule, and absorption (circular dichroism); fluorescence correlation spectroscopy will also be discussed. The quantum chemistry /physics behind these methods will be reviewed.

Credit 2 units.

Typical periods offered: Fall

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**BBS 5328 Structural Biology Journal Club**

Multi-laboratory research colloquia for DBBS graduate students focused on structural biology and complementary biophysical techniques. Course credit requires student presentation for credit.

Credit 1 unit.

Typical periods offered: Spring

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**BBS 5336 Computational Biophysics Journal Club**

This course covers a combination of classic and recent publications on computational methods for studying biomolecules. Students participating for credit will be required to present at least once.

Credit 1 unit.

Typical periods offered: Spring

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**BBS 5357 Chemistry and Physics of Biomolecules**

This course covers three major types of biomolecular structures: proteins, nucleic acids, and membranes. Basic structural chemistry is presented as well as the biophysical techniques used to probe each type of structure. Selected topics covered include protein folding, protein design, X-ray crystallography, NMR spectroscopy, nucleic acid bending and supercoiling, nucleic acid:protein interactions, RNA folding, membrane organization, fluidity, permeability and transport, and membrane channels. The weekly discussion section will cover problem sets and present current research papers. This is one of the required courses for the biochemistry and for the molecular biophysics graduate programs. Prior course work in biochemistry and physical chemistry is recommended but not required.

Credit 3 units.

Typical periods offered: Fall

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**BBS 5358 Biochemical and Biophysical Investigations of Infectious Diseases Journal Club**

Biochemical and biophysical approaches continue to advance as powerful approaches to the understanding of human disease processes. This journal club covers recent papers in which these approaches address aspects of infectious diseases or inflammation. Students who enroll for credit will be expected to participate in weekly presentations and to present one to two papers along with accompanying background information.

Credit 1 unit.

Typical periods offered: Spring

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**BBS 5392 Molecular Microbiology & Pathogenesis**

Course is devoted to studying microorganisms, particularly those that cause disease, with an emphasis on the molecular interactions between pathogens and hosts. First third of the course focuses on virology, second third on bacteriology and the last third on eukaryotic pathogens.

Credit 4 units.

Typical periods offered: Fall, Spring

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**BBS 5393 Molecular Virology Journal Club**

Journal club covering a broad range of topics in virology with an emphasis on pathogenesis or molecular biology of medically important viruses. A minimum of one student presentation with faculty critique.

Credit 0.5 units.

Typical periods offered: Fall, Spring

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**BBS 5397 Current Literature in Microbiology**

Presentations by students on a broad range of topics of current interest in microbiology. The course will emphasize presentations and discussion skills. Credit requires attendance and participation at all sessions and one presentation.

Credit 1 unit.

Typical periods offered: Fall, Spring

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**BBS 5412 Tropical and Molecular Parasitology**

Graduate level seminar course focusing on current scientific literature in molecular parasitology. The journal club will meet biweekly during the Fall and Spring semesters. Students will attend both semesters in order to receive one credit. The seminar series will run jointly with a research conference in Tropical and Molecular Parasitology. Outside speakers will be invited for the seminar series to emphasize important developments in tropical medicine and molecular parasitology. In advance of the invited speakers, topics will focus on their previous research publications.

Credit 0.5 units.

Typical periods offered: Fall

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**BBS 5417 Hematology Division Journal Club: Current Topics in Cellular, Molecular, and Stem Cell Biology**

This journal club covers a broad range of topics of current interest, including the fields of biochemistry, molecular biology, cell biology, developmental biology, and immunology. Speakers usually give a brief background to introduce the topic and then focus on one-two papers from the current literature. Presentations are given by graduate students, post-doctorates, and faculty. Each attendee presents two-three times per year. Participants are expected to attend all the sessions. This journal club was founded in 1966.

Credit 1 unit.

Typical periods offered: Fall, Spring

**BBS 5425 Immunology of Infectious Diseases Journal Club**

The goal of this Journal Club (JC) is to provide 2nd year students in MMMP program a platform to discuss new and emerging concepts on mechanisms by which host immune responses mediate protection against infectious diseases. This exercise will also enable the student who attend the fundamental Immunology course to apply their knowledge to understand the basis for immunology of infectious diseases. The format will include faculty who will select cutting-edge papers and head the discussion during the JC session.

Credit 1 unit.

Typical periods offered: Fall, Spring

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**BBS 5426 ID Gateway: Translational and Public Health Aspects of Basic Infectious Disease Research**

This course provides an opportunity for students, postdoctoral fellows, infectious disease fellows and faculty to explore issues at the interface between patient care, public health and basic research in the area of microbial pathogenesis.

Credit 2 units.

Typical periods offered: Spring

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**BBS 5445 DNA Metabolism Journal Club**

Presentation of current research papers in DNA replication, DNA repair, and DNA recombination, with an emphasis on basic biochemical and biophysical approaches.

Credit 1 unit.

Typical periods offered: Spring

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**BBS 5456 Advanced Crystallography**

The advanced course in Protein Crystallography will address all aspects of modern protein crystallography including fundamentals of crystallography, the derivation of the structure factor and electron density equation, symmetry and space groups, direct methods, isomorphous replacement, molecular replacement, data collection, and crystal growing theory and techniques. Prerequisite, Physical Chemistry & Bio 5325 Protein Structure and Function. Two class hours per week.

Credit 2 units.

Typical periods offered: Spring

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**BBS 5469 Biochemistry, Biophysics, and Structural Biology Seminar**

Student presentation of Biochemistry, Biophysics or Structural Biology topic. Second Year Students present from literature; senior students give formal research seminar. Attendance required of all BBSB Graduate Students.

Credit 0.5 units.

Typical periods offered: Fall, Spring

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**BBS 5480 Nucleic Acids & Protein Biosynthesis**

Fundamental aspects of the structure, biosynthesis, and function of nucleic acids and the biosynthesis of proteins. Emphasis on mechanisms involved in the biosynthetic processes and the regulation thereof. Lecture course supplemented with student discussions of research papers.

Credit 3 units.

Typical periods offered: Fall

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**BBS 5483 Human Genetic Analysis**

Basic Genetic concepts: meiosis, inheritance, Hardy-Weinberg Equilibrium, Linkage, segregation analysis; Linkage analysis: definition, crossing over, map functions, phase, LOD scores, penetrance, phenocopies, liability classes, multi-point analysis, non-parametric analysis (sibpairs and pedigrees), quantitative trait analysis,

determination of power for mendelian and complex trait analysis; Linkage Disequilibrium analyses: allelic association (case control designs and family based studies), QQ and Manhattan plots, whole genome association analysis; population stratification; Quantitative Trait Analysis: measured genotypes and variance components. Hands-on computer lab experience doing parametric linkage analysis with the program LINKAGE, model free linkage analyses with Genehunter and Merlin, power computations with SLINK, quantitative trait analyses with SOLAR, LD computations with Haploview and WGAViewer, and family-based and case-control association analyses with PLINK and SAS. The methods and exercises are coordinated with the lectures and students are expected to understand underlying assumptions and limitations and the basic calculations performed by these computer programs. Auditors will not have access to the computer lab sessions.

Credit 3 units.

Typical periods offered: Fall

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**BBS 5484 Genetics and Development of C. Elegans Journal Club**

Students will present a research paper (or present their current thesis research) and the appropriate background material.

Credit 1 unit.

Typical periods offered: Fall, Spring

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**BBS 5487 Genetics and Genomics of Disease**

The course will cover the use of genomic and genetic information in the diagnosis and treatment of disease, with an emphasis on current practice and existing gaps to be filled to achieve precision medicine. Areas of discussion include: bioinformatics methods; assessment of pathogenicity; use and curation of disease variant databases; discovery of incidental findings; genomics applications in Mendelian disease, complex traits, cancer, pharmacogenomics, and infectious disease; design of clinical trials with genetic data; ethical and policy issues.

Credit 2 units.

Typical periods offered: Fall, Spring

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**BBS 5488 Genomics**

This course is designed for beginning graduate students who want to become familiar with the basic concepts and applications of genomics. The course covers a wide range of topics including how genomes are mapped and sequenced as well as the latest computational and experimental techniques for predicting genes, splice sites, and promoter elements. High throughput techniques for ascribing function to DNA, RNA, and protein sequences including microarrays, mass spectrometry, interspecies genome comparisons, and genome-wide knock-out collections will also be discussed. Finally, the use of genomic techniques and resources for studies of human disease will be discussed. A heavy emphasis will be put on students acquiring the basic skills needed to navigate databases that archive sequence data, expression data and other types of genome-wide data. Through problem sets, the students will learn to manipulate and analyze the large data sets that accompany genomic analyses by writing simple computer scripts. While students will become sophisticated users of computational tools and databases, programming and the theory behind it are not covered in this course.

Credit 4 units.

Typical periods offered: Spring

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**BBS 5489 Human Genetics Journal Club**

In this biweekly journal club on Human Genetics we will present and discuss current cutting edge papers in human and mammalian molecular genetics. Students learn presentation skills, how to critique a paper and how to interact with a very active and critical audience. Any person interested in the current state of the art in Human

Genetics may attend this course. It is a requirement that all students wishing to earn credit in this course must present a 1.5 hour journal club talk and must regularly attend and participate in the journal club throughout the year.

Credit 0.5 units.

Typical periods offered: Fall, Spring

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**BBS 5491 Advanced Genetics**

Fundamental aspects of organismal genetics with emphasis on experimental studies that have contributed to the molecular analysis of complex biological problems. Examples are drawn primarily from yeast, nematodes, fruit flies, mouse, and humans. Students will conceive and write an original research proposal with a substantial genetics component; the learning goal is to build skills in developing hypotheses from the literature and designing experimental approaches to test those hypotheses.

Credit 3 units.

Typical periods offered: Spring

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**BBS 5496 Seminar in Computational Molecular Biology**

Students present current research papers and the appropriate background material in the field of Computational Biology. Arts & Sciences students must take this course for credit; Engineering students must take this course Pass/No Pass.

Credit 1 unit.

Typical periods offered: Fall, Spring

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**BBS 5499 Cancer Informatics Journal Club**

This journal club will explore current topics in cancer informatics. Current literature will be reviewed for advanced cancer genome analysis methods, statistics, algorithms, tools, databases, and other informatics resources.

Credit 1 unit.

Typical periods offered: Fall, Spring

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**BBS 5500 Medical Genetics**

A significant portion of the first-year course in basic medical genetics devoted to human and clinical genetics, with emphasis on how genomic information will transform the practice of medicine. Topics covered include population genetics; molecular basis of mutations; human functional genomics; mouse models of human disease; pharmacogenomics; metabolic defects. Lectures, small group discussions, patient information session.

Credit 2 units.

Typical periods offered: Spring

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**BBS 5501 Biology of the Visual System**

The purpose of the course is to provide a fascinating view of vertebrate eye development, anatomy, physiology and pathology. Topics to be covered include the molecules that control eye formation, ocular stem cells, the physiology of transparency, hereditary ocular diseases, phototransduction, the neurobiology of the retina and central visual pathways, age-related eye diseases, and many others. The course is open to all second year graduates students and above. Ophthalmology residents and postdocs with an interest in vision are strongly encouraged to attend.

Credit 3 units.

Typical periods offered: Fall

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**BBS 5505 Independent Study in Fundamentals of Molecular and Microbial Genetics**

This literature-based course will introduce students to seminal and current studies in molecular and microbial genetics. Students will read and present a minimum of 12 landmark papers that helped shape our understanding of molecular and microbial genetics. Emphasis will be placed on students' ability to comprehend and explain these studies via chalk talks. All presentations will be given by students.

Credit 2 units.

Typical periods offered: Fall, Spring

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**BBS 5507 Genome Engineering Methods and Applications**

This course will cover the basic principles of genome engineering with emphasis on Cas9/CRISPR technology. It will consist of discussion sessions in which students will present assigned manuscripts followed by a general discussion of the topic directed by the instructor. The course will cover the mechanisms of genome editing using host DNA repair systems, the function of Cas9, and how Cas9 can be harnessed to introduce defined mutations into almost any genome. The use of Cas9 to activate or repress genes, alter chromatin modifications, and the application of these Cas9 systems to conducting genome-scale screens in mammalian cells as well as its use in studying cell fate will be highlighted. Finally, we will study how Cas9 methodologies can be used to introduce disease-associated variants into pluripotent stem cells (e.g. iPSCs) that can be differentiated into disease-relevant cell for use in functional genomic studies.

Credit 1 unit.

Typical periods offered: Fall, Spring

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**BBS 5512 Diseases of Membrane Transport & Excitability**

Classes will consider the molecular basis of the disease as well as animal models and current clinical studies. Addressing studies from the level of basic biophysical and molecular properties of the underlying ion channels/transporters, to the cellular defects, to organ and animal outcomes and therapies., which will encourage and force students to develop their ability to integrate understanding at multiple levels. Students will be introduced to emerging ideas in clinical diagnosis, management and treatment, when appropriate, clinical specialists will allow student participants to directly observe and participate in the clinical experiences.

Credit 2 units.

Typical periods offered: Spring

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**BBS 5513 ITVS Project Building**

The overall goal is to have intense guidance to construct a grant/fellowship application. Students should expect to have a near completed F30/F31 application by the end of this course. Students will study previous F30/F31 applications and sit on a mock panel to review real world grants from their peers. They will use this experience to understand the reviewers perspective when writing fellowships and grants in the future. Students will draft all portions of a research proposal with feedback from their peers, the course instructor and faculty mentors.

Credit 1 unit.

Typical periods offered: Fall, Spring

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**BBS 5540 Neural Sciences**

An integrated course dealing with the structure, function and development of the nervous system. The course will be offered in the Spring of the first year Medical School calendar.

Credit 5 units.

Typical periods offered: Spring

**BBS 5543 Oral Presentation of Scientific Data**

Practical course on how to prepare and present scientific data to an audience. Meets once a week for 90 minutes.

Credit 1 unit.

Typical periods offered: Spring

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**BBS 5571 Cellular Neurobiology**

This course will present a fully integrated overview of nerve cell structure, function and development at the molecular and cellular level. Broad topics to be covered include gene structure and regulation in the nervous system, basic neurophysiology, presynaptic and postsynaptic mechanisms of chemical neurotransmission, sensory transduction, neurogenesis and migration, axon guidance and synapse formation. Three 90 minute lectures plus one 75 minute paper discussion section per week. There will be four exams, as well as weekly quizzes.

Credit 6 units.

Typical periods offered: Fall

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**BBS 5572 Principles of Medicinal Chemistry**

Overview of basic principles of medicinal chemistry covering drug targets and concepts of metabolism, efficacy and potency as relevant to drug design.

Credit 3 units.

Typical periods offered: Fall

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**BBS 5577 Synapses Journal Club**

Synaptic function and malleability are fundamental to nervous system function and disease. This is an advanced seminar in the development, structure, and function of the synapse in health and disease. It is a natural extension of topics covered in Bio 5571. It may be primarily of interest to students in the Neurosciences Program, but also to students in MCB, Development, Biochemistry, Computational Biology, and Molecular Biophysics. Generally a topic for the semester helps focus the group; past topics have included Synapses and Disease, Neurotransmitter Transporters, Glutamate Receptors, Dendrites, GABA receptors. Participants (students, postdocs, and faculty) alternate responsibility for leading critical discussion of a current paper. Active participation offers the opportunity for students to hone their critical thinking and presentation skills. Students enrolling for credit will be expected to attend each week, to lead discussion once per semester and to provide written critiques (1-2 pages each) of two papers.

Credit 1 unit.

Typical periods offered: Fall, Spring

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**BBS 5617 Development Biology PhD Program Seminar**

In response to student feedback for additional training in Developmental Biology obtained from surveys and group meetings, we propose a new seminar course in Developmental Biology. This once a week course will introduce student in the Developmental, Regenerative, and Stem Cell Biology PhD Program both to the classical embryological experiments that define key concepts in developmental biology, such as cellular fields, equivalence groups, cytoplasmic determinants, and the more modern experiments that uncovered the genetic and molecular basis of these processes. In general, the classes will be individual sessions on professional development, such as scientific presentation, how to navigate graduate school, etc.

Credit 1 unit.

Typical periods offered: Fall

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**BBS 5619 Advanced Cognitive, Computational, and Systems Neuroscience**

This course will develop critical thinking and analysis skills with regard to topics in Cognitive, Computational and Systems Neuroscience. Course format will be a series of modules composed of intensive, faculty-led case studies on interdisciplinary topics at the intersection of psychology, computation and neuroscience. The goal will be to highlight the benefits of integrative, interdisciplinary approaches, by delving into a small set of topics from a variety of perspectives, rather than providing a survey-level introduction to a broader set of topic areas. Modules will involve a combination of lectures and student-led discussion groups, with students further expected to complete a multi-disciplinary integrative final review paper. Case-study topics will vary somewhat from year to year, but are likely to include some of the following: temporal coding as a mechanism for information processing, coordinate transformations in sensory-motor integration, mechanisms of cognitive control, motor control strategies including application to neural prosthetics, and memory systems in health and disease.

Credit 3 units.

Typical periods offered: Fall

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**BBS 5622 Cognitive, Computational, and Systems Neuroscience Project Building**

The goal of this course is to help students in the CCSN Pathway develop the critical thinking skills necessary to develop and implement high quality, interdisciplinary research projects. Throughout the course of the semester, each student will develop a research plan in their chosen area of interest. The plan will be developed in consultation with at least two faculty members (from at least two different subdisciplines within the pathway) as well as the other students and faculty participating in the course. The culmination of this course will be for each student to produce an NIH-style grant proposal on the research project of their choosing. For most students, this will serve either as their thesis proposal or a solid precursor to the thesis proposal. The course will be designed to help facilitate the development of such a research plan through didactic work, class presentations, class discussion, and constructive feedback on written work. The course will begin with a review of written examples of outstanding research proposals, primarily in the form of grant submissions similar to those that the students are expected to develop (i.e., NRSA style proposals, R03 proposals). Review of these proposals will serve as a stimulus to promote discussion about the critical elements of good research proposals and designs in different areas. Each student will be expected to give three presentations throughout the semester that will provide opportunities to receive constructive feedback on the development and implementation of research aims. The first presentation (towards the beginning of the semester) will involve presentation of the student's general topic of interest and preliminary formulation of research questions. Feedback will emphasize ways to focus and develop the research hypotheses into well-formulated questions and experiments. The second presentation will involve a more detailed presentation of specific research questions (along the lines of NIH-style Specific Aims) and an initial outline of research methods. The final presentation will involve a fuller presentation of research questions and proposed methods. Feedback, didactic work, and group discussion throughout the semester will include guidance on critical components of the development of a research plan, including how to perform literature searches, formulate testable hypotheses, write critical literature summaries, and design experiments and analyses. The course will meet once a week, with faculty members from different tracks within the Pathway present at each meeting. This will allow students to receive feedback from several perspectives.

Credit 3 units.

Typical periods offered: Fall, Spring

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**BBS 5646 First-Year Fundamentals**

This course will provide a two-part introduction to neuroscience research fundamentals. Namely, it will introduce elementary statistical analysis for neuroscience research as well as grant writing to support neuroscience-related research. Enrollment is limited to first-year neuroscience students.

Credit 0.5 units.

Typical periods offered: Spring

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**BBS 5648 Coding and Statistical Thinking in the Neurosciences**

Students are introduced to scientific programming in Python. Students will learn common programming constructs and how to visualize and analyze data. Coding will be integrated into a statistics curriculum introducing summary statistics, probability distributions, simulation and hypothesis testing, and power analysis for experimental design.

Credit 3 units.

Typical periods offered: Fall, Spring

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**BBS 5651 Neural Systems**

The course will consist of lectures and discussions of the sensory, motor and integrative systems of the brain and spinal cord, together with a weekly lab. The lectures will present aspects of most neural systems, and will be given by faculty members who have specific expertise on each topic. The discussions will include faculty led group discussions and papers presented and discussed by students. The labs will include human brain dissections, examination of histological slides, physiological recordings, behavioral methods, computational modeling, and functional neural imaging.

Credit 6 units.

Typical periods offered: Spring

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**BBS 5663 Neurobiology of Disease**

This is an advanced graduate course on the pathology of nervous system disorders. This course is primarily intended to acquaint Neuroscience graduate students with a spectrum of neurological diseases, and to consider how advanced neuroscientific approaches may be applied to promoting recovery in the brain. Topics will be presented by Washington University faculty members and include: neurooncology, stroke, retinal disease, perinatal brain injury, neurodegenerative disorders, neuroinflammation, epilepsy, and psychiatric disorders. The class will meet for 2 hours each week. Each session will be led by a faculty guest with expertise in a specific neurological or psychiatric disease. In the first hour, the speaker will discuss clinical manifestations and pathophysiology. Where possible, the clinical presentation will be supplemented with a patient demonstration or videotape. After a 30 minute break for pizza and soda, the second hour will follow a journal club format. Two or three students will review current papers assigned by the speaker or course director. This course is offered in alternate years. Prerequisite: Introductory neuroscience course at the graduate or medical school level.

Credit 2 units.

Typical periods offered: Spring

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**BBS 5678 Clocksclub**

Clocksclub focuses on recent advances in the study of biological timing including sleep and circadian rhythms. Participants discuss new publications and data on the molecules, cells and circuits underlying daily rhythms and their synchronization to the local environment. Students registered for this journal club will lead a discussion once during the semester.

Credit 1 unit.

Typical periods offered: Fall, Spring

**BBS 5702 Current Approaches in Plant and Microbial Research**

This course is designed to introduce graduate students and upper-division undergraduates to contemporary approaches and paradigms in plant and microbial biology. The course includes lectures, in-class discussions of primary literature and hands-on exploration of computational genomic and phylogenetic tools. Evaluations include short papers, quizzes, and oral presentations. Over the semester, each student works on conceptualizing and writing a short NIH-format research proposal. Particular emphasis is given to the articulation of specific aims and the design of experiments to test these aims, using the approaches taught in class. Students provide feedback to their classmates on their oral presentations and on their specific aims in a review panel.

Credit 4 units.

Typical periods offered: Spring

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**BBS 5703 Experimental Design and Analysis in Biological Research**

In-depth exploration of landmark and current papers in genetics, molecular and cell biology, with an emphasis on prokaryotes and eukaryotic microbes. Class discussions will center on such key discoveries as the chemical nature of genetic material, the genetic code, oxygen producing light-spectrum, cell-cell signaling, transcriptional regulation, the random nature of mutation, and cell cycle regulation. Emphasis will be placed on what makes a good question or hypothesis, expedient ways to address scientific problems, and creative thinking. The last third of the course will consist of student-run seminars on selected topics to increase proficiency in the synthesis of new material and public presentation skills.

Credit 2 units.

Typical periods offered: Fall

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**BBS 5723 Seminar in Plant and Microbial Bioscience**

This course emphasizing presentation skill and critical analysis counts towards the PMB Graduate Program's journal club course requirement. Students will be responsible for dividing and presenting 30 current research publications selected by the course masters. In addition to assembling brief PowerPoint presentations providing background and significance for their assigned articles, students are expected to provide classmates with a 1 page primer and short list of relevant references

Credit 2 units.

Typical periods offered: Fall, Spring

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**BBS 5801 Biochemistry & Molecular Biophysics Seminar Journal Club**

This will be a journal club-based seminar course mirroring the topics covered by Biochemistry and Molecular Biophysics (BMB) seminar speakers during the concurrent semester. Students will present a paper published by one of the BMB seminar speakers one-week ahead of that speaker's seminar. This will allow students and faculty to become more familiar with the research programs of BMB invited speakers, likely stimulating discussion within the Q&A period after the seminar, as well as during informal meet-the-speaker lunch sessions. Students will be evaluated on their journal club presentation, attendance and class participation.

Credit 1 unit.

Typical periods offered: Spring

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**BBS 5840 Climate Change Reading Group**

The Climate Change Reading Group is made up of multi-disciplinary faculty and students from multiple institutions in St Louis: WUSTL, UMSL, SLU, Missouri Botanical Garden, Danforth Center, and more. Many of us in different labs, departments, and institutions around STL are actively investigating aspects and effects of climate change; this reading group provides a venue for interacting with others in the community. Subject matter within the context of Climate Change will

be chosen each week by a different presenter. Students can join this reading group for 1 credit if they agree to read all papers, actively participate in discussions, find and present one high quality scientific paper on climate change in the field of their choice and moderate the discussion of this paper. The students will be evaluated on their participation, their understanding of the issues, and their presentation. Credit 1 unit.

Typical periods offered: Spring

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**BBS 5850 Seminar in Floristic Taxonomy**

This weekly seminar provides an introduction to/overview of Plants, each semester progressively covering orders and families in a sequence derived from the Angiosperm Phylogeny Website (<http://www.mobot.org/MOBOT/Research/APweb/welcome.html>); in Spring 2015, the seminar will cover several crown orders of the monocots, including grasses and relatives. Weekly presentations include a summary of all relevant information (molecular, chemical, anatomical, embryological, morphological, ecological, geographical, historical/paleontological, etc.) about the plant group under consideration, review of the classification/phylogeny of the group, examination of fresh and/or preserved specimens, and discussion of relationships, human uses, and other relevant aspects of the biology of that group. Credit will be contingent on one (or two) seminar presentation(s) per student, regular attendance and active participation in group discussions.

Credit 1 unit.

Typical periods offered: Fall, Spring

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**BBS 5866 Communicating Science: Writing for Multiple Audiences**

This course introduces strategies for writing effectively and communicating scientific research to a variety of audiences. Students will learn to reduce jargon, explain scientific concepts in common language, write clearly and concisely, and use sentence structure to maximum efficiency. Written assignments emphasize the significance and innovation in scientific research that appeal to broad audiences, including: the general public, students, policy makers, grant reviewers, and journal editors. This course meets biweekly and consists of lectures and small group sessions. You must enroll in both the lecture session (section 1) and a small group (section A, B, C, or D).

Credit 1 unit.

Typical periods offered: Spring

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**BBS 5867 Career Planning for Biological Scientists**

This course will guide you through nationally recognized and evidence-based career exploration curricula. It is intended for DBBS Ph.D. students and bioscience postdocs who want to jump-start career planning and professional skills needed for a broad range of scientific careers. Topics include self-assessment, career exploration, and goal-setting for long-term success. You will work on a team to research the scientific career path of your choice. Each team will study the specific required knowledge, skills, and attributes of their career interest or employment sector. As part of this research project, you will complete a simulated job exercise and network with alumni or local leaders in your chosen field, gaining valuable real-world insights and creating essential professional connections.

Credit 1 unit.

Typical periods offered: Fall, Spring

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**BBS 5900 Research**

Enrolled students will meet in-person with faculty for a minimum of 1 hour per week. Pass/No Pass Only.

Credit 12 units.

Typical periods offered: Fall, Spring, Summer

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**BBS 5902 Introduction to the Scholarship of Teaching and Learning**

In this course, advanced graduate students and postdocs in STEM will 1) learn the fundamentals of the Scholarship of Teaching and Learning (SoTL)-which is the practice of developing, reflecting on, and evaluating teaching methods to improve student learning, 2) Develop a working knowledge of SoTL, which draws on research in education, STEM education, and cognitive science, 3) Understand how SoTL can lead to the dissemination of new knowledge to a broad audience of educators through publication and presentations., and 4) Develop the central elements of a SoTL project. These elements include articulating questions about classroom teaching that can be addressed in a SoTL research project; developing working hypotheses in response to the questions; designing an evaluative plan, including specific research methods, the type of data to be collected, and how the data will be analyzed in relation to the hypotheses; identifying and understanding necessary procedures to obtain IRB approval for the research.

Credit 1 unit.

Typical periods offered: Spring

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**BBS 5910 Nano Topics in Biology and Biomedical Sciences**

This course will expose students to advanced topics, methods, and skills in biomedical sciences. The course will rapidly fill gaps in student knowledge in areas that are relevant to their research and or professional development. Each section of the course will be offered independently, sometimes in coordination with existing journal clubs and other seminars. Some sections will focus on technique; others will be theoretically or conceptually focused. Each section will be led by a faculty member drawn from DBBS in an area of their expertise. Objectives include deepening students knowledge and skill sets in critical thinking, experimental design, and technical prowess as related to the specific themes of each section.

Credit 0.5-1 units.

Typical periods offered: Fall, Spring

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**BBS 5911 Seminar in Biology & Biomedical Sciences**

These seminars cover the recent literature in various areas not included in other courses, or in more depth than other courses. Credit to be arranged.

Credit 12 units.

Typical periods offered: Spring

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**BBS 5915 Teaching Practice in Biology & Biomedical Sciences**

Students serve as teaching assistants for undergraduate and graduate level courses. Faculty-supervised activities include: lecture preparation and presentation; leading discussion and problem-solving sessions; laboratory instruction.

Credit 1 unit.

Typical periods offered: Fall, Spring

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**BBS 5922 Entering Mentoring**

This course is a series of facilitated discussions aimed at developing and improving mentoring skills for those involved in supervising undergraduate research experiences. It is designed for postdocs and graduate students who are or will be 'bench mentors' for undergraduates doing Bio 500 and/or Summer Research. Participants will receive Entering Mentoring materials, including articles and worksheets to facilitate mentoring interactions with their mentee, plus several resource books relevant to mentoring. They will develop a mentoring philosophy statement, work on specific assignments designed to improve their relationship with their mentee and share their present and past experiences as mentors and mentees. Bench mentors will be eligible for a travel award to help defray expenses for attending a meeting with their mentee, if that student wins one of the HHMI SURF travel awards (4-5 awarded annually) or is otherwise being supported to present at a scientific meeting. Graduate students



and postdocs do NOT need to be mentoring a student at the time of the course; it is open to all with an interest in mentoring now or in the future. Note: The sessions will be held either at the beginning of the day or the end of the day at the Danforth campus. Once registration closes, an email will be sent to those registered to poll for the best days & times.

Credit 1 unit.

Typical periods offered: Fall, Spring

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### BBS 5923 Foundations in Cancer Biology

This basic cancer biology class is designed to provide a didactic foundation into cancer biology principles. These will include tumor suppressors & oncogenes, DNA damage pathways, protein modifications, tumor progression, metastasis, tumor microenvironment and numerous other topics relevant to cancer biology.

Credit 3 units.

Typical periods offered: Fall

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### BBS 5928 Experimental Cancer Biology

This basic cancer biology class is meant to coincide with the Foundation course. Topics will be discussed in parallel with Foundation course topics but from the perspective of the laboratory experimentalist. Experimental details will provide the basis for understanding how to ask and answer important questions in the cancer biology laboratory.

Credit 3 units.

Typical periods offered: Fall

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### BBS 5940 Foundations in Cancer Biology and Experimental Cancer Biology

This advanced course will teach the clinical perspective of cancer biology using topics from oncology, radiation biology, radiology, pathology, immunology and surgery. Students will learn to write a grant proposal that includes a clinical trial element while also shadowing physicians in a real cancer clinical setting.

Credit 3 units.

Typical periods offered: Spring

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### BBS 5989 Advanced Topics in Neuroscience

This course will expose upper-level and postdoctoral students to advanced topics and methods in neuroscience. The course will rapidly fill gaps in student knowledge in areas that may be relevant to new directions in thesis work or interest areas. Each section of the course will be offered asynchronously, sometimes in coordination with existing journal clubs and other seminars. Each section will meet for two hours per week for three weeks. Sections may start with a didactic component or a review paper, but they will quickly delve into the discussion of primary papers curated by faculty and covering a focused topic. It is expected that papers will cover both historical and current contexts. Some sections will focus on technique; others will be conceptually focused. Each section will be led by a faculty member drawn from the Neuroscience program in an area of their expertise. Objectives include deepening critical thinking, statistical knowledge, experimental design, and technical prowess.

Credit 0.5-1 units.

Typical periods offered: Fall, Spring

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### BBS 5999 Independent Work

This course is designed for individual students wishing to explore indepth specialized areas of literature or technology with one or more faculty members. Credit will vary with the amount of work and discussion, but cannot be more than 3 credits.

Credit 3 units.

Typical periods offered: Fall, Spring

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### BBS 9000 Full-Time Graduate Research/Study

Full-Time Graduate Research/Study

Credit 0 units.

Typical periods offered: Fall, Spring, Summer

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### BBS 9001 Full-Time Graduate Study in Absentia

Full-Time Graduate Study in Absentia

Credit 0 units.

Typical periods offered: Fall, Spring, Summer

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### BBS 9002 Full-Time Graduate Study Extension

Full-Time Graduate Study Extension

Credit 0 units.

Typical periods offered: Fall, Spring, Summer

## Policies

The Vagelos Division of Biology & Biomedical Sciences has more than 700 students with access to over 700 faculty mentors with whom they may perform their dissertation work. This unparalleled flexibility results from the joint governance of DBBS by the Washington University School of Medicine and the School of Arts & Sciences — a 50-year-old model that fosters the most impactful science executed at the boundaries of fields, programs, disciplines, schools and departments. A hallmark of DBBS is our commitment to interdisciplinary collaboration. By transcending traditional academic boundaries, our programs consistently earn top-tier national and international rankings.

In this interdisciplinary environment, graduate students are governed by policies and guidelines established by the university, the School of Medicine, and DBBS. The policies identified here and elsewhere in this *Bulletin* are not to be considered a complete list. However, every attempt has been made to identify the location of those policies that affect most or all students in DBBS.

The University Policies (p. 18) page in this *Bulletin* outlines regulations for both graduate and undergraduate students. For further details, please consult the Office of the University Registrar website and the University Policies page of the WashU website. Graduate students are encouraged to review the specific policy categories relevant to their degree programs.

All DBBS students must follow the University PhD Policies & Requirements (p. 32) as set forth by the Provost's Office.

Degrees in DBBS are conferred by the School of Medicine; hence, students must follow the applicable policies as set forth by the school, including the relevant PhD Program Policies & Guidelines.

DBBS students can reference the DBBS Student Handbook for student guidelines across all Division programs.

# Division of Computational & Data Sciences

The Division of Computational & Data Sciences (DCDS) at Washington University in St. Louis trains students interested in problems from across a range of disciplines that share a common reliance on data and computing.

The introduction of now-standard tools from statistical analysis and hypothesis testing transformed the practice of natural and social science in the mid-20th century. Emerging tools from computational and data science have the potential to bring about an even larger transformation of scientific practice, especially in the social sciences. The questions raised by data generated by and about human behavior are engaging and profound. However, many if not most of these questions can only be tackled using a multidisciplinary approach that combines a deep knowledge of the capabilities and operation of data science techniques with the domain expertise needed to apply them effectively to the problems under consideration.

Doctoral students in Computational & Data Sciences receive strong methodological training in modern computational and statistical methods, and they also acquire expertise in a particular social science application area.

The program is inherently interdisciplinary and brings together leading experts from across the university who are using data to solve some of the greatest challenges that our world faces today. Faculty include both data and computing experts as well as domain experts from different application areas.

## Faculty

**Eunhye Ahn**

Assistant Professor, Brown School  
PhD, University of Southern California

**Ruopeng An**

Assistant Professor, Brown School  
PhD, Pardee RAND Graduate School

**Dennis Barbour**

Associate Professor, Biomedical Engineering  
MD, Johns Hopkins University  
PhD, Johns Hopkins University

**Deanna Barch**

Professor and Chair, Psychological & Brain Sciences  
PhD, University of Illinois

**Janine Bijsterbosch**

Assistant Professor, Radiology  
PhD, University of Sheffield

**Ryan Bogdan**

Associate Professor, Psychological & Brain Sciences  
PhD, Harvard University

**Todd Braver**

Professor, Psychological & Brain Sciences, Radiology, and Neuroscience  
PhD, Carnegie Mellon University

**Michael Brent**

Henry Edwin Sever Professor of Engineering, Computer Science & Engineering  
PhD, Massachusetts Institute of Technology

**Derek Brown**

Associate Professor, Brown School  
PhD, Duke University

**Sheretta Butler-Barnes**

Associate Professor, Brown School  
PhD, Wayne State University

**David Carter**

Associate Professor, Political Science  
PhD, University of Rochester

**Yixin Chen**

Professor, Computer Science & Engineering  
PhD, University of Illinois

**Dino Christenson**

Associate Professor, Political Science  
PhD, Ohio State University

**Brett Drake**

Professor, Brown School  
PhD, University of California, Los Angeles

**Ted Enamorado**

Assistant Professor, Political Science  
PhD, Princeton University

**Randi Foraker**

Associate Professor of Public Health, Brown School  
PhD, The University of North Carolina at Chapel Hill

**Patrick Fowler**

Track Chair, Social Work & Public Health  
Associate Professor, Brown School  
PhD, Wayne State University

**Roman Garnett**

Assistant Professor, Computer Science & Engineering  
PhD, University of Oxford

**Aimilia Gastounioti**

Assistant Professor, Radiology  
PhD, National Technical University of Athens

**Chris Gill**

Professor, Computer Science & Engineering  
DSc, Washington University in St. Louis

**Brian Gordon**

Assistant Professor, Radiology  
PhD, University of Illinois

**Roch Guérin**

Professor and Chair, Computer Science & Engineering  
PhD, California Institute of Technology

**Shenyang Guo**

Professor, Brown School  
PhD, University of Michigan–Ann Arbor

**Ross Hammond**

Associate Professor, Brown School  
PhD, University of Michigan

**Jenine Harris**

Associate Professor, Brown School  
PhD, Saint Louis University

**Chien-Ju Ho**

Assistant Professor, Computer Science & Engineering  
PhD, University of California, Los Angeles

**Josh Jackson**

Associate Professor, Psychological & Brain Sciences  
PhD, University of Illinois Urbana-Champaign

**Nathan Jacobs**

Professor, Computer Science & Engineering  
PhD, Washington University in St. Louis

**Kim Johnson**

Associate Professor, Brown School  
PhD, University of Minnesota

**Melissa Jonson-Reid**

Professor, Brown School  
PhD, University of California, Berkeley

**Brendan Juba**

Assistant Professor, Computer Science & Engineering  
PhD, Massachusetts Institute of Technology

**Thomas Kannampallil**

Assistant Professor, Anesthesiology  
PhD, University of Illinois

**Caitlin Kelleher**

Associate Professor, Computer Science & Engineering  
PhD, Carnegie Mellon University

**Wouter Kool**

Assistant Professor, Psychological & Brain Sciences  
PhD, Princeton University

**Matt Kreuter**

Professor, Social Work & Public Health  
PhD, The University of North Carolina at Chapel Hill

**Albert Lai**

Associate Professor and Deputy Director, Institute for Informatics  
Associate Professor, Computer Science & Engineering  
PhD, Columbia University

**Calvin Lai**

Assistant Professor, Psychological & Brain Sciences  
PhD, University of Virginia

**Matthew Lew**

Assistant Professor, Electrical & Systems Engineering  
PhD, Stanford University

**Jr-Shin Li**

Professor, Electrical & Systems Engineering  
PhD, Harvard University

**Fangqiong Ling**

Assistant Professor, Energy, Environmental & Chemical Engineering  
PhD, University of Illinois Urbana-Champaign

**Chenyang Lu**

Professor, Computer Science & Engineering  
PhD, University of Virginia

**Christopher Lucas**

Assistant Professor, Political Science  
PhD, Harvard University

**Doug Luke**

Professor, Brown School  
PhD, University of Illinois

**Phillip Marotta**

Assistant Professor, Brown School  
PhD, Columbia University

**Andrew D. Martin**

Professor, Political Science and Law  
Chancellor, Washington University in St. Louis  
PhD, Washington University in St. Louis

**Timothy McBride**

Professor, Brown School  
PhD, University of Wisconsin–Madison

**Jacob Montgomery**

Track Chair, Political Science  
Associate Professor, Political Science  
PhD, Duke University

**William Nomikos**

Assistant Professor, Political Science  
PhD, Yale University

**Alvitta Ottley**

Assistant Professor, Computer Science & Engineering  
PhD, Tufts University

**Neal Patwari**

Professor, Electrical & Systems Engineering  
Professor, Computer Science & Engineering  
PhD, University of Michigan

**Philip R.O. Payne**

Professor and Director, Institute for Informatics  
Professor, Computer Science & Engineering  
PhD, Columbia University

**Netanel Raviv**

Assistant Professor, Computer Science & Engineering  
PhD, Technion – Israel Institute of Technology

**Zachariah Reagh**

Assistant Professor, Psychological & Brain Sciences  
PhD, University of California, Irvine

**Andrew Reeves**

Associate Professor, Political Science  
PhD, Harvard University

**Guillermo Rosas**

Associate Professor, Political Science  
PhD, Duke University

**Betsy Sinclair**

Professor, Political Science  
PhD, California Institute of Technology

**Bruno Sinopoli**

Professor and Chair, Electrical & Systems Engineering  
PhD, University of California, Berkeley

**Aristeidis Sotiras**

Assistant Professor, Radiology  
PhD, École Centrale Paris

**Fred Ssewamala**

Associate Dean for Transdisciplinary Faculty Research, Brown School  
PhD, Washington University in St. Louis

**Joe Steensma**

Professor of Practice, Brown School  
EdD, Indiana Wesleyan University

**Joshua Swamidass**

Associate Professor, Pathology & Immunology  
Associate Professor, Biomedical Engineering  
MD, University of California, Irvine  
PhD, University of California, Irvine

**Jessie Sun**

Assistant Professor, Psychological & Brain Sciences  
PhD, University of California, Davis

**Yevgeniy Vorobeychik**

Associate Professor, Computer Science & Engineering  
PhD, University of Michigan

**Chenguang Wang**

Assistant Professor, Computer Science & Engineering  
PhD, Peking University

**Yong Wang**

Associate Professor, Electrical & Systems Engineering

**Emily Willroth**

Assistant Professor of Psychological & Brain Sciences  
PhD, University of California, Berkeley

**William Yeoh**

Track Chair, Computational Methodologies  
Associate Professor, Computer Science & Engineering  
PhD, University of Southern California

**Jeffrey Zacks**

Track Chair, Psychological & Brain Sciences  
Professor and Associate Chair, Psychological & Brain Sciences  
PhD, Stanford University

**Shen Zeng**

Assistant Professor, Electrical & Systems Engineering  
PhD, University of Stuttgart

**Ning Zhang**

Assistant Professor, Computer Science & Engineering  
PhD, Virginia Polytechnic Institute and State University

**Xuan Zhang**

Assistant Professor, Electrical & Systems Engineering  
PhD, Cornell University

## Degree Requirements

Upon joining the PhD program, each student is assigned an initial advisor from the DCDS faculty. This advisor meets with the student to assess their background and to advise them on course selection.

All students complete a common core curriculum as well as a domain depth requirement in a social science area. The focus of the first year is on acquiring a common set of tools and an understanding of the ranges and types of problems students may work on as they progress through the program. The entire incoming cohort takes a unique two-semester seminar sequence solely for DCDS students, which includes both general topics and a series of data-driven dives into the types of research questions that may be encountered in each of the domain areas.

## Curriculum

### Required Core Courses

Please refer to the DCDS Doctoral Student Handbook for the most up-to-date core course requirements.

### Domain Depth Tracks

Students will choose one of four focus tracks: Political Science, Psychological & Brain Sciences, Social Work & Public Health, or Computational Methodologies. Please refer to the DCDS Doctoral Student Handbook for the most up-to-date domain depth track requirements.

## Further Requirements

Additional requirements for this program are as follows:

- A minimum of 72 credit units beyond the bachelor's level, with a minimum of 37 being course credits (including the core curriculum)
- A minimum of 24 credit units of doctoral dissertation research
- Students must maintain a cumulative average grade of B (3.0 grade-point average) for all 72 credit units.
- Required courses must be completed with no more than one grade below a B–.
- Up to 24 graduate credit units may be transferred with the approval of the Graduate Studies Committee, which is chaired by the director of graduate studies.

In addition to fulfilling the course and research credit requirements, students must do the following:

- Pass a qualifying exam.
- Successfully defend a thesis proposal.
- Present and successfully defend a dissertation.
- Complete a teaching requirement consisting of two semesters of mentored teaching experience.

## Institute of Materials Science & Engineering

The Institute of Materials Science & Engineering (IMSE) at Washington University in St. Louis offers a unique, interdisciplinary PhD in Materials Science & Engineering that crosses traditional departmental and school boundaries. The field of materials science and engineering focuses on the study, development and application of new materials with desirable properties, with the goal of enabling new products and superior performance regimes. Disciplines in the physical sciences (e.g., chemistry, physics) play a central role in developing the fundamental knowledge that is needed to design materials for a variety of engineering applications (e.g., mechanical engineering, electrical engineering, biomedical engineering). Building on training that spans from fundamental to applied sciences, materials scientists and engineers integrate this fundamental knowledge to develop new materials and match them with appropriate technological needs.

The IMSE is well positioned to address the needs of a student seeking a truly interdisciplinary experience. The IMSE brings together a diverse group of faculty from departments in Arts & Sciences, the McKelvey School of Engineering, and the School of Medicine. The IMSE also oversees shared research and instrument facilities, develops partnerships with industry and national laboratories, and facilitates outreach activities.

Current focused areas of research and advanced graduate education within the IMSE include the following:

- Artificial intelligence in materials discovery and design
- Biomedical, bio-derived, and bio-inspired materials
- Materials for energy and environmental technologies
- Quantum and photonic materials and devices

## Faculty

### Director

#### Katharine M. Flores

Christopher I. Byrnes Professor, Mechanical Engineering & Materials Science  
PhD, Stanford University

Professor Flores' primary research interest is the mechanical behavior of high-performance structural materials, with particular emphasis on understanding structure-processing-property relationships in bulk metallic glasses and their composites.

### Professors

#### Jianjun Guan

Professor, Mechanical Engineering & Materials Science  
PhD, Zhejiang University

Professor Guan's research interests are in biomimetic biomaterials synthesis and scaffold fabrication; bioinspired modification of biomaterials; injectable and highly flexible hydrogels; bioimageable polymers for MRI and EPR imaging and oxygen sensing; mathematical modeling of scaffold structural and mechanical properties; stem cell differentiation; neural stem cell transplantation for brain tissue regeneration; and bone and cardiovascular tissue engineering.

#### Marcus Foston

Professor, Energy, Environmental & Chemical Engineering  
PhD, Georgia Institute of Technology

Professor Foston's research program seeks to develop innovative and novel routes to exploit and utilize lignocellulosic biomass by taking advantage of materials involved in industries such as agriculture, paper making, and forestry products.

#### Erik Henriksen

Professor, Physics  
PhD, Columbia University

Professor Henriksen's lab research is centered on the properties of electrons confined to two dimensions. This remarkable system has yielded a tremendous amount of interesting and important physics over the past several decades, from the integer and fractional quantum Hall effects to the groundbreaking discoveries of graphene and other atomically thin crystals and especially to the recent realization of the topological nature of the electronic structure of a surprising number of materials both novel and familiar.

#### Song Hu

Professor, Biomedical Engineering  
PhD, Washington University in St. Louis

Professor Hu's research focuses on the development of cutting-edge optical and photoacoustic technologies for high-resolution structural, functional, metabolic, and molecular imaging in vivo and their applications in neurovascular disorders, cardiovascular diseases, regenerative medicine, and cancer.

**Vijay Ramani**

Roma B. & Raymond H. Wittcoff Distinguished University Professor of Environment & Energy  
PhD, University of Connecticut

Vijay Ramani's research interests lie at the confluence of electrochemical engineering, materials science and renewable and sustainable energy technologies. The National Science Foundation, Office of Naval Research, ARPA-E, and Department of Energy have funded his research, with mechanisms including an NSF CAREER award (2009) and an ONR Young Investigator Award (ONR-YIP; 2010).

**Srikanth Singamaneni**

The Lilyan & E. Lisle Hughes Professor, Mechanical Engineering & Materials Science  
PhD, Georgia Institute of Technology

Professor Singamaneni's research interests include plasmonic engineering in nanomedicine (in vitro biosensing for point-of-care diagnostics, molecular bioimaging, nanotherapeutics); photovoltaics (plasmonically enhanced photovoltaic devices); surface-enhanced Raman scattering (SERS)-based chemical sensors, with particular emphasis on the design and fabrication of unconventional and highly efficient SERS substrates; hierarchical organic/inorganic nanohybrids as multifunctional materials; bioinspired structural and functional materials; polymer surfaces and interfaces; responsive and adaptive materials and scanning probe microscopy; and surface force spectroscopy of soft and biological materials.

**Fuzhong Zhang**

Professor, Energy, Environmental & Chemical Engineering  
PhD, University of Toronto

Professor Zhang's research focuses on developing synthetic biology tools and systems for the sustainable production of structurally defined chemicals and high-performance materials. Current research projects include the following: (1) engineering microbial metabolic dynamics and heterogeneity; (2) engineering metabolic pathways to produce structure-defined biofuels and chemicals; and (3) developing microbial factories to produce high-performance materials.

## Associate Professors

**Peng Bai**

Associate Professor, Energy, Environmental & Chemical Engineering  
PhD, Tsinghua University, Beijing

Professor Bai's research focuses on the development of next-generation batteries. Knowledge and tools developed in the Bai Group also apply to and benefit the design of other electrochemical energy systems, like supercapacitors and fuel cells.

**Mikhail Y. Berezin**

Associate Professor, Radiology  
PhD, Moscow Institute of Oil and Gas/Institute of Organic Chemistry

Dr. Berezin's lab focuses on the development of novel optically active probes ranging from small molecules to nanoparticles and the development of optical instrumentation for spectroscopy and imaging using knowledge of excited states. The lab's research interest lies in the investigation and application of molecular excited states and their reactions for medical imaging and clinical treatment.

**Nathaniel Huebsch**

Associate Professor, Biomedical Engineering  
PhD, Harvard University

Professor Huebsch's research focus is in basic and translational stem cell mechanobiology, with specific focus on hydrogels to control cell-mediated tissue repair and three-dimensional, iPSC-based heart-in-a-dish models to study the influence of mechanical loading and genetics on arrhythmia and contractility.

**Matthew Lew**

Associate Professor, Electrical & Systems Engineering  
PhD, Stanford University

Professor Lew and his students build advanced imaging systems to study biological and chemical systems at the nanoscale, leveraging innovations in applied optics, signal and image processing, design optimization, and physical chemistry. Their advanced nanoscopes (microscopes with nanometer resolution) visualize the activity of individual molecular machines inside and outside living cells. Examples of new technologies developed in the Lew Lab include (1) using tiny fluorescent molecules as sensors that can detect amyloid proteins; (2) designing new "lenses" to create imaging systems that can visualize how molecules move and tumble; and (3) new imaging software that minimizes artifacts in super-resolution images.

**Xianglin Li**

Associate Professor, Mechanical Engineering & Materials Science  
PhD, University of Connecticut

Professor Li's research interests are in batteries and fuel cells, including direct methanol fuel cells, lithium-oxygen batteries and battery thermal management; transport phenomena in porous media; greenhouse gas emissions and full fuel cycle analysis of fossil fuels; and life cycle assessment and economic analysis of advanced energy techniques, among others.

**Mark Meacham**

Associate Professor, Mechanical Engineering & Materials Science  
PhD, Georgia Institute of Technology

Professor Meacham's research interests include microfluidics, micro-electromechanical systems (MEMS) and associated transport phenomena, with application to design, development and testing of novel energy systems and life sciences tools, from scalable micro-/nanotechnologies for improved heat and mass exchangers to MEMS-based tools for manipulation and investigation of cellular processes.

He is also interested in the behavior of jets and/or droplets of complex fluids during ejection from microscopic orifices, which is critical to applications as disparate as biological sample preparation and additive manufacturing.

**Rohan Mishra**

Associate Professor, Mechanical Engineering & Materials Science  
PhD, Ohio State University

Professor Mishra's research interest is to develop quantitative structure-property correlations in materials starting from the atomic scale. To develop such correlations, his group synergistically combines electronic structure calculations with atomic-resolution electron microscope imaging and spectroscopy. The end goal is the rational design of materials with properties tailored for electronic, optical, magnetic and energy applications. Current research topics include perovskite materials for photovoltaic and optoelectronic applications, novel electrocatalysts, oxidizers, and wide-bandgap semiconductors.

**Jai Rudra**

Associate Professor, Biomedical Engineering  
PhD, Louisiana Tech University

Jai Rudra's lab is interested in the development of nanoscale biomaterials such as nanofibers, nanoparticles, virus-like particles, and hydrogels for engaging the immune system to induce protective antibody and cell-mediated immune responses against diseases such as tuberculosis, melanoma, and flavivirus infections (i.e., West Nile and Zika). He is also investigating the development of vaccines against drugs of addiction such as cocaine.

**Chuan Wang**

Associate Professor, Electrical & Systems Engineering  
PhD, University of Southern California

Professor Wang's research focus is on two-dimensional semiconductor nanoelectronics and optoelectronics, stretchable electronics, printed electronics, and sensors and actuators.

**Patricia Weisensee**

Associate Professor, Mechanical Engineering & Materials Science  
PhD, University of Illinois at Urbana-Champaign

Professor Weisensee's work focuses on understanding the interplay of fluid dynamics, heat transfer, and liquid-solid interactions of droplets and other multi-phase systems. Practical applications of interest are phase change heat transfer for thermal management, thermal storage, water harvesting, metallic additive manufacturing, and droplet interactions with biological and natural systems.

## Assistant Professors

**Sang-Hoon Bae**

Assistant Professor, Mechanical Engineering & Materials Science  
PhD, University of California, Los Angeles

Professor Bae's research group focuses on tackling the challenges in materials science with thermodynamics, kinetics, and solid-state physics.

**Matthew Bersi****Christopher Cooper**

Assistant Professor, Energy, Environmental & Chemical Engineering  
PhD, Stanford University

Christopher Cooper's research at WashU focuses on using dynamic polymers to create responsive, soft materials for applications in energy storage, environmental sustainability, and human health. Through advanced synthesis and characterization, his research group designs polymers with distinct molecular designs and reversible bonds for applications including wearable or implantable electronic devices, recyclable underwater adhesives, soft actuators, and upcycling of industrial plastics. Cooper has published more than 15 peer-reviewed journal articles and given numerous conference presentations and invited talks.

**Francisco Lagunas Vargas****Mark Lawrence**

Assistant Professor, Electrical & Systems Engineering  
PhD University of Birmingham

Professor Lawrence and his lab are harnessing breakthroughs in nanoscale engineering to push the limits of light-based technologies, targeting applications ranging from all-optical computing and quantum communication to metrology and biosensing.

**Kelly Powderly**

Assistant Professor of Chemistry  
PhD, Princeton University

The Powderly Group seeks to develop and utilize new synthetic pathways to discover extended solids with magnetic, electronic, and non-trivial topological properties of interest in quantum information science and to explore new fundamental bonding in materials.

**Sheng Ran**

Assistant Professor, Physics  
PhD, Iowa State University

Professor Ran's research aims to realize and understand exotic states of quantum materials using combined techniques of bulk crystal synthesis, electric and thermal transport measurements under extreme temperature, pressure and magnetic field conditions, and neutron and high-energy X-ray scattering.

**Xi Wang**

Assistant Professor, Physics  
PhD, Florida State University

Xi Wang's lab utilizes cutting-edge magneto optical and optoelectronic microscopy and spectroscopy to probe and control excitons, electrons, phonons, magnons, and so on in quantum materials for applications in quantum simulation and quantum communication.

**Chong Zu**

Assistant Professor, Physics  
PhD, Tsinghua University

Professor Zu's research interests lie at the interface between atomic, molecular, and optical physics; condensed matter physics; and quantum information.

## Degree Requirements

To earn a PhD degree, students must complete the requirements of the McKelvey School of Engineering, along with program-specific requirements. Courses include the following:

- Four IMSE Core Courses (12 units)

| Code                         | Title                                           | Units |
|------------------------------|-------------------------------------------------|-------|
| MEMS 5610                    | Quantitative Materials Science & Engineering    | 3     |
| MEMS 5619                    | Thermodynamics of Materials *                   | 3     |
| <i>Hard Materials Track:</i> |                                                 |       |
| MEMS 5620                    | Kinetics of Materials                           | 3     |
| CHEM 5620                    | Solid-State and Materials Chemistry *           | 3     |
|                              | or PHYSICS 5072 Solid State Physics             |       |
| <i>Soft Materials Track:</i> |                                                 |       |
| MEMS 5608                    | Introduction to Polymer Science and Engineering | 3     |
| MEMS 5614                    | Polymeric Materials Synthesis and Modification  | 3     |

\* EECE 5020 Advanced Thermodynamics in EECE may be taken instead with permission of the Director of Graduate Studies.

- Three courses (9 units) from a preapproved list of Materials Science & Engineering electives
- IMSE 8991 IMSE First-Year Research Experience (6 units)
- A minimum of three graduate-level technical elective courses (9 units) in mathematics or any science or engineering department, to reach a total of at least 36 academic credit units
  - A maximum of 3 units of IMSE Journal Club will be permitted toward this requirement.
  - Any 4000-level courses not included on the preapproved list of Materials Science & Engineering electives must be approved by the Graduate Studies Committee.
- A maximum of 12 units of 4000-level courses may be applied toward the required 36 academic credit units. Undergraduate-only courses (below the 4000 level) are generally not permitted and may not be used to fulfill this requirement.
- IMSE 8997 IMSE Graduate Seminar every semester of full-time enrollment
- 18 to 36 units of IMSE 8998 Doctoral Research (Students must identify an IMSE faculty member willing and able to support their dissertation research on a materials-related topic.)
- Students must maintain a grade point average of at least 3.0 for all graded courses and have no more than one grade of B– or below in a core course or a Materials Science & Engineering elective.

Additional program requirements include the following:

- Pass the IMSE Qualifying Examination (oral and written components).
- Identify an IMSE graduate program faculty member willing and able to support the student's dissertation research on a materials-related topic.
- Maintain satisfactory research progress on a topic in materials science and engineering, as determined by the dissertation advisor and the mentoring committee.
- Successfully complete research ethics training by the end of the third semester.
- Successfully complete MTE requirements by the end of the third year.
- Successfully complete the dissertation proposal and presentation, with approval from the dissertation examination committee.
- Successfully complete and defend a PhD dissertation, with final approval from the dissertation examination committee.

*Failure to meet these requirements will result in dismissal from the program.*

## Recommended Course Plan

### Year 1

#### Fall Semester

- IMSE 8997 IMSE Graduate Seminar
- IMSE 8991 IMSE First-Year Research Experience
- MEMS 5610 Quantitative Materials Science & Engineering
- MEMS 5619 Thermodynamics of Materials
  - IMSE will allow EECE 5020 Advanced Thermodynamics in EECE in place of MEMS 5619 Thermodynamics of Materials with permission of the Director of Graduate Studies.
- Hard Materials Track: CHEM 5620 Solid-State and Materials Chemistry
  - An elective may be chosen if the student is taking PHYSICS 5072 Solid State Physics in the spring.
- Soft Materials Track: MEMS 5608 Introduction to Polymer Science and Engineering

#### Spring Semester

- Begin dissertation research
- IMSE 8997 IMSE Graduate Seminar
- IMSE 8991 IMSE First-Year Research Experience
- Hard Materials Track: MEMS 5620 Kinetics of Materials
- Soft Materials Track: MEMS 5614 Polymeric Materials Synthesis and Modification
- Elective

## Summer

- Prepare for IMSE Qualifying Examination (typically taken in August):
  - Written document and oral presentation on research rotation
  - Oral examination on fundamentals from core courses

## Years 2 and Beyond

- Complete remaining electives (discuss with dissertation advisor)
- IMSE 8997 IMSE Graduate Seminar
- IMSE 8998 Doctoral Research
- Teaching requirements (to be completed by the end of the third year):
  - Attend two McKelvey preparatory engagement workshops.
  - AI two times at 10 MER units for a total of 20 units.
- Regular meetings (at least once per year) with the mentoring committee
- Dissertation proposal and presentation (fifth semester)
- Dissertation and oral defense

## Mentored Experience Implementation Plan

As part of their degree requirements, PhD students must complete a program-defined Mentored Experience Requirement (MER) as per these guidelines. The Mentored Experience Implementation Plan (MEIP) is the written articulation of a program-defined degree requirement for PhD students to engage in mentored teaching activities and/or mentored professional activities, collectively referred to as the *MER*.

## Mentored Experience Requirement (MER)

### Philosophy of Teaching

Materials scientists and engineers work at the interface between the fundamental physical sciences and application-oriented disciplines. As such, they often need to translate between underlying physical principles governing the performance of a material and the design requirements of a system or device. This translation is inherently two-way; the emergent properties of novel materials enable new, potentially transformative applications, and new devices often require materials with unique (and challenging) property profiles. To facilitate this two-way translation, our PhD graduates must be able to communicate both fundamental and applied concepts to a variety of audiences, including supervisors, subordinates, clients, and co-workers, whose familiarity with the MSE field may range from novice

to expert. Moreover, mentored teaching experiences instill a sense of responsibility, professionalism, and ethical conduct, preparing students to navigate the complex landscape of academia, industry, government, or other research-oriented sectors with confidence and integrity.

## Preparatory Engagement

Preparatory Engagement activities are those that represent an introduction to the foundational skills associated with teaching or communication. Pedagogical preparation engagement activities are normally completed before students are permitted to engage in assisting or teaching in a classroom.

Two preparatory workshops are required:

1. McKelvey Teaching Orientation (Canvas Course)
2. McKelvey Teaching Workshop (Canvas Course)

## Mentored Teaching Experiences (MTEs)

### Assistant in Instruction (AI)

An Assistant in Instruction (AI) is a PhD student who is directly engaged in the organization, instruction, and/or support of a semester-long course *primarily taught by a faculty member*. An AI receives mentorship from a faculty member related to best practices in classroom engagement, instruction in the field, interpersonal engagement, and other relevant skills. Students and mentors complete a mentorship plan prior to the start of each AI experience. To complete each AI assignment and to ensure that it applies toward their degree requirements, students must register for the appropriate course number for each semester of engagement. Refer to the "Required Pathways for Completion" section below for course numbers and details.

Students will AI two times at 10 MER units for a total of 20 units. Students work with their graduate supervisor on the timing and content of those assignments.

## Required Pathways for Completion

Students work with their faculty mentor and their Director of Graduate Studies to plan how and when they will complete their MER. Students register during the normal registration period for courses in accordance with one of these approved pathways.

- Preparatory Engagement

|          |                |
|----------|----------------|
| EGS 8010 | Take two times |
|----------|----------------|

# Interdisciplinary Opportunities

Washington University offers courses through interdisciplinary programs that include studies in a variety of disciplines that cross traditional academic boundaries and support academic areas outside of the schools.

- **Interdisciplinary Courses**

Graduate students can speak with their advisors with regard to enrolling in individual courses available outside of their school that may advance their research or professional goals. An internal tuition agreement valid across the university's graduate and professional schools enables interdisciplinary study by allowing enrollment in classes outside of the student's home school. Many undergraduate and graduate courses are available for graduate student enrollment, subject to the following eligibility guidelines:

- The student must be enrolled full-time in a graduate degree program and have the approval of their faculty advisor or administrative officer to take a course outside of their home school.
- Courses will be open to students outside of the discipline only if those students have met the required prerequisites and have the approval of both their department/advisor and the course instructor.
- Finally, courses and students in part-time or "continuing" programs, including WashU Continuing & Professional Studies, are not part of this agreement. Courses that require individualized instruction and/or additional fees (e.g., independent studies, individual music lessons) are also excluded.
- **Teaching Citation — Center for Teaching and Learning**  
The Teaching Citation is a professional-development program open to Washington University graduate students. The purpose of the program is to provide formalized pedagogical training to help graduate students prepare for careers that involve teaching. Graduate students who complete the program will participate in a learning community in which they will 1) develop knowledge of effective pedagogy, including evidence-based teaching methods, by completing one Foundations in Teaching and five advanced-level CTL workshops, 2) gain expertise with varied teaching methods by documenting three qualifying teaching experiences, and 3) develop, reflect on, and refine on their teaching approach by writing an engaging teaching philosophy statement. Documenting one's teaching experience includes demonstrating that the required number of teaching hours have been met, attaining faculty or CTL observation and student feedback on one's teaching activities, and writing a self-reflection. The qualifying teaching experiences that can be counted toward the Teaching Citation include, for example, include leading a weekly discussion or recitation subsection, leading regular review- or help-sessions, presenting course lectures, teaching a course independently, and mentoring a student in a research project. Teaching experiences must be approved by CTL staff.

- A limited opportunity for some Washington University students to enroll in courses at Saint Louis University and the University of Missouri–St. Louis is available through the Inter-University Exchange Program (p. 96).
- The Skandalaris Center (p. 97) offers cocurricular programming and practical, hands-on training and funding opportunities to students and faculty in all disciplines and schools.
- The McDonnell International Scholars Academy (p. 99) is an endowed fellowship program that offers generous financial support toward graduate and professional degree studies at Washington University in St. Louis.

## Inter-University Exchange Program

The Inter-University Exchange (IE) program between Washington University, Saint Louis University (SLU), and the University of Missouri–St. Louis (UMSL) began in 1976 as an exchange agreement encouraging greater inter-institutional cooperation at the graduate level. Over time, this program has evolved to include undergraduate education. The basic provisions of the original agreement are still in place today, and participation continues to be at the discretion of each academic department or unit.

At Washington University, there are several schools that *do not participate* in this program (i.e., degree-seeking students in these schools are not eligible to participate in the IE program, and courses offered in these schools are not open to SLU and UMSL students attending Washington University through the IE program). They are the School of Law, the School of Medicine, the McKelvey School of Engineering, and the School of Continuing & Professional Studies. The Washington University schools that are open to participation in the IE program may have specific limitations or requirements for participation; details are available in those offices.

The following provisions apply to all coursework taken by Washington University students attending SLU or UMSL through the IE program:

- Such courses can be used for the fulfillment of degree or major requirements. (Students should consult with their dean's office for information about how IE coursework will count toward their grade-point average, units and major requirements.)
- Such courses are not regularly offered at Washington University.
- Registration for such courses requires preliminary approval of the student's major/department advisor, the student's division office or dean, and the academic department of the host university.
- Students at the host institution have first claim on course enrollment (i.e., a desired course at SLU or UMSL may be fully subscribed and unable to accept Washington University students).
- Academic credit earned in such courses will be considered as resident credit, not transfer credit.

- Tuition for such courses will be paid to Washington University at the prevailing Washington University rates; there is no additional tuition cost to the student who enrolls in IE coursework on another campus. However, students are responsible for any and all fees charged by the host school.
- Library privileges attendant on enrolling in a course on a host campus will be made available in the manner prescribed by the host campus.

## Instructions

Washington University students must be enrolled full-time to participate in the IE program and have no holds, financial or otherwise, on their academic record at Washington University or at the host institution.

1. The student must complete the IE program application form. Forms are available from the Office of the University Registrar website.
2. The student must provide all information requested in the top portion of the form and indicate the course in which they wish to enroll.
3. The student must obtain the approval signature of the professor teaching the class or the department chair at SLU or UMSL, preferably in person.
4. The student also must obtain the approval signatures of their major advisor at Washington University and the appropriate individual in their dean's office.
5. Completed forms must be submitted to the Office of the University Registrar in the Women's Building a minimum of one week before the start of the term.

Course enrollment is handled administratively by the registrars of the home and host institutions. Washington University students registered for IE coursework will see these courses on their class schedule and academic record with the subject codes SLU and UMSL. Final grades are recorded when received from the host institution. The student does not need to obtain an official transcript from SLU or UMSL to receive academic credit for IE coursework at Washington University.

|          |                                                                                                                                                                                                           |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact: | Office of the University Registrar                                                                                                                                                                        |
| Phone:   | 314-935-5959                                                                                                                                                                                              |
| Email:   | <a href="mailto:registrar@wustl.edu">registrar@wustl.edu</a>                                                                                                                                              |
| Website: | <a href="http://registrar.wustl.edu/student-records/registration/the-inter-university-exchange-program">http://registrar.wustl.edu/student-records/registration/the-inter-university-exchange-program</a> |

# Skandalaris Center for Interdisciplinary Innovation and Entrepreneurship

The Skandalaris Center for Interdisciplinary Innovation and Entrepreneurship is the hub of creativity, innovation, and entrepreneurship at Washington University. We believe everyone can be entrepreneurial. Skandalaris provides programming where anyone can explore their creative and entrepreneurial interests, develop an entrepreneurial mindset, and go from ideation to launch.

## Mission

The Skandalaris Center fosters and empowers an inclusive community that finds opportunities in problems and transforms ideas into action. We build an ecosystem of education, research, and resources that engages all WashU students, faculty, alumni, and staff as entrepreneurial leaders and collaborators.

## Who We Serve

We work with the best and brightest at WashU — the change-makers, thought leaders, and visionaries — to solve the world's problems and meet local needs through innovation and entrepreneurship. As an interdisciplinary center, our initiatives serve students, faculty, staff, and alumni from all levels and disciplines.

## Our Initiatives

We develop programs for WashU entrepreneurs, creatives, innovators, and scholars. Our commitment to interdisciplinary innovation and entrepreneurship is motivated by the following beliefs:

- *Everyone can be creative.* We provide hands-on experiences and the creative means to solve problems.
- *Innovation is the backbone of entrepreneurship.* Our opportunities are designed to develop and share new ideas while connecting with other WashU entrepreneurs and innovators.
- *Good ideas are one opportunity away from success.* Our programs are created to help WashU entrepreneurs and innovators access the resources they need to take their ideas to the next level.
- *Knowledge and skills are key to innovation and entrepreneurship.* Our Center offers events and opportunities to help our community of WashU entrepreneurs, creatives, and innovators learn the ins and outs of innovation and entrepreneurship.

## Programs and Resources

- **Experts on Call**

This program provides an opportunity for the WashU community to connect with experts in the Skandalaris Center or remotely, free of charge.

- **Honors in Innovation & Entrepreneurship**

Students who have shown exemplary involvement in innovation and entrepreneurship during their time at Washington University are recognized through this program. Honors are earned by accumulating points through a combination of curricular and cocurricular activities.

- **In-Residence Program**

This program provides WashU students, faculty, staff, and alumni with the opportunity to learn from and work with professionals with extensive industry experience.

- **PhD Citation in Entrepreneurship**

This program provides opportunities for PhD students who are interested in developing skills and experiences in the areas of entrepreneurship and innovation.

- **Pivot 314 Fellowship**

The Pivot 314 Fellowship is a year-long program presented by the Office of the Provost and the Skandalaris Center for Interdisciplinary Innovation and Entrepreneurship. Pivot 314 offers graduate students curated programming focused on professional development and on strengthening leadership and communications skills, as well as internship opportunities.

- **Resources**

The Skandalaris Center, Washington University, and external services and resources are available to support innovators and entrepreneurs.

- **Skandalaris Spaces**

Our collaboration space is available for hosting meetings or events. Requests should be made a week in advance.

- **Skandalaris Startup Webinars, Panel Discussions, and Workshops**

These webinars provide an exciting way for alumni to reconnect and share their experiences with entrepreneurship. We also offer free, noncredit workshops designed to encourage creativity, innovation, and entrepreneurship.

- **Startup Venture Promotion**

The Skandalaris Center is happy to help Washington University in St. Louis students, faculty, staff, and alumni with promoting their startup ventures.

- **Student Enterprise Program (StEP)**

StEP provides a unique opportunity for students to own and operate a business on campus that serves the WashU community. Student owners can supplement the valuable business and entrepreneurial skills they learn in the classroom while gaining real-world experience as they manage and lead their own businesses.

- **Student Groups**

There are many organizations that allow students to gain experience and make valuable interdisciplinary connections in the areas of creativity, innovation, and entrepreneurship.

- **Venture Development**

The WashU community is invited to set an appointment with a member of our team for help with ideas and businesses at any stage. We will work with these individuals to brainstorm ideas, strengthen financial models, draft business plans, perfect pitches, and more.

- **Washington University Entrepreneurship Courses**

Courses in entrepreneurship offered across the university are available to students at all levels and in all disciplines.

## Competitions

- **IdeaBounce®**

IdeaBounce® is both an online platform and an event for sharing venture ideas and making connections. This is an opportunity for participants to pitch their ideas (no matter how "fresh"), get feedback on them, and make connections. In-person events happen frequently throughout the fall and spring semesters.

- **Skandalaris Venture Competition (SVC)**

The SVC provides expert mentorship to new ventures and startups to ready them for commercializing their ideas, launching, and pitching to investors. Teams will develop materials focused on explaining the ideas that they are working on to a broad audience.

- **Who Can Apply:** Current Washington University students and alumni (within one year of graduation) with an early-stage venture or idea
- **Award:** Up to \$22,500

- **Global Impact Award (GIA)**

The GIA awards WashU-affiliated ventures with inventions, products, ideas, and business models that will have a broad and lasting impact on society.

- **Who Can Apply:** WashU students, postdocs, residents, and alumni who have graduated within the last 10 years
- **Award:** Up to \$50,000

## Learn More

Please contact the Skandalaris Center to sign up for our newsletter and for additional information about all programs.

|          |                                                                         |
|----------|-------------------------------------------------------------------------|
| Phone:   | 314-935-9134                                                            |
| Email:   | sc@wustl.edu                                                            |
| Website: | <a href="http://skandalaris.wustl.edu">http://skandalaris.wustl.edu</a> |



## McDonnell International Scholars Academy

The McDonnell International Scholars Academy graduate fellowship program at WashU is dedicated to fostering a dynamic community of scholars chosen based on their ability to emerge as leaders and experts in their fields. The McDonnell Academy offers curated programming that includes a leadership seminar, cohort trips, and presentation skills development. This multifaceted approach cultivates leaders who embrace a global outlook and help drive positive change in their communities and beyond.

The McDonnell Academy provides both financial and programmatic support to enrich the WashU graduate experience. Meaningful participation and engagement are key components of the program. For more information about program benefits, eligibility, and admissions, please visit the Admissions page of the McDonnell International Scholars Academy website.

Website: <https://mcdonnell.wustl.edu/>

# Undergraduate Policies

Please expand the sections below for more information about WashU's undergraduate policies and guidelines.

## Academic Standing

The faculty of the school in which a student is enrolled determines the academic standing of that student. Each school, as appropriate to their respective degree requirements, considers the following key performance indicators to determine whether a student remains in good academic standing:

- Minimum semester and cumulative GPA of 2.0 (i.e., minimum required to graduate);
- Satisfactory progress in units completed, typically 12 per semester;
- Progress in the focused area of study, as defined by school (e.g., major requirements).

Failure to maintain the above indicators may cause a student to be placed into one of the academic standing categories described below, which is a signal that minimum standards for graduating are not being met. Unless a student demonstrates improvement, thereby indicating their ability to fulfill degree requirements within a reasonable period of time, the student may be dismissed from the university. Each school will determine the appropriate standards and actions for students to take, respective to each status:

### Academic Concern

Any of the following performance indicators at the end of a semester will cause the student's standing to be reviewed and may cause the student to be placed on Academic Concern:

- Receiving an incomplete (first occurrence and all subsequent occurrences)
- Earning a semester GPA of less than 2.0 (first occurrence)
- Earning fewer than a total of 12 units in a regular semester (first occurrence)

While a student placed on Academic Concern remains in good academic standing, this status is a signal to the student that academic performance is below minimum standards and, if continued, will likely cause the student to fall out of good standing. This status is not noted on the official transcript; since it does not cause the student to fall out of good standing, it will not be incorporated into enrollment verifications requesting confirmation of academic standing.

### Academic Notice

Any of the following performance indicators at the end of a semester will cause the student's standing to be reviewed and may cause the student to be placed on Academic Notice:

- Cumulative GPA of less than 2.0 (first occurrence and all subsequent occurrences)
- Semester GPA of less than 2.0 (second occurrence and all subsequent occurrences)
- Earning fewer than a total of 12 units in a regular semester (second occurrence and all subsequent occurrences)
- School-specific requirements:
  - Olin students earning a professional GPA of less than 2.0 (all business courses)
  - Arts & Sciences students earning below a C- in any major-related course

If the performance indicators contributing to the status of Academic Notice are raised above the threshold (e.g., by the resolution of an incomplete grade or the change of a final grade), the status may be reconsidered.

Academic Notice status indicates that a student is not in good academic standing. Although this status is not noted on the official transcript, it will be incorporated into enrollment verifications requesting confirmation of a student's standing.

### Academic Time Away

Any of the following performance indicators at the end of a semester will cause the student's standing to be reviewed and may cause the student to be placed on Academic Time Away, which is a pause in enrollment at Washington University:

- Any third time a student becomes eligible for Academic Notice
- Any second sequential semester a student becomes eligible for Academic Notice (These are typically the fall and spring semesters, since most students do not enroll in summer classes. However, if a student does enroll in summer classes after a spring semester after which they were placed on Academic Notice, their performance will be reviewed.)
- Any semester in which student earns no degree credit

Academic Time Away status indicates that a student is not in good academic standing. Because this status is marked by a break in enrollment, this status is noted on the official transcript. The terms of the Time Away are determined by the student's school.

### Academic Dismissal

A student whose performance causes them to be eligible for Academic Time Away for a second time becomes eligible for Academic Dismissal. Each school will determine according to their standards and practices when a student is to be academically dismissed. Consult the Student Status: Expulsion and Dismissal section (p. 24) of the University Policies page for more information.

## Grades and Grade Points

The following grades are used in calculating the grade point average:



| Grade   | Points per Unit |
|---------|-----------------|
| A or A+ | 4.0             |
| A-      | 3.7             |
| B+      | 3.3             |
| B       | 3.0             |
| B-      | 2.7             |
| C+      | 2.3             |
| C       | 2.0             |
| C-      | 1.7             |
| D+      | 1.3             |
| D       | 1.0             |
| D-      | 0.7             |
| F       | 0.0             |

The following grades and notations are ignored in calculating the grade point average. Incomplete and N (No grade reported) grade notations that are not resolved with a final grade within 120 days of the last day of the semester for which the notation was posted will be automatically changed to a grade of F (or NP, in the case of a course taken Pass/No Pass).

| Grade/Notation  | Value                                       |
|-----------------|---------------------------------------------|
| Pass            | Pass                                        |
| No Pass         | No pass                                     |
| I               | Course work incomplete; final grade pending |
| W               | Withdrawal                                  |
| N               | No grade reported; final grade pending      |
| R               | Retaken course                              |
| L               | Successful audit                            |
| Z               | Unsuccessful audit                          |
| Exam Credit     | Exam credit                                 |
| Transfer Credit | Transfer credit                             |
| Not Transferred | Course attempted, not transferred           |

## Minimum/Maximum Course Load

Undergraduate degree programs in Arts & Sciences, Olin Business School, Sam Fox School of Design & Visual Arts, and McKelvey School of Engineering require full-time enrollment. Full-time enrollment is between 12 and 21 units of credit per semester. Courses taken as “audit” are not factored into the full-time status measure since students are not pursuing them to earn credit. Undergraduate students may not enroll in fewer than 12 units without approval; recommendations for reduced course loads may be approved for documented disability accommodations or health reasons by the appropriate office in Student Affairs, or students’ schools (typically if they are in their ninth semester of enrollment at Washington

University and poised to complete degree requirements). Approvals for reduced course loads primarily allow students to pursue lower course loads without risking a violation of standard academic progress and standing requirements.

Enrollment in fewer than 12 units may affect undergraduates’ eligibility for financial aid, athletics, immigration status and other services, and may be approved for reduced tuition but only as documented on the Tuition & Fees page of this *Bulletin*. Similarly, students may not enroll in more than 21 units without approval from their school, and will incur additional tuition charges for such enrollment.

Students should review school policies and consult advisors for information about typical course loads to make appropriate progress in their degree program, since consistently pursuing only the minimum required units will not allow a student to fulfill degree requirements in a timely manner. They should also verify with their school how dropping or adding courses may affect their academic standing.

## Reading Days and Final Assessments

When registering for classes at Washington University, students commit to all course requirements, including the examination procedures chosen and announced by the course instructor. When selecting courses, students are advised to take note of all final exam information. Students anticipating conflicts in their final examination schedule should seek to resolve them with the relevant instructors before enrolling. Students should not register for courses that result in three or more final examinations on one day. If a student does so, the instructors are not obligated to offer an alternative exam.

Final exam days and times are subject to change. The most current final exam schedule information can be found on the Final Exam and Evening Exam Schedules page of the Office of the University Registrar website.

## Registration in Courses

Registration dates are published in advance on the Office of the University Registrar's website. Late registration after the term begins is permitted only until the “add/drop” deadline relevant to a student's program. Students will not earn credit for courses in which they are not duly registered. Students may not register in courses that have conflicting meeting times. Exceptions will only be made in the most extraordinary of circumstances. Any and all exceptions must be approved by the Office of the Provost and the student's home school. Questions should be answered by reviewing the Enrollment in Course with Overlapping Meeting Times page of the Office of the Provost website.

Students may drop a course by the published deadline found on the Office of the University Registrar's website; dropped courses do not appear on the permanent academic record, and no grade is recorded. Students may withdraw from a course after the drop deadline and until the published withdrawal deadline. A withdrawal will result in a W notation associated with the course on the permanent record,

including the transcript. Students who wish to drop or withdraw from a course are expected to follow steps to do so by the appropriate deadline. Failure to drop a course or to withdraw by the published deadline may result in the failure of the course, and the transcript will reflect a failing grade.

Undergraduate students may request, under certain rare circumstances, to withdraw from all courses in a term, after the term is over, if circumstances beyond their control prevented them from exercising normal enrollment options described above during that term. They must submit the request according to the process and by the deadline described on the Office of the University Registrar's website.

## Repeated/Retaken Courses

Most courses are designed to be completed once, and credit may only be earned once. Students are permitted to retake courses in which they have earned a final quality grade of B– or lower or a No Pass grade. When courses designed to be taken once are retaken, all attempts remain on the student's record, including the original grade. However, the attempt with the highest grade will retain credit and be used to calculate grade points. The other attempt(s) will have credit and GPA impacts removed; on the transcript, the letter *R* will be placed next to the grade(s) to denote the retake. Credit awarded for transferred courses or exams will be included in course attempts, if articulated as an equivalent of a Washington University course. Students with unresolved incomplete grades should not register for another course attempt as a mechanism to resolve the incomplete.

Some courses, such as "topics" courses or internship/research courses, are designed to be taken multiple times for credit. This is considered "repeating" a course and is allowed according to the course settings and policies. Multiple completions may be applied to academic requirements according to the policies of the student's program and school.

## Satisfactory Academic Progress (SAP) for Title IV Federal Financial Aid

The minimum progress needed to maintain eligibility for Federal Financial Aid has three components: GPA, pace, and maximum time frame. All undergraduate programs require a minimum GPA of 2.0. Students are evaluated for SAP annually at the end of the spring semester. If a student is failing SAP, they are not eligible for Federal Financial Aid until 1) they successfully appeal their status or 2) they regain satisfactory progress. Additional information about Satisfactory Academic Progress is available from Student Financial Services.

## Teaching and Learning

### Teaching and Learning at Washington University: A Statement of Best Practices and Expectations

*Undergraduate Council*

*November 10, 1999*

*Teaching Subcommittee of the Undergraduate Council*

*Walter Chan and Robert E. Hegel, Co-Chairs*

*Amended by the Teaching Learning Subcommittee of the Undergraduate Council on January 27, 2010, and October 30, 2015.*

*Amended statements endorsed by the Undergraduate Council on February 2, 2010, and November 2, 2015.*

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*All members of the Washington University community share responsibility for creating an atmosphere conducive to learning. A collaborative learning environment involves the active participation of both instructors and students in the classroom and in activities outside the classroom. This environment requires:*

- best efforts on the part of both faculty and students to enhance the learning experience for the benefit of all persons involved;
- recognizing that everyone present plays an important role; that all participants in the learning experience deserve respect for what they contribute; and that both faculty and students be sensitive to the importance of the others in this process;
- an atmosphere that embraces multiple identities in the classroom by demonstrating mutual respect for all persons regardless of political, racial, ethnic, religious, gender, sexual orientation, age, disability, socioeconomic or veteran status.

In response to changing classroom dynamics, we, the Undergraduate Council, make the following recommendations:

### Expectations and Responsibilities of the Faculty

The faculty member is involved in several major roles, including those of teacher, scholar-researcher, and citizen in the university. For the unimpeded performance of these functions, the faculty member is guaranteed academic freedom. At the same time, the faculty member has clear responsibilities to the students and to the institution, particularly in the faculty member's role as teacher. Instructors should provide the basic outlines for the learning experience and provide guidance as appropriate, generally in the form of a handout or easily accessible electronic document. Such guidance should normally involve:



- presenting a syllabus that:
  - identifies the goals of the course and its prerequisites, a schedule of major assignments and examinations, and explicit criteria for how student work will be evaluated;
  - articulates ground rules for classroom interaction and consequences for infringement (How much active participation is expected of the student? Is attendance required? Is it acceptable to eat during class? What are the guidelines for collaboration inside and outside of the classroom?);
  - establishes behavior expectations for the class, including respecting every member, listening and engaging;
  - makes clear expectations for technology use during class;
  - includes links to information about inclusion and diversity, bias reporting, and accommodations based upon sexual assault and mental health;
- reminding students of and upholding the university's standards for academic integrity;
- bringing new perspectives and insights to assigned readings and other text materials;
- conducting classroom and one-on-one interactions in keeping with the university's guidelines on diversity and inclusion;
- regularly meeting and punctuality in starting and dismissing class;
- prompt and responsible grading (including midterms), with evaluative comments and opportunities for students to discuss their grades with the faculty member;
- adherence to the announced office-hour schedule and offering as many avenues as possible for contact, including by online venue, telephone or email;
- using appropriate, relevant technology both inside and outside of the classroom to enhance communication between faculty and students;
- uploading course materials and sending emails or other notifications in a timely manner;
- overseeing assistants in instruction (AIs), including the training of AIs; providing definitions of grading expectations as per the University Code of Conduct; providing detailed rubrics for grading evaluations, case studies and projects; and ensuring a faculty review in the event students contest their grade and petition for regrading, especially to ensure grading uniformity;
- regular communication between two or more professors when they share in the teaching process of a one-semester course, including agreement about responsibilities, assignments given to students, and due dates expected;
- facilitation of and reflection on student evaluations of the faculty member's teaching methods and materials, including midsemester evaluations, as a means of creating an atmosphere of shared responsibility within the classroom;
- regular communication with students regarding progress in the course, ways to improve, and grading structure;
- avoiding prohibitive costs when ordering textbooks and other course materials; making electronic texts available;

- adhering to the published final examination schedule to avoid interfering with students' preparation for other classes;
- showing up to all of the classes and giving students the full number of contact hours they deserve each semester.

## Expectations and Responsibilities of the Students

Students must take responsibility for their own learning. Students also share with the instructor the responsibility for providing an environment conducive to learning. Students should personally:

- actively engage in learning the material and with the process of education, including meeting with the instructor and/or AI when requested to or when necessary;
  - use the course materials, faculty expertise, and expectations for learning to build their own knowledge and skills;
  - attend all classes, both lecture and discussion sessions, and participate in class discussions; leave class only for emergencies; use online resources for augmentation and review, not as a substitute for class;
  - be punctual in completing assignments;
  - behave in the classroom in a manner that demonstrates respect for all students and faculty and follows university guidelines for diversity and inclusion;
  - adhere to the instructor's expectations for the use of technology during class, including laptops, tablets and phones;
  - share responsibility for the flow of information concerning a course by regularly checking the course webpage, online discussion groups and university email;
  - be familiar with and adhere to matters of academic integrity as identified by their instructors and their school within the university;
  - participate in objective and constructive evaluations of the instructor, course content according to the syllabus, and required textbooks/materials to clarify opportunities and strengths that will help the instructor to improve the course in subsequent semesters;
  - conform to the ground rules of the course as defined in the syllabus.

## Learning Outside the Classroom

Students and instructors should consult at the beginning of the semester about the content and expectations regarding independent study, supervised internships, supervised research, fieldwork, and international learning.

Students and instructors should familiarize themselves with division/department/program policies regarding independent studies and internship opportunities.

## Special Student Concerns

Students should take the initiative to inform the faculty of anticipated absences prior to the scheduled event and discuss special arrangements to compensate for missed instruction. Should the absence be emergent or unanticipated, it is the student's responsibility to inform the faculty in a timely manner to minimize the disruption of class progression as a whole. Students should recognize that the collective needs of the faculty and other students in a course may outweigh individual priorities. Faculty should be sensitive to individual student needs for special arrangements:

- to accommodate disabilities, illnesses, family emergencies, or academic or professional opportunities that interfere with usual class attendance or performance;
- to provide accommodations when students miss class because of religious holidays.

## Responsibilities of the University Administration

For its part, the university administration must:

- continue to provide facilities and ensure adequate classroom and laboratory space that is stocked with sufficient, appropriate equipment;
- give priority to supporting both faculty and students in teaching and learning;
- provide opportunities for professional, student, and leadership development in both teaching and learning;
- be responsive when normal communications between faculty and students break down by providing a process for discussion and negotiation;
- facilitate communication among various constituents of the university;
- facilitate the flow of visitors to the classroom by providing faculty with ample notice.

## Where to Get Help

For instructors: The departmental chair or associate chair, the Teaching Center, colleagues, and the relevant dean's office offer very useful advice on teaching techniques, materials and methods.

For students: The instructor, the AIs, and the Learning Center can be counted on for guidance on best learning techniques and practices. The Writing Center can be a very helpful resource for all levels of written assignments from concept identification and document structuring through final paper editing.

Should a student concern occur, the general process of communication and request for assistance, guidance, and problem resolution is as follows:

1. Raise the concern with the faculty member.
2. If resolution has not been achieved, raise the concern with the associate chair or department chair.
3. If resolution has not been achieved, raise the concern with the student's advisor(s).

Concerns and/or disagreements that have not been resolved by this process can be addressed to the faculty-student mediator.

If the student has a concern related to discrimination or harassment, the University Policy on Discrimination and Harassment provides additional information about resources and options.

## Transfer Credit

### Recording Policy

Transfer credit is articulated on a student's permanent record and listed on transcripts. Courses transferred from other institutions of higher education do not have grades or grade points assigned and therefore do not apply toward a student's GPA.

Institutionally, Washington University participates in the Inter-University Exchange Program (p. 180). Courses taken at St. Louis University and the University of Missouri St. Louis, according to the parameters documented, are approved to transfer to Washington University. The McKelvey School of Engineering has agreements related to dual degree programs with other institutions. WashU Continuing and Professional Studies has an agreement with the Barnes-Jewish College Goldfarb School of Nursing for students in the Associate in Arts Pre-Nursing Program (p. 145).

### Eligible Credit

In order to be eligible for transfer articulation, courses taken from another institution — whether taken before matriculation or after matriculation as preapproved domestic or study abroad enrollment — must meet the following criteria:

- Be offered and transcribed by a fully accredited institution of higher education (either according to U.S. Department of Education standards or by the appropriate national ministry of education for non-U.S. institutions);
- Have a quality final grade of C or better;
- Be offered in a subject matter/discipline taught at Washington University and at a level by which college/university credit would normally be awarded;
- Not be applied to high school graduation requirements;
- Be taught on the campus of a college or university and enrolled in primarily by duly matriculated college students (i.e., high school graduates); and
- Not be taken while a student is on suspension for violation of Academic Integrity or Student Code of Conduct policies.



Schools may have additional specific criteria about requirement areas that cannot be fulfilled with transfer credit (i.e., that can only be fulfilled by the completion of Washington University courses) as well as limits on the number of transferred credits that may apply to degree requirements or be taken during a summer term. Please review the school academic policy sections for details.

# WashU Continuing & Professional Studies - Undergraduate

WashU Continuing & Professional Studies (CAPS) is the division for modern learners at Washington University in St. Louis. The division offers a wide range of courses in a variety of interdisciplinary and professional areas of study. Part-time and full-time study options in undergraduate degree programs, master's degree programs, certificate programs, and professional development are available. CAPS is also home to the WashU Prison Education Project (PEP), which offers credit-bearing college courses and degrees to incarcerated students at two regional Missouri prisons; the English Language Program (ELP), which helps WashU students who speak English as an additional language achieve academic and professional success; and the EMPOWER program for English language development in workforce certification. For more information regarding any of these programs, visit the WashU CAPS website.

Since 1931, CAPS has been a cornerstone of career advancement and professional development in the St. Louis region. Their mission is to empower modern learners — those balancing education with work and personal responsibilities — with flexible, high-quality educational pathways to career success.

CAPS offers a variety of degree and certificate programs tailored to meet the demands of the regional job market. A dynamic curriculum, developed in collaboration with industry leaders, ensures learners gain the skills and knowledge employers are seeking. Whether learners are looking to upskill, reskill, or achieve a new qualification, CAPS provides the practical, career-focused education they need to thrive.

Flexible learning options, including online courses, hybrid programs, and in-person classes, allow students to pursue their educational goals on their terms. CAPS is committed to supporting students' success with a range of resources and personalized coaching. With the support of dedicated instructors, recruiters, student success navigators, and career specialists, students have the resources and guidance needed to succeed.

## Undergraduate Study

CAPS awards Bachelor of Science (BS) degrees to all and, to WashU employees and select partner program members, Associate in Arts degrees, in a range of interdisciplinary areas of study. Students may also select individual courses from many different academic departments and programs housed in CAPS. In addition, undergraduate certificate programs for professional and personal

development are available. Please visit the WashU CAPS website or call 314-935-6700 for more detailed information, requirements, and policies concerning specific undergraduate degree and certificate programs.

## Admission

The admissions policies and procedures at CAPS reflect the unique experiences and needs of modern learners who are academically capable but who have historically not had access to a WashU education. Students seeking admission to an undergraduate degree or certificate program should connect with CAPS to discuss their goals prior to submitting an application for admission. Formal admission is required of all learners who wish to take for-credit courses at CAPS.

All those seeking admission must complete the admissions application online at the CAPS website and submit a non-refundable \$50 application fee. To be considered for admission, all application materials must be received by the posted deadline. For a full list of application requirements, please visit the CAPS Undergraduate Application Deadlines & Admissions Requirements page. If an applicant does not meet the criteria for admission, they should connect with a CAPS representative to discuss their options for entry. Submitted applications for admission are good for up to one full year from the original term of application (for a total of three terms, including the original term of application). Applicants wishing to be considered for admission for a term that is after the one-year mark must submit a new application and the non-refundable \$50 application fee. Updated application materials may be requested at any point after the original semester of application. Applicants should connect with a CAPS representative for more information about deadlines and procedures.

## Bachelor's Degrees

Admission to a bachelor's degree program requires at least 45 transferrable credits (with a letter grade of C or higher) or 45 letter-graded credits completed in CAPS, as well as a cumulative GPA of 2.7 in that prior college work. CAPS Student Success Navigators will review each applicant's academic record; if the cumulative GPA across all transcripts is 2.7 or above, the applicant will be considered for admission. If the cumulative GPA is 2.7 or above with work older than 10 years excluded, the applicant will be considered for admission.

The 45 credits may include courses already completed toward an associate's degree (AA). Students in a CAPS AA program have the opportunity for streamlined admission to a CAPS bachelor's degree program. During their final semester of study for the AA, these students may request to continue into a bachelor's degree program and will be eligible to do so with a cumulative CAPS GPA of 2.0 or higher. This admission will be contingent on the successful completion of the AA.

Applicants who do not meet the GPA requirement but have significant professional experience and a thoughtful plan for career change or advancement may be offered contingent admission to the bachelor's degree program.



An applicant who is offered contingent admission to an undergraduate CAPS program has an opportunity to earn regular admission by taking 6 credits of recommended CAPS coursework during the semester of admission. The courses taken must be completed with a combined GPA of 2.7 or higher and no grade below C. One of the contingent courses must be English Composition at the correct placement level, either CAPS-ECOMP 1110 Analytical Writing or CAPS-ECOMP 2020 Critical and Researched Writing; all students must complete a writing assessment and will be recommended for one of these two courses. Students should coordinate with their Student Success Navigator to select their second course in one of the following areas: science, numerical applications, moral reasoning, or cultural diversity. Completed courses taken to satisfy contingent admission requirements will apply to the student's degree program. Students who are admitted under contingency status are eligible to apply for federal financial aid and CAPS scholarships. The Admissions and Progression Committee will review academic progress after each fall and spring semester to determine whether a student has earned regular admission, is permitted to continue studying under contingency, or is not permitted to continue.

## Associate's Degrees\*

The minimum requirements to be considered for admission to an associate of arts degree are as follows:

- The applicant must be a WashU employee or part of an approved partner program. Please contact a CAPS representative for more information about qualifying partner programs.
- The applicant must have a minimum cumulative GPA of at least 2.7 in all prior coursework (the minimum may be higher for specific programs).
- There are also minimum requirements regarding transferable academic credits for associate's degrees that vary by program. Applicants should connect with a CAPS representative for more information about those requirements.

\* The AA admissions requirements listed above apply to traditional CAPS AA programs. Certain partnership programs may carry different requirements; those details will be included on the relevant program pages.

## Undergraduate Certificates

There is no minimum GPA or credit unit requirement for admission to an undergraduate certificate program. However, applicants must have a high school diploma or its equivalent, and all other application requirements apply.

## Undergraduate Non-Degree-Seeking Learners

There is no minimum GPA or credit unit requirement for admission to the undergraduate non-degree-seeking program. However, applicants must have a high school diploma or its equivalent, and all other application requirements apply. Students enrolling as non-degree-seeking are limited to taking CAPS courses only. WashU employees who are taking prerequisite courses for professional school should connect with a Student Success Navigator to request an exception. Not all exception requests will be approved.

## Reinstatement

Undergraduate students who decide not to enroll continuously (from one term to the next) as full-time or part-time students will have a hold placed on their record or be discontinued from their program of study.

- One semester of non-enrollment will result in a hold being placed on the student's record. Students must connect with a Student Success Navigator to discuss re-enrollment options and request removal of the hold.
- Six continuous terms of non-enrollment (including summer) will result in the student being discontinued from their program of study. Students must connect with a Student Success Navigator and apply for reinstatement to return to their program of study.

For further reinstatement information, students should contact [caps@wustl.edu](mailto:caps@wustl.edu). Students seeking reinstatement may be required to submit additional documentation to support their application for reinstatement.

**Beginning with the Fall 2026 term**, CAPS will move to the Office of the University Registrar's (OUR) "Request for Reinstatement" process. For information about that process, its deadlines, and requirements, please visit the OUR's Time Away page.

## Additional Information

For more detailed information about admission requirements for the Associate in Arts degree, the Bachelor of Science and Bachelor of Science in Integrated Studies degrees, and undergraduate certificate programs, including application, please visit the WashU CAPS website, call 314-935-6700, or visit the CAPS Office of Admissions and Student Services, located on Washington University's West Campus at 11 N. Jackson Avenue, Suite 1000, St. Louis, MO 63105-2153 (appointment required).

# BS and BSIS Programs

WashU CAPS Bachelor of Science (BS) degrees, created for the needs of modern learners, offer innovative and flexible concentrations designed around each learner's prior experiences and specific career goals. The Bachelor of Science in Pharmaceutical Sciences (BS) prepares students to move on to advanced study and/or careers in the pharmaceutical field. The Bachelor of Science in Integrated Studies (BSIS) aligns with professional and educational needs, pairing an in-depth, interdisciplinary field of study with a certificate that helps learners to upskill or reskill for future employment. Based on the demands of the regional workforce, CAPS bachelor's degree programs ensure graduates are well-prepared for today's job market in a variety of fields.

For a list of degrees, more specific information about degree requirements and policies, and specific requirements for each program of study, refer to the "List of Degrees and Degree Requirements" tab of this page (p. 108).

Phone: 314-935-6700  
Website: <http://caps.wustl.edu>

## List of Degrees and Degree Requirements

Applicants to the BSIS degree program must have at least 45 credits of transferrable coursework (these credits can include credits previously completed through CAPS) and a cumulative GPA of 2.7 or higher on a 4.0 scale. These credits may include courses already completed toward an associate's degree. Applicants who do not meet the GPA requirement but who have significant professional experience and a thoughtful plan for career change or advancement may be offered contingent admission to a bachelor's degree program.

The following Bachelor of Science degree is offered:

- Pharmaceutical Sciences (p. 110)

The following Bachelor of Science in Integrated Studies degrees are offered:

- Clinical Research Management (p. 111)
- Data Analytics and Applications (p. 114)
- Foundations of Counseling Psychology and Behavioral Health (p. 115)
- Health Care Management (p. 120)
- Health Sciences (p. 125)
- Humanities (p. 130)
- Leadership and Management (p. 131)
- Social Sciences (p. 136)
- Strategic Communications (p. 137)

## Bachelor of Science Degrees

To receive a Bachelor of Science degree from WashU Continuing & Professional Studies (CAPS), students must be admitted to degree candidacy; complete a minimum of 120 units of college-level work with a cumulative grade point average of 2.0 or higher in all courses taken; and satisfy general education, certificate, distribution, field of study, and residency requirements. Students in BSIS programs must also complete a Community Engagement course. A designated CAPS course will fulfill this requirement.

The total number of units required for each field of study varies according to the subject. At least half of the units for the field of study must be completed at WashU. At least 30 units of advanced courses overall must be completed at WashU. Students must complete program of study requirements with grades of C– or better and an overall 2.0 GPA in all field of study courses. (**Note:** The writing courses carry a minimum grade requirement of C.\*) Up to 12 credits of study for a CAPS bachelor's degree may be taken for Pass/No Pass credit. (This limit does not include courses that are available only as Pass/No Pass.) CAPS encourages students to use their time at WashU to augment their field of study with related coursework and to explore many different areas of knowledge.

## General Education Requirements: 45 units total\*\*

### General Requirements

- CAPS-ECOMP 1110 Analytical Writing (3 units)\*
- CAPS-ECOMP 2020 Critical and Researched Writing (3 units)\*
- One additional 3-unit advanced writing course with a minimum grade of C, which may be chosen from a 3000-level writing (CAPS-ECOMP) course *or* a 3000-level writing-intensive course in another subject as designated by CAPS. Ideally, students would enroll in this course no later than their fourth term.
- One 3-unit course in numerical applications with a minimum grade of C–. The following courses fulfill the numerical applications requirement:
  - Any course from CAPS's Math department (CAPS-MATH), including statistics, and programming courses in CAPS's Data Studies department (CAPS-DATASTUDIES)
  - CAPS-GS 1170 Quantitative Reasoning
  - CAPS-PSYCH 3000 Introductory Psychological Statistics
- One 3-unit course bearing the tag "Moral Reasoning"
- One 3-unit course bearing the tag "Cultural Diversity." Courses that satisfy this requirement explore issues of global human diversity and the interactions among cultures.



## Distribution Requirements

Learners must complete 27 units, with 9 units being completed in each area noted below. Each distribution area must include coursework from at least two disciplines. A course that fulfills field of study requirements, basic requirements, and/or a distribution requirement can count in every area it fulfills. For example, CAPS-HIST 3307 Facing East: An Indigenous View of Early North America can be used to fulfill 1) a field of study requirement in the BSIS Humanities degree; 2) the cultural diversity requirement; and 3) a Humanities distribution course requirement. Overlap limitations between a BSIS degree and a certificate must be maintained.

- Humanities: (9 units) Courses from Art History; Classics; History; Literature; Philosophy; Religious Studies; Creative Writing; Film Studies; Foreign Languages; Music; and Speech
- Social Sciences: (9 units) Courses from Anthropology; Economics; Political Science; Psychology; Sociology; and Women, Gender, and Sexuality Studies
- Natural Sciences & Mathematics: (9 units) Courses from Biology; Chemistry; Earth, Environmental, & Planetary Sciences; Physics; General Science; and Mathematics & Statistics

\* Students who receive a grade lower than a C in CAPS-ECOMP 1110 Analytical Writing taken at CAPS must repeat the course. Students who receive a grade lower than a C in CAPS-ECOMP 2020 Critical and Researched Writing taken at CAPS must, in consultation with the Director of Integrated Studies and members of English Composition faculty, choose between two options to satisfy the requirement: 1) repeat the course; or 2) complete a 3-unit composition tutorial with a grade of C or higher. Students who have completed English composition courses at other colleges or universities should be well-prepared for the required writing courses at CAPS. Transfer credit will be granted for this coursework according to our standard transfer credit policies. All students will be assessed for writing proficiency. Students who are new to CAPS must begin with CAPS-ECOMP 1110 Analytical Writing. Those who demonstrate strong writing skills in the assessment may enroll in CAPS-ECOMP 2020 Critical and Researched Writing instead. All students must complete CAPS-ECOMP 2020 Critical and Researched Writing and at least one 3000- or 4000-level writing-intensive or 3000-/4000-level writing course at CAPS. All writing-intensive courses must receive designation and approval from CAPS. CAPS-ECOMP 1110 Analytical Writing and CAPS-ECOMP 2020 Critical and Researched Writing must be completed within the first three semesters of a student's enrollment in a degree-seeking program (AA or BSIS) and must be taken in consecutive semesters at CAPS. If these course requirements are not satisfied within three semesters, the student will not be permitted to register for other courses until the ECOMP course requirements are satisfied. Students who fail an ECOMP course at the time of their third-semester registration will not be able to continue their course flow until they pass the ECOMP course.

\*\*These requirements are effective as of fall 2026. Students admitted to CAPS programs prior to fall 2026 are expected to fulfill the requirements in place at the time of their admission.

## Certificate Requirement

Learners in BSIS programs must complete a certificate (p. 146), tailoring their degree to their educational and professional goals. Individuals planning to enroll in a BSIS degree program may request that the required certificate be waived if they can demonstrate substantial prior academic work or equivalent learning outcomes in the certificate's area of study. Waivers are intended to prevent duplication of learning while maintaining the academic integrity and learning objectives of the program.

## Eligibility Criteria

To be eligible for a waiver, a learner must do the following:

1. Be formally admitted to the degree program or have completed all of the requirements for formal admission to a degree program that includes the certificate requirement.
2. Provide at least two pieces of official documentation (e.g., transcripts, syllabi, course descriptions, evidence of professional experience) showing the completion of extensive coursework or proficiency in the relevant field (e.g., certificates, badges, other credentials).
3. Demonstrate that prior coursework, learning outcomes, and/or professional experience are substantially equivalent to the content and competencies covered in the certificate program.
4. Have earned grades of B (3.0) or higher in the relevant coursework or demonstrate equivalent mastery through professional experience or credentialing (if applicable).

Certificate waivers do not reduce the total number of credit units required for a degree, and no academic credit is awarded for waived certificate requirements. Learners must still complete substitute coursework or electives as determined by their Student Success Navigator.

1. Those seeking a waiver must submit a Certificate Requirement Waiver Request Form along with supporting documentation, to CAPS. (Email CAPS ([caps@wustl.edu](mailto:caps@wustl.edu)) for a link to the form.)
2. CAPS will review the request to determine whether the prior coursework and/or professional experience meets or exceeds the certificate's learning outcomes.
3. The Vice Dean or designated CAPS authority will make a decision and communicate it in writing to the student within 30 days of submission.
4. Approved waivers will be documented in the student's academic record.

**Note:**



- Certificate waivers will not be granted for capstone, practicum, or residency coursework unless explicitly approved by the Vice Dean.
- Students must still meet all institutional and program completion requirements.

## Certificate Overlap Policy

If a student is pursuing a bachelor's degree and a certificate, overlap is allowed between the field of study and the certificate. If the certificate consists of 15 units or fewer, there should be at least 6 units unique to the certificate. For certificates of 16 units or more, there should be at least 9 units unique to the certificate. (An exception to the restriction applies to sequential programs of the same name, such as Clinical Research Management, in which case all certificate courses may apply to the next-level program.)

# Pharmaceutical Sciences, BS

The **Bachelor of Science in Pharmaceutical Sciences** is grounded in the belief that scientific knowledge, critical inquiry, and ethical responsibility are essential to the discovery, development, and responsible use of medications that improve human health. The program is designed to cultivate scientifically literate graduates who understand the interdisciplinary nature of pharmaceutical science and its role in advancing public health, biomedical innovation, and patient well-being.

Pharmaceutical science integrates principles from chemistry, biology, pharmacology, and engineering to understand how therapeutic agents are discovered, developed, formulated, and evaluated. The program emphasizes a strong foundation in the natural sciences while fostering analytical thinking, quantitative reasoning, and laboratory competence. Through this integrated approach, students learn to examine how drugs interact with biological systems and how scientific evidence informs the safe and effective use of pharmaceuticals.

The program also recognizes that modern pharmaceutical development occurs within complex regulatory, ethical, and societal contexts. Students are therefore encouraged to consider issues of safety, quality, equity, access, and responsible innovation in the development and distribution of medications. By engaging with scientific literature, laboratory experiences, and collaborative problem-solving, students develop the skills necessary to contribute thoughtfully to the pharmaceutical and biomedical fields.

Finally, the program supports diverse educational and career pathways. Graduates are prepared for advanced study in pharmacy, pharmaceutical sciences, medicine, and related health professions, as well as entry into the pharmaceutical, biotechnology, and regulatory sectors. Through rigorous scientific training and an emphasis on lifelong learning, the program seeks to prepare graduates who will contribute to the advancement of therapeutics and the improvement of health outcomes in an evolving global healthcare landscape.

Contact: CAPS  
Phone: 314-935-6700  
Email: [caps@wustl.edu](mailto:caps@wustl.edu)  
Website: <https://caps.washu.edu/>

## Degree Requirements

## Coursework

This is a brand-new program as of Fall 2026, and new courses are in development. Examples of required courses for this 125-unit program include the following:

| Code            | Title                                         | Units |
|-----------------|-----------------------------------------------|-------|
| CAPS-BIO 1012   | General Biology I (Lecture)                   | 3     |
| CAPS-BIO 1019   | General Biology II (Lab)                      | 1     |
| CAPS-BIO 1022   | General Biology II (Lecture)                  | 3     |
| CAPS-BIO 2200   | Anatomy and Physiology I                      | 4     |
| CAPS-BIO 2201   | Anatomy and Physiology II                     | 4     |
| CAPS-BIO 2800   | Microbiology for Health Professions           | 4     |
| CAPS-CHEM 1020  | Introductory General Chemistry I (Laboratory) | 2     |
| CAPS-CHEM 1040  | General Chemistry Laboratory II               | 2     |
| CAPS-CHEM 1050  | Introductory General Chemistry I (Lecture)    | 3     |
| CAPS-CHEM 1060  | Introductory General Chemistry II (Lecture)   | 3     |
| CAPS-COMM 2017  | Oral Communication                            | 3     |
| CAPS-ECOMP 1110 | Analytical Writing                            | 3     |
| CAPS-ECOMP 2020 | Critical and Researched Writing               | 3     |
| CAPS-GS 1015    | College Transition Seminar                    | 1     |
| CAPS-MATH 1100  | Calculus I                                    | 3     |
| CAPS-PSYCH 1000 | Introduction to Psychology                    | 3     |
| CAPS-SOC 2023   | Introduction to Sociology                     | 3     |

- Biochemistry
- Genetics
- Immunology
- Information Mastery I: Drug Information & Evidence-Based Medicine
- Medical Physiology
- Molecular Biology
- Organic Chemistry I and II (with Labs)
- Pharmaceutics
- Pharmacy Calculations
- Physics I and II (with Labs)
- Principles of Drug Addiction
- Public Health Fundamentals



- Lower- and upper-level Science electives
- Electives in the Humanities
- Upper-level Writing elective

## Clinical Research Management, BSIS

The Bachelor of Science in Integrated Studies: **Clinical Research Management** is designed for learners in the early stages of a career in clinical research, as well as for more experienced individuals such as investigators, coordinators, and sponsor representatives who want to expand their knowledge and skills in the field. The program lays a foundation in principles and applications from the basic sciences and then covers in greater depth the processes necessary for the management of studies that develop drugs, devices, and treatment protocols for patient care.

This customized undergraduate program focuses on the scientific methods of clinical research, good clinical practice, research ethics, and the regulatory guidelines that protect human subjects, all of which are integral components of clinical trial management in academic research or pharmaceutical industry settings.

This program is completed entirely online.

Contact: CAPS  
Phone: 314-935-6700  
Email: CAPS@wustl.edu  
Website: <https://caps.washu.edu/programs/undergraduate-programs/bachelor-of-science-in-integrated-studies-degree-programs/bsis-clinical-research-management/>

## Degree Requirements

All WashU Continuing & Professional Studies (CAPS) BSIS students must satisfy the same general-education requirements (p. 108).

Learners in BSIS programs must complete a certificate (p. 146), tailoring their degree to their educational and professional goals.

Learners in the Clinical Research Management program may fulfill this requirement with the overlapping Certificate in Clinical Research Management. In some cases, those with extensive work experience and/or a significant number of transfer credits may have the certificate requirement waived. Requests for waiving the certificate requirement are reviewed and approved by CAPS on a case-by-case basis.

Learners in BSIS programs must also complete a Community Engagement course. A designated CAPS course will fulfill this requirement.

Requirements specific to the field of study include the following:

## Required Courses: 40 units

| Code               | Title                                                            | Units     |
|--------------------|------------------------------------------------------------------|-----------|
| CAPS-BIO 1012      | General Biology I (Lecture)                                      | 3         |
| CAPS-BIO 1009      | General Biology I (Lab)                                          | 1         |
| CAPS-BIO 1022      | General Biology II (Lecture)                                     | 3         |
| CAPS-BIO 1019      | General Biology II (Lab)                                         | 1         |
| CAPS-CRM 2000      | Fundamentals of Clinical Research Management I                   | 3         |
| CAPS-CRM 2001      | Fundamentals of Clinical Research Management II                  | 3         |
| CAPS-PHIL 2040     | Biomedical Ethics                                                | 3         |
| CAPS-BIO 2200      | Anatomy and Physiology I                                         | 4         |
| CAPS-BIO 2201      | Anatomy and Physiology II                                        | 4         |
| CAPS-CRM 3010      | Introduction to Data & Information Management in Health Sciences | 3         |
| CAPS-CRM 3020      | Research Ethics and Regulatory Affairs                           | 3         |
| CAPS-CRM 3030      | The Business of Clinical Research                                | 3         |
| CAPS-CRM 3050      | Pharmacology for Clinical Research                               | 3         |
| CAPS-CRM 3051      | Practicum/Capstone for CRM                                       | 3         |
| <b>Total Units</b> |                                                                  | <b>40</b> |

## Electives

Electives on the following topics are recommended:

- Clinical Research Management courses not on the "Required Courses" list above
- Psychology
- Leadership and Management
- Project Management
- Statistics
- Computer Programming

*This program is offered fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

## Courses

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### **CAPS-BIO 1012 General Biology I (Lecture)**

First part of a two-term rigorous introduction to basic biological principles and concepts. The first term covers the molecular and cellular basis of life, bioenergetics, signal transduction, DNA and protein synthesis, and the function of whole organisms (physiology). Paired with weekly lab session/s. Laboratories include traditional wet labs as well as inquiry-based, online labs. Restricted to School of Continuing & Professional Studies (CAPS) students, others with CAPS permission.

Credit 3 units. UColl: NSC

Typical periods offered: Spring, Summer 2, Fall, Summer

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### **CAPS-BIO 1019 General Biology II (Lab)**

Second term (lab section) of a two-term sequence that provides a broad, but rigorous introduction to basic biological principles and concepts. The second term covers DNA technology and genomics, the genetic basis of development, the mechanisms of evolution, the evolutionary history of biological diversity, plant form and function, and ecology. Laboratories include traditional wet labs as well as inquiry-based on-line labs.

Credit 1 unit. UColl: NSC

Typical periods offered: Summer 4, Spring, Summer

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### **CAPS-BIO 1022 General Biology II (Lecture)**

Second term of a two-term sequence that provides a broad but rigorous introduction to basic biological principles and concepts. The second term covers DNA technology and genomics, the genetic basis of development, the mechanisms of evolution, the evolutionary history of biological diversity, plant form and function, and ecology. Paired with weekly lab/s. Laboratories include traditional wet labs as well as inquiry-based online labs.

Credit 3 units. UColl: NSC

Typical periods offered: Summer 4, Spring, Summer

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### **CAPS-BIO 1009 General Biology I (Lab)**

Lab section of gen Bio 1012. First part of a two-term introduction to basic biological principles and concepts. The first term covers the molecular and cellular basis of life, bioenergetics, signal transduction, DNA and protein synthesis, and the function of whole organisms (physiology). Laboratories include traditional wet labs as well as inquiry-based online labs. Restricted to students admitted to a School of Continuing & Professional Studies (CAPS) degree program. Others may register with instructor permission on a space-available basis.

Credit 1 unit. UColl: NSC

Typical periods offered: Spring, Summer 2, Fall, Summer

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### **CAPS-BIO 2200 Anatomy and Physiology I**

Anatomy and physiology is the study of inter-relationships between the structure and the function at gross and microscopic levels of the organization of the living body. The two-semester series will use the body systems to emphasize the anatomical terminology, cellular and tissue level of organization. Anatomy and physiology I includes the integumentary, skeletal, muscular, nervous and endocrine systems. The laboratory component reinforces topics and concepts covered in lectures.

Credit 4 units. UColl: NSC

Typical periods offered: Summer 4, Summer 3, Spring, Summer 2, Fall, Summer

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### **CAPS-BIO 2201 Anatomy and Physiology II**

Anatomy and physiology is the study of inter-relationships between the structure and the function at gross and microscopic levels of the organization of the living body. This two-semester course will use the body systems to emphasize the anatomical terminology, cellular and tissue level of organization. Anatomy and Physiology II includes the cardiovascular, respiratory, immune, digestion, urinary and reproductive systems. The laboratory component reinforces topics and concepts covered in lectures.

Credit 4 units. UColl: NSC

Typical periods offered: Summer 4, Summer 3, Spring, Summer 2, Fall, Summer

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### **CAPS-PHIL 2040 Biomedical Ethics**

Are doctors ever permitted to lie to their patients? Should physician-assisted suicide be legal? Should governments require their citizens to get vaccinated against common diseases? Is race-based medicine unjustified because race is a social construction? Should medical researchers be allowed to edit the human genome? Is there such a thing as a male or female brain? These are among the questions addressed in biomedical ethics. In this course we will critically examine, in light of contemporary moral disagreements and traditional ethical theories, some of the philosophical issues that arise out of medical practice and research in our society, including questions about specific policies and practices as well as broader questions about the implications of contemporary medicine, biology, and neuroscience. Topics may include euthanasia, genetic engineering, abortion, disability, medical malpractice, informed consent, the allocation of medical resources, patient autonomy, gender-affirming care, and health care as a human right. The course presupposes no background in philosophy.

Credit 3 units. UColl: ML

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall

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### **CAPS-CRM 2000 Fundamentals of Clinical Research Management I**

This introductory course provides the basic foundation for clinical research. We examine the historical evolution of research, linking it to the current regulations and guidelines for good clinical practice. Course material includes research roles and responsibilities, institutional review boards, phases of drug development, the informed consent process, human subject protections, and an overview of study conduct.

Credit 3 units.

Typical periods offered: Fall

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### **CAPS-CRM 2001 Fundamentals of Clinical Research Management II**

This course focuses on the application of principles and theories covered in Fundamentals of Clinical Research Management I. Students will develop and complete documents for a specific assigned protocol. This will include completing institutional review board paperwork, writing an informed consent, developing source documents, and critiquing research articles.

Credit 3 units.

Typical periods offered: Spring

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### **CAPS-CRM 3001 Internship in Clinical Research Management**

Requires signed proposal and approval from CAPS

Credit 3 units.

Typical periods offered: Fall, Spring, Summer

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## **CAPS-CRM 3006 Evidence-Based Decision Making**

Policies can fail because of weak foundational support. Many times, there are no detailed strategic objectives and no clear and measurable success criteria, or these may not be aligned with strategic goals. This course is an introduction to developing policy. Using information about COVID-19 in St. Louis as a case study, this course highlights the intersection of culture; government; leadership; and social determinants such as sex, gender, and poverty. To develop the skills used to evaluate and solve problems, students will learn to critically examine the following: (1) the concept of health (broadly defined); and (2) how data are used to develop policies and programs for communities.

Credit 3 units. UColl: SSC

Typical periods offered: Fall, Summer 3, Spring

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## **CAPS-CRM 3010 Introduction to Data & Information Management in Health Sciences**

This course presents the basic principles for understanding the design, conduct, analysis, and endpoints of clinical trials. The class will review statistical terminology and explain trial design from a clinician's point of view, including theoretical and practical aspects of randomization, stratification, blinding, and single center versus multi-center trials. Additional topics include hypothesis formulation, commonly used research designs, statistical significance, confidence intervals, and statistical tests.

Credit 3 units.

Typical periods offered: Fall

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## **CAPS-CRM 3020 Research Ethics and Regulatory Affairs**

This course will provide an understanding of the ethical guidelines, issues, and challenges of conducting research on human subjects. We will explore issues such as conflicts of interest, genetic testing, limits of confidentiality, risk, and the distinction between compliance and ethics. As we learn about protecting research groups and interests and explaining rights and liabilities, we will study health care legislation and regulations, guidelines, contractual matters, and the complex regulatory framework that governs human subject research. Finally, we will learn to use an ethical problem-solving model in clinical research.

Credit 3 units. UColl: ML

Typical periods offered: Spring

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## **CAPS-CRM 3026 Drug-Induced Diseases: Detection, Prevention, and Management**

A drug-induced disease (DID) is the unintended effect of a drug that results in mortality or morbidity with symptoms sufficient to prompt a patient to seek medical attention and/or require hospitalization. There have been great advances in drug therapy that have had tremendous beneficial impact on patient outcomes. However, the effects of drugs are not always beneficial; drugs are also capable of causing new diseases or exacerbating those that already exist. Some of these diseases are well known and transient (e.g., diarrhea, weight gain). Others, like liver disease and diabetes, are neither. This course will explore these issues in a novel, disease-specific way that will be accessible to a wide range of students: clinical research managers, medical students, nurses, pharmacists and other allied health professionals. The course will include weekly readings from the textbook or other sources. Regular group discussions will be important, addressing how this new knowledge can be applied to students' professional or personal practices.

Credit 3 units.

Typical periods offered: Fall, Spring

## **CAPS-CRM 3030 The Business of Clinical Research**

An overview of the business elements of clinical research, this course covers drug and device development, the regulatory environment, finance, corporate structures, and the clinical trials office. Students will consider stakeholders including pharmaceutical and device industries, academic and private research centers, government agencies such as the National Institutes of Health, nonprofit agencies and a variety of other organizations such as American Diabetes Association and the National Cancer Institute. They also will study local, state, and federal regulations, as well as international and global issues that impact the business of clinical research.

Credit 3 units.

Typical periods offered: Fall, Spring

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## **CAPS-CRM 3050 Pharmacology for Clinical Research**

This course presents the basic principles of pharmacology and their application to clinical research management to help ensure safe and effective management of drug trials. We will study the foundations of pharmacology, including the principles of drug absorption, distribution, metabolism and excretion, drug binding sites and interactions, and drug development. We also will examine pharmacological problems with special populations, and the emergent area of pharmacogenetics. In the second half of the course we will review important drug classes, with an emphasis on understanding Investigator's Brochures, including drug action and place in therapy, pharmacology, toxicity, chemical properties, and kinetics.

Credit 3 units.

Typical periods offered: Fall, Spring

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## **CAPS-CRM 3051 Practicum/Capstone for CRM**

This course provides student-specific guidance and experience in a clinical research environment. Students will engage in practical experiences in a field and therapeutic area of their choice, or, if desired, get exposure to diverse clinical research settings. The practicum will take place in departments within WashU outpatient research settings and pharmaceutical and device industry settings. Students already working in a clinical research environment will have the option of completing a research project with instructor approval or a hybrid between the practicum and the capstone in order to fit their goals. Student must have completed all other courses for the undergraduate degree or undergraduate certificate in the Clinical Research Management Program. May be concurrent with final course.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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## **CAPS-CRM 3350 Introduction to Project Management in Clinical Research**

This course aims to explore basic concepts of project management with direct application to clinical research. Students will better understand criteria defining a project and product (versus operations), roles and responsibilities of a project manager, various methodologies (e.g. agile, waterfall, etc.), and planning tools (e.g. Microsoft Project, Jira, Teams). Student experiences in clinical research will be integrated into course discussions to explore application of project management skills and practice important team-building skills (e.g. effective meeting principles). Additionally, the course will incorporate a variety of learning resources from the Project Management Institute (PMI), LinkedIn, and professional research organizations (e.g. ACRP) into class discussions and project assignments. One or more (modified) research protocols will be used for hands-on experience applying project management strategies.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer



**CAPS-CRM 4999 Independent Study in Clinical Research Management**  
Requires completed proposal form, permission from CAPS.  
Credit 3 units.

Typical periods offered: Fall Intersession, Summer 3, Spring, Summer Intersession, Spring Intersession, Fall

## Data Analytics and Applications, BSIS

Data-related industries, such as the geospatial industry, are worth \$4.9 billion in St. Louis and are responsible for more than 27,000 jobs. Given the growth of these data-related industries, professionals in the field need to have a strong foundation in a variety of data. In the **Bachelor of Science in Integrated Studies: Data Analytics and Applications**, learners obtain the knowledge and skills necessary for success in the data analytics field, and develop relevant, data-related skills that will make them competitive in the market for jobs that center on working with a diversity of data. Students will complete required coursework and electives focused on Python, GIS, and R, along with relevant math and statistics courses. The curriculum aligns with area industry need; examples include fields like data scientist and GIS analyst. The experienced and talented faculty who will teach the courses within this degree come from a variety of professional backgrounds, such as government and private industry.

This program will meet the needs of modern learners, providing flexible, online course delivery. Through a focus on project-based learning, students complete coursework based on their own interests or the needs of a community partner. The program will focus on transparency in teaching and learning (TILT) to help learners understand the transferability—and meaningfulness—of classroom learning to their lives and careers.

Contact: CAPS  
Phone: 314-935-6700  
Email: caps@wustl.edu  
Website: <https://www.caps.wustl.edu>

### Degree Requirements

All WashU Continuing & Professional Studies (CAPS) BSIS students must satisfy the same general-education requirements (p. 108).

Learners in BSIS programs must complete a certificate (p. 146), tailoring their degree to their educational and professional goals. In some cases, those with extensive work experience and/or a significant number of transfer credits may have the certificate requirement waived. Requests for waiving the certificate requirement are reviewed and approved by CAPS on a case-by-case basis.

Learners in BSIS programs must also complete a Community Engagement course. A designated CAPS course will fulfill this requirement.

### Required Courses: 24 units

| Code                    | Title                                                                         | Units     |
|-------------------------|-------------------------------------------------------------------------------|-----------|
| CAPS - DATASTUDIES 1240 | Introduction to (Statistical) Programming with R                              | 3         |
| CAPS - DATASTUDIES 1410 | Programming With Python                                                       | 3         |
| CAPS - DATASTUDIES 1410 | Data Fundamentals I                                                           | 1.5       |
| CAPS - DATASTUDIES 1410 | Data Fundamentals II                                                          | 1.5       |
| CAPS - DATASTUDIES 2034 | Introduction to Data Science With Python                                      | 3         |
| CAPS - DATASTUDIES 2034 | SQL and Data: Exploration and Analysis                                        | 3         |
| CAPS-GIS 2000           | Introduction to GIS                                                           | 3         |
| CAPS-MATH 1100          | Calculus I                                                                    | 3         |
| CAPS-MATH 2000          | Applied Statistics (or CAPS-BIO XXXX Biostatistics [new course coming soon!]) | 3         |
| <b>Total Units</b>      |                                                                               | <b>24</b> |

### Electives: 9 units

Selections include the following:

| Code                           | Title                                                 | Units |
|--------------------------------|-------------------------------------------------------|-------|
| CAPS - DATASTUDIES 2006        | Analysis and Visualization in Tableau                 | 3     |
| CAPS - DATASTUDIES 2006        | Advanced Data Visualization (with R)                  | 3     |
| CAPS - DATASTUDIES 3250        | Communicating, Leading, and Problem Solving With Data | 3     |
| CAPS-GIS 3000                  | Advanced GIS                                          | 3     |
| CAPS-GIS 3005                  | Digital Cartography                                   | 3     |
| CAPS-GIS 3010                  | GIS Programming                                       | 3     |
| CAPS-GIS 4010                  | Spatial Data Modeling and Design                      | 3     |
| Other courses approved by CAPS |                                                       |       |

### Required Capstone: 3 units

Students must also complete a 3-unit capstone course.

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. The CAPS cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment*



team to discuss your options for face-to-face program enrollment.  
F-1 and J-1 students should not enroll in online courses or programs  
without first consulting the university's Office for International  
Students and Scholars (OISS).

## Foundations of Counseling Psychology and Behavioral Health, BSIS

The **Bachelor of Science in Integrated Studies: Foundations of Counseling Psychology and Behavioral Health** is designed for modern learners who are looking for applied study experience in pursuit of careers in social work, counseling, or related roles in healthcare. The program's courses introduce learners to clinical psychology, counseling, and social work and provide the tools they need to understand research and its application to future practice. Elective courses allow learners to explore areas of interest that correspond with local need. For example, those who wish to work with the growing population of older adults might take Developmental Psychology, Social Gerontology, and Psychology of Aging.

**Note:** Completion of this program does not make students eligible for any professional licensure status.

Contact: CAPS  
Phone: 314-935-6700  
Email: caps@wustl.edu  
Website: <https://caps.wustl.edu/programs/undergraduate-programs/bachelor-of-science-in-integrated-studies-degree-programs/bsis-foundations-of-counseling-psychology-and-behavioral-health/>

### Degree Requirements

All WashU Continuing & Professional Studies (CAPS) BSIS students must satisfy the same general-education requirements (p. 108).

Learners in BSIS programs must complete a certificate (p. 146), tailoring their degree to their educational and professional goals. In some cases, those with extensive work experience and/or a significant number of transfer credits may have the certificate requirement waived. Requests for waiving the certificate requirement are reviewed and approved by CAPS on a case-by-case basis.

Learners in BSIS programs must also complete a Community Engagement course. A designated CAPS course will fulfill this requirement.

Requirements specific to the field of study include the following:

### Required Courses: 12 units

| Code               | Title                                       | Units     |
|--------------------|---------------------------------------------|-----------|
| CAPS-PSYCH 1000    | Introduction to Psychology                  | 3         |
| CAPS-PSYCH 3000    | Introductory Psychological Statistics       | 3         |
| CAPS-PSYCH 3998    | Research Methods                            | 3         |
| CAPS-ISLA 4000     | Integrated Studies Capstone: Research Track | 3         |
| <b>Total Units</b> |                                             | <b>12</b> |

### Required Foundational Area Courses: 9 units

Select from the following:

| Code            | Title                             | Units |
|-----------------|-----------------------------------|-------|
| CAPS-PSYCH 3040 | Introduction to Social Psychology | 3     |
| CAPS-PSYCH 3070 | Developmental Psychology          | 3     |
| CAPS-PSYCH 3115 | Biological Psychology             | 3     |
| CAPS-PSYCH 3125 | Psychology of Personality         | 3     |
| CAPS-PSYCH 3140 | Cognitive Psychology              | 3     |
| CAPS-PSYCH 3165 | Learning and Memory               | 3     |

### Elective Courses: 9 units

Learners may choose to specialize in an area based on their future occupational interests. Learners with interest in specializing should select three courses from one content area. Those interested in a broader experience may select any combination of three courses from the following electives, or they may choose other courses in Psychology with permission:

### Behavioral Health

| Code            | Title                                     | Units |
|-----------------|-------------------------------------------|-------|
| CAPS-PSYCH 1050 | Introduction to Applied Behavior Analysis | 3     |
| CAPS-SOC 1200   | Introduction to Social Work               | 3     |
| CAPS-PSYCH 3100 | Perspectives on Counseling                | 3     |
| CAPS-PSYCH 3135 | Health Psychology                         | 3     |
| CAPS-PSYCH 3230 | Cross-Cultural Psychology                 | 3     |
| CAPS-PSYCH 4160 | Addiction and Treatment                   | 3     |

## Clinical Psychology

| Code            | Title                                                   | Units |
|-----------------|---------------------------------------------------------|-------|
| CAPS-PSYCH 3100 | Perspectives on Counseling                              | 3     |
| CAPS-PSYCH 3175 | Introduction to Psychopathology and Clinical Psychology | 3     |
| CAPS-PSYCH 3230 | Cross-Cultural Psychology                               | 3     |

## Lifespan

| Code            | Title                     | Units |
|-----------------|---------------------------|-------|
| CAPS-PSYCH 3070 | Developmental Psychology  | 3     |
| CAPS-PSYCH 3075 | Psychology of Adolescence | 3     |
| CAPS-PSYCH 3081 | Social Gerontology        | 3     |
| CAPS-PSYCH 3090 | Psychology of Aging       | 3     |

*This program is offered mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

## Courses

### CAPS-PSYCH 1000 Introduction to Psychology

This course covers current concepts and theories of learning, motivation, emotion, perception, thought, intelligence, and personality, emphasizing both biological and philosophical aspects. Psychology 1000 is a prerequisite for all 3000--level and above psychology courses.

Credit 3 units. UColl: SSC

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer, Spring Half B, Spring Half A, Spring, Fall Half B, Fall Half A, Fall

### CAPS-PSYCH 1050 Introduction to Applied Behavior Analysis

In this course, students will learn the foundational principles of Applied Behavior Analysis (ABA). Through a combination of lectures, demonstration videos, quizzes, and experiential learning activities, students will learn how to implement a variety of behavior analytic techniques with patients who have behavioral health needs. The course sequence follows the second edition of the Registered Behavior Technician (RBT) task list published by the Behavior Analyst Certification Board (BACB), with learning objectives across the following modules: Measurement, Assessment, Skill Acquisition, Behavior Reduction, Documentation and Reporting, and Professional Conduct/Scope of Practice. By completing this course, students will

qualify to sit for the national RBT certification administered by the BACB; certificate-holders work in a wide range of behavioral health settings including schools, outpatient clinics, hospitals, and home-based settings.

Credit 3 units. UColl: SSC

Typical periods offered: Summer 4, Summer 3, Spring, Summer 2, Fall, Summer

### CAPS-PSYCH 1996 Psychology Elective - 100 Level

To be used for transfer credit, only.

Credit 3 units.

Typical periods offered: Fall Intercession, Summer 3, Spring, Summer Intercession, Spring Intercession, Fall

### CAPS-PSYCH 2000 Introduction to Industrial and Organizational Psychology

This course explores the application of research findings in psychology and other behavioral sciences to issues and problems in the workplace, including both theory and methodology. Includes motivation, communication, learning, decision making, leadership, power and influence, and personnel selection.

Credit 3 units.

Typical periods offered: Fall

### CAPS-PSYCH 2005 Human Growth and Development

This course provides an overview of emotional, psychological, physical, and social development through the life span. We will emphasize the developmental tasks, characteristics, and typical behaviors of each developmental era (infancy, childhood, adolescence, adulthood, later life). We will study major developmental theorists including Freud, Erickson, Piaget, Millet, Gilligan, and Kohlberg.

Credit 3 units. UColl: SSC

Typical periods offered: Fall, Summer 3, Spring

### CAPS-PSYCH 2030 Positive Psychology and Happiness

Positive psychology is the study of the positive elements of human nature, behavior, and experiences, as well as the practices that facilitate these positive elements. In the first part of this course, we review the history of positive psychology, examine the meaning and measurement of happiness and well-being, explore the role of genetics and circumstances on happiness, and review the myriad benefits of happiness. In the second part of the course, we review the research detailing who is happy and why, and we explore the research on the practices and habits that facilitate happiness. Specific practice and habit topics include gratitude, mindfulness, optimism, strengths identification, meaning and purpose in life, meaningful social connections, compassion, forgiveness, positive relationships, sleep, and more. Throughout the course, we will participate in experiential learning from assessing our own happiness and strengths to engaging in practices found to facilitate happiness.

Credit 3 units.

Typical periods offered: Fall

### CAPS-PSYCH 2994 Internship in Psychology

Participation under supervision in an applied, non-academic community agency for course credit. Signed Internship Learning Agreement required prior to enrollment. Open only to CAPS students. Must be taken Pass/Fail.

Credit 3 units.

Typical periods offered: Fall, Summer



## **CAPS-PSYCH 2996 Psychology Elective - 2000 Level**

This course listing is to be used for transfer credit, only.

Credit 1-6 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring Half B, Spring Half A, Spring, Spring Intersession, Fall Half B, Fall Half A, Fall

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## **CAPS-PSYCH 3000 Introductory Psychological Statistics**

Descriptive statistics including correlation and regression. Inferential statistics including non-parametric and parametric tests of significance through two-way analysis of variance. Course emphasizes underlying logic and is not primarily mathematical, although knowledge of elementary algebra is essential.

Credit 3 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall

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## **CAPS-PSYCH 3005 Experimental Psychology**

This course provides training in the logic and techniques of psychological research so as to provide students with experience in the design of psychology experiments and interpretation of results. Topics include experimental design and control, library research, quantitative treatment of data, graphical presentation of results, and clarity of scientific writing. Lectures focus on general principles of experimentation, whereas the laboratory sections provide an introduction to a range of psychological phenomena through hands-on experience in experimentation. Each student also completes an independent research project.

Credit 4 units. Art: NSM BU: SCI

Typical periods offered: Fall, Summer 3, Spring

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## **CAPS-PSYCH 3020 Evolutionary Psychology**

This course will explore the extent to which an understanding of biological evolution is relevant to an understanding of human psychology. Fundamental evolutionary principles will be introduced and their application to psychological theory and research carefully evaluated. Individual topics include romantic relationships, family dynamics, cooperation, clinical pathology, judgment and decision-making, religious belief, and more.

Credit 3 units.

Typical periods offered: Fall

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## **CAPS-PSYCH 3025 History and Modern Systems of Psychology**

An introduction to the history of psychology. This course begins with a brief consideration of forces leading to development of psychology in the mid-1800s. It then examines the birth of modern psychology in Germany, and the schools of psychology that emerged early in the 20th century. Newer orientations and ideas are considered in the final segment of the course. We also consider the impact of psychology on American public life during the 20th century.

Credit 3 units.

Typical periods offered: Spring

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## **CAPS-PSYCH 3035 Industrial and Organizational Psychology**

Interactions of individuals and organizations in measures of human performance, motivation, leadership, job satisfaction, training, ability testing, and stress. Skill-building in the techniques of psychology that are applied to the solution of business and industrial problems.

Credit 3 units.

Typical periods offered: Spring

## **CAPS-PSYCH 3040 Introduction to Social Psychology**

Interaction of biological, cultural, situational, and technological factors on who we are and how we interact with others: person perception, motivation, attitudes, and communication.

Credit 3 units. UColl: SSC

Typical periods offered: Fall, Summer 3, Spring

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## **CAPS-PSYCH 3055 Abnormal Child Psychology**

This course will familiarize students with current perspectives on the nature, causes, assessment, treatment, and prevention of child psychiatric disorders and related family dysfunction. Theoretical perspectives and research findings will be discussed pertaining to anxiety, depression, conduct disorder, attention-deficit/hyperactivity disorder, autism, learning impairments, and parent-child conflict.

Credit 3 units. Art: SSC BU: BA

Typical periods offered: Fall, Summer 3, Spring

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## **CAPS-PSYCH 3070 Developmental Psychology**

In this course we will study behavior in children including developmental methodology, prenatal development, memory, cognition, attention, perception, language, sex roles, morality, emotions, aggression, and intelligence testing.

Credit 3 units. UColl: SSC

Typical periods offered: Fall, Spring

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## **CAPS-PSYCH 3075 Psychology of Adolescence**

Psychology of the period from puberty to adulthood; the major developmental tasks such as identity formation and the influence of differential parental style upon the development of adolescents.

Credit 3 units. UColl: SSC

Typical periods offered: Summer 4, Summer 3, Spring, Summer 2, Fall

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## **CAPS-PSYCH 3080 Juvenile Delinquency**

This course explores the nature of juvenile delinquency, including its root causes and influences, as well as the various strategies currently being employed to reduce and prevent delinquent behavior. The course discusses how delinquency begins, persists, and is overcome. Delinquency will be looked at from both a sociological and developmental-psychological perspective. We will discuss the criminal justice response to delinquency and evaluate programs and models that have met with varying degrees of success, as well as those that have had the opposite effect on reducing delinquent behavior.

Credit 3 units.

Typical periods offered: Fall, Spring

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## **CAPS-PSYCH 3081 Social Gerontology**

This course provides an introduction to aging and growing old from an interdisciplinary perspective. Specific attention is paid to demographics, physical health and illness, mental health, interpersonal relations, work issues, living arrangements, ethics, and death and dying.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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## **CAPS-PSYCH 3090 Psychology of Aging**

Study of the processes of aging in the individual in terms of their behavioral effects. Age changes in biological functions, sensation, perception, intelligence, learning, memory, and creativity studied to understand the capacities and potential of the mature and older person.

Credit 3 units.

Typical periods offered: Spring

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**CAPS-PSYCH 3100 Perspectives on Counseling**

This is an experiential course teaching skills in the counseling process. We will examine awareness and listening, attending and reflecting, questioning and summarizing, empathy, concreteness, problem definition, probing, and detailing. Role-playing and group work supplement didactic material.

Credit 3 units.

Typical periods offered: Fall

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**CAPS-PSYCH 3110 Internship in Psychology**

Requires signed Learning Agreement and approval from site supervisor, CAPS.

Credit 3 units.

Typical periods offered: Summer

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**CAPS-PSYCH 3115 Biological Psychology**

This course presents an introduction to biological mechanisms underlying behavior. Topics will include the physiology of nerve cells, the anatomy of the nervous system, the control of sensory and motor activity, arousal and sleep, and motivation and higher mental processes.

Credit 3 units. Art: NSM BU: SCI UColl: SSC

Typical periods offered: Fall, Summer 3, Spring

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**CAPS-PSYCH 3120 Independent Study in Psychology**

Requires approval from instructor, dept coordinator, and CAPS

Credit 4 units.

Typical periods offered: Fall Intersession, Summer 3, Spring, Summer Intersession, Spring Intersession, Fall

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**CAPS-PSYCH 3125 Psychology of Personality**

This course covers basic theories of personality and complex human behavior. We study related techniques, procedures, and findings of personality assessment and personality research, and examine critical issues in the evaluation of personality theories.

Credit 3 units.

Typical periods offered: Fall, Spring

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**CAPS-PSYCH 3135 Health Psychology**

This course examines the history of health psychology and its place in general health care. Students and instructor will examine relevant theory as applied to specific topics including stress, coping, weight loss, chronic illness in general (diabetes in particular), adherence to medically prescribed regimens, Type A personality and cardiac risk factors.

Credit 3 units.

Typical periods offered: Summer 3, Spring

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**CAPS-PSYCH 3140 Cognitive Psychology**

Thought processing from an information processing approach. Includes pattern recognition, attention, memory, reasoning, language processes, decision making, and problem solving.

Credit 3 units. UColl: SSC

Typical periods offered: Fall, Summer 3, Spring

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**CAPS-PSYCH 3165 Learning and Memory**

In this course we focus on the major theories of human learning and memory. We review several behavioral-associationist theories, including classical conditioning and behavior modification. The course emphasis is on cognitive-organizational theories, human information processing, current perspectives on knowledge representation, and their implication for understanding and recall.

Credit 3 units. UColl: SSC

Typical periods offered: Summer 4, Summer 3, Spring, Summer 2, Fall, Summer

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**CAPS-PSYCH 3175 Introduction to Psychopathology and Clinical Psychology**

Affective, cognitive, and behavioral abnormalities which create patterns disruptive to mental health: comprised of psychiatric symptoms, personal distress, and/or functional impairments. Biological, psychological, social, and cultural determinants of mental health and illness; diagnosis, etiology, and treatment of clinical level concerns. This course is the same as Abnormal Psychology in both Arts & Sciences and the School of Continuing & Professional Studies, thus students may not take both.

Credit 3 units.

Typical periods offered: Summer 4, Summer 3, Spring, Summer 2, Fall, Summer

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**CAPS-PSYCH 3205 Introduction to Criminology**

A general introduction to the study of crime from an interdisciplinary perspective. Classical and contemporary sociological theories to explain and predict criminal behavior will be studied, as well as psychological theories from the psychoanalytic, behavioral, and cognitive traditions that attempt to account for criminality and the psychosocial development of a criminal personality type. Other topics include the measurement and extent of crime, the role of age, race, gender, social class in the causation of and reaction to crime, and the criminal justice response to crime, as well as recent trends in policing, corrections, and community-based interventions.

Credit 3 units. UColl: SSC

Typical periods offered: Fall, Summer 3, Spring

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**CAPS-PSYCH 3210 Introduction to Forensic Psychology**

Forensic psychology is the application of scientific psychological knowledge to matters that come before the judge or jury. This course will focus on criminal cases such as homicide and sex offender commitment and on personal injury cases. Topics will include consultation with attorneys, psychological tests used and recommended by forensic psychologists, and sex offender risk assessment. Other topics will include keys to being a dangerous expert on the witness stand. Numerous actual case studies will be presented.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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**CAPS-PSYCH 3215 Crisis Intervention: The Criminal Justice Response to Chaos, Mayhem, and Disorder**

This course explores the nature and psychology of the major types of crises criminal justice professionals confront on a daily basis, including domestic violence, terrorism, riots and post-disaster panic, cults, threatened suicide, and active shooters, among others. Students will explore these topics against the backdrop of actual case examples like hurricane Katrina, the attacks of 9/11, the shooting at Columbine High School, and the Branch Davidian standoff at Waco. Major theories and typology schemes that attempt to account for these behaviors will be explored, as well as the emotional impact of crisis response on police, correctional officers, and other first responders. .

Credit 3 units.



Typical periods offered: Summer 3, Summer

### **CAPS-PSYCH 3230 Cross-Cultural Psychology**

An overview of social, developmental, and organizational forces from a cross-cultural perspective with a focus on culture as a variable, and its relationship to attitudes and behavior. A review of historical biases in the discipline of psychology will precede the study of research methodologies best suited to cross-cultural work. Also emphasized is the manner in which social and cultural forces shape the human experience.

Credit 3 units. UColl: CD

Typical periods offered: Fall, Spring

### **CAPS-PSYCH 3240 Correctional Theory & Practice**

In this course we will explore every aspect of correctional theory and practice in America. We will look at the structure of the correctional system, both jails and prisons, the demographics of the inmate population, and the experience of those working in a correctional setting, especially correctional officers. We will look at inmate psychology, and the personality changes (prisonization) that often take place in an inmate during their period of incarceration. We will look at the special problems that must be addressed by correctional system relating to juvenile, female, mentally ill, and aged inmates. Finally, we will discuss the death penalty and the ongoing debate in America about this type of punishment.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

### **CAPS-PSYCH 3245 Principles of Forensic Assessment**

This course addresses a breadth of topics in forensic assessment through an examination of the methods utilized in this endeavor, particularly in the criminal arena. Students will become familiar with the administration, scoring, and interpretation of instruments used to assess competence to stand trial, criminal responsibility, malingering, and dangerousness, among other domains. Factors surrounding ethics in forensic evaluation, the dilemmas encountered in dealing with the diverse criminal population, and recent social and ethical criticisms of forensic assessment processes themselves constitute pivotal course content. Students will have the opportunity to observe and take a role in forensic evaluations through the use of critical examinations of forensic assessment instruments, the observation of case materials, and the completion of assigned course activities.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

### **CAPS-PSYCH 3250 Criminal Typologies**

This course examines a wide range of delinquent and criminal behavior, with special emphasis on the developmental, biological, learning and situational, and cognitive-behavioral factors that form the origins of criminal behavior. Deriving from the perspective that juvenile and adult criminal behaviors are continually influenced by multiple systems, we will also examine the social, economic, political, and ecological factors that interact to influence such behaviors. This course will consider the precursors to and typologies of delinquency; criminal psychopathy; homicide, assault, and intimate partner and family violence; multiple murder, school, and workplace violence; modern terrorism; sexual assault; sexual abuse of children and youth; burglary, home invasions, thefts and white-collar offenses; violent economic crime, cybercrime, and crimes of intimidation; and substance abuse crimes.

Credit 3 units. UColl: SSC

Typical periods offered: Summer 3, Spring, Fall, Summer

### **CAPS-PSYCH 3271 Psychological Dynamics of Empathy**

In this course, we will explore the antecedents and consequences of empathic motivation, defined broadly. Along the way, we consider answers to several interesting questions: Why are some people generally more empathic than others? Are there cultural differences in levels of this trait? To what extent is empathy an emotional or cognitive phenomenon? We will also consider the conditions under which empathy is associated with prosocial outcomes (e.g., reducing racial prejudice) but with recognition that empathy has a darker side, one that can ironically exacerbate people's preexisting biases. The approach to empathy will be highly interdisciplinary as we consider research and theory within several fields within psychology (e.g., social, personality, cognitive) as well as areas that draw from other scholarly disciplines (e.g. social neuroscience, social anthropology, theology, religious studies).

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

### **CAPS-PSYCH 3998 Research Methods**

This course provides training in the logic and techniques of psychological research so as to provide students with experience in the design of psychology experiments and interpretation of results. Topics include experimental design and control, library research, quantitative treatment of data, graphical presentation of results, and clarity of scientific writing.

Credit 3 units. UColl: SSC

Typical periods offered: Spring

### **CAPS-PSYCH 4005 Psychological Tests and Measurements**

This course is an introduction to psychological tests and measurements. We will cover basic principles of test construction, including reliability, validity, item analysis, and development of normative data. We will examine major types of tests (e.g., intelligence, personality, interests, and attitudes), as well as their application to career counseling, clinical diagnosis, employee selection, performance appraisal, and organizational assessment.

Credit 3 units.

Typical periods offered: Spring

### **CAPS-PSYCH 4030 Contemporary Topics in Social Psychology:**

Consideration of selected contemporary topics in social psychology.

Credit 3 units. Art: SSC

Typical periods offered: Fall, Summer 3, Spring

### **CAPS-PSYCH 4125 Applied Psychology of Learning: Training in Industry**

Overview of the foundations of industrial training and the tools of the trade. Review of learning and memory and recent findings on cognition. Study of methods and techniques used for analysis, design, development, and evaluation of training. Impact of recent advances in computing and instructional technologies.

Credit 3 units.

Typical periods offered: Spring

### **CAPS-PSYCH 4155 Introduction to Group Dynamics**

Various aspects of group process including group decision making and problem solving, group influence processes, communication, power, and leadership. Small group behavior and its application to organizations.

Credit 3 units.

Typical periods offered: Fall

**CAPS-PSYCH 4160 Addiction and Treatment**

This course examines the motivation and behavior patterns of the drug/alcohol user. This examination takes place in the wider context of deviance. A portion of the course is devoted to a survey and evaluation of the services and programs available to the drug/alcohol user from the point of view of the user, the user's family, and society. Topics include: the history of psychotropic substances and their purpose and use in human society to the present; the history and philosophy of counseling interventions for psychotropic substance abuse and dependence; the ethnic, environmental, and socioeconomic factors affecting which substances are used, receptivity to treatment, and attitudes toward intervention; various treatment modalities such as 12-step groups, therapy groups, and in-patient treatment for both self-referred and court ordered clients.

Credit 3 units. UColl: SSC

Typical periods offered: Spring

**CAPS-PSYCH 4999 Independent Study**

Reading or research in a special area of psychology. Approval of a specific plan of reading or research by the supervising faculty member and the departmental coordinator is required prior to registration. Prerequisite: 15 hours of psychology course work, advanced standing, permission of the instructor, and permission of the departmental coordinator. Open only to CAPS students.

Credit 3 units.

Typical periods offered: Spring

**CAPS-SOC 1200 Introduction to Social Work**

For students considering a social work degree, this introductory survey course includes the nature, function, and various types of social work practice, acquainting students with the history, scope, and values of the profession. For students considering degrees in other helping professions (nursing, counseling, non-profit services), this course prepares them to understand the roles that social workers have in a variety of multi-disciplinary settings.

Credit 3 units. UColl: SSC

Typical periods offered: Fall, Summer 3, Spring

**CAPS-ISLA 4000 Integrated Studies Capstone: Research Track**

This capstone course requires students to complete a research project integrating the knowledge and skills they have acquired throughout their program. The course takes a qualitative academic approach to solving a problem (defined by the student with the support of the instructor). Students will analyze a chosen problem, formulate several potential pathways surrounding the problem, and defend their hypothesis/thesis. This discussion of their research project will include the implementation and impact of a proposed solution or pathway. The capstone project will be a reflective, challenging, imaginative, and creative facet of the student's academic experience.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

# Health Care Management, BSIS

**The Bachelor of Science in Integrated Studies: Health Care Management**

provides an academic foundation for learners pursuing managerial careers in health care. The program includes courses that examine scientific, social, political, economic, ethical, and organizational issues in health care and that also address implications for public policy. These courses underscore the complex, interdisciplinary nature of health care today and the mandate for critical thinking, contextual understanding, and ethical behavior across all related fields and careers.

The program equips learners with an academic foundation for work in a variety of health care professions, including, but not limited to, hospital administration, community health, and public health.

This program can be completed entirely online.

|          |                                                                                                                                                                                                                                                                                                                 |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact: | CAPS                                                                                                                                                                                                                                                                                                            |
| Phone:   | 314-935-6700                                                                                                                                                                                                                                                                                                    |
| Email:   | <a href="mailto:caps@wustl.edu">caps@wustl.edu</a>                                                                                                                                                                                                                                                              |
| Website: | <a href="https://caps.washu.edu/programs/undergraduate-programs/bachelor-of-science-in-integrated-studies-degree-programs/bsis-in-health-care-management/">https://caps.washu.edu/programs/undergraduate-programs/bachelor-of-science-in-integrated-studies-degree-programs/bsis-in-health-care-management/</a> |

## Degree Requirements

All WashU Continuing & Professional Studies (CAPS) BSIS students must satisfy the same general-education requirements (p. 108).

Learners in BSIS programs must complete a certificate (p. 146), tailoring their degree to their educational and professional goals. In some cases, learners with extensive work experience and/or a significant number of transfer credits may have the certificate requirement waived. Requests for waiving the certificate requirement are reviewed and approved by CAPS on a case-by-case basis.

Learners in BSIS programs must also complete a Community Engagement course. A designated CAPS course will fulfill this requirement.

## Required Courses: 27 units

| Code                                | Title                                                                | Units |
|-------------------------------------|----------------------------------------------------------------------|-------|
| CAPS-ECON 1012                      | Introduction to Microeconomics                                       | 3     |
| CAPS-COMM 2000<br>or CAPS-COMM 2230 | Foundations of Communications<br>Integrated Strategic Communications | 3     |



|                    |                                |           |
|--------------------|--------------------------------|-----------|
| CAPS-PHIL 2040     | Biomedical Ethics              | 3         |
| CAPS-BUS 2190      | Financial Accounting           | 3         |
| CAPS-HCARE 3025    | Introduction to Public Health  | 3         |
| CAPS-HCARE 3035    | Health Care Finance            | 3         |
| CAPS-HCARE 3040    | Health Care Policy             | 3         |
| CAPS-BUS 3055      | Principles of Management       | 3         |
| CAPS-ISLA 4001     | Capstone: Applied Skills Track | 3         |
| <b>Total Units</b> |                                | <b>27</b> |

## Elective Courses: 3 units

Select from the following:

| Code            | Title                              | Units |
|-----------------|------------------------------------|-------|
| CAPS-HCARE 1030 | Introduction to Health Professions | 3     |
| CAPS-BUS 3065   | Principles of Project Management   | 3     |
| CAPS-PSYCH 3135 | Health Psychology                  | 3     |
| CAPS-ECON 3150  | Health Economics                   | 3     |
| CAPS-BUS 3210   | Strategic Planning                 | 3     |
| CAPS-COMM 3630  | Crisis Communications              | 3     |

*This program is offered mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. The School of Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

## Courses

### CAPS-HCARE 1030 Introduction to Health Professions

This course is an introduction to various healthcare professions. The course will explore a brief history and overview of the US healthcare system while giving students a survey of the various health professions available and pathways into those fields. Through career exploration, students will be provided with a framework to explore healthcare professions and focus their career goals. Students will learn through lecture, readings, videos, and visiting professionals.  
Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

### CAPS-HCARE 1040 Introduction to Human Body Systems

This course is designed for students who are currently functioning in healthcare or those who plan to enter the allied health workforce (e.g., medical transcription, medical coding, nursing assistant, etc.), to provide an overview of anatomy, physiology, and basic pathology.  
Credit 3 units.

Typical periods offered: Summer 3, Summer, Spring Half B, Spring Half A, Spring, Fall Half B, Fall Half A, Fall

### CAPS-HCARE 1996 Health Care Elective

The course number to be used for transfer credit, only.  
Credit 3 units.

Typical periods offered: Fall Intercession, Summer Intercession, Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring Half B, Spring Half A, Spring, Spring Intercession, Fall Half B, Fall Half A, Fall

### CAPS-HCARE 2400 Medical Terminology and Language

This course provides a broad survey of the language of medicine and health terminologies. Students learn to accurately spell and define common medical terms related to major disease processes, diagnostic procedures, laboratory tests, abbreviations, drugs, and treatment modalities. Emphasis is placed on word formation, definition, and correct pronunciation.  
Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

### CAPS-HCARE 2510 Medical Billing I

Medical Billing I is the first part of a two-course series that provides essential training on the core principles of medical billing. This fully online series prepares participants to navigate working in the health insurance industry, address legal and regulatory issues, and understand the differences in reimbursement methodologies. Students will gain experience in proper claim form preparation, submission, and payment processing and tracking, thus equipping them with the skills needed to support financial operations in clinics, physicians' offices, and other healthcare settings. The Medical Billing series is strongly recommended for individuals preparing for the AAPC Certified Professional Biller (CPB®) exam, and will help students prepare for a career in a medical billing department at a physician's office, clinic, or similar position.

Prior knowledge of medical terminology and anatomy is strongly recommended. "Medical Terminology and Language" and "Human Body Systems" courses are also available through WashU CAPS.  
Credit 3 units.

Typical periods offered: Spring Half B, Spring Half A, Summer 3, Fall Half B, Fall Half A

### CAPS-HCARE 2511 Medical Billing II

Medical Billing II is the second part of a two-course series that provides essential training on the core principles of medical billing. This fully online series prepares participants to navigate working in the health insurance industry, address legal and regulatory issues, and understand the differences in reimbursement methodologies. Students will gain experience in proper claim form preparation, submission, and payment processing and tracking, thus equipping them with the skills needed to support financial operations in clinics, physicians' offices, and other healthcare settings. The Medical Billing series is strongly recommended for individuals preparing for the AAPC Certified Professional Biller (CPB®) exam, and will help students prepare for a career in a medical billing department at a physician's office, clinic, or similar position.

Prior knowledge of medical terminology and anatomy is strongly recommended. "Medical Terminology and Language" and "Human Body Systems" courses are also available through WashU CAPS.  
Credit 3 units.

Typical periods offered: Spring Half B, Spring Half A, Summer 3, Fall Half B, Fall Half A, Summer

**CAPS-HCARE 2515 Medical Coding I**

Medical Coding I is the first part of a two-course series that provides essential training in the foundational principles of medical coding. This fully online series introduces students to the structure and use of the three primary code books: CPT®, ICD-10-CM, and HCPCS Level II. Participants will gain experience interpreting and applying medical codes in compliance with current standards and regulations, preparing them for entry-level roles in physicians' offices and similar healthcare settings. This program is strongly recommended for individuals planning to take the AAPC Certified Professional Coder (CPC®) exam and those pursuing a career in medical coding. Prior knowledge of medical terminology and anatomy is strongly recommended. "Medical Terminology and Language" and "Human Body Systems" courses are also available through WashU CAPS.

Credit 3 units.

Typical periods offered: Spring Half B, Spring Half A, Summer 3, Fall Half B, Fall Half A, Summer

**CAPS-HCARE 2516 Medical Coding II**

Medical Coding II is the second part of a two-course series that provides essential training in the foundational principles of medical coding. This fully online series introduces students to the structure and use of the three primary code books: CPT®, ICD-10-CM, and HCPCS Level II. Participants will gain experience interpreting and applying medical codes in compliance with current standards and regulations, preparing them for entry-level roles in physicians' offices and similar healthcare settings. This program is strongly recommended for individuals planning to take the AAPC Certified Professional Coder (CPC®) exam and those pursuing a career in medical coding. Prior knowledge of medical terminology and anatomy is strongly recommended. "Medical Terminology and Language" and "Human Body Systems" courses are also available through WashU CAPS.

Credit 3 units.

Typical periods offered: Spring Half B, Spring Half A, Summer 3, Fall Half B, Fall Half A, Summer

**CAPS-HCARE 2600 Readings in Social Work: Addressing Trauma**

FOR PEP STUDENTS, ONLY. This interdisciplinary course explores both historical and contemporary research on trauma and its immediate and long-term effects. Students in this course will explore biological and psychological consequences of trauma, develop skills in differentiating forms of trauma, and evaluate contemporary research on evidence-based responses to trauma designed to support vulnerable populations and to help create trauma-informed practices in education, healthcare, and other industries.

Credit 1 unit. UColl: SSC

Typical periods offered: Spring

**CAPS-HCARE 3002 Independent Study in Health Care**

For undergraduates. Requires completed Independent Study Proposal Form, permission from CAPS.

Credit 3 units.

Typical periods offered: Fall Intersession, Summer 3, Spring, Summer Intersession, Spring Intersession, Fall

**CAPS-HCARE 3020 Legal Issues in Health Care Management**

This course offers an overview of the most important legal issues currently facing hospitals, physicians, and other health care organizations. We will study the Affordable Care Act, liability for data breaches under HIPAA /HITECH (the health privacy laws), False Claims Act and whistleblower suits (for Medicaid and Medicare fraud), laws governing physician-hospital relationships (the Stark Law and Anti-Kickback laws), labor and employment issues, mergers and antitrust law, medical malpractice and tort reform, and scope of practice laws.

Credit 3 units.

Typical periods offered: Spring

**CAPS-HCARE 3025 Introduction to Public Health**

This introduction to the field of public health examines the philosophy, history, organization, functions, activities, and results of public health research and practice. Case studies include infectious and chronic diseases, mental health, maternal and reproductive health, food safety and nutrition, environmental health, and global public health. Students are encouraged to look at health issues from a systemic and population-level perspective, and to think critically about health systems and problems, especially health disparities and health care delivery to diverse populations.

Credit 3 units.

Typical periods offered: Spring

**CAPS-HCARE 3035 Health Care Finance**

The magnitude of healthcare expenditures is a growing problem for providers and patients. This course, for current or future healthcare managers, covers fundamental tools, concepts, and applications of finance in healthcare organizations that produce cost-effective, efficient operations. Students examine how expenditure control is influenced by individuals, governmental institutions, and newly formed insurance exchanges. The class also studies how healthcare organizations maximize revenue sources. The course explores the relation between market behavior, financial efficiency, and quality in healthcare organizations, and how these factors affect an organization's survival and growth in the changing healthcare environment.

Credit 3 units.

Typical periods offered: Fall

**CAPS-HCARE 3040 Health Care Policy**

This course examines important and complex developments in contemporary health care policy. Learners begin with a historical overview, then look at the structure of current health care delivery and identify political and economic challenges moving forward. In particular, the class will critically examine methods and principles for evaluating health care costs and measuring policy effectiveness. The course also addresses unintended consequences of health care policies, special interests and political agendas, and the influence of major institutional forces on clinical and translational research. Case studies and guest speakers will help illustrate current ethical dilemmas and other real challenges to contemporary health care and reform.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

**CAPS-HCARE 3048 Bioscience for Business**

This course is ideal for persons with business backgrounds that want to achieve a deeper understanding of the technologies and principals upon which their businesses depend. It will explore, at a practical and introductory level, the issues, concepts and processes of bioscience / molecular biology as related to the biotechnology industry. The course is divided into three sections; the first section, devoted to basic science, will explore Mendelian inheritance, genes, intracellular information flow related to protein synthesis, protein synthesis, and genomics and proteomics. The second section, devoted to applied science, will explore gene splicing, gene delivery, cell culture, proteins and nucleic acids as products, and commercial outsourcing. The third section, devoted to current topics, will explore stem cells, product licensing, new product forecasting, the promise of gene therapy, and genetically modified organisms as they pertain to food sources. The instructor, along with other experienced personnel, will teach the



basics of biology as they relate to the biotechnology industry including techniques to produce protein and nucleic acid products. The class will explore related current topics, including licensing and methods of new product forecasting.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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### **CAPS-HCARE 3055 Systematic Literature Review and Medical Regulatory Writing**

Medical devices are critical for patient care and public health, so companies must comply with extensive regulations to ensure the safety, efficacy, and performance of these devices. Medical device companies are expected to demonstrate that their devices perform as intended using data from well-designed clinical trials and “real-world evidence.” Given the expense of conducting clinical trials, real-world evidence is increasingly important for companies seeking to demonstrate the safety and performance of their medical device. This course, Systematic Literature Review and Medical Regulatory Writing, is designed to equip students with the necessary skills to conduct comprehensive literature reviews and produce high-quality summary reports of the state-of-the-art for medical devices. This course is ideal for individuals pursuing careers in medical research, clinical trials, medical regulatory writing, and related fields. It is recommended that students have a background in medical sciences or a related field, basic understanding of research methodologies, and a desire to gain proficiency in academic writing.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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### **CAPS-HCARE 3064 Healthcare Entrepreneurship**

Healthcare entrepreneurs improve the overall quality of healthcare delivery. This course introduces students to the particular characteristics of healthcare entrepreneurship, focusing on the creation, funding, and management of biotechnology and health services enterprises. Students will learn the steps involved in the conceptualization, planning, capitalization, launch, compensation, and management of an entrepreneurial healthcare venture. Students will use course principles and skills to develop an entrepreneurial business plan that addresses a real clinical problem.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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### **CAPS-HCARE 3080 Race Matters! How Race and Racism Affect Health and Medicine**

This course grapples with the relationships among race, racism, health, and medicine, both in the United States and abroad. It examines the historical roots of medical racism, the role of medical and genetic research in constructing and deconstructing race as a biological concept, and the ways that systemic racism harms health. This course will also consider how race operates with other intersecting social and political identities (e.g., ethnicity, age, sex, gender, sexual orientation, class, disability) to influence health outcomes. Although anthropological and critical race theories will frame our learning, we will read broadly across other disciplines, including (but not limited to) sociology, the history of medicine, law, public health, and science and technology studies.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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### **CAPS-HCARE 3100 Balancing Precision Medicine and Public Health**

FOR PEP STUDENTS, ONLY. In this course, students will extend their knowledge base in basic biology in order to develop foundations in human genomics and its applications in health, wellness, medicine, and healthcare. Having a strong foundation in genomics, students will be challenged to understand, analyze, and critique the current state

of precision medicine. Students will also explore its future, employing both rigorous critical analysis frameworks and creative approaches. In parallel, this course will develop foundations in public health that are rooted in history, theory, and practice. Students will be challenged to examine how precision medicine approaches might support or undermine the goals of public health and to consider the possibility of precision public health.

Credit 3 units. UColl: NSC

Typical periods offered: Fall

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### **CAPS-HCARE 3145 Compassion Cultivation Training**

Compassion Cultivation Training (CCT) is an 8-week educational program designed to help you cultivate compassion, strengthen your resilience, feel more connected to others, and improve your overall sense of well-being. CCT is a distillation from Tibetan Mahayana Buddhist practices for developing compassion, adapted to a secular setting. Initially developed by Stanford University scholars with support from the Dalai Lama, CCT combines traditional contemplative practices with contemporary psychology and scientific research. The program involves instruction in a series of meditation practices starting with mindfulness-based meditation. The curriculum uses modern concepts of psychology and neuroscience to understand and enhance our ability to be compassionate.

Credit 1 unit.

Typical periods offered: Spring Half B, Spring Half A, Summer 3, Summer Intersession, Fall Half B, Fall Half A

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### **CAPS-HCARE 3160 Transnational Reproductive Health Issues: Meanings, Technologies and Practices**

This course covers recent scholarship on gender and reproductive health, including such issues as reproduction and the disciplinary power of the state, contested reproductive relations within families and communities, and the implications of global flows of biotechnology, population, and information for reproductive strategies at the local level. We will also explore how transnational migration and globalization have shaped reproductive health, the diverse meanings associated with reproductive processes, and decisions concerning reproduction. Reproduction will serve as a focus to illuminate the cultural politics of gender, power, and sexuality.

Credit 3 units. Art: SSC BU: BA UColl: CD, ML

Typical periods offered: Fall, Summer 3, Spring

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### **CAPS-HCARE 4010 Biotech Entrepreneurship Seminar**

This course provides technically-trained students with a comprehensive introduction to the principles and practices of entrepreneurship within the biotechnology sector. Designed for individuals with a background in science, engineering, or other technical fields, the course bridges the gap between technical expertise and entrepreneurial knowledge. Students will explore the process of starting and growing a biotech company, including identifying commercial opportunities, developing business models, and navigating regulatory landscapes.

Credit 1 unit.

Typical periods offered: Summer 3, Spring, Fall, Summer

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### **CAPS-HCARE 4011 Biotech Entrepreneurship Seminar II**

This course provides technically-trained students with a comprehensive introduction to the principle and practices of entrepreneurship within the biotechnology sector. Designed for individuals with a background in science, engineering, or other technical fields, the course bridges the gap between technical expertise and entrepreneurial knowledge. Students will explore the process of starting and growing a biotech company, including identifying commercial opportunities, developing financial models, and pursuing dilutive capital.

Credit 1 unit.

Typical periods offered: Spring

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**CAPS-HCARE 4023 Healthcare Entrepreneurship**

The emergence of rapid innovation and prototyping of new products and services in Healthcare has opened the door to an entirely new generation of Entrepreneurs and entrepreneurial thinkers. No longer is the healthcare ecosystem completely controlled by legacy juggernauts fueled by institutional buyers. Rather, today we have healthcare consumerism that is rapidly focusing on individuals as the industry and government work to empower greater access to care. This course will introduce students to a historical approach to entrepreneurship, and provide a framework to analyze opportunities for new product or services development in healthcare. We will explore both the complexity of the industry and expose students to the necessary fact that many times novel solutions are but a component to a holistic, multidisciplinary approach to care, and enable students to understand how their novel solutions might fit into that care ecosystem. Preliminary List of Topics: By the end of the course, students will be able to successfully write a business plan, develop and deliver an elevator pitch to potential investors, be proficient in SWOT analysis, market analysis, brand development, market penetration strategies, costing and revenue generation forecasting (pro forma development), industry alignment of innovative service or product, and in-depth critical thinking skills around building a successful business.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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**CAPS-ECON 1012 Introduction to Microeconomics**

Determination of prices; distribution of national income; theory of production. For a thorough introduction to economics, Introduction to Macroeconomics also should be taken.

Credit 3 units. Art: NSM UColl: SSC

Typical periods offered: Fall, Summer 3

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**CAPS-COMM 2000 Foundations of Communications**

Foundations of Communication is designed to help students be more effective communicators by examining the principles and contexts of human communication. It introduces fundamental elements (including self-awareness, perception, listening and responding, and verbal and nonverbal messages) and models of communication, basic communication theory, interpersonal communication, small group communication, and public speaking, with an emphasis on a practical application at each level. Students will learn the skills and techniques essential to effective communication and will be expected to demonstrate those in each communication context throughout the semester.

Credit 3 units.

Typical periods offered: Spring

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**CAPS-PHIL 2040 Biomedical Ethics**

Are doctors ever permitted to lie to their patients? Should physician-assisted suicide be legal? Should governments require their citizens to get vaccinated against common diseases? Is race-based medicine unjustified because race is a social construction? Should medical researchers be allowed to edit the human genome? Is there such a thing as a male or female brain? These are among the questions addressed in biomedical ethics. In this course we will critically examine, in light of contemporary moral disagreements and traditional ethical theories, some of the philosophical issues that arise out of medical practice and research in our society, including questions about specific policies and practices as well as broader questions about the implications of contemporary medicine, biology, and neuroscience. Topics may include euthanasia, genetic engineering, abortion,

disability, medical malpractice, informed consent, the allocation of medical resources, patient autonomy, gender-affirming care, and health care as a human right. The course presupposes no background in philosophy.

Credit 3 units. UColl: ML

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall

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**CAPS-BUS 2190 Financial Accounting**

This course presents the study of financial and managerial applications of accounting--the language of business--for a more complete understanding of the composition of financial statements. Topics include the accounting cycle to management accounting, emphasizing the impact of accounting practices on the financial statements. Current accounting software is used as a tool for practical applications exposure.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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**CAPS-COMM 2230 Integrated Strategic Communications**

Strategic communication programs enable organizations to accomplish business goals by building and maintaining trusted relationships with their most important communities. A strategic communication plan includes clear and measurable objectives, is based on positioning that clearly differentiates the organization, and takes advantage of appropriate and effective tactics. This course provides an overview of all aspects of strategic communication and how they relate to each other in corporate, agency and not-for-profit environments. It covers the critical concepts needed to manage diverse communication disciplines - including marketing, branding, advertising, public relations, promotions, graphic design, traditional and new media. This course provides the foundation in theory and practice required by today's business executives and professional communicators to create and manage successful programs, using all available strategic communication techniques.

Credit 3 units. UColl: SSC

Typical periods offered: Summer 3, Spring, Fall, Summer

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**CAPS-BUS 3055 Principles of Management**

This course combines a strong foundation in management principles with six core managerial competencies critical for success: self-management, strategic action, planning and administration, global awareness, teamwork, and communication. Students will study a number of well-known organizations to illustrate these managerial competencies. They also will explore how proactive managers respond to opportunities and challenges of global management and diversity, team-based management, service management, ethical issues, and contemporary trends in business. The course further offers self-assessment tools to help students understand and develop their own management potential for career success.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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**CAPS-PSYCH 3135 Health Psychology**

This course examines the history of health psychology and its place in general health care. Students and instructor will examine relevant theory as applied to specific topics including stress, coping, weight loss, chronic illness in general (diabetes in particular), adherence to medically prescribed regimens, Type A personality and cardiac risk factors.

Credit 3 units.

Typical periods offered: Summer 3, Spring



## **CAPS-ECON 3150 Health Economics**

Analysis of consumer demand for health care, medical technology, and the role of health insurance. Emphasis placed on behavior of the physician (whether he acts as an agent for the consumer or on his own behalf); on the use of paramedics, preventive care, outpatient care, and the general market organization of the health industry. The major concern will be the rising cost of health care and appropriate public policy responses.

Credit 3 units. BU: BA EN: S UColl: SSC

Typical periods offered: Summer 3, Spring, Fall, Summer

## **CAPS-BUS 3210 Strategic Planning**

All successful businesses have a strategy--this course will teach students how to create one. Whether one is a student who wants to understand how business works, an entrepreneur developing a business, or an experienced manager who would like to implement practical approaches to strategic planning and critical thinking, this course will help on that journey. Leading-edge strategic planning tools and templates will help learners tackle the tough issues of today and the future. The course will emphasize how to create, implement, and manage successful change within organizations. Using case studies and examples from industry leaders, students will build critical thinking skills and use fundamental principles and tools that relate to successful strategic planning and decision making. They will develop written and oral presentation skills in the context of strategic planning; understand how to motivate the organization; and design and receive feedback on a draft strategic plan that can fit almost any situation.

Credit 3 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall

## **CAPS - DATASTUDIES 3250 Communicating, Leading, and Problem Solving With Data**

Some of the most desired skills in the job market, across various fields, are management, communication, leadership, and the ability to apply data to influence policy and decision-making in an organization. The purpose of this course is to help students develop the non-technical skills needed to use data in various professional settings such as concepts in data literacy, data interpretation, and data communication. Students will be able to apply the knowledge they learned through mini-assignments, weekly discussions, and a semester long-project that is divided into stages. Students not in the CAPS Data Analytics certificate program must have knowledge of basic statistics and basic Excel tasks in order to succeed in this course (e.g. understand means, medians, and modes and can calculate them in Excel).

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

## **CAPS-COMM 3630 Crisis Communications**

Both profit and nonprofit organizations are increasingly embroiled in controversies and crises. Consequently, demands are growing for public relations practitioners to help restore an organization's good name and reputation, along with its financial stability. In learning to construct, implement and evaluate a crisis communication plan, students will research and analyze an organizational crisis, identify the communication demands of various audiences affected by a crisis, and develop strategies and communication tools for managing a crisis.

Credit 3 units.

Typical periods offered: Spring

## **CAPS-ISLA 4001 Capstone: Applied Skills Track**

The Capstone: Applied Skills Track is the culmination of students' knowledge and skills in the business field, emphasizing real-world application of core lessons to solve important problems or challenges in an industry or organization aligned with their career goals. Students will identify a complex issue within their chosen area, conduct research, design practical solutions, and develop strategic recommendations with potential industry impact. Through instructor-led guidance, students will build a comprehensive capstone project that incorporates critical thinking, problem-solving, and applied leadership and professional communication. Students will also enhance their presentation and professional writing skills and engage in industry-relevant discussions through professional development activities.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

# Health Sciences, BSIS

## **The Bachelor of Science in Integrated Studies: Health Sciences**

provides an academic foundation for learners pursuing clinical or research careers in health care. The program includes courses that examine foundational science for health care professionals. It also addresses scientific, social, political, ethical, and organizational issues in health care as well as implications for individual practice and public policy. The coursework underscores the complex, interdisciplinary nature of health care today and the mandate for critical thinking, contextual understanding, and ethical behavior across all related fields and careers.

The BSIS in Health Sciences equips learners with an academic foundation for graduate or professional school or for work in a variety of health care professions, including (but not limited to) community health, public health, biomedical research, medicine, nursing, dentistry, and physical and occupational therapy.

|          |                                                                                                                                                                                                                                                                                                   |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact: | CAPS                                                                                                                                                                                                                                                                                              |
| Phone:   | 314-935-6700                                                                                                                                                                                                                                                                                      |
| Email:   | <a href="mailto:caps@wustl.edu">caps@wustl.edu</a>                                                                                                                                                                                                                                                |
| Website: | <a href="https://caps.washu.edu/programs/undergraduate-programs/bachelor-of-science-in-integrated-studies-degree-programs/bsis-in-health-sciences/">https://caps.washu.edu/programs/undergraduate-programs/bachelor-of-science-in-integrated-studies-degree-programs/bsis-in-health-sciences/</a> |

## Degree Requirements

All WashU Continuing & Professional Studies (CAPS) BSIS students must satisfy the same general-education requirements (p. 108).

Learners in BSIS programs must complete a certificate (p. 146), tailoring their degree to their educational and professional goals. In some cases, those with extensive work experience and/or a significant number of transfer credits may have the certificate requirement waived. Requests for waiving the certificate requirement are reviewed and approved by CAPS on a case-by-case basis.



Learners in BSIS programs must also complete a Community Engagement course. A designated CAPS course will fulfill this requirement.

## Required Courses: 26 units

| Code               | Title                                                  | Units     |
|--------------------|--------------------------------------------------------|-----------|
| CAPS-BIO 1009      | General Biology I (Lab)                                | 1         |
| CAPS-BIO 1012      | General Biology I (Lecture)                            | 3         |
| CAPS-BIO 1019      | General Biology II (Lab)                               | 1         |
| CAPS-BIO 1022      | General Biology II (Lecture)                           | 3         |
| CAPS-BIO 3420      | Introduction to Human Disease and Its Scientific Basis | 3         |
| CAPS-HCARE 1030    | Introduction to Health Professions                     | 3         |
| CAPS-HCARE 3025    | Introduction to Public Health                          | 3         |
| CAPS-ISLA 4001     | Capstone: Applied Skills Track                         | 3         |
| CAPS-PHIL 2040     | Biomedical Ethics                                      | 3         |
| CAPS-PSYCH 3135    | Health Psychology                                      | 3         |
| <b>Total Units</b> |                                                        | <b>26</b> |

## Electives: 9 units

Selections include the following:

| Code             | Title                                                      | Units |
|------------------|------------------------------------------------------------|-------|
| CAPS-ANTHRO 3310 | Health, Healing, and Ethics: Intro to Medical Anthropology | 3     |
| CAPS-BIO 2200    | Anatomy and Physiology I                                   | 4     |
| CAPS-BIO 2201    | Anatomy and Physiology II                                  | 4     |
| CAPS-BIO 3245    | Introduction to Immunology                                 | 3     |
| CAPS-BIO 4006    | Introduction to Biochemistry                               | 3     |
| CAPS-CHEM 1020   | Introductory General Chemistry I (Laboratory)              | 2     |
| CAPS-CHEM 1040   | General Chemistry Laboratory II                            | 2     |
| CAPS-CHEM 1050   | Introductory General Chemistry I (Lecture)                 | 3     |
| CAPS-CHEM 1060   | Introductory General Chemistry II (Lecture)                | 3     |
| CAPS-PHYS 1700   | General Physics I (Lecture)                                | 3     |
| CAPS-HCARE 2400  | Medical Terminology and Language                           | 3     |
| CAPS-PSYCH 3070  | Developmental Psychology                                   | 3     |
| PHYSICS 1741     | Physics I Laboratory                                       | 1     |
| Coming soon      | Organic Chemistry I (with Lab)                             |       |
| Coming soon      | Organic Chemistry II (with Lab)                            |       |

**Note:** At least 15 units in this program must be taken in upper-level (3000-level or higher) courses.

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

## Courses

### CAPS-HCARE 1030 Introduction to Health Professions

This course is an introduction to various healthcare professions. The course will explore a brief history and overview of the US healthcare system while giving students a survey of the various health professions available and pathways into those fields. Through career exploration, students will be provided with a framework to explore healthcare professions and focus their career goals. Students will learn through lecture, readings, videos, and visiting professionals.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

### CAPS-HCARE 1040 Introduction to Human Body Systems

This course is designed for students who are currently functioning in healthcare or those who plan to enter the allied health workforce (e.g., medical transcription, medical coding, nursing assistant, etc.), to provide an overview of anatomy, physiology, and basic pathology.

Credit 3 units.

Typical periods offered: Summer 3, Summer, Spring Half B, Spring Half A, Spring, Fall Half B, Fall Half A, Fall

### CAPS-HCARE 1996 Health Care Elective

The course number to be used for transfer credit, only.

Credit 3 units.

Typical periods offered: Fall Intercession, Summer Intercession, Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring Half B, Spring Half A, Spring, Spring Intercession, Fall Half B, Fall Half A, Fall

### CAPS-HCARE 2400 Medical Terminology and Language

This course provides a broad survey of the language of medicine and health terminologies. Students learn to accurately spell and define common medical terms related to major disease processes, diagnostic procedures, laboratory tests, abbreviations, drugs, and treatment modalities. Emphasis is placed on word formation, definition, and correct pronunciation.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

### CAPS-HCARE 2510 Medical Billing I

Medical Billing I is the first part of a two-course series that provides essential training on the core principles of medical billing. This fully online series prepares participants to navigate working in the health insurance industry, address legal and regulatory issues, and understand the differences in reimbursement methodologies. Students



will gain experience in proper claim form preparation, submission, and payment processing and tracking, thus equipping them with the skills needed to support financial operations in clinics, physicians' offices, and other healthcare settings. The Medical Billing series is strongly recommended for individuals preparing for the AAPC Certified Professional Biller (CPB®) exam, and will help students prepare for a career in a medical billing department at a physician's office, clinic, or similar position.

Prior knowledge of medical terminology and anatomy is strongly recommended. "Medical Terminology and Language" and "Human Body Systems" courses are also available through WashU CAPS.

Credit 3 units.

Typical periods offered: Spring Half B, Spring Half A, Summer 3, Fall Half B, Fall Half A

### **CAPS-HCARE 2511 Medical Billing II**

Medical Billing II is the second part of a two-course series that provides essential training on the core principles of medical billing. This fully online series prepares participants to navigate working in the health insurance industry, address legal and regulatory issues, and understand the differences in reimbursement methodologies. Students will gain experience in proper claim form preparation, submission, and payment processing and tracking, thus equipping them with the skills needed to support financial operations in clinics, physicians' offices, and other healthcare settings. The Medical Billing series is strongly recommended for individuals preparing for the AAPC Certified Professional Biller (CPB®) exam, and will help students prepare for a career in a medical billing department at a physician's office, clinic, or similar position.

Prior knowledge of medical terminology and anatomy is strongly recommended. "Medical Terminology and Language" and "Human Body Systems" courses are also available through WashU CAPS.

Credit 3 units.

Typical periods offered: Spring Half B, Spring Half A, Summer 3, Fall Half B, Fall Half A, Summer

### **CAPS-HCARE 2515 Medical Coding I**

Medical Coding I is the first part of a two-course series that provides essential training in the foundational principles of medical coding. This fully online series introduces students to the structure and use of the three primary code books: CPT®, ICD-10-CM, and HCPCS Level II. Participants will gain experience interpreting and applying medical codes in compliance with current standards and regulations, preparing them for entry-level roles in physicians' offices and similar healthcare settings. This program is strongly recommended for individuals planning to take the AAPC Certified Professional Coder (CPC®) exam and those pursuing a career in medical coding. Prior knowledge of medical terminology and anatomy is strongly recommended. "Medical Terminology and Language" and "Human Body Systems" courses are also available through WashU CAPS.

Credit 3 units.

Typical periods offered: Spring Half B, Spring Half A, Summer 3, Fall Half B, Fall Half A, Summer

### **CAPS-HCARE 2516 Medical Coding II**

Medical Coding II is the second part of a two-course series that provides essential training in the foundational principles of medical coding. This fully online series introduces students to the structure and use of the three primary code books: CPT®, ICD-10-CM, and HCPCS Level II. Participants will gain experience interpreting and applying medical codes in compliance with current standards and regulations, preparing them for entry-level roles in physicians' offices and similar healthcare settings. This program is strongly recommended for individuals planning to take the AAPC Certified Professional Coder (CPC®) exam and those pursuing a career in medical coding.

Prior knowledge of medical terminology and anatomy is strongly recommended. "Medical Terminology and Language" and "Human Body Systems" courses are also available through WashU CAPS. Credit 3 units.

Typical periods offered: Spring Half B, Spring Half A, Summer 3, Fall Half B, Fall Half A, Summer

### **CAPS-HCARE 2600 Readings in Social Work: Addressing Trauma**

FOR PEP STUDENTS, ONLY. This interdisciplinary course explores both historical and contemporary research on trauma and its immediate and long-term effects. Students in this course will explore biological and psychological consequences of trauma, develop skills in differentiating forms of trauma, and evaluate contemporary research on evidence-based responses to trauma designed to support vulnerable populations and to help create trauma-informed practices in education, healthcare, and other industries.

Credit 1 unit. UColl: SSC

Typical periods offered: Spring

### **CAPS-HCARE 3002 Independent Study in Health Care**

For undergraduates. Requires completed Independent Study Proposal Form, permission from CAPS.

Credit 3 units.

Typical periods offered: Fall Intersession, Summer 3, Spring, Summer Intersession, Spring Intersession, Fall

### **CAPS-HCARE 3020 Legal Issues in Health Care Management**

This course offers an overview of the most important legal issues currently facing hospitals, physicians, and other health care organizations. We will study the Affordable Care Act, liability for data breaches under HIPAA /HITECH (the health privacy laws), False Claims Act and whistleblower suits (for Medicaid and Medicare fraud), laws governing physician-hospital relationships (the Stark Law and Anti-Kickback laws), labor and employment issues, mergers and antitrust law, medical malpractice and tort reform, and scope of practice laws.

Credit 3 units.

Typical periods offered: Spring

### **CAPS-HCARE 3025 Introduction to Public Health**

This introduction to the field of public health examines the philosophy, history, organization, functions, activities, and results of public health research and practice. Case studies include infectious and chronic diseases, mental health, maternal and reproductive health, food safety and nutrition, environmental health, and global public health. Students are encouraged to look at health issues from a systemic and population-level perspective, and to think critically about health systems and problems, especially health disparities and health care delivery to diverse populations.

Credit 3 units.

Typical periods offered: Spring

### **CAPS-HCARE 3035 Health Care Finance**

The magnitude of healthcare expenditures is a growing problem for providers and patients. This course, for current or future healthcare managers, covers fundamental tools, concepts, and applications of finance in healthcare organizations that produce cost-effective, efficient operations. Students examine how expenditure control is influenced by individuals, governmental institutions, and newly formed insurance exchanges. The class also studies how healthcare organizations maximize revenue sources. The course explores the relation between market behavior, financial efficiency, and quality in healthcare organizations, and how these factors affect an organization's survival and growth in the changing healthcare environment.

Credit 3 units.

Typical periods offered: Fall

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**CAPS-HCARE 3040 Health Care Policy**

This course examines important and complex developments in contemporary health care policy. Learners begin with a historical overview, then look at the structure of current health care delivery and identify political and economic challenges moving forward. In particular, the class will critically examine methods and principles for evaluating health care costs and measuring policy effectiveness. The course also addresses unintended consequences of health care policies, special interests and political agendas, and the influence of major institutional forces on clinical and translational research. Case studies and guest speakers will help illustrate current ethical dilemmas and other real challenges to contemporary health care and reform.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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**CAPS-HCARE 3048 Bioscience for Business**

This course is ideal for persons with business backgrounds that want to achieve a deeper understanding of the technologies and principals upon which their businesses depend. It will explore, at a practical and introductory level, the issues, concepts and processes of bioscience / molecular biology as related to the biotechnology industry. The course is divided into three sections; the first section, devoted to basic science, will explore Mendelian inheritance, genes, intracellular information flow related to protein synthesis, protein synthesis, and genomics and proteomics. The second section, devoted to applied science, will explore gene splicing, gene delivery, cell culture, proteins and nucleic acids as products, and commercial outsourcing. The third section, devoted to current topics, will explore stem cells, product licensing, new product forecasting, the promise of gene therapy, and genetically modified organisms as they pertain to food sources. The instructor, along with other experienced personnel, will teach the basics of biology as they relate to the biotechnology industry including techniques to produce protein and nucleic acid products. The class will explore related current topics, including licensing and methods of new product forecasting.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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**CAPS-HCARE 3055 Systematic Literature Review and Medical Regulatory Writing**

Medical devices are critical for patient care and public health, so companies must comply with extensive regulations to ensure the safety, efficacy, and performance of these devices. Medical device companies are expected to demonstrate that their devices perform as intended using data from well-designed clinical trials and “real-world evidence.” Given the expense of conducting clinical trials, real-world evidence is increasingly important for companies seeking to demonstrate the safety and performance of their medical device. This course, Systematic Literature Review and Medical Regulatory Writing, is designed to equip students with the necessary skills to conduct comprehensive literature reviews and produce high-quality summary reports of the state-of-the-art for medical devices. This course is ideal for individuals pursuing careers in medical research, clinical trials, medical regulatory writing, and related fields. It is recommended that students have a background in medical sciences or a related field, basic understanding of research methodologies, and a desire to gain proficiency in academic writing.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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**CAPS-HCARE 3064 Healthcare Entrepreneurship**

Healthcare entrepreneurs improve the overall quality of healthcare delivery. This course introduces students to the particular characteristics of healthcare entrepreneurship, focusing on the creation, funding, and management of biotechnology and health services enterprises. Students will learn the steps involved in the conceptualization, planning, capitalization, launch, compensation, and management of an entrepreneurial healthcare venture. Students will use course principles and skills to develop an entrepreneurial business plan that addresses a real clinical problem.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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**CAPS-HCARE 3080 Race Matters! How Race and Racism Affect Health and Medicine**

This course grapples with the relationships among race, racism, health, and medicine, both in the United States and abroad. It examines the historical roots of medical racism, the role of medical and genetic research in constructing and deconstructing race as a biological concept, and the ways that systemic racism harms health. This course will also consider how race operates with other intersecting social and political identities (e.g., ethnicity, age, sex, gender, sexual orientation, class, disability) to influence health outcomes. Although anthropological and critical race theories will frame our learning, we will read broadly across other disciplines, including (but not limited to) sociology, the history of medicine, law, public health, and science and technology studies.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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**CAPS-HCARE 3100 Balancing Precision Medicine and Public Health**

**FOR PEP STUDENTS, ONLY.** In this course, students will extend their knowledge base in basic biology in order to develop foundations in human genomics and its applications in health, wellness, medicine, and healthcare. Having a strong foundation in genomics, students will be challenged to understand, analyze, and critique the current state of precision medicine. Students will also explore its future, employing both rigorous critical analysis frameworks and creative approaches. In parallel, this course will develop foundations in public health that are rooted in history, theory, and practice. Students will be challenged to examine how precision medicine approaches might support or undermine the goals of public health and to consider the possibility of precision public health.

Credit 3 units. UColl: NSC

Typical periods offered: Fall

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**CAPS-HCARE 3145 Compassion Cultivation Training**

Compassion Cultivation Training (CCT) is an 8-week educational program designed to help you cultivate compassion, strengthen your resilience, feel more connected to others, and improve your overall sense of well-being. CCT is a distillation from Tibetan Mahayana Buddhist practices for developing compassion, adapted to a secular setting. Initially developed by Stanford University scholars with support from the Dalai Lama, CCT combines traditional contemplative practices with contemporary psychology and scientific research. The program involves instruction in a series of meditation practices starting with mindfulness-based meditation. The curriculum uses modern concepts of psychology and neuroscience to understand and enhance our ability to be compassionate.

Credit 1 unit.

Typical periods offered: Spring Half B, Spring Half A, Summer 3, Summer Intersession, Fall Half B, Fall Half A



## **CAPS-HCARE 3160 Transnational Reproductive Health Issues:**

### **Meanings, Technologies and Practices**

This course covers recent scholarship on gender and reproductive health, including such issues as reproduction and the disciplinary power of the state, contested reproductive relations within families and communities, and the implications of global flows of biotechnology, population, and information for reproductive strategies at the local level. We will also explore how transnational migration and globalization have shaped reproductive health, the diverse meanings associated with reproductive processes, and decisions concerning reproduction. Reproduction will serve as a focus to illuminate the cultural politics of gender, power, and sexuality.

Credit 3 units. Art: SSC BU: BA UColl: CD, ML

Typical periods offered: Fall, Summer 3, Spring

## **CAPS-HCARE 4010 Biotech Entrepreneurship Seminar**

This course provides technically-trained students with a comprehensive introduction to the principles and practices of entrepreneurship within the biotechnology sector. Designed for individuals with a background in science, engineering, or other technical fields, the course bridges the gap between technical expertise and entrepreneurial knowledge. Students will explore the process of starting and growing a biotech company, including identifying commercial opportunities, developing business models, and navigating regulatory landscapes.

Credit 1 unit.

Typical periods offered: Summer 3, Spring, Fall, Summer

## **CAPS-HCARE 4011 Biotech Entrepreneurship Seminar II**

This course provides technically-trained students with a comprehensive introduction to the principle and practices of entrepreneurship within the biotechnology sector. Designed for individuals with a background in science, engineering, or other technical fields, the course bridges the gap between technical expertise and entrepreneurial knowledge. Students will explore the process of starting and growing a biotech company, including identifying commercial opportunities, developing financial models, and pursuing dilutive capital.

Credit 1 unit.

Typical periods offered: Spring

## **CAPS-HCARE 4023 Healthcare Entrepreneurship**

The emergence of rapid innovation and prototyping of new products and services in Healthcare has opened the door to an entirely new generation of Entrepreneurs and entrepreneurial thinkers. No longer is the healthcare ecosystem completely controlled by legacy juggernauts fueled by institutional buyers. Rather, today we have healthcare consumerism that is rapidly focusing on individuals as the industry and government work to empower greater access to care. This course will introduce students to a historical approach to entrepreneurship, and provide a framework to analyze opportunities for new product or services development in healthcare. We will explore both the complexity of the industry and expose students to the necessary fact that many times novel solutions are but a component to a holistic, multidisciplinary approach to care, and enable students to understand how their novel solutions might fit into that care ecosystem. Preliminary List of Topics: By the end of the course, students will be able to successfully write a business plan, develop and deliver an elevator pitch to potential investors, be proficient in SWOT analysis, market analysis, brand development, market penetration strategies, costing and revenue generation forecasting (pro forma development), industry alignment of innovative service or product, and in-depth critical thinking skills around building a successful business.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

## **CAPS-BIO 1012 General Biology I (Lecture)**

First part of a two-term rigorous introduction to basic biological principles and concepts. The first term covers the molecular and cellular basis of life, bioenergetics, signal transduction, DNA and protein synthesis, and the function of whole organisms (physiology). Paired with weekly lab session/s. Laboratories include traditional wet labs as well as inquiry-based, online labs. Restricted to School of Continuing & Professional Studies (CAPS) students, others with CAPS permission.

Credit 3 units. UColl: NSC

Typical periods offered: Spring, Summer 2, Fall, Summer

## **CAPS-BIO 1009 General Biology I (Lab)**

Lab section of gen Bio 1012. First part of a two-term introduction to basic biological principles and concepts. The first term covers the molecular and cellular basis of life, bioenergetics, signal transduction, DNA and protein synthesis, and the function of whole organisms (physiology). Laboratories include traditional wet labs as well as inquiry-based online labs. Restricted to students admitted to a School of Continuing & Professional Studies (CAPS) degree program. Others may register with instructor permission on a space-available basis.

Credit 1 unit. UColl: NSC

Typical periods offered: Spring, Summer 2, Fall, Summer

## **CAPS-BIO 1022 General Biology II (Lecture)**

Second term of a two-term sequence that provides a broad but rigorous introduction to basic biological principles and concepts. The second term covers DNA technology and genomics, the genetic basis of development, the mechanisms of evolution, the evolutionary history of biological diversity, plant form and function, and ecology. Paired with weekly lab/s. Laboratories include traditional wet labs as well as inquiry-based online labs.

Credit 3 units. UColl: NSC

Typical periods offered: Summer 4, Spring, Summer

## **CAPS-BIO 1019 General Biology II (Lab)**

Second term (lab section) of a two-term sequence that provides a broad, but rigorous introduction to basic biological principles and concepts. The second term covers DNA technology and genomics, the genetic basis of development, the mechanisms of evolution, the evolutionary history of biological diversity, plant form and function, and ecology. Laboratories include traditional wet labs as well as inquiry-based on-line labs.

Credit 1 unit. UColl: NSC

Typical periods offered: Summer 4, Spring, Summer

## **CAPS-PHIL 2040 Biomedical Ethics**

Are doctors ever permitted to lie to their patients? Should physician-assisted suicide be legal? Should governments require their citizens to get vaccinated against common diseases? Is race-based medicine unjustified because race is a social construction? Should medical researchers be allowed to edit the human genome? Is there such a thing as a male or female brain? These are among the questions addressed in biomedical ethics. In this course we will critically examine, in light of contemporary moral disagreements and traditional ethical theories, some of the philosophical issues that arise out of medical practice and research in our society, including questions about specific policies and practices as well as broader questions about the implications of contemporary medicine, biology, and neuroscience. Topics may include euthanasia, genetic engineering, abortion,

disability, medical malpractice, informed consent, the allocation of medical resources, patient autonomy, gender-affirming care, and health care as a human right. The course presupposes no background in philosophy.

Credit 3 units. UColl: ML

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall

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**CAPS-PSYCH 3135 Health Psychology**

This course examines the history of health psychology and its place in general health care. Students and instructor will examine relevant theory as applied to specific topics including stress, coping, weight loss, chronic illness in general (diabetes in particular), adherence to medically prescribed regimens, Type A personality and cardiac risk factors.

Credit 3 units.

Typical periods offered: Summer 3, Spring

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**CAPS-BIO 3420 Introduction to Human Disease and Its Scientific Basis**

This course will examine current research on the physiological, genetic, and biochemical pathways of human diseases. Topics will include cardiovascular disease, stroke, osteoporosis, diabetes, kidney disease, arthritis, cancer, chronic obstructive pulmonary disorder, obesity, and infectious disease. We will study the primary causes, risk factors, and biological mechanisms underlying such diseases, their impact on the lifestyle and lifespan of afflicted individuals, and what effective preventative or therapeutic treatment strategies are currently in use or emerging through exciting new research discoveries. Special topics will focus on new therapeutics and the lessons they can teach us about the inherent difficulties associated with pharmaceutical drug development today.

Credit 3 units.

Typical periods offered: Spring

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**CAPS-ISLA 4001 Capstone: Applied Skills Track**

The Capstone: Applied Skills Track is the culmination of students' knowledge and skills in the business field, emphasizing real-world application of core lessons to solve important problems or challenges in an industry or organization aligned with their career goals. Students will identify a complex issue within their chosen area, conduct research, design practical solutions, and develop strategic recommendations with potential industry impact. Through instructor-led guidance, students will build a comprehensive capstone project that incorporates critical thinking, problem-solving, and applied leadership and professional communication. Students will also enhance their presentation and professional writing skills and engage in industry-relevant discussions through professional development activities.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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## Humanities, BSIS

**The Bachelor of Science in Integrated Studies: Humanities** is designed for modern learners who want to build on their existent education by engaging with subjects across humanities disciplines. Learners acquire foundations for career development and lifelong learning, honing skills in writing, deep reading, communication, and critical thinking. By approaching subjects across disciplines, learners consider

and analyze issues using multiple lenses. They also learn to appreciate differences across cultures, in different areas of work and life, and among individuals. They deepen their understanding of problems, test new approaches to challenges, and learn to solve issues creatively.

This program can be completed entirely online.

|          |                                                                                                                                                                                                                                                                                         |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact: | CAPS                                                                                                                                                                                                                                                                                    |
| Phone:   | 314-935-6700                                                                                                                                                                                                                                                                            |
| Email:   | <a href="mailto:caps@wustl.edu">caps@wustl.edu</a>                                                                                                                                                                                                                                      |
| Website: | <a href="https://caps.washu.edu/programs/undergraduate-programs/bachelor-of-science-in-integrated-studies-degree-programs/bsis-in-humanities/">https://caps.washu.edu/programs/undergraduate-programs/bachelor-of-science-in-integrated-studies-degree-programs/bsis-in-humanities/</a> |

## Degree Requirements

All WashU Continuing & Professional Studies (CAPS) BSIS students must satisfy the same general-education requirements (p. 108).

Learners in BSIS programs must complete a certificate (p. 146), tailoring their degree to their educational and professional goals. In some cases, those with extensive work experience and/or a significant number of transfer credits may have the certificate requirement waived. Requests for waiving the certificate requirement are reviewed and approved by CAPS on a case-by-case basis.

Learners in BSIS programs must also complete a Community Engagement course. A designated CAPS course will fulfill this requirement.

## Required Courses: 27 units

Students choose 27 units from Humanities courses, including these disciplines:

- African and African-American Studies
- Art History and Archaeology
- Classics
- East Asian Languages and Cultures
- English Composition & Creative Writing\*
- English Literature
- French
- History
- Italian
- Philosophy
- Spanish
- Others with permission

\* Courses taken in this area must be at the 3000 level or above.



## Required Capstone: 3 units

Students must also complete a 3-unit capstone course in which they reflect on the integration of a topic across fields within the chosen concentration.

**Note:** At least 15 units in the program of study must be in upper-level (3000-level and higher) courses.

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. The CAPS cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

## Leadership and Management, BSIS

The **Bachelor of Science in Integrated Studies: Leadership and Management** combines the study of group and organizational cultures with a focus on how to develop and implement successful management strategies. Coursework provides a foundation in leadership studies, strategic planning, and finance. Students learn theories of leadership and team management while gaining essential, practical skills for successfully planning, implementing and evaluating strategies in various organizational settings.

The program prepares learners for leadership roles in business, governmental, and nonprofit organizations that need experts in organizational dynamics, including how to successfully engage with stakeholders and leverage internal and community resources.

This program can be completed entirely online.

Contact: CAPS  
Phone: 314-935-6700  
Email: [caps@wustl.edu](mailto:caps@wustl.edu)  
Website: <https://caps.washu.edu/programs/undergraduate-programs/bachelor-of-science-in-integrated-studies-degree-programs/bsis-in-leadership-management/>

## Degree Requirements

All WashU Continuing & Professional Studies (CAPS) BSIS students must satisfy the same general-education requirements (p. 108).

Learners in BSIS programs must complete a certificate (p. 146), tailoring their degree to their educational and professional goals. In some cases, those with extensive work experience and/or a significant number of transfer credits may have the certificate requirement waived. Requests for waiving the certificate requirement are reviewed and approved by CAPS on a case-by-case basis.

Students in BSIS programs must also complete a Community Engagement course. A designated CAPS course will fulfill this requirement.

## Required Courses: 18 units

| Code               | Title                                 | Units     |
|--------------------|---------------------------------------|-----------|
| CAPS-BUS 2210      | Marketing Concepts                    | 3         |
| CAPS-BUS 3020      | Leadership for Organizational Success | 3         |
| CAPS-BUS 3055      | Principles of Management              | 3         |
| CAPS-BUS 3130      | Business Finance                      | 3         |
| CAPS-BUS 3210      | Strategic Planning                    | 3         |
| CAPS-ISLA 4001     | Capstone: Applied Skills Track        | 3         |
| <b>Total Units</b> |                                       | <b>18</b> |

## Elective Courses: 12 units

Selections include the following:

| Code           | Title                                                | Units |
|----------------|------------------------------------------------------|-------|
| CAPS-BUS 2190  | Financial Accounting                                 | 3     |
| CAPS-BUS 3000  | Introduction to Supply Chain Management              | 3     |
| CAPS-BUS 3040  | Managing Organizational Risk                         | 3     |
| CAPS-BUS 3065  | Principles of Project Management                     | 3     |
| CAPS-BUS 3075  | Conflict Mitigation and Management in Organizations  | 3     |
| CAPS-BUS 3080  | International Management: Leadership Across Cultures | 3     |
| CAPS-BUS 3270  | International Trade and Globalization                | 3     |
| CAPS-COMM 3010 | Market Research and Communications Strategies        | 3     |

**Note:** Business-related programs at CAPS are not accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

## Courses

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### **CAPS-BUS 1020 Personal Finance**

In this course students will learn how to analyze and control their own financial affairs. They will acquire a better understanding of personal finances by developing and managing a financial plan, evaluating financial and investment options, and learning about research tools for financial planning. Upon completion of the course, students will be able to evaluate the risk/return relationship of different investments, determine the correct insurance coverage needed, evaluate when a taxable or tax deferred investment is appropriate, calculate retirement needs, and develop a savings plan and household budgeting system. Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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### **CAPS-BUS 1996 Business Elective - 1000 Level**

This course listing is to be used for transfer credit, only. Credit 1-6 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring Half B, Spring Half A, Spring, Spring Intersession, Fall Half B, Fall Half A, Fall

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### **CAPS-BUS 2020 Business Tools and Fundamentals**

This course provides a basic introduction to Finance, Operations, Information Technology, Marketing, Communications, Sales, and Human Resources. Primarily for liberal arts students who are considering careers in for profit, entrepreneurial, and nonprofit organizations, the course is an introduction to key strategic, technical, and professional skills that are valued and often required by employers. As we analyze business cases, we will learn how to read a spread sheet, prepare a short business plan, examine how a sales cycle works, and study the role of big data. Through analyzing business cases, we also look at current practices in marketing and communications, organizational analysis, and decision making. Credit 3 units.

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### **CAPS-BUS 2040 Managerial Decisions: Uses and Abuses of Data Analytics**

This course is designed to provide students and business professionals the vocabulary and key concepts needed to utilize data analytics and understand associated techniques for decision making. Topics include data wrangling, data visualization, assessment, modelling, and ethics associated with analytics. Students will learn to evaluate

and analyze data, understanding outcomes and limitations, in order to work effectively with data scientists who design and run studies. Through assignments and projects, students will be able to examine applications of data analytics from their current work or studies. Credit 3 units.

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### **CAPS-BUS 2100 Entrepreneurship**

This course will explore, at a practical and introductory level, the issues, concepts, and processes associated with entrepreneurship. The course is divided into three sections: the entrepreneurial environment; the required toolkit for entrepreneurs; and practical applications of entrepreneurial strategies and processes. The instructor, along with other experienced entrepreneurs, will teach the key stages of a new business venture, including developing and implementing a concept, growing and sustaining the business, and harvesting value to ensure the financial health of the enterprise. The course is ideal for students interested in starting a business, or for those who wish to apply concepts and practices of entrepreneurship to their current work.

Credit 3 units.

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### **CAPS-BUS 2120 Introduction to International Business**

Broad introduction to the field of international business: international trade, including the concept of comparative advantage; global strategies for multinational firms; foreign exchange; international financial markets and institutions; trends in economic integration; management and organizational issues. Prerequisite: U07 Econ 103. Credit 3 units.

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### **CAPS-BUS 2140 The Law of Business I**

Contracts and negotiable instruments: formation; rights of parties involved; effects of fraud, duress, illegality, undue influence; remedies; the law of note, check draft, bill of exchange, warehouse receipt, bill of lading.

Credit 3 units.

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### **CAPS-BUS 2190 Financial Accounting**

This course presents the study of financial and managerial applications of accounting--the language of business--for a more complete understanding of the composition of financial statements. Topics include the accounting cycle to management accounting, emphasizing the impact of accounting practices on the financial statements. Current accounting software is used as a tool for practical applications exposure.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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### **CAPS-BUS 2201 Supervisory Management / BJCE**

Leadership fundamentals in supervisory management: individual and group behavior, techniques for preventing and solving problems; handling complaints and grievances; communication; planning and building an organization. This is a BJCE course. Credit 3 units.

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### **CAPS-BUS 2210 Marketing Concepts**

This course explores the decision-making process associated with providing consumers with goods and services. Topics include an introduction to the field of marketing and its environment, market research, consumer behavior, product policy, branding, packaging, distribution, promotion, and pricing. Students also study how the Internet has changed each of these areas.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer



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**CAPS-BUS 2240 Introduction to Public Affairs**

This course examines the relationships between the public and influential institutions, especially different levels of government and media communication networks. Students also study how changes in communications and media, including the Internet, print, and social media, have influenced the field of public affairs. Related course topics include lobbying, publishing, and entertainment, their interface with political, economic, and social issues, and their influence on the work of public affairs professionals. We also will analyze how changes in the media impact international communication, and how these influence our understanding of other cultures, regions, and countries.

Credit 3 units.

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**CAPS-BUS 2241 Introduction to Project Management**

This course retired in favor of the 300-level version (as of SP20)

Credit 3 units.

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**CAPS-BUS 2250 Design Thinking: Human-Centered Approaches to Making the World**

This course provides an overview of approaches to design thinking: a process of identifying, creating, and implementing solutions. Through an experiential approach, students learn methods for understanding users' needs, synthesizing complex information, identifying directives for design, generating ideas, prototyping, and communicating solutions. Methodologies will reflect multiple areas, including design, engineering, business, and anthropology. The class operates collaboratively tackling a locally relevant problem, such as active transportation or waste management. Students also explore the role of this process in business, organizations promoting social change, and education through readings, case studies, lectures, guest speakers, discussion, and written exercises. No previous experience in design is required.

Credit 3 units.

Typical periods offered: Summer

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**CAPS-BUS 2996 Business Elective - 2000 Level**

This course listing is to be used for transfer credit, only.

Credit 1-6 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring Half B, Spring Half A, Fall Intersession, Spring, Spring Intersession, Fall Half B, Fall Half A, Fall

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**CAPS-BUS 2999 Independent Study**

Requires written permission from the coordinator in Business and the dean in University College.

Credit 3 units.

Typical periods offered: Fall

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**CAPS-BUS 3000 Introduction to Supply Chain Management**

This introductory course is designed to familiarize the student with the subject matter of procurement, forecasting, inventory management, enterprise resource planning, quality management, location selection, and supply chain integration and performance measurement. By the end of this course, students will have a foundation in SCM, and be prepared to determine if they want to pursue a career in SCM.

Credit 3 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall

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**CAPS-BUS 3020 Leadership for Organizational Success**

This course examines contemporary theories and principles of leadership, with an emphasis on application at all levels within the organization. Along with leadership models, we study examples of successful, creative organizations. The theories and practices we examine may be applied to a wide range of organizations, including business, nonprofit, information technology, health care, communications, and public affairs. The course content, which students apply to their own experience and workplace, draws from multiple disciplines.

Credit 3 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall

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**CAPS-BUS 3040 Managing Organizational Risk**

In this course, students will evaluate key risk management tools and frameworks to identify, assess, monitor, and manage responses to minimize and mitigate potential adverse impacts to an organization. Emphasis will be given to common types of risks, including market, cultural, operational, and political. Through the analysis and discussion of case studies, students will learn to apply important concepts and frameworks that will deepen their understanding of how to manage organizational risk in real-life scenarios. By the end of this course, students will gain the proper skills to manage common types of risk to the overall enterprise and will be able to provide direction on how to design and implement successful risk mitigation strategies.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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**CAPS-BUS 3055 Principles of Management**

This course combines a strong foundation in management principles with six core managerial competencies critical for success: self-management, strategic action, planning and administration, global awareness, teamwork, and communication. Students will study a number of well-known organizations to illustrate these managerial competencies. They also will explore how proactive managers respond to opportunities and challenges of global management and diversity, team-based management, service management, ethical issues, and contemporary trends in business. The course further offers self-assessment tools to help students understand and develop their own management potential for career success.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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**CAPS-BUS 3065 Principles of Project Management**

This course provides students with a foundation in project management centered on developing their skills and capabilities. Students will gain competencies in planning, controlling, scheduling, resource allocation, budgeting, and performance measurements, utilizing tools and techniques to manage challenges throughout the project life cycle. Students will also examine the roles of the project manager, project teams, and stakeholders in the development of the project scope, up to and until project closure. Students should be aware that this course involves a significant amount of group work. Collaboration and teamwork are essential to the learning experience in a project management course. Students should expect to engage in collaborative projects, discussions, and presentations, all of which will require active participation and effective communication with their peers.

Credit 3 units.

Typical periods offered: Summer 4, Summer 3, Spring, Summer 2, Fall, Summer

**CAPS-BUS 3075 Conflict Mitigation and Management in Organizations**

This course examines the nature, causes, and management of conflict within organizational contexts, emphasizing communication and managerial strategies for prevention and resolution. Students will explore how managers can identify conflict early, foster productive dialogue, and build systems that support collaboration and trust. Through practical case studies, discussions, and written analysis, learners will gain tools to mitigate destructive conflict, strengthen team relationships, and promote effective communication across all levels of an organization.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

**CAPS-BUS 3080 International Management: Leadership Across Cultures**

This course examines international business organizations and their managerial practices, with attention given to cultural differences, including leadership style, decision-making, negotiating, risk-taking, and training. Students also explore how cultural differences influence perceptions of corporate social responsibility, and the difference between ethical and corrupt managerial practices.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

**CAPS-BUS 3088 Social and Political Strategy for Global Business**

Given the ever-changing landscape of the global economy, business leaders are recognizing the need to address complex issues and make strategic decisions to fulfill short, medium, and long-term responsibilities to their shareholders and stakeholders alike. Managers need to integrate social, political, and legal strategies in conjunction with their market plans to succeed in today's business environment. This course provides an understanding of how non-market forces such as governmental regulations and policies, environmental issues, international trade policies, and the general public's preferences directly or indirectly affect a firm's productivity and overall performance. Students will learn how to launch and position products, enter new markets, and explore integrated strategies to analyze the marketplace and, ultimately, compete.

Credit 3 units.

**CAPS-BUS 3090 Introduction to Resilience**

Resilience signifies the capacity to adapt to changing conditions and to maintain or regain functionality and vitality in the face of disturbances whether natural (such as tornadoes, hurricanes, earthquakes) or manmade (such as civil unrest, economic downturn, aging infrastructure). This course will explore multiple aspects of resilience from social, environmental and infrastructure perspectives. Social resilience reinforces the role of communities in building resilience, environmental resilience examines the role of natural systems to serve as mentors for resilience, and infrastructure resilience looks at the role of built structures and systems in fostering resilience. We will examine common attributes that build resilience across different perspectives (social, environmental, infrastructure) and settings (e.g. city, neighborhood, building). Resilience and related course themes apply to a wide range of disciplines and experiences - environmental studies, history, urban planning, business, political science, design, to name a few - and students will be guided to apply course skills and strategies to their own interests and goals.

Credit 3 units.

**CAPS-BUS 3130 Business Finance**

This course is designed to survey the corporate finance discipline, examine the financial management of corporations and help students develop the skills needed to make decisions about financing, investments and dividends. Students also will be introduced to money, capital markets and institutions.

Credit 3 units.

Typical periods offered: Fall, Spring

**CAPS-BUS 3191 Advertising**

This is an introduction to advertising, including economic, social, and marketing factors influencing advertising objectives and strategies. Students analyze advertising messages and design, and examine mass media systems as vehicles for advertising. We also focus on planning, buying, and scheduling of advertising media. Prerequisite: U48-210 or 211 or permission of instructor and junior standing. Recommended for the Liberal Arts and Business (LAB) and the Business Communication Certificates.

Credit 3 units.

**CAPS-BUS 3199 Integrated Studies Capstone: A&S Professional Track**

Credit 3 units.

**CAPS-BUS 3210 Strategic Planning**

All successful businesses have a strategy--this course will teach students how to create one. Whether one is a student who wants to understand how business works, an entrepreneur developing a business, or an experienced manager who would like to implement practical approaches to strategic planning and critical thinking, this course will help on that journey. Leading-edge strategic planning tools and templates will help learners tackle the tough issues of today and the future. The course will emphasize how to create, implement, and manage successful change within organizations. Using case studies and examples from industry leaders, students will build critical thinking skills and use fundamental principles and tools that relate to successful strategic planning and decision making. They will develop written and oral presentation skills in the context of strategic planning; understand how to motivate the organization; and design and receive feedback on a draft strategic plan that can fit almost any situation.

Credit 3 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall

**CAPS-BUS 3250 History of American Business, Management, and Technology**

This course is designed to introduce students to the study of the sociocultural aspects and elements in American Business, Management and Technology. Its primary focus and emphasis, therefore, is directed to understanding how the sociocultural elements and aspects of American business, management and technology have developed and evolved over time. This course will also examine how business and management have helped to influence and shape how American Society and Culture have developed and been influenced by these evolutions in business and management.

Credit 3 units. UColl: HSM, HUS

**CAPS-BUS 3270 International Trade and Globalization**

This course will explore globalization in the context of international trade and cross-border investments. Course topics include: forces driving globalization; economic consequences; trends in international trade and investment; effects of protectionism; government's



role in world trade; international institutions such as World Trade Organization, European Union, and International Monetary Fund. In each of these areas students will consider how current global events and questions impact the international business environment.

Credit 3 units. UColl: CD

Typical periods offered: Fall, Summer 3, Spring

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### **CAPS-BUS 3280 Regional Economics & Geographical Information Systems (GIS)**

Classical Theories of economics are the foundation of today's regional thinking and they are the starting point of this course. Modern information technology in the form of Geographic Information Systems, Global Positioning Systems and mobile computing have combined to empower traditional theories with a penetrating pretence in application to contemporary public and private sector issues. New case study material and hands on learning practice sets drawn from spatial situations in logistics management, infrastructure design, operation and maintenance, Utilities and energy management, operations, and maintenance, resource allocation and optimization, transportation, disaster avoidance, management, and recovery, and marketing and distribution provide customized learning examples. Prerequisite: U07 Econ 1011 (or similar introduction to microeconomic principles).

Credit 3 units.

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### **CAPS-BUS 3300 The Business of Communications**

This course presents the business side of journalism and media organizations, from publication and creation of content to day-to-day operations. Students will study business practices and procedures of all types of media organizations, with emphasis on sales and marketing, product distribution, production, and audience identification and engagement. We also will learn to develop publications and products which speak to readers and viewers.

Credit 3 units.

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### **CAPS-BUS 3302 Topics: Convergence of Government and Business: Cortex V. NGA Course**

Credit 3 units. UColl: PSA, PST

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### **CAPS-BUS 3310 Global Regional Economies: Economic Integration**

This course examines the theory of global regional economies and the purpose and practices of integrating a geographic group of countries' economies into a common economic system of trade in goods and services, data, and mobility of people and capital. A common economy is intended to broaden and improve opportunities for the vast majority of people of a region by increasing productivity through the more efficient use of scarce resources. However, integration to a common economic system must be accomplished in the context of the social, environmental, political, and cultural changes that will occur, and these must be addressed. Analysis of implementation, practices, policies, and progress as well as comparison of various regionally integrated economies are achieved through the research of performance data.

Credit 3 units.

Typical periods offered: Fall

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### **CAPS-BUS 3993 Internship in Business**

The Business Internship course provides students with supervised, experiential learning opportunities in professional business settings. Students will apply business, management, or leadership related concepts, develop career-ready skills, and explore potential career paths within the business field. Students may earn up to six internship credits toward their degree; therefore, the course may be taken a maximum of two times. As a culminating assignment, students

complete a reflective paper connecting their internship experiences to academic and professional development goals. Before enrolling, students must consult with their Student Navigator to review eligibility requirements, internship plans, and credit options.

Credit 1-6 units.

Typical periods offered: Summer

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### **CAPS-BUS 3996 Business Elective - 3000 Level**

This course listing is to be used for transfer credit, only.

Credit 1-6 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring Half B, Spring Half A, Spring, Spring Intersession, Fall Half B, Fall Half A, Fall

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### **CAPS-BUS 3999 Independent Study in Business**

Requires instructor and program coordinator/director permission.

Credit 3 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer Half B, Summer Half A, Summer, Spring, Spring Intersession, Fall Half B, Fall Half A, Fall

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### **CAPS-BUS 4000 Internship**

Credit 3 units.

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### **CAPS-BUS 4142 Community Development and Environmental Preservation Through Entrepreneurial Collaboration II**

A continuation of the on-campus Community Development & Environmental Preservation through Entrepreneurial Collaboration, which is offered in the spring, this field course takes place in Madagascar. Selected students will work in teams to refine and implement the plans developed in the on-campus course, communicate with community members to ensure sustainability, and measure the outcomes of previous projects. Teams will work with the Missouri Botanical Garden (MBG) Community-Based Conservation Program, Malagasy partners, NGOs, and members of specific rural subsistence communities. Students prepare reports for use by MBG, their partners, and future student groups, keep field notes, and develop a poster presentation. Enrollment is limited, and interested students are required to apply in late February. Those accepted must register by late March. Pre-requisite: Community Development & Environmental Preservation through Entrepreneurial Collaboration.

Credit 3 units.

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### **CAPS-BUS 4996 Business Elective - 4000 Level**

This course listing is to be used for transfer credit, only.

Credit 1-6 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring Half B, Spring Half A, Spring, Spring Intersession, Fall Half B, Fall Half A, Fall

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### **CAPS-SUST 2010 Foundations and Practice of Sustainability**

This interdisciplinary course serves as an introduction to sustainability concepts, sustainability practice, and systems thinking. Students in this course will develop and articulate a common understanding of foundational sustainability concepts, including definitions, global challenges, human impacts, and approaches to sustainability solutions. Students will also start to understand and develop the competencies (knowledge, skills, attitudes) needed for success as a sustainability advocate or practitioner in professional settings, including systems thinking, strategic planning, group collaboration, and communicating the case for sustainability to various and specific audiences.

Credit 3 units.

Typical periods offered: Fall

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**CAPS-COMM 3010 Market Research and Communications Strategies**

This course provides an overview of market research techniques with an emphasis on planning for communications campaigns. The course provides a hands-on look at several popular market research techniques used in supporting communications, such as focus groups and phone surveys. No previous knowledge of statistics is necessary. Recent case studies are used to illustrate how research results have influenced communications campaigns.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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**CAPS-ISLA 4001 Capstone: Applied Skills Track**

The Capstone: Applied Skills Track is the culmination of students' knowledge and skills in the business field, emphasizing real-world application of core lessons to solve important problems or challenges in an industry or organization aligned with their career goals. Students will identify a complex issue within their chosen area, conduct research, design practical solutions, and develop strategic recommendations with potential industry impact. Through instructor-led guidance, students will build a comprehensive capstone project that incorporates critical thinking, problem-solving, and applied leadership and professional communication. Students will also enhance their presentation and professional writing skills and engage in industry-relevant discussions through professional development activities.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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## Social Sciences, BSIS

The **Bachelor of Science in Integrated Studies: Social Sciences** is designed for modern learners who want to build on their existent education by engaging with subjects across Social Sciences disciplines. Learners acquire foundations for career development and lifelong learning, honing skills in writing, deep reading, research, and critical thinking. When approaching subjects across disciplines, learners consider and analyze issues using multiple lenses.

Students learn to appreciate differences across cultures, in areas of work and life, and among individuals. They deepen their understanding of problems, test new approaches to challenges, and learn to solve issues creatively.

This program can be completed entirely online.

|          |                                                                                                                                                                                                                                                                                                   |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact: | CAPS                                                                                                                                                                                                                                                                                              |
| Phone:   | 314-935-6700                                                                                                                                                                                                                                                                                      |
| Email:   | <a href="mailto:caps@wustl.edu">caps@wustl.edu</a>                                                                                                                                                                                                                                                |
| Website: | <a href="https://caps.washu.edu/programs/undergraduate-programs/bachelor-of-science-in-integrated-studies-degree-programs/bsis-in-social-sciences/">https://caps.washu.edu/programs/undergraduate-programs/bachelor-of-science-in-integrated-studies-degree-programs/bsis-in-social-sciences/</a> |

## Degree Requirements

All WashU Continuing & Professional Studies (CAPS) BSIS students must satisfy the same general-education requirements (p. 108).

Learners in BSIS programs must complete a certificate (p. 146), tailoring their degree to their educational and professional goals. In some cases, those with extensive work experience and/or a significant number of transfer credits may have the certificate requirement waived. Requests for waiving the certificate requirement are reviewed and approved by CAPS on a case-by-case basis.

Learners in BSIS programs must also complete a Community Engagement course. A designated CAPS course will fulfill this requirement.

**Total units required:** 30 (27 units plus a 3-unit capstone)

## Required Courses: 27 units

Choose 27 units from Social Sciences courses, including these disciplines:

- Anthropology
- Economics
- Political Science
- Psychology
- Sociology
- Women, Gender, and Sexuality Studies

## Required Capstone: 3 units

Learners must also complete a 3-unit capstone course in which they reflect on the integration of a topic across fields within the chosen concentration.

**Note:** At least 15 units in the program of study must be in upper-level (3000-level and higher) courses.

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*



## Strategic Communications, BSIS

The **Bachelor of Science in Integrated Studies: Strategic Communications** bridges the study of human communication with how to effectively develop and deliver content for individual brands and organizations. Coursework provides a foundation in oral and speech communication, organizational culture, media relations, and message design. Students learn concepts in communication while gaining essential, practical skills for designing, implementing, and managing business communications programs for a range of corporate, agency, and nonprofit organizations.

This program prepares learners for careers in government, business, and media organizations that need experts who understand communications strategies and who can translate business objectives into media messaging, manage in-house resources, and direct external teams of communications professionals.

This program can be completed entirely online.

Contact: CAPS  
Phone: 314-935-6700  
Email: [caps@wustl.edu](mailto:caps@wustl.edu)  
Website: <https://caps.washu.edu/programs/undergraduate-programs/bachelor-of-science-in-integrated-studies-degree-programs/bsis-in-strategic-communications/>

### Degree Requirements

All WashU Continuing & Professional Studies (CAPS) BSIS students must satisfy the same general-education requirements (p. 108).

Learners in BSIS programs must complete a certificate (p. 146), tailoring their degree to their educational and professional goals. In some cases, those with extensive work experience and/or a significant number of transfer credits may have the certificate requirement waived. Requests for waiving the certificate requirement are reviewed and approved by CAPS on a case-by-case basis.

Learners in BSIS programs must also complete a Community Engagement course. A designated CAPS course will fulfill this requirement.

### Required Courses: 18 units

| Code               | Title                               | Units     |
|--------------------|-------------------------------------|-----------|
| CAPS-COMM 2000     | Foundations of Communications       | 3         |
| CAPS-COMM 2010     | Writing for Business Communication  | 3         |
| CAPS-COMM 2017     | Oral Communication                  | 3         |
| CAPS-COMM 2230     | Integrated Strategic Communications | 3         |
| CAPS-COMM 3031     | Organizational Communication        | 3         |
| CAPS-ISLA 4001     | Capstone: Applied Skills Track      | 3         |
| <b>Total Units</b> |                                     | <b>18</b> |

### Elective Courses: 12 units

Selections include the following:

| Code           | Title                                               | Units |
|----------------|-----------------------------------------------------|-------|
| CAPS-BUS 3075  | Conflict Mitigation and Management in Organizations | 3     |
| CAPS-COMM 3010 | Market Research and Communications Strategies       | 3     |
| CAPS-COMM 3440 | Public Relations Principles and Practices           | 3     |
| CAPS-COMM 3630 | Crisis Communications                               | 3     |
| CAPS-COMM 3650 | Communications Technology and New Media             | 3     |
| CAPS-COMM 3710 | Digital Communications Analytics                    | 3     |
| CAPS-COMM 4161 | Communications Ethics and the Law                   | 3     |
| CAPS-JRN 3450  | Effective Editing                                   | 3     |

**Note:** At least 15 units in the program of study must be in upper-level (3000-level and higher) courses.

*This program is offered fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

### Courses

**CAPS-COMM 1120 Protect Yourself: Personal Digital Security**

Everyone uses computers, smartphones, & the internet, but most don't know much about securing their devices, personal data, or even identities. There's a lot to worry about--viruses, phishing, surveillance, tracking, & much more--but what should really concern individuals? How can one tell if they or their devices are vulnerable? Are there safeguards out there? This course, meant for the average technology user, will answer these questions. Topics covered include passwords, spyware, messaging & email, encryption, testing for vulnerabilities, HTTPS, and backup.

Credit 1 unit.

Typical periods offered: Summer 3

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**CAPS-COMM 1996 Communications Elective - 1000 Level**

This course listing is to be used for transfer credit, only.

Credit 1-6 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring Half B, Spring Half A, Spring, Spring Intersession, Fall Half B, Fall Half A, Fall

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**CAPS-COMM 2000 Foundations of Communications**

Foundations of Communication is designed to help students be more effective communicators by examining the principles and contexts of human communication. It introduces fundamental elements (including self-awareness, perception, listening and responding, and verbal and nonverbal messages) and models of communication, basic communication theory, interpersonal communication, small group communication, and public speaking, with an emphasis on a practical application at each level. Students will learn the skills and techniques essential to effective communication and will be expected to demonstrate those in each communication context throughout the semester.

Credit 3 units.

Typical periods offered: Spring

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**CAPS-COMM 2010 Writing for Business Communication**

Effective and appropriate written communication skills are a distinct advantage to any employee and an essential requirement for today's manager. In this course we will take a creative and active approach to increasing your knowledge of communications principles and formats as well as your ability to express yourself in a variety of written forms, including memos, proposals, presentations and reports. Communications strategy, and the importance of how the message, medium and an understanding of the audience all relate to affect communications outcomes, will also be reviewed.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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**CAPS-COMM 2016 Search Engine Optimization Strategies**

The greatest tool for discovery today is the search bar. More than 80 percent of people search online for products and services, but from a marketing perspective, how do you ensure your website result will be shown to them? It is imperative to consider search engine optimization for any digital campaign you embark upon, and SEO work is best learned by doing. Through this course, we aim to deconstruct and demystify how search engines work and what brands, organizations and individuals can do to improve their own search engine standing. Specifically, we will focus on understanding the algorithms that power search engines; how keyword strategies can be researched and constructed; the elements of strong SEO performance; and how to devise and measure tactics that improve a site's overall ranking.

Credit 1 unit.

Typical periods offered: Summer

**CAPS-COMM 2017 Oral Communication**

Oral Communication is an introductory course that bridges the most prominent areas in the study of interpersonal and speech communication, including effective one-to-one, small and large group, intercultural, relational, organizational and professional, and public speaking. It will emphasize theoretical/conceptual approaches as well as skill development and the application of oral and speech communication tactics to various communication settings and contexts. Students will explore and apply effective communication strategies that incorporate elements in persuasion, mindful listening, cultural awareness, and group management and leadership.

Credit 3 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall

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**CAPS-COMM 2090 Website Design and Development**

This course covers Web site development using the three methods that have been used since Web design first began: hand-coding HTML using a text editor; building Web pages using a WYSIWYG editor like Dreamweaver; and using the most modern method, a Content Management System that separates design from content while making it easy for non-technical users to update a site. We will cover design principles, Cascading Style Sheets, server-side vs. client-side technologies, Web browsers, and Web servers. We will conclude the course with a brief overview of the future of Web development: XHTML and XML.

Credit 3 units.

Typical periods offered: Fall, Spring

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**CAPS-COMM 2210 Marketing Communications**

An introduction to advertising, public relations, and promotions and how they influence communications, journalism, and mass media. Students explore each of the three sisters of marketing and how they are used to build integrated marketing programs. Specific tools, including special events, direct mail, sponsorship, and press materials, will be discussed. In addition, the class will examine current and memorable marketing campaigns, view new technologies, and learn techniques and trends from professionals in the marketing field.

Credit 3 units.

Typical periods offered: Summer

---

**CAPS-COMM 2230 Integrated Strategic Communications**

Strategic communication programs enable organizations to accomplish business goals by building and maintaining trusted relationships with their most important communities. A strategic communication plan includes clear and measurable objectives, is based on positioning that clearly differentiates the organization, and takes advantage of appropriate and effective tactics. This course provides an overview of all aspects of strategic communication and how they relate to each other in corporate, agency and not-for-profit environments. It covers the critical concepts needed to manage diverse communication disciplines - including marketing, branding, advertising, public relations, promotions, graphic design, traditional and new media. This course provides the foundation in theory and practice required by today's business executives and professional communicators to create and manage successful programs, using all available strategic communication techniques.

Credit 3 units. UColl: SSC

Typical periods offered: Summer 3, Spring, Fall, Summer



## **CAPS-COMM 2250 Fundamentals of Public Affairs: Messaging Strategies, Public Policy and Advocacy**

This course examines the relationships between the public and influential institutions, especially different levels of government and media communication networks. Students also study how changes in communications and media, including the Internet, print, and social media, have influenced the field of public affairs. Related course topics include lobbying, publishing, and entertainment, their interface with political, economic, and social issues, and their influence on the work of public affairs professionals. We also will analyze how changes in the media impact international communication, and how these influence our understanding of other cultures, regions, and countries.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

## **CAPS-COMM 2996 Communications Elective - 2000 Level**

This course listing is to be used for transfer credit, only.

Credit 1-6 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring Half B, Spring Half A, Spring, Spring Intersession, Fall Half B, Fall Half A, Fall

## **CAPS-COMM 3008 Website Design: Principles and Practice**

The Web is its own design medium, and it requires a specific set of skills. This hands-on course teaches students the concepts, issues, and skills needed to design attractive, usable, and accessible websites that work across a wide range of devices. Bringing together graphic design and code, topics will include design principles, color, typography, layout, and multimedia. Graphic design tools will be introduced and explained.

Credit 3 units.

Typical periods offered: Fall, Spring

## **CAPS-COMM 3010 Market Research and Communications Strategies**

This course provides an overview of market research techniques with an emphasis on planning for communications campaigns. The course provides a hands-on look at several popular market research techniques used in supporting communications, such as focus groups and phone surveys. No previous knowledge of statistics is necessary. Recent case studies are used to illustrate how research results have influenced communications campaigns.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

## **CAPS-COMM 3020 Digital Paid Media**

In this course, students will receive an introduction to digital paid media. Students will learn about the various ad networks and platforms that help reach consumers online. Digital paid media includes search engine marketing, social media ads, display, mobile, and video ads. This course delves into best-practice approaches to planning and measuring digital paid media campaigns, as well as how to leverage complex algorithms.

Credit 1 unit.

Typical periods offered: Summer 4, Summer 3, Summer 2

## **CAPS-COMM 3031 Organizational Communication**

Organizational Communication provides an overview of communication dynamics within and between organizations. Students will analyze these processes using various analytical frameworks, concepts, theories, and methods aimed at both examining and improving organizational communication strategies. Emphasis will be

given to contemporary issues and challenges facing communication professionals and organizations at large. This course's guiding principle is to teach students how to lead their organizations in gaining a competitive advantage in a strategic communications context.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

## **CAPS-COMM 3050 Social Media for Public Relations**

This class introduces students to the various ways social media may be used in the practice of public relations and marketing. We use the traditional steps of research, strategy, and measurement and apply them to online campaigns. We learn about various emerging social media technologies--including blogs, wikis, Facebook, Twitter, and LinkedIn--and how they have changed the world of PR and marketing.

Credit 1 unit.

Typical periods offered: Summer

## **CAPS-COMM 3060 Making the Cut: Editing Digital Video**

This course introduces students to video editing: reducing hours of recorded video to compelling moments and creatively weaving together the best parts to attract and hold viewers. Students will use supplied video material to learn how to guide the viewer's attention, build suspense, and inform the audience. We will also learn tricks to fix common mistakes made in the field and explore higher-level production methods (e.g., color correction, picture-in-a-picture technique) to achieve a professional look. By the end of the course, students will be proficient in making simple edits to create the equivalent of a basic short narrated video package or promotional video. Students will also learn to improve their videography skills by seeing what works in the editing suite.

Credit 3 units.

Typical periods offered: Fall, Spring

## **CAPS-COMM 3110 Advanced Web Site Design and Development**

This course focuses on one of the most important parts of Web development: Cascading Style Sheets (CSS), which allow developers to set the formatting and positioning of content in webpages. We will cover topics such as CSS selectors, media-specific styles, animation, navigation, layouts with Flexbox and Grid, lightboxes, and we'll take an in-depth look Responsive Web Design via Bootstrap and other frameworks.

Credit 3 units.

Typical periods offered: Spring

## **CAPS-COMM 3440 Public Relations Principles and Practices**

This course provides an overview of public relations and its social media and online components. We will consider theoretical and practical applications of communications with various publics: media, employees, consumers, the community, and shareholders.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

## **CAPS-COMM 3452 Effective Editing**

Today's communicators don't just write, they also must edit their work for posting on a website or publishing in print. Learn about editing, including the basics of professional-grade grammar, punctuation and style usage. Most editing today involves not just copyediting, however. Communicators must know how to spot sexist and racist language, poor organization and imprecise sentences. This class will help you edit others' work, and, most importantly, your own.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

**CAPS-COMM 3630 Crisis Communications**

Both profit and nonprofit organizations are increasingly embroiled in controversies and crises. Consequently, demands are growing for public relations practitioners to help restore an organization's good name and reputation, along with its financial stability. In learning to construct, implement and evaluate a crisis communication plan, students will research and analyze an organizational crisis, identify the communication demands of various audiences affected by a crisis, and develop strategies and communication tools for managing a crisis.

Credit 3 units.

Typical periods offered: Spring

**CAPS-COMM 3650 Communications Technology and New Media**

This course explores concepts, production, design, publications, strategies and practical applications of interactive media. The course focuses on emerging topics and technologies to help students develop strategies for addressing and resolving both basic and complex issues associated with interactive media. Case studies will be introduced to examine a range of interactive media topics including photography, blogging, videography, ethics and social media marketing.

Credit 3 units.

Typical periods offered: Fall, Summer 3

**CAPS-COMM 3680 The Business of Communications**

This course presents the business side of journalism and media organizations, from publication and creation of content to day-to-day operations. Students will study business practices and procedures of all types of media organizations, with emphasis on sales and marketing, product distribution, production, and audience identification and engagement. We also will learn to develop publications and products which speak to readers and viewers.

Credit 3 units.

Typical periods offered: Fall

**CAPS-COMM 3710 Digital Communications Analytics**

For the last quarter century, organizations, companies and brands have entered into an increasingly evolving world of digital communications, offering unbridled opportunities to reach and engage their key stakeholder audiences. This course delves deep into how to uncover and utilize data analytics and their related insights to better understand, plan and optimize communications within digital channels and platforms. It goes into detail on how the digital ecosystem has evolved and is still evolving due to technological advances, regulatory actions, and other cultural impacts. It explores how to use digital data to better understand audiences and their behavior as well as for specific marketing and communications objectives, such as launching a new product and planning for a crisis.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

**CAPS-COMM 3993 Internship in Communications**

The Communications Internship course provides students with supervised, experiential learning opportunities in media, marketing, strategic, or organizational communication settings. Students will apply communication theories, concepts, and strategies, develop career-ready skills, and explore potential career paths within the media/communications field. Students may earn up to six internship credits toward their degree; therefore, the course may be taken a maximum of two times. As a culminating assignment, students complete a reflective paper connecting their internship experiences to academic and professional development goals. Before enrolling, students must consult with their Student Navigator to review eligibility requirements, internship plans, and credit options.

Credit 1-6 units.

Typical periods offered: Summer 3, Summer, Fall Intercession, Spring, Summer Intercession, Spring Intercession, Fall

**CAPS-COMM 3996 Communications Elective - 3000 Level**

This course listing is to be used for transfer credit, only.

Credit 1-6 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring Half B, Spring Half A, Spring, Spring Intercession, Fall Half B, Fall Half A, Fall

**CAPS-COMM 3999 Independent Study in Communications**

Instructor and CAPS approval required.

Credit 1-4 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

**CAPS-COMM 4050 Topics in Public Relations**

An advanced-level examination of public relations functions through studies in special subjects related to the field. A major research paper or project is required. For information about current offerings, consult the Course Schedule.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

**CAPS-COMM 4161 Communications Ethics and the Law**

In this course, we will analyze principles that influence ethical judgment in the newsroom, the public relations firm, and the broader communications business. We will look at historical foundations of ethical thought in communications, study laws governing mass communications, and examine tools and strategies for ethical judgment in the field. We will also consider how one's personal ethical framework influences judgment, and we will use case studies to analyze ethical questions associated with social responsibility, commercial speech vs. political speech, and censorship.

Credit 3 units. UColl: ML

Typical periods offered: Spring

**CAPS-COMM 4994 Internship in Public Relations and Advertising**

Requires CAPS permission

Credit 3 units.

Typical periods offered: Fall, Spring, Summer

**CAPS-COMM 4999 Independent Study in Communications**

Requires CAPS permission

Credit 3 units.

Typical periods offered: Fall Intercession, Summer 3, Spring, Summer Intercession, Spring Intercession, Fall

**CAPS-JRN 3450 Effective Editing**

Today's communicators don't just write, they also must edit their work for posting on a website or publishing in print. Learn about editing, including the basics of professional-grade grammar, punctuation and style usage. Most editing today involves not just copyediting, however. Communicators must know how to spot sexist and racist language, poor organization and imprecise sentences. This class will help you edit others' work, and, most importantly, your own.

Credit 3 units.

Typical periods offered: Fall, Summer 3



## CAPS-ISLA 4001 Capstone: Applied Skills Track

The Capstone: Applied Skills Track is the culmination of students' knowledge and skills in the business field, emphasizing real-world application of core lessons to solve important problems or challenges in an industry or organization aligned with their career goals. Students will identify a complex issue within their chosen area, conduct research, design practical solutions, and develop strategic recommendations with potential industry impact. Through instructor-led guidance, students will build a comprehensive capstone project that incorporates critical thinking, problem-solving, and applied leadership and professional communication. Students will also enhance their presentation and professional writing skills and engage in industry-relevant discussions through professional development activities.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

# Associate in Arts Degrees

The **Associate in Arts (AA)** degree provides a framework for understanding the disciplines and skills of a liberal arts degree, a foundation for further study at the bachelor's degree level, and an initial academic credential that may be required for career advancement. The degree is awarded to learners who successfully complete the equivalent of two years of undergraduate study. This program is offered either fully or mostly online (learners interested in the Natural Sciences and Mathematics concentration may need to take some courses on campus).

The courses completed for the degree count toward all Bachelor of Science in Integrated Studies degree programs at WashU Continuing & Professional Studies (CAPS).

Learners preparing for a career in nursing are encouraged to enroll in an AA Degree in Pre-Nursing (p. 142). These students fulfill the same general education requirements as learners in the regular AA degree program, but the program includes some preselected Health and Biology courses.

**New in Fall 2026!** WashU CAPS is pleased to offer the Direct Admit Nursing Career Pathway in partnership with Barnes-Jewish College Goldfarb School of Nursing. For information about this program, please visit our AA Degree in Pre-Nursing page.

**Note:** Associate in Arts degree programs are open only to WashU employees and partner program students. For general admissions information, visit the Undergraduate WashU Continuing & Professional Studies Bulletin page. (p. 106)

WashU Continuing & Professional Studies (CAPS) offers the Associate in Arts degree with concentrations in the following areas. Courses are selected from multiple departments within those areas rather than in a single department:

- *Natural Sciences and Mathematics:* Mathematics, Biology, Chemistry, Physics, Earth and Planetary Sciences, others with authorization
- *Social Sciences:* Anthropology; Economics; Political Science; Psychology; Sociology; Women, Gender, and Sexuality Studies; others with authorization
- *Humanities:* Classics, History, Literature, Philosophy, Religious Studies, Art History and Archaeology, others with authorization
- *Professional Studies:* Business\*, Communications, Health Care, Clinical Research Management, GIS, Data Studies, others with authorization\*\*

\* Business-related programs at CAPS are not accredited by the Association to Advance Collegiate Schools of Business (AACSB International) at WashU.

\*\*Business and Forensic Psychology certificates could be used to complete the majority of the Professional Studies area (15/18 units).

## Admission

All those seeking admission must complete the admissions application online on the CAPS website and submit a non-refundable \$50 application fee. To be considered for admission, all application materials must be received by the posted deadline. For a full list of application requirements, please visit the Undergraduate Application Deadlines & Admissions Requirements page of the CAPS website. If an applicant does not meet the criteria for admission, they should connect with a CAPS representative to discuss their options for entry. Submitted applications for admission are good for up to one full year from the original term of application (for a total of three terms, including the original term of application). Applicants wishing to be considered for admission for a term that is after the one-year mark must submit a new application and the non-refundable \$50 application fee. Updated application materials may be requested at any point after the original semester of application. Applicants should connect with a CAPS representative for more information about deadlines and procedures.

The minimum requirements to be considered for admission to an associate of arts degree are as follows:

- The applicant must be a WashU employee or part of an approved partner program. Please contact a CAPS representative for more information about qualifying partner programs.
- The applicant must have a minimum cumulative GPA of at least 2.7 in all prior coursework (this minimum may be higher for specific programs).
- There are minimum requirements regarding transferable academic credits for associate's degrees that vary by program. Applicants should connect with a CAPS representative for more information about those requirements.

The AA admissions requirements listed above apply to the traditional CAPS AA program. Certain partnership programs may carry different requirements; those details will be included on the relevant program pages.

Contact: CAPS  
Phone: 314-935-6700  
Email: caps@wustl.edu  
Website: <http://caps.wustl.edu/programs/undergraduate/associate-arts>

- Natural Sciences and Mathematics
- Social Sciences
- Humanities

## Degree Requirements

- AA Degree (p. 142)
- AA Degrees in Pre-Nursing (p. 142)

# Associate in Arts Degree

The Associate in Arts degree is open only to WashU employees and partner program students.

To receive an Associate in Arts degree from WashU Continuing & Professional Studies (CAPS), learners must be admitted to degree candidacy; complete a minimum of 60 units of college-level work with a cumulative grade point average of 2.0 or higher; and satisfy specific writing, course distribution, and residency requirements. In addition, they must complete a 18-unit concentration with grades of C– or better in all courses. No more than 24 units may be transferred to the degree. The final 36 units of the degree program must be completed at Washington University. The courses completed for the Associate in Arts degree count toward all Bachelor of Science degree programs in CAPS.

## General Education Requirements\*

### Basic Requirements: 15 units

| Code                                 | Title                           | Units     |
|--------------------------------------|---------------------------------|-----------|
| CAPS-ECOMP 1110                      | Analytical Writing              | 3         |
| CAPS-ECOMP 2020                      | Critical and Researched Writing | 3         |
| One course in cultural diversity     |                                 | 3         |
| One course in moral reasoning        |                                 | 3         |
| One course in numerical applications |                                 | 3         |
| <b>Total Units</b>                   |                                 | <b>15</b> |

### Distribution Requirements: 18 units

Learners must complete 6 units in each distribution area noted below. Each distribution area must include coursework from at least two subjects. (Courses that satisfy the numerical applications, moral reasoning, and cultural diversity Basic Requirements may also count toward the Distribution Requirements.)

## Concentration Requirements: 18 units

- *Natural Sciences and Mathematics*: Mathematics; Biology; Chemistry; Physics; Earth, Environmental, and Planetary Sciences; others with authorization
- *Social Sciences* (online option available): Anthropology; Economics; Political Science; Psychology; Sociology; Women, Gender, and Sexuality Studies; others with authorization
- *Humanities* (online option available): Classics; History; Literature; Philosophy; Religious Studies; Art History and Archaeology; others with authorization
- *Professional Studies* (online option available): Business; Clinical Research Management; Communications; Geographic Information Systems (GIS); Health Care; Data Studies; others with authorization

## Electives: 9 units

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

\* These requirements are effective as of summer 2025. Students admitted to CAPS programs prior to summer 2025 are expected to fulfill the requirements in place at the time of their admission.

# Associate in Arts Degrees in Pre-Nursing

WashU Continuing & Professional Studies (CAPS) offers two different **Associate in Arts (AA)** programs for pre-nursing students:



- The original **Associate in Arts (AA) in Pre-Nursing** is for modern learners who wish to earn an AA and potentially to continue on to a Bachelor of Science in Nursing program at any of the schools that offer that program. (The top half of this page shares details about this AA.)
- As of Fall 2026, CAPS also offers high school graduates a second option: completing an **Associate in Arts: Direct Admit Nursing Career Pathway**, a joint program offered by CAPS in partnership with the Barnes-Jewish College Goldfarb School of Nursing. (Scroll to the second half of this page for details about this program).

## Associate in Arts in Pre-Nursing

The **Associate in Arts (AA) in Pre-Nursing** provides the opportunity for modern learners to complete the prerequisites required to continue on to a Bachelor of Science in Nursing (BSN) program while earning an associate's degree. The pre-nursing curriculum provides learners with an ideal foundation for their professional studies: strong communication skills, practical analytical and problem-solving abilities, an appreciation for complex ethical questions, and an introduction to human sciences. Individuals who complete this course sequence will be well equipped to continue on to a variety of clinical nursing (BSN) programs. Applicants should consult the requirements of the BSN program they wish to attend to ensure that any specific requirements are met. The AA in Pre-Nursing requires at least 6 units of transferable credit for admission, and it is only available to WashU employees or members of our partner programs. This program is offered either fully or mostly online.

The courses completed for the Associate in Arts Degree in Pre-Nursing will count toward all Bachelor of Science in Integrated Studies degree programs at CAPS should pre-nursing students opt to continue their studies at CAPS.

Learners interested in completing only the prerequisites for nursing schools without earning the AA should apply to our Pre-Nursing Program.

**Note:** Learners in the AA in Pre-Nursing program fulfill the same general education requirements as students in the AA degree program but must complete certain preselected courses.

## Basic Requirements: 15 units

| Code                                                     | Title                           | Units     |
|----------------------------------------------------------|---------------------------------|-----------|
| CAPS-ECOMP 1110                                          | Analytical Writing              | 3         |
| CAPS-ECOMP 2020                                          | Critical and Researched Writing | 3         |
| CAPS-MATH 1012                                           | Introduction to Statistics      | 3         |
| or CAPS-MATH 2000                                        | Applied Statistics              |           |
| One course that carries the Moral Reasoning attribute.   |                                 | 3         |
| One course that carries the Cultural Diversity attribute |                                 | 3         |
| <b>Total Units</b>                                       |                                 | <b>15</b> |

## Distribution Requirements: 18 units

Learners must complete 6 units in each distribution area noted below. Each distribution area must include coursework from at least two disciplines unless otherwise noted. (Courses that satisfy the numerical applications, moral reasoning, and cultural diversity Basic Requirements may also count toward the Distribution Requirements.)

- Natural Sciences and Mathematics
- Social Sciences:

| Code               | Title                        | Units    |
|--------------------|------------------------------|----------|
| CAPS-PSYCH 1000    | Introduction to Psychology   | 3        |
| CAPS-PSYCH 2005    | Human Growth and Development | 3        |
| <b>Total Units</b> |                              | <b>6</b> |

- Humanities must include the following:

| Code           | Title              | Units |
|----------------|--------------------|-------|
| CAPS-COMM 2017 | Oral Communication | 3     |

## Concentration Requirements: 18 units

| Code               | Title                               | Units     |
|--------------------|-------------------------------------|-----------|
| CAPS-BIO 1000      | Concepts in Biology                 | 3         |
| CAPS-BIO 2030      | Nutrition                           | 3         |
| CAPS-BIO 2200      | Anatomy and Physiology I            | 4         |
| CAPS-BIO 2201      | Anatomy and Physiology II           | 4         |
| CAPS-BIO 2800      | Microbiology for Health Professions | 4         |
| <b>Total Units</b> |                                     | <b>18</b> |

## Electives: 9 units

- Humanities elective (3 units)
- Social Science elective (3 units)
- General elective (3 units)

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

## Direct Admit Nursing Career Pathway\*

The CAPS/Goldfarb **Direct Admit Nursing Career Pathway** is a partnership between WashU Continuing & Professional Studies (CAPS) and Barnes-Jewish College Goldfarb School of Nursing that provides high school graduates with a clear, structured route to earn their Bachelor of Science in Nursing (BSN) degree in as few as three years. Students enter college with a defined academic plan and the assurance of guaranteed admission to Goldfarb's Upper Division bachelor's program.\*\*

After they graduate from high school, students are admitted to WashU CAPS, where they earn an associate in arts (AA) degree while building an academic foundation aligned with Goldfarb's nursing requirements. After successfully completing 54 credits, students finish their last 6 AA degree credits with Goldfarb and then transition directly into Goldfarb's Upper Division to complete their BSN degree. This coordinated pathway removes the uncertainty of transfer or competitive reapplication and allows students to focus on academic success and professional preparation.

This pathway is designed for motivated students who demonstrate both academic readiness and a clear commitment to nursing:

- Students with a 3.5+ GPA, weighted in science coursework (AP or IB Biology and Chemistry are recommended.)
- Students involved in HOSA, pre-med, or health-focused student organizations
- Students seeking a stable, meaningful career with a clear professional outcome
- Students motivated to begin earning sooner and to progress efficiently
- Students who value a structured pathway

This program consists of 54 to 55 units of coursework, as outlined below.

### Required Courses: 43 to 46 units\*\*\*

| Code            | Title                                                                                                                                                             | Units |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| CAPS-BIO 1000   | Concepts in Biology                                                                                                                                               | 3     |
| CAPS-BIO 2030   | Nutrition                                                                                                                                                         | 3     |
| CAPS-BIO 2200   | Anatomy and Physiology I                                                                                                                                          | 4     |
| CAPS-BIO 2201   | Anatomy and Physiology II                                                                                                                                         | 4     |
| CAPS-BIO 2800   | Microbiology for Health Professions                                                                                                                               | 4     |
| CAPS-COMM 2017  | Oral Communication                                                                                                                                                | 3     |
| CAPS-ECOMP 1110 | Analytical Writing (Qualified students may test out of this course and proceed directly to ECOMP 2020. Consult a Student Success Navigator for more information.) | 3     |
| CAPS-ECOMP 2020 | Critical and Researched Writing                                                                                                                                   | 3     |

|                    |                                                                        |           |
|--------------------|------------------------------------------------------------------------|-----------|
| CAPS-GS 1015       | College Transition Seminar                                             | 1         |
| CAPS-MATH 1012     | Introduction to Statistics                                             | 3         |
| or CAPS-MATH 2000  | Applied Statistics                                                     |           |
| CAPS-MATH 1040     | Algebra (or the new Math Foundations for Nursing course, coming soon!) | 3         |
| CAPS-PHIL 2040     | Biomedical Ethics                                                      | 3         |
| CAPS-PSYCH 1000    | Introduction to Psychology                                             | 3         |
| CAPS-PSYCH 2005    | Human Growth and Development                                           | 3         |
| CAPS-SOC 2023      | Introduction to Sociology                                              | 3         |
| <b>Total Units</b> |                                                                        | <b>46</b> |

The remaining units of credit must be taken as approved electives, at least 6 units of which must be in subjects within the humanities.

## Application and Admissions Requirements for First-Time-in-College Students

First-time-in-college applicants must have a 3.0 minimum high school GPA and at least four years of study of the following subjects: English, mathematics (pre-calculus is recommended), and science (physics and/or biology is recommended, depending on the student's planned major).

First-time-in-college applicants to a bachelor's or associate's degree program should submit the following:

- Official high school transcript
- Official transcripts reflecting any AP, IB, or dual enrollment college credit
- A two-page statement of intent discussing the following:
  - The applicant's background and why they are interested in the chosen field of study
  - What specifically in their background has set them up for success
  - Their academic and professional goals
- Two letters of recommendation:
  - An academic reference; science or mathematics is strongly recommended
  - A professional or personal reference that speaks to the applicant's ability to be successful

\* Partner Barnes-Jewish College Goldfarb School of Nursing (GSON) is located at 4483 Duncan Avenue, St. Louis, MO, 63110. GSON accepts 54 to 55 units of credit from CAPS prior to transfer into the BSN program, and students must achieve a minimum cumulative GPA of 3.0 to qualify for transfer. CAPS receives 6 units of transfer credit from GSON toward the completion of the AA.

\*\*\*This is guaranteed, but it is contingent upon meeting requirements.



**\*\***After the student completes a writing assessment, it may be determined that they need to take the 1-credit Writing Lab and/or the 1-credit Reading Comprehension support courses concurrently with Analytical Writing.

## Pre-Nursing Program

Nursing is a fulfilling and vital career with enormous growth potential. Nurses are essential members of health care delivery teams, often serving as the most direct link to the patient while orchestrating the best possible care. They are in a position to advocate for patients and families, especially those who cannot advocate for themselves. Nurses improve patients' quality of life and support people at their most vulnerable moments. They serve as key members of health care teams, working together with physicians, pharmacists, social workers, and other providers to coordinate care. Nurses benefit from opportunities for continuous learning throughout their careers, and they may gain greater responsibility and autonomy through increased education and experience. They serve in a variety of settings and specialties, and may opt to pursue research or teaching opportunities.

The Pre-Nursing Program at WashU Continuing & Professional Studies (CAPS) is for learners who wish to complete prerequisites before continuing on to a bachelor of science in nursing (BSN) program. Students receive individual advising in order to create a course plan that fulfills the prerequisites for their future nursing programs of choice. The pre-nursing curriculum provides learners with an ideal foundation for their professional studies: strong communication skills, practical analytical and problem-solving abilities, an appreciation for complex ethical questions, and an introduction to human sciences. Learners who complete this course sequence will be well equipped to continue on to a variety of clinical nursing (BSN) programs.

*The Pre-Nursing Program is not eligible for local, state, or federal aid options unless students are concurrently enrolled in a degree program eligible for financial aid. WashU employees may use their tuition benefit for the program.*

- Please visit the **Pre-Nursing Program Details** page (p. 145) of this *Bulletin* for more information.

Contact: CAPS  
Phone: 314-935-6700  
Email: caps@wustl.edu  
Website: <https://caps.wustl.edu/pre-nursing-program>

## Pre-Nursing Program Details

Learners who complete 54 units of nursing prerequisites with CAPS may, with an additional 6 units, earn an Associate in Arts degree. Students interested in the associate degree should speak with a Student Success Navigator about applying to that program and fulfilling degree requirements.

## Examples of Common BSN Prerequisites\* and Their CAPS Equivalents

Learners should work with a Student Success Navigator to arrange a schedule that fits their previous college record and timetable.

|                              |                                                                                                                                                                    |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General Elective             | Select from a variety of introductory and upper-level courses; Quantitative Reasoning (CAPS-SCI 1020/ Quantitative Reasoning) is highly recommended.               |
| College Algebra              | Algebra (CAPS-MATH 1040)                                                                                                                                           |
| Statistics                   | Introduction to Statistics (CAPS-MATH 1012) or Applied Statistics (CAPS-MATH 2000)                                                                                 |
| Introduction to Sociology    | Introduction to Sociology (CAPS-SOC 2023) or other courses in Sociology with approval                                                                              |
| English Composition I        | Analytical Writing (CAPS-ECOMP 1110)                                                                                                                               |
| English Composition II       | Critical and Researched Writing (CAPS-ECOMP 2020)                                                                                                                  |
| History or Political Science | Select from a variety of introductory and upper-level courses in these departments.                                                                                |
| Social Science Elective      | Select from a variety of introductory and upper-level courses in the departments of Anthropology, Economics, Political Science, and Psychology.                    |
| Humanities Elective          | Select from a variety of introductory and upper-level courses in the departments of Art History, Classics, History, Literature, Philosophy, and Religious Studies. |
| Ethics                       | Biomedical Ethics (CAPS-PHIL 2040)                                                                                                                                 |



|                                                            |                                                                    |
|------------------------------------------------------------|--------------------------------------------------------------------|
| Select courses in Biology, Chemistry, Genetics, or Physics | Concepts in Biology (CAPS-BIO 1000) or other courses with approval |
| Nutrition                                                  | Nutrition (CAPS-BIO 2030)                                          |
| Anatomy and Physiology I with Lab                          | Anatomy and Physiology I (CAPS-BIO 2200)                           |
| Anatomy and Physiology II with Lab                         | Anatomy and Physiology II (CAPS-BIO 2201)                          |
| Introduction to Immunology                                 | Introduction to Immunology (CAPS-BIO 3245)                         |
| Microbiology with lab                                      | Microbiology for Health Professions (CAPS-BIO 2800)                |
| General Psychology                                         | Introduction to Psychology (CAPS-PSYCH 1000)                       |
| Human Growth and Development                               | Human Growth and Development (CAPS-PSYCH 2005)                     |
| Oral Communication/Speech                                  | Oral Communication (CAPS-COMM 2017)                                |

\* Examples from admissions requirements for the Barnes-Jewish College Goldfarb School of Nursing.

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. The School of Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

Contact: CAPS  
Phone: 314-935-6700  
Email: caps@wustl.edu  
Website: <https://caps.wustl.edu/pre-nursing-program>

## Undergraduate Certificate Programs

WashU Continuing & Professional Studies (CAPS) awards undergraduate certificates in many specialized areas of academic, professional, and personal development. Undergraduate certificate programs are credit-bearing and vary in length and number of requirements. All coursework must be completed at CAPS. To receive

an undergraduate certificate, learners must have earned a cumulative grade point average of 2.0 or higher for all certificate courses taken. No course with a grade below C- will count toward an undergraduate certificate.

Learners may pursue an undergraduate certificate on a standalone basis or as a required part of a bachelor's degree — courses taken toward an undergraduate certificate program are applied to the CAPS Bachelor of Science in Integrated Studies degree.\* If a learner is pursuing a bachelor's degree and a certificate, overlap is allowed between the program of study and the certificate. If the certificate consists of 15 units or fewer, there should be at least 6 units unique to the certificate. For certificates of 16 units or more, there should be at least 9 units unique to the certificate. (An exception to this restriction applies to sequential programs of the same name, such as Clinical Research Management, in which case all certificate courses may apply to the next-level program.) If a learner is pursuing multiple certificate programs, overlap between certificates is allowed up to 9 units.

Please visit the individual certificate pages (p. 146) for more detailed information, requirements, and policies.

\* *Exception:* The Somatic Studies Certificate cannot be used for the BSIS degree requirement.

Contact: CAPS  
Phone: 314-935-6700  
Email: caps@wustl.edu  
Website: <http://caps.wustl.edu>

## Certificates

Admission to CAPS undergraduate certificate programs requires a high school diploma or equivalent. Newly admitted learners will complete reading and writing assessments to determine whether any foundational coursework, including mandatory English composition courses, in those areas is needed to ensure success in the chosen program of study.

- Applied GeoAI (p. 147)
- Business (p. 148)
- Business Writing (p. 149)
- Clinical Research Management (p. 149)
- Creative Writing (p. 150)
- Data Analytics (p. 151)
- Forensic Psychology (p. 152)
- Geographic Information Systems (p. 152)\*
- Health Care Transitions (p. 153)
- Leadership and Organizational Development (p. 154)
- Marketing (p. 154)
- Project Management (p. 155)



- Somatic Studies (p. 156) (This certificate cannot be used for the BSIS degree requirement.)
- Strategic Communication (p. 160)
- Sustainability (p. 164) (This program has stopped accepting new students as of Spring 2026.)

\* Denotes a certificate that is eligible for financial aid.

## Regarding the Certificate Requirement for CAPS Bachelor of Science in Integrated Studies Degrees

Learners planning to enroll in a BSIS degree program may request that the required certificate be waived if they can demonstrate substantial prior academic work or equivalent learning outcomes in the certificate's area of study. Waivers are intended to prevent duplication of learning while maintaining the academic integrity and learning objectives of the program.

### Waiver Eligibility Criteria

To be eligible for a waiver, a learner must do the following:

1. Be formally admitted to the degree program or have completed all the requirements for formal admission to a degree program that includes the certificate requirement.
2. Provide at least two pieces of official documentation (e.g., transcripts, syllabi, course descriptions, or evidence of professional experience) showing completion of extensive coursework or proficiency in the relevant field (i.e., certificates, badges, or other credentials).
3. Demonstrate that prior coursework, learning outcomes, and/or professional experience are substantially equivalent to the content and competencies covered in the certificate program.
4. Have earned grades of B (3.0) or higher in the relevant coursework or can demonstrate equivalent mastery through professional experience or credentialing (if applicable).

Certificate waivers do not reduce the total credit units required for a degree, and no academic credit is awarded for waived certificate requirements. Learners must still complete substitute coursework or electives as determined by their Student Success Navigator.

1. The student must submit a Certificate Requirement Waiver Request Form along with supporting documentation, to CAPS. (Email [caps@wustl.edu](mailto:caps@wustl.edu) for a link to this form.)
2. CAPS will review the request to determine whether the prior course and/or professional work meets or exceeds the certificate's learning outcomes.

3. The Vice Dean or designated CAPS authority will make a decision and communicate it in writing to the student within 30 days of submission.
4. Approved waivers will be documented in the student's academic record.

#### Notes:

- Certificate waivers will not be granted for capstone, practicum, or residency coursework unless explicitly approved by the Vice Dean.
- Students must still meet all institutional and program completion requirements.

## Reinstatement

Undergraduate students who decide not to enroll continuously (from one term to the next) as full-time or part-time students will have a hold placed on their record or be discontinued from their program of study.

- One semester of non-enrollment will result in a hold being placed on the student's record. They must connect with a Student Success Navigator to discuss re-enrollment options and request removal of the hold.
- Six continuous terms of non-enrollment (including summer) will result in the student being discontinued from their program of study. They must connect with a Student Success Navigator and apply for reinstatement to return to their program of study.

For further reinstatement information, students should contact [caps@wustl.edu](mailto:caps@wustl.edu). Students seeking reinstatement may be required to submit additional documentation to support their application for reinstatement.

## Applied GeoAI Certificate

GeoAI — geospatial artificial intelligence — applies AI and machine learning to location-based data in order to improve understanding, analysis, and decision-making in myriad fields. GeoAI connects spatial information with predictive modeling and automation to reveal patterns that support more informed planning and problem-solving. The **Certificate in Applied GeoAI**, the first of its kind in the region, focuses on building expertise in GeoAI in an AI-forward job market. Learners in this program will gain skills applicable to the field, such as data management, imagery analysis, and locational intelligence, with a focus on practical application in the job market. The certificate is designed for GIS professionals who want to expand their skills in GeoAI and imagery analysis, for students with prior GIS coursework seeking deeper specialization, and for professionals in fields such as real estate, business, or data science who want to integrate a spatial component into their work. Upon completing the Applied GeoAI certificate, students will have developed skills in Python, geodatabase management, and imagery analysis which would make them competitive in the geospatial field in the St. Louis region.

This program is completed entirely online.

Contact: CAPS  
Phone: 314-935-6700  
Email: caps@wustl.edu  
Website: <https://caps.washu.edu/programs/certificates/certificate-in-applied-geoai/>

## Requirements

### Certificate in Applied GeoAI

#### Required Courses: 13 units

| Code                   | Title                            | Units     |
|------------------------|----------------------------------|-----------|
| CAPS-GIS 3000          | Advanced GIS                     | 3         |
| CAPS-GIS 4035          | Applications in Imagery Analysis | 3         |
| CAPS-GIS 4505          | Advanced Imagery Analysis        | 3         |
| New course coming soon | Introduction to GeoAI            | 3         |
| New course coming soon | GeoAI Portfolio                  | 1         |
| <b>Total Units</b>     |                                  | <b>13</b> |

#### Elective Courses: 3 units

Learners choose from the following:

| Code          | Title                            | Units |
|---------------|----------------------------------|-------|
| CAPS-GIS 3010 | GIS Programming                  | 3     |
| CAPS-GIS 4010 | Spatial Data Modeling and Design | 3     |

Other courses with approval.

## Prerequisites

Students should have completed Introduction to GIS and Programming with Python or have equivalent experience in GIS and Python to pursue this certificate.

| Code                    | Title                   | Units |
|-------------------------|-------------------------|-------|
| CAPS - DATASTUDIES 2305 | Programming With Python | 3     |
| CAPS-GIS 2000           | Introduction to GIS     | 3     |

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. CAPS cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment*

*team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

## Business Certificate

The **Certificate in Business** provides the information, skills, and resources needed to function effectively in a business setting. The coursework addresses core competencies including accounting, marketing, and management as well as in-demand skills such as budgeting, business analysis, business process, procurement, and operations management.

Learners are able to complete this certificate online. However, course availability may vary depending on the semester.

*Business-related programs at WashU Continuing & Professional Studies (CAPS) are not accredited by the Association to Advance Collegiate Schools of Business (AACSB International) at WashU. Most courses are 3 units.*

Contact: CAPS  
Phone: 314-935-6700  
Email: caps@wustl.edu  
Website: <http://caps.wustl.edu/programs/certificates/business>

## Requirements

### Certificate in Business

#### Required Courses: 15 units

| Code               | Title                                   | Units     |
|--------------------|-----------------------------------------|-----------|
| CAPS-BUS 2190      | Financial Accounting                    | 3         |
| CAPS-BUS 2210      | Marketing Concepts                      | 3         |
| CAPS-BUS 3000      | Introduction to Supply Chain Management | 3         |
| CAPS-BUS 3055      | Principles of Management                | 3         |
| CAPS-BUS 3130      | Business Finance                        | 3         |
| <b>Total Units</b> |                                         | <b>15</b> |

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. The School of Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while*



here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).

## Business Writing Certificate

The **Certificate in Business Writing** focuses on the writing skills that are necessary to develop communications materials for an organization. Students in the program learn persuasion principles, how to better understand audience needs, and cutting-edge message design strategies. The program is designed to support people who have attended college (or who have at least completed two foundational composition courses) and are looking to grow in their current position or transition into a strategic communications role.

Learners are able to complete this certificate online. However, course availability may vary depending on the semester.

*Business-related programs at WashU Continuing & Professional Studies (CAPS) are not accredited by the Association to Advance Collegiate Schools of Business (AACSB International) at WashU. Most courses are 3 units.*

Contact: CAPS  
Phone: 314-935-6700  
Email: caps@wustl.edu  
Website: <https://caps.wustl.edu/programs/certificates/>

### Requirements

## Certificate in Business Writing

### Required Courses: 9 units

| Code            | Title                               | Units |
|-----------------|-------------------------------------|-------|
| CAPS-COMM 2010  | Writing for Business Communication  | 3     |
| CAPS-COMM 2230  | Integrated Strategic Communications | 3     |
| CAPS-ECOMP 3010 | Writing for Public Speaking         | 3     |
| Total Units     |                                     | 9     |

### Elective Courses in Writing: 3 units

Students choose one of the following:

| Code              | Title                                   | Units |
|-------------------|-----------------------------------------|-------|
| CAPS-JRN 3450     | Effective Editing                       | 3     |
| or CAPS-COMM 3650 | Communications Technology and New Media |       |

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. The School of Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

## Clinical Research Management Certificate

The **Certificate in Clinical Research Management** is designed primarily for individuals with clinical research responsibilities who want the formal course work to complement their skills and experience in the field.

This certificate program targets key processes for managing research protocols that develop and use drugs, devices, and treatments for patient care. The program focuses on the scientific methods of clinical research, good clinical practice, research ethics, and the regulatory guidelines that protect human subjects, all of which are integral components of clinical trial management in academic research or pharmaceutical industry settings.

Learners are able to complete this certificate online. However, course availability may vary depending on the semester.

Contact: CAPS  
Phone: 314-935-6700  
Email: CAPS@wustl.edu  
Website: <http://caps.wustl.edu/programs/certificates/clinical-research-management>

## Requirements

# Certificate in Clinical Research Management

## Required Courses: 21 units

| Code               | Title                                                            | Units     |
|--------------------|------------------------------------------------------------------|-----------|
| CAPS-CRM 2000      | Fundamentals of Clinical Research Management I                   | 3         |
| CAPS-CRM 2001      | Fundamentals of Clinical Research Management II                  | 3         |
| CAPS-CRM 3010      | Introduction to Data & Information Management in Health Sciences | 3         |
| CAPS-CRM 3020      | Research Ethics and Regulatory Affairs                           | 3         |
| CAPS-CRM 3030      | The Business of Clinical Research                                | 3         |
| CAPS-CRM 3050      | Pharmacology for Clinical Research                               | 3         |
| CAPS-CRM 3051      | Practicum/Capstone for CRM                                       | 3         |
| <b>Total Units</b> |                                                                  | <b>21</b> |

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

# Creative Writing Certificate

The creative writing courses at WashU Continuing & Professional Studies (CAPS) are open to all learners with writing skills comparable to those typically learned in English Composition (CAPS-ECOMP 1110 and CAPS-ECOMP 2030). CAPS offers a 16-unit **Certificate in Creative Writing** for those who want to explore in depth and achieve significant ability in the art of writing fiction, creative nonfiction, or poetry.

Instructors in this program are experienced professional writers, most of whom are associated with the WashU Graduate Writing Program and the Department of English. All of the craft courses are taught using the workshop model, with open discussion and detailed, constructive criticism of each student's writing.

Learners are able to complete this certificate online. However, course availability may vary depending on the semester.

Contact: CAPS  
Phone: 314-935-6700  
Email: caps@wustl.edu  
Website: <https://caps.wustl.edu/programs/certificates/creative-writing>

## Requirements

# Certificate in Creative Writing

Learners may specialize in fiction, creative nonfiction, or poetry. Each student will take the 3-unit foundational course "Writing Across the Genres" (CAPS-ECOMP 1300) in their first term in the program and, in successive terms, four 3-credit, advanced-level (3000 or higher) courses, including two courses devoted to mastering the craft of writing in the chosen specialty genre, one course primarily in reading and analysis of the literature in that genre, and one course in a second genre.

The learner's final course in the program will be taken for 4 credits rather than the usual 3, and it will include a 1-credit meta-commentary assignment. This assignment requires them to step back from the particular course and describe (in 1500 words) what they have learned about the differences between and similarities among the genres investigated and how these have affected their choice of genre. Learners should look at the strategies they have chosen in their writing and explain why they chose them for a particular purpose. The goals of this assignment are for students to demonstrate the skills that they have learned during the course of their certificate studies, to think about those skills apply to the genres they have examined, and to show how these skills govern their approach to creative writing.

Sample courses include the following:

| Code            | Title                                                                                           | Units |
|-----------------|-------------------------------------------------------------------------------------------------|-------|
| CAPS-ECOMP 3040 | Exposition: Exploring Saint Louis                                                               | 3     |
| CAPS-ECOMP 3100 | Genre Writing                                                                                   | 3     |
| CAPS-ECOMP 3110 | Poetry Writing                                                                                  | 3     |
| CAPS-ECOMP 3130 | Fiction Writing: The Moral of the Story: Writing Fiction About Ethics, Philosophy, and Morality | 3     |
| CAPS-ECOMP 3150 | Fiction Writing: Young Adult Fiction                                                            | 3     |
| CAPS-ECOMP 3160 | Fiction Writing                                                                                 | 3     |
| CAPS-ECOMP 3170 | Creative Nonfiction                                                                             | 3     |
| CAPS-ECOMP 3190 | Advanced Fiction Workshop                                                                       | 3     |
| CAPS-ECOMP 3200 | The Art of the Personal Essay                                                                   | 3     |
| CAPS-ECOMP 3213 | Writing Horror Across the Globe                                                                 | 3     |
| CAPS-ECOMP 3250 | Introduction to Screenwriting                                                                   | 3     |
| CAPS-ECOMP 3271 | Nonfiction: Reading and Writing the Memoir                                                      | 3     |



|                 |                                                           |   |
|-----------------|-----------------------------------------------------------|---|
| CAPS-ECOMP 3280 | Creative Nonfiction: Writing Ourselves, Writing the World | 3 |
| CAPS-ECOMP 3300 | Masters of Fantasy Writing                                | 3 |
| CAPS-ECOMP 4010 | Humor Writing                                             | 3 |
| CAPS-ECOMP 4500 | Fundamentals of Novel Writing                             | 3 |
| CAPS-ECOMP 4600 | Advanced Novel Writing                                    | 3 |

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. The School of Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

## Data Analytics Certificate

The **Certificate in Data Analytics** focuses on data preparation, data analysis, applied statistics, and data visualization. Students in the program learn to communicate, problem solve, and lead around data practices, making them professionally competitive in the St. Louis region.

This certificate program is designed primarily for individuals wishing to transition to a data analytics career, including people who have little to no background in data or learners who have some background in data but want to enhance or learn data-related skills. Upon completion of the certificate, learners will be competitive for entry-level data analytics and data analysis careers.

Learners are able to complete this certificate online. However, course availability may vary depending on the semester.

Contact: CAPS  
Phone: 314-935-6700  
Email: caps@wustl.edu  
Website: <https://caps.wustl.edu/programs/certificates/>

## Requirements

## Certificate in Data Analytics

### Required Courses: 12 units

| Code                    | Title                                                 | Units     |
|-------------------------|-------------------------------------------------------|-----------|
| CAPS - DATASTUDIES 1240 | Foundamentals I                                       | 1.5       |
| CAPS - DATASTUDIES 1240 | Data Fundamentals II                                  | 1.5       |
| CAPS - DATASTUDIES 3250 | Communicating, Leading, and Problem Solving With Data | 3         |
| CAPS - DATASTUDIES 3250 | Experiential Learning in Data Analytics               | 3         |
| CAPS-MATH 2000          | Applied Statistics                                    | 3         |
| <b>Total Units</b>      |                                                       | <b>12</b> |

### Elective Courses: 6 units

Learners choose two of the following courses:

| Code                    | Title                                            | Units |
|-------------------------|--------------------------------------------------|-------|
| CAPS - DATASTUDIES 1240 | Introduction to (Statistical) Programming with R | 3     |
| CAPS - DATASTUDIES 2006 | Programming With Python                          | 3     |
| CAPS - DATASTUDIES 2006 | Analysis and Visualization in Tableau            | 3     |
| CAPS - DATASTUDIES 3015 | Introduction to Data Science With Python         | 3     |
| CAPS - DATASTUDIES 3015 | Big Data: Exploration and Analysis               | 3     |
| CAPS - DATASTUDIES 3015 | Advanced Data Visualization (with R)             | 3     |
| CAPS-GIS 2000           | Introduction to GIS                              | 3     |

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. The School of Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

# Forensic Psychology Certificate

Forensic Psychology examines the intersection of human behavior and criminal justice, and it applies theories and skills from psychology to the legal system, including areas such as law enforcement, corrections, victim services, and the treatment of offenders. Forensic psychology includes five major subdisciplines—police psychology, investigative psychology, criminal psychology, correctional psychology, and legal psychology—all of which are covered in the course work comprising the 15-unit **Certificate in Forensic Psychology**.

Forensic psychologists are growing in numbers in judicial systems and law enforcement, working in correctional facilities, law enforcement agencies, police offices, school and university settings, community service agencies, and private practices. In addition to being a springboard to graduate study in Psychology, Sociology, Criminal Justice, and Criminology, the Certificate in Forensic Psychology complements undergraduate degrees in Psychology, Political Science, Sociology, Anthropology, Urban Studies, Biology, and Chemistry.

Learners are able to complete this certificate online, however, course availability may vary depending on the semester.

Contact: CAPS  
Phone: 314-935-6700  
Email: CAPS@wustl.edu  
Website: <https://caps.wustl.edu/programs/certificates/forensic-psychology>

## Requirements

## Certificate in Forensic Psychology

### Required Courses: 6 units

| Code               | Title                               | Units    |
|--------------------|-------------------------------------|----------|
| CAPS-PSYCH 3205    | Introduction to Criminology         | 3        |
| CAPS-PSYCH 3210    | Introduction to Forensic Psychology | 3        |
| <b>Total Units</b> |                                     | <b>6</b> |

### Elective Courses: 9 units

Learners choose from among the following:

| Code                                                                     | Title                                                                             | Units |
|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------|
| CAPS-WGSS 3055                                                           | Sex Trafficking                                                                   | 3     |
| CAPS-WGSS 3070                                                           | Gender and the Prison System                                                      | 3     |
| CAPS-PSYCH 3080                                                          | Juvenile Delinquency                                                              | 3     |
| CAPS-WGSS 3120                                                           | Gender and Crime                                                                  | 3     |
| CAPS-PSYCH 3175                                                          | Introduction to Psychopathology and Clinical Psychology                           | 3     |
| CAPS-PSYCH 3215                                                          | Crisis Intervention: The Criminal Justice Response to Chaos, Mayhem, and Disorder | 3     |
| CAPS-PSYCH 3245                                                          | Principles of Forensic Assessment                                                 | 3     |
| CAPS-PSYCH 3250                                                          | Criminal Typologies                                                               | 3     |
| CAPS-ANTHRO 3440                                                         | Introduction to Forensic Anthropology                                             | 3     |
| Additional Psychology, Forensic Psychology, etc. courses with permission |                                                                                   |       |

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

# Geographic Information Systems Certificate

Geographic information systems (GIS) display and manage all types of data over time, usually in the form of maps, charts, and reports that help with the analysis of patterns and trends.

GIS technology, easily integrated into any organization's information system, provides a quick and effective method for sharing data visually and for solving spatial problems. GIS is widely used in many fields and industries, including environmental science, architecture, engineering, medicine, municipal government, public health, social work, business, and a variety of research enterprises.



The 18-unit **Certificate in Geographic Information Systems** teaches both fundamental and advanced concepts and skills, including the design of GIS projects, the operation of software, cartographic output, spatial analysis, and industry-specific applications of GIS. The certificate targets working professionals seeking course work and skill enhancement in the field, as well as learners wishing to complement their academic interests with additional training in GIS.

Learners are able to complete this certificate online, however, course availability may vary depending on the semester.

Contact: CAPS  
Phone: 314-935-6700  
Email: caps@wustl.edu  
Website: <http://caps.wustl.edu/programs/certificates/geographic-information-systems>

## Requirements

## Certificate in Geographic Information Systems

### Required Courses: 15 units

| Code               | Title                            | Units     |
|--------------------|----------------------------------|-----------|
| CAPS-GIS 2000      | Introduction to GIS              | 3         |
| CAPS-GIS 3000      | Advanced GIS                     | 3         |
| CAPS-GIS 3005      | Digital Cartography              | 3         |
| CAPS-GIS 4010      | Spatial Data Modeling and Design | 3         |
| CAPS-GIS 4015      | GIS Clinic                       | 3         |
| <b>Total Units</b> |                                  | <b>15</b> |

### Elective Courses: 3 units

Learners choose from among the following:

| Code                        | Title                                   | Units |
|-----------------------------|-----------------------------------------|-------|
| CAPS-GIS 3010               | GIS Programming                         | 3     |
| CAPS-GIS 4035               | Applications in Imagery Analysis        | 3     |
| CAPS-GIS 4100               | Applications in Geospatial Intelligence | 3     |
| CAPS-GIS 4505               | Advanced Imagery Analysis               | 3     |
| Other courses with approval |                                         |       |

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*an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

## Health Care Transitions Certificate

The **Certificate in Healthcare Transitions** focuses on the science and math skills that are necessary to transition to a healthcare-focused career. The program provides pathways to entry-level apprenticeships and careers in roles such as medical assistant, medical secretary, lab technician, and more.

Learners are able to complete this certificate online. However, course availability may vary depending on the semester.

Contact: CAPS  
Phone: 314-935-6700  
Email: caps@wustl.edu  
Website: <https://caps.wustl.edu/programs/certificates/>

## Requirements

## Certificate in Health Care Transitions

### Required Courses: 15 units

| Code                   | Title                                                 | Units     |
|------------------------|-------------------------------------------------------|-----------|
| CAPS-BIO 1000          | Concepts in Biology                                   | 3         |
| CAPS-MATH 1040         | Algebra                                               | 3         |
|                        | or CAPS-SCI 1020 Quantitative Reasoning               |           |
| CAPS-BIO 2330          | Human Body Systems *                                  | 3         |
|                        | or CAPS-HCARE 1040 Introduction to Human Body Systems |           |
| CAPS-HCARE 2400        | Medical Terminology and Language                      | 3         |
| New course coming soon | Healthcare Communications                             | 3         |
| <b>Total Units</b>     |                                                       | <b>15</b> |

\* Learners working toward certain credentials may opt to take the sequence CAPS-BIO 2200 Anatomy and Physiology I and CAPS-BIO 2201 Anatomy and Physiology II (4 units each) in lieu of CAPS-BIO 2330 Human Body Systems.

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

# Leadership and Organizational Development Certificate

The **Certificate in Leadership and Organizational Development** focuses on teaching learners to develop and apply effective, adaptive, and inclusive leadership skills for successful organizational development. Individuals in the program learn principles in group behavior, management, and teambuilding as well as how to successfully employ those principles in the workplace.

Learners are able to complete this certificate online. However, course availability may vary depending on the semester.

Contact: CAPS  
Phone: 314-935-6700  
Email: caps@wustl.edu  
Website: <https://caps.wustl.edu/programs/certificates/>

## Requirements

# Certificate in Leadership and Organizational Development

## Required Courses: 9 units

| Code               | Title                                 | Units    |
|--------------------|---------------------------------------|----------|
| CAPS-BUS 3020      | Leadership for Organizational Success | 3        |
| CAPS-BUS 3055      | Principles of Management              | 3        |
| CAPS-BUS 3210      | Strategic Planning                    | 3        |
| <b>Total Units</b> |                                       | <b>9</b> |

## Elective Courses: 6 units

Learners choose from the following:

| Code           | Title                                                | Units |
|----------------|------------------------------------------------------|-------|
| CAPS-BUS 3080  | International Management: Leadership Across Cultures | 3     |
| CAPS-COMM 2230 | Integrated Strategic Communications                  | 3     |
| CAPS-COMM 3440 | Public Relations Principles and Practices            | 3     |

*Business-related programs at WashU Continuing & Professional Studies (CAPS) are not accredited by the Association to Advance Collegiate Schools of Business (AACSB International) at WashU.*

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

# Marketing Certificate

The **Certificate in Marketing** offers learners the opportunity to build a focused and practical foundation in marketing. Designed to complement a variety of majors, this certificate equips individuals with a set of market-aligned skills that are highly valued across industries. Learners will explore core marketing concepts and develop key competencies in areas such as market research, communication strategy, product marketing, and public relations. Learners will gain the knowledge and basic tools needed to support marketing initiatives, contribute to brand development, and make data-informed decisions.

Learners are able to complete this certificate online. However, course availability may vary depending on the semester.

Contact: CAPS  
Phone: 314-935-6700  
Email: caps@wustl.edu  
Website: <https://caps.wustl.edu/programs/certificates/marketing>



## Requirements

## Certificate in Marketing

### Required Courses: 12 units

| Code               | Title                                         | Units     |
|--------------------|-----------------------------------------------|-----------|
| CAPS-COMM 2010     | Writing for Business Communication            | 3         |
| CAPS-BUS 2210      | Marketing Concepts                            | 3         |
| CAPS-COMM 3010     | Market Research and Communications Strategies | 3         |
| CAPS-COMM 3440     | Public Relations Principles and Practices     | 3         |
| <b>Total Units</b> |                                               | <b>12</b> |

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

## Project Management Certificate

The **Certificate in Project Management** emphasizes the essential skills needed to successfully research, plan, develop, and complete a project in an organizational context. Individuals in the program learn key project management fundamentals, how to identify and effectively manage risk, the role of data in project planning and implementation, and communication skills for leaders.

Learners are able to complete this certificate online. However, course availability may vary depending on the semester.

This program is not explicitly designed as PMP exam preparation. Please consult the WashU CAPS PMP Course-to-Skill Map to see how courses in this program align with key competencies assessed in the PMP certification exam.

Contact: CAPS  
Phone: 314-935-6700  
Email: caps@wustl.edu  
Website: <https://caps.washu.edu/programs/certificates/certificate-in-project-management/>

## Requirements

## Certificate in Project Management

### Required Courses: 9 units

| Code               | Title                            | Units    |
|--------------------|----------------------------------|----------|
| CAPS-BUS 3040      | Managing Organizational Risk     | 3        |
| CAPS-BUS 3055      | Principles of Management         | 3        |
| CAPS-BUS 3065      | Principles of Project Management | 3        |
| <b>Total Units</b> |                                  | <b>9</b> |

### Elective Courses: 6 units

Learners select 6 units from the following list:

| Code                    | Title                                                 | Units |
|-------------------------|-------------------------------------------------------|-------|
| CAPS-BUS 3210           | Strategic Planning                                    | 3     |
| CAPS-COMM 2230          | Integrated Strategic Communications                   | 3     |
| CAPS - DATASTUDIES 3250 | Communicating, Leading, and Problem Solving With Data | 3     |

*Business-related programs at WashU Continuing & Professional Studies (CAPS) are not accredited by the Association to Advance Collegiate Schools of Business (AACSB International) at WashU.*

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

# Somatic Studies Certificate

Somatic practices promote integrated personal development by training learners in processes for mindful, embodied living; they complement disciplines of inquiry and knowledge related to the human body and mind. Although these disciplines are relatively new to Western thought, somatic practices are recognized in numerous ancient and contemporary cultures not only as beneficial to physical health but also as methods for the cultivation of the mind and the discovery of knowledge. Such experience may inform and complement knowledge in such areas as biology, neuroscience, physics, psychology, philosophy, anthropology, and religious studies. Somatic practices also have applied value in professions such as education, performing arts, athletics, medicine, and physical therapy.

The **Certificate in Somatic Studies** offers a diverse spectrum of established movement processes aimed at self-development, with courses taught by certified instructors in their respective disciplines. With the coordinator's approval, a maximum of 3 units of course work from other disciplines may be applied to the Certificate in Somatic Studies.

This certificate cannot be used for the BSIS degree requirement.

Contact: CAPS  
Phone: 314-935-6700  
Email: [caps@wustl.edu](mailto:caps@wustl.edu)  
Website: <http://caps.wustl.edu/programs/certificates/somatic-studies>

## Requirements

### Certificate in Somatic Studies

The Certificate in Somatic Studies is composed of a minimum of 15 credit units of coursework. This includes the required 2-unit course CAPS-DANCE 2360 Introduction to Somatic Practices, which is an introductory survey of a variety of practices offered in the program, complemented by lectures on related disciplines such as biology, philosophy, and psychology.

Learners choose an additional 13 units from courses listed in CAPS-DANCE according to their individual interests and goals. With the coordinator's approval, a maximum of 3 units of coursework from related disciplines may be applied toward the Certificate in Somatic Studies.

**Note:** Courses that apply to the Certificate in Somatic Studies must be taken for a letter grade. If, when registering, a certificate candidate only sees "Pass/No Pass" as a selectable grading base, they should inform CAPS and contact the registrar to add the letter grade (aka "Quality Graded Credit") option. DANCE courses taken as Pass/No Pass may not be eligible for a grade base change after the fact and may not be applied to the certificate program retroactively.

Below is a selection of courses from which learners can choose; there may be others listed in CAPS-DANCE in a given term. Of note is that some Somatics courses only carry 1 unit of credit (rather than 2 units) during the shortened summer sessions.

| Code            | Title                                              | Units |
|-----------------|----------------------------------------------------|-------|
| CAPS-DANCE 1000 | Body Conditioning                                  | 2     |
| CAPS-DANCE 1030 | Topics in Dance: The Alexander Technique           | 2     |
| CAPS-DANCE 1050 | Beginning T'ai Chi Ch'uan                          | 2     |
| CAPS-DANCE 1060 | Body-Mind Balance                                  | 2     |
| CAPS-DANCE 1070 | Yoga and Relaxation Techniques                     | 2     |
| CAPS-DANCE 1150 | Beginning Taekwondo I                              | 2     |
| CAPS-DANCE 2050 | Introduction to Pilates                            | 2     |
| CAPS-DANCE 2090 | Contact Improvisation                              | 1     |
| CAPS-DANCE 2180 | Mind Body Movement: Yoga and Pilates               | 2     |
| CAPS-DANCE 2280 | Xingyiquan--Five Elements                          | 1     |
| CAPS-DANCE 2290 | Xingyiquan--Twelve Animals                         | 2     |
| CAPS-DANCE 3105 | Integrative Healing: Somatic Modalities for Trauma | 2     |
| CAPS-DANCE 3220 | Xingyiquan -- Linking Forms                        | 2     |
| CAPS-DANCE 4070 | Applied Anatomy for the Performing Artist          | 2     |

## Courses

### CAPS-DANCE 1000 Body Conditioning

This Body Conditioning course provides training for the whole body with equal emphasis on strengthening work, cardio intervals, and building endurance and flexibility while supporting the mindful practice of movement awareness. Through a progressive series of developed skills, class activities are designed to provide overall toning and awareness of body/mind connectivity through basic bodyweight exercises and playful, dance-inspired practices combined with Yoga and Pilates-based work. Students will need an exercise mat for floor work and resistance bands for various strengthening and stretching exercises. No prerequisites. Students may enroll up to three times. Pass/Fail only. Students admitted to the Certificate in Somatic Studies must take this course for a letter grade.

Credit 2 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall



## **CAPS-DANCE 1030 Topics in Dance: The Alexander Technique**

Applies the principles of the Alexander Technique to technical and performance issues. Students learn to recognize and change counter-productive habits and to allow natural postural reflexes to work, improving length, balance, and flexibility. The result is enhanced range of expression and the ability to make choices about how one moves. This course is available as Pass/Fail, but students pursuing the Certificate in Somatic Studies must enroll for a letter grade.

Credit 2 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

## **CAPS-DANCE 1050 Beginning T'ai Chi Ch'uan**

An introduction to the theory and practice of T'ai Chi Ch'uan. T'ai Chi Ch'uan is based on the Daoist theory of complementary opposites (yin/yang). The purpose of these exercises is to help students gain bodily strength, balance, flexibility, peace of mind, relaxation, and improved circulation. T'ai Chi Ch'uan may also be used for self-defense; it specializes in the neutralization of an attack by turning of the waist. Readings in Daoist texts, including taijiquan classics, are assigned.

During the semester, students will learn the first form of Chen T'ai chi ch'uan. This course is only available as Pass/No Pass for most students, but students admitted to the Certificate in Somatic Studies must take this course for a letter grade. Students should wear loose-fitting clothing and sneakers. Students may enroll no more than two times.

Credit 2 units.

Typical periods offered: Summer 4, Summer 3, Spring, Summer 2, Fall, Summer

## **CAPS-DANCE 1051 Beginning T'ai Chi Ch'uan II**

A continuation of an introduction to the theory and practice of T'ai Chi Ch'uan for beginning students. T'ai Chi Ch'uan is based on the Daoist theory of complementary opposites (yin/yang). The purpose of these exercises is to help students gain bodily strength, balance, flexibility, peace of mind, relaxation, and improved circulation. T'ai Chi Ch'uan may also be used for self-defense; it specializes in the neutralization of an attack by turning of the waist. Students should wear loose-fitting clothing and sneakers. Readings in Daoist texts, including t'ai chi classics, are assigned. Part III of the Yang Family T'ai Chi Ch'uan sequence will be taught. Students may enroll no more than two times. This course is available as Pass/Fail, but students pursuing the Certificate in Somatic Studies must enroll for a letter grade.

Credit 2 units.

Typical periods offered: Summer 3, Spring

## **CAPS-DANCE 1060 Body-Mind Balance**

Employing theories and practices of contemporary movement sciences, current body-mind and relaxation techniques, somatic exercises and yoga, this class emphasizes body awareness and deep mindfulness. It is designed to support and encourage the ability to calm the critical mind, awaken the physical senses and tune into the inherent wisdom of the body-mind. Discussion of readings and viewings of related and current topics opens each meeting. Students should wear comfortable clothing and bring a mat or towel. For students of all ages; this class is less strenuous than "Yoga and Relaxation Techniques." Students may enroll no more than two times. This course is available as Pass/Fail, but students pursuing the Certificate in Somatic Studies must enroll for a letter grade.

Credit 2 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

## **CAPS-DANCE 1070 Yoga and Relaxation Techniques**

This course provides a systematic introduction to the methods and theoretical foundations of Hatha Yoga. Instruction integrates asana (yoga postures), yoga-informed somatic movement, pranayama (breath regulation), and meditation, with the aim of supporting

physical health, psychological well-being, and embodied awareness. Students will engage with foundational topics in yoga humanities and applied anatomical principles, examining how these frameworks inform and shape contemporary yoga practices. Students should wear comfortable clothing and bring a mat and any required props. Pass/Fail only for most students, but those pursuing the Certificate in Somatic Studies must enroll for a letter grade. Students may enroll no more than two times.

Credit 2 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

## **CAPS-DANCE 1150 Beginning Taekwondo I**

The objectives of this course are to learn the philosophical and historical backgrounds of Taekwondo and master basic Taekwondo martial art skills such as kicks, punches, blocks, and Taegeuk forms to facilitate physically and mentally reflective growth. As a form of martial arts, Taekwondo's ultimate goal is to achieve self-reflection through the physical trainings and self-discipline. Throughout this course, the students will be able to: (1) understand the philosophical and historical backgrounds of Taekwondo; (2) master basic Taekwondo kicks, punches, blocks and forms up to the yellow belt level; (3) perform TKD non-touching sparring using the basic and advanced skills; (4) self-reflect on their physical and mental growth through the self-defense training. Must be taken Pass-Fail. Course may be repeated one time.

Credit 2 units.

Typical periods offered: Fall, Summer

## **CAPS-DANCE 1151 Beginning Taekwondo II**

Taekwondo's ultimate goal is for the student to achieve self-reflection through physical training and self-discipline, and this course builds on the foundation developed in Beginning Taekwondo I. Throughout this course, students will learn to understand the philosophical and historical backgrounds of Taekwondo; to master Taekwondo kicks, punches, blocks, and forms up to the blue belt level; to perform Taekwondo non-touching sparring using the basic and advanced skills; and to self-reflect on their physical and mental growth through the training.

Credit 2 units.

Typical periods offered: Fall, Spring

## **CAPS-DANCE 1160 Personal Ecology**

Using a personal lens, we will explore our embodied relationship to Nature. Students will review research on the benefits of being in nature and take the connectedness to nature survey to assess their own current state of connectedness. Through facilitated explorations both indoors and outdoors, students will learn somatic practices in mindful awareness, including walking and sitting meditations, creative movement, creative art forming, and embodied writing. An emphasis on multiple ways of knowing will inform online and in-class discussions.

Credit 1 unit.

Typical periods offered: Spring

## **CAPS-DANCE 1180 Intro to Authentic Movement & Body-Mind Integration**

This is an experiential introduction to the theory and practice of authentic movement and the principles of body-mind integration through in-depth movement exploration and the expressive arts. The course combines topics associated with somatics and creativity in order to deepen connections among imagination, memory, and expression. Students cultivate the practice of focusing within the body, allowing movement to happen rather than doing or making movement. In addition, students use journals, drawing, and work with clay to integrate personal movement material.

Credit 2 units.

Typical periods offered: Fall, Summer 3, Spring

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**CAPS-DANCE 2050 Introduction to Pilates**

This course offers an introduction to the Pilates Method mat repertoire, part of the method developed by movement pioneer Joseph Pilates. The mat repertoire focuses on core strengthening, spinal articulation and stabilization. The exercises increase strength and flexibility and work towards correcting asymmetries and chronic weaknesses to bring the body into a balanced, neutral alignment. Students will gain body awareness and an understanding of the principles of Pilates including: control, breath, flowing movement, precision, centering, stability, range of motion, and opposition. No previous training in Pilates is required. The instructor will offer modifications that address individual limitations. Readings will be assigned that address topics in Pilates as well as related topics in exercise science and functional anatomy. May be repeated one time for credit. This course is offered as Pass/Fail only, unless students are pursuing the Certificate in Somatic Studies; these students must enroll for a letter grade.

Credit 2 units.

Typical periods offered: Fall, Spring

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**CAPS-DANCE 2090 Contact Improvisation**

Introductory studio work in principles and techniques of Contact Improvisation. CI is an open-ended dance form for two or more people exploring spontaneous physical interaction in the present moment. This unique dance class is instructed through guided parameters and free-form movement play between partners to develop improved movement coordination, balance and creativity. Invented in the early 1970's, CI is practiced all over the world for its fun, accessibility, artistic beauty, physical challenge, and for making connections with other people. Recently CI is also recognized for its positive and therapeutic effects on personal well-being through shared exercise, stress relief, and cultivation of mindful presence. A core value of CI's inclusivity, the practice is open to all people and levels of dance training from beginning to advanced; no prior experience required. May be repeated one time. Students pursuing the Certificate in Somatic Studies must enroll for a letter grade; all others must take the course Pass/No Pass. Credit 1 unit.

Typical periods offered: Spring

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**CAPS-DANCE 2140 Introduction to Hip-Hop and Funk Dance Styles**

This course will be an introduction to the fundamentals of hip-hop, jazz funk, house dance and other related dance styles. This course is designed to introduce students to the various elements of these styles -- the history, terminology, technique, core movement concepts, and prominent dance figures -- and for students to experience all of these elements through dancing, observation, research, discussion, and choreography. This course will also explore the culture and music of hip-hop and other related styles of dance. As a whole, this course will focus on strengthening movement skills through increased flexibility, strength, and endurance while sharpening musical awareness, learning choreography, exploring improvisation, and understanding the appropriate vocabulary needed to develop strong technique for these styles. There will be written assignments and readings included in this course. Previous movement training is recommended but not required. Credit 2 units.

Typical periods offered: Spring

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**CAPS-DANCE 2160 Intermediate T'ai Chi Ch'uan**

An introduction to the theory and practice of Chen Style T'ai Chi Ch'uan (Taijiquan) for intermediate students. Students who have demonstrated proficiency in Yang Style T'ai Chi Ch'uan and have completed the two-course introductory sequence may enroll; others

may enroll only with the permission of the instructor. T'ai Chi Ch'uan is based on the Taoist theory of complementary opposites (yin/yang): the purpose of these exercises is to help students gain bodily strength, balance, flexibility, peace of mind, relaxation, and improved circulation. T'ai Chi Ch'uan may also be used for self-defense; it specializes in the neutralization of an attack by turning of the waist. Students should wear loose-fitting clothing and sneakers. Readings in Daoist texts, including t'ai chi classics, will be assigned.

Credit 2 units.

Typical periods offered: Summer

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**CAPS-DANCE 2180 Mind Body Movement: Yoga and Pilates**

This course combines Yoga, SATYA (Sensory Awareness Training for Yoga Attunement), Pilates Method mat exercises and meditation/relaxation techniques with the goal of improving mind body awareness, postural alignment, balance, strength, range of motion and psychological well-being. Students will be guided through beginning level yoga breathing practices (Pranayama), sensory awareness and myofascial release exercises, yoga postures (Asanas) and Pilates Method mat exercises. Intermediate level postures and exercises will be added as the class progresses. An emphasis will be placed on practicing safely with optimal postural alignment, joint stabilization, fluidity and ease. No previous training in yoga or Pilates is required. The instructor will offer modifications that address individual limitations. Coursework will include a home mindfulness practice and short online discussion posts on the ethical principles of yoga and current scientific research on yoga or other somatic practices. This course may be repeated one time for credit. This course is offered as Pass/Fail only, unless students are pursuing the Certificate in Somatic Studies; these students must enroll for a letter grade.

Credit 2 units.

Typical periods offered: Summer 4, Summer 3, Spring, Summer 2, Fall, Summer

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**CAPS-DANCE 2210 Tap Dance: Beginning**

Introduction to basic tap steps and rhythms. Development of awareness of varied tap dance styles. No previous dance training required.

Credit 2 units.

Typical periods offered: Summer 4, Summer 3

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**CAPS-DANCE 2220 Introduction to Dance of West Africa**

This course entails the study of West African Dances and the Music that accompanies them. Special emphasis will be placed on the dance, music, culture, language and arts of the Ivory Coast. This course will address the relationship between music and dance and their social and cultural significance. The class will consist of lecture and demonstration followed by active participation by students, primarily dancing and drumming. Outside of class students will build technique and develop an appreciation and understanding of the relevant resources available and how to research them. May be repeated one time.

Credit 2 units.

Typical periods offered: Fall

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**CAPS-DANCE 2280 Xingyiquan--Five Elements**

An introduction to the theory and practice of Xingyiquan (Hsing Yi Ch'uan). It is one of the three great systems of Wu Dang Internal Arts, along with Taijiquan (T'ai Chi Ch'uan) and Baguazhang (Ba Gua Chang). The purpose of these exercises is to help students gain bodily strength, balance, flexibility, peace of mind, relaxation, and improved circulation. Xingyiquan may also be used for self-defense; it features straightforward defense techniques, with specialization of upper-body movements. Students should wear loose-fitting clothing and



sneakers. Readings in Daoist texts are assigned, along with readings on the history, philosophy, and technique of this art. Students admitted to the Certificate in Somatic Studies must take this course for a letter grade. Students may enroll no more than two times.

Credit 1 unit.

Typical periods offered: Summer

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### **CAPS-DANCE 2290 Xingyiquan--Twelve Animals**

A continuation course in the theory and practice of Xingyiquan (Hsing Yi Ch'uan). It is one of the three great systems of Wu Dang Internal Arts, along with Taijiquan (T'ai Chi Ch'uan) and Baguazhang (Ba Gua Chang). The purpose of these exercises is to help students gain bodily strength, balance, flexibility, peace of mind, relaxation, and improved circulation. Xingyiquan may also be used for self-defense; it features straightforward defense techniques, with specialization of upper-body movements. Students should wear loose-fitting clothing and sneakers. Readings in Daoist texts are assigned, along with readings on the history, philosophy, and technique of this art. Students admitted to the Certificate in Somatic Studies must take this course for a letter grade. Students may enroll no more than two times.

Credit 2 units.

Typical periods offered: Fall, Summer

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### **CAPS-DANCE 2300 Tap Dance II**

Additional work on technique with attention to acquiring a sense of musical phrasing, rhythmic accuracy, and clarity of sound. Rhythmic improvisation. Some outside reading.

Credit 2 units.

Typical periods offered: Fall, Summer 3, Spring

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### **CAPS-DANCE 2360 Introduction to Somatic Practices**

Introduction to Somatics investigates a growing field of practices that emphasize the unity of mind and body as experienced from within, through conscious guided movement and self-awareness. This course is a survey of somatic courses available in the CAPS Dance and Somatic Studies Certificate Programs. In-class work is supplemented by readings and complimented with guest lectures in related theoretical disciplines, such as biology, psychology, philosophy, etc.

Credit 2 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall

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### **CAPS-DANCE 2999 Independent Study**

Student must have CAPS permission.

Credit 3 units.

Typical periods offered: Fall Intersession, Summer 3, Spring, Summer Intersession, Spring Intersession, Fall

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### **CAPS-DANCE 3040 We Are the Movers and Shakers: The History of Percussive Dance in America**

This course focuses upon the rich history of movement and sound in American Dance, from the Colonial Era to the present day. African, Latin American, Native American, and European dance forms and their interactions are explored. We also study distinctly American forms such as clogging, stepping, and tap dancing. Much of percussive dance evolved from the people, and we examine the relationships between percussive dance and social and political movements: peaceful protest and Native American dance; police brutality/Jim Crow/Japanese internment and tap dance; creating a protective enclave or safe space for expression in African American step dance; and community building/intergenerational dance in Appalachian clogging. This is

not a movement technique class, but students learn some basic body rhythms or dance movements in order to comprehend and contextualize the performances discussed in class. Students may also be required to attend a dance or music performance.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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### **CAPS-DANCE 3060 American Roots of Contemporary Dance**

This course is an introduction to contemporary modern dance, with a particular focus on its American roots. Students will both develop various techniques and learn concepts used by American modern dance pioneers. Elements of improvisation and basic dance composition skills will also be explored. Topics will include the aesthetics and history of American modern dance as well as how the roots of American modern dance continue to influence contemporary dance of the 21st century.

Credit 2 units.

Typical periods offered: Fall, Summer 3, Spring

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### **CAPS-DANCE 3070 Special Studies in Dance**

Students with previous training may register for this course in order to receive additional instruction in intermediate and advanced levels of modern dance or ballet. Enrollment restricted to CAPS students with permission. For more information, please contact CAPS.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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### **CAPS-DANCE 3105 Integrative Healing: Somatic Modalities for Trauma**

"Integrative Healing: Somatic Modalities for Trauma" offers a practical and theoretical introduction to somatic practices that emerged in Europe and North America in the 20th century. In this class, students will have opportunities to explore social, environmental, relational, and cultural ways of understanding the body and movement. They further will investigate how Somatics can heal emotional and physical pain and discord and how integrative services can help with that healing. The course will include readings and videos about related approaches emergent in the past 20 years within the fields of yoga, somatic experiencing to trauma, conscious yoga, and sensorimotor psychotherapy. Somatics is a constantly-evolving field that encompasses many disciplines focused on the dialogue between inner and outer experiences of the whole person. "Integrative Healing..." will explore movement; theory; and the integration of the body, mind, and spirit through modalities including Somatics and social justice/Generative Somatics, Body-Mind Centering, bodywork, and yoga (various types). Students will explore Cultural Somatics, Trauma Conscious Somatics, and other areas in text, discussion, and movement.

Credit 2 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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### **CAPS-DANCE 3120 Tap Dance Workshop**

Students learn repertory taught by the instructor and excerpts of dances by well-known tap artists such as Leon Collins, Eddie Brown, Eleanor Powell, Fred Astaire, and the Nicholas Brothers.

Credit 2 units.

Typical periods offered: Fall

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### **CAPS-DANCE 3170 Creative Dance Movement for Grades K-5**

This course introduces creative movement as a mode of whole body learning. Students will experience creative dance movement both as an expressive form and as a vehicle for arts integration in the K-5 classroom. Students will become familiar with using the elements of dance: body, space, force and time in lesson planning, and will gain

practice with strategies using mindfulness and sensitivity to movement as ways to foster self-regulation in children. Reading assignments and specific movement exercises will support the student's development in pedagogical expertise. National dance education standards will inform methods for lesson planning, evaluation and assessment. This course applies towards both Missouri State Elementary Dance certification requirements and to the Certificate in Somatic Studies at Washington University.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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#### **CAPS-DANCE 3220 Xingyiquan -- Linking Forms**

This is a continuation course in the theory and practice of Xingyiquan (Hsing Yi Ch'uan). It is one of the three great systems of Wu Dang Internal Arts, along with Taijiquan (T'ai Chi Ch'uan) and Baguazhang (Ba Gua Chang). The purpose of these exercises is to help students gain bodily strength, balance, flexibility, peace of mind, relaxation, and improved circulation. Xingyiquan may also be used for self-defense; it features straightforward defense techniques, with specialization of upper-body movements. This course builds upon the foundational courses in Five Elements and Twelve Animals. Students will learn two short linking forms that utilize the skills and techniques learned in the two foundational courses. Students should wear loose-fitting clothing and sneakers. Readings in Daoist texts are assigned, along with readings on the history, philosophy, and technique of this art. Students admitted to the Certificate in Somatic Studies must take this course for a letter grade. Students may enroll no more than two times.

Credit 2 units.

Typical periods offered: Spring, Summer

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#### **CAPS-DANCE 3270 Special Studies in Somatics**

Students with previous experience may register for this course in order to receive credit for specialized small group instruction in somatic practices. Permission of CAPS Somatic Studies coordinator required. Credit variable, max 3 units. This course is available as Pass/Fail, but students pursuing the Certificate in Somatic Studies must enroll for a letter grade.

Credit 3 units.

Typical periods offered: Fall, Spring

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#### **CAPS-DANCE 4070 Applied Anatomy for the Performing Artist**

Introduction to basic anatomy (skeletal system, muscles, nature of joints) applied to concerns of dancers and actors: movement analysis, pre-performance warm-up/post-performance cool-down, and stretching, with specific emphasis on improving body awareness and movement potential. Lectures, readings, discussion, and practical applications. Not a performance class. Prerequisite: minimum one year of training in dance or acting.

Credit 2 units.

Typical periods offered: Fall, Spring

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#### **CAPS-DANCE 4078 Practicum: Applications of Somatic Learning**

This is an advanced course on somatic theory and practice that integrates lectures and experiential activities to study the contributions of prominent somatic educators and therapists and how they have applied their methodology to specific areas and different populations. Each student will identify a specific somatic approach, study in-depth associated theories, techniques, and applications. Each student will write a final paper about their project, lead a group session, and present a class presentation.

Credit 2 units.

Typical periods offered: Fall, Summer 3, Spring

#### **CAPS-DANCE 4999 Independent Study**

Requires CAPS permission.

Credit 3 units.

Typical periods offered: Fall Intercession, Summer 3, Spring, Summer Intercession, Spring Intercession, Fall

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## **Strategic Communication Certificate**

The **Certificate in Strategic Communication** provides essential skills for designing, implementing, and managing business communications programs for a range of corporate, agency, and nonprofit organizations. Individuals in the program learn to coordinate internal and external communications. Program components help learners implement programs personally, manage in-house resources, or direct external teams of communications professionals.

This program provides in-depth instruction in writing, editing, and presentation along with analysis of critical concepts in communications research, management, marketing, advertising, public relations, technology, and media (traditional and new) and how these functions relate to each other in the creation of effective organizational communications.

Learners are able to complete this certificate online. However, course availability may vary depending on the semester.

|          |                                                                                                                                                         |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact: | CAPS                                                                                                                                                    |
| Phone:   | 314-935-6700                                                                                                                                            |
| Email:   | <a href="mailto:caps@wustl.edu">caps@wustl.edu</a>                                                                                                      |
| Website: | <a href="https://caps.wustl.edu/programs/certificates/strategic-communication">https://caps.wustl.edu/programs/certificates/strategic-communication</a> |

## **Requirements**

## **Certificate in Strategic Communication**

### **Required Courses: 9 units**

| Code               | Title                                         | Units    |
|--------------------|-----------------------------------------------|----------|
| CAPS-COMM 2000     | Foundations of Communications                 | 3        |
| CAPS-COMM 2230     | Integrated Strategic Communications           | 3        |
| CAPS-COMM 3010     | Market Research and Communications Strategies | 3        |
| <b>Total Units</b> |                                               | <b>9</b> |



## Elective Courses: 6 units

Learners choose from the following:

| Code           | Title                                     | Units |
|----------------|-------------------------------------------|-------|
| CAPS-COMM 3440 | Public Relations Principles and Practices | 3     |
| CAPS-COMM 3630 | Crisis Communications                     | 3     |
| CAPS-COMM 3710 | Digital Communications Analytics          | 3     |

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

## Courses

### CAPS-COMM 1120 Protect Yourself: Personal Digital Security

Everyone uses computers, smartphones, & the internet, but most don't know much about securing their devices, personal data, or even identities. There's a lot to worry about--viruses, phishing, surveillance, tracking, & much more--but what should really concern individuals? How can one tell if they or their devices are vulnerable? Are there safeguards out there? This course, meant for the average technology user, will answer these questions. Topics covered include passwords, spyware, messaging & email, encryption, testing for vulnerabilities, HTTPS, and backup.

Credit 1 unit.

Typical periods offered: Summer 3

### CAPS-COMM 1996 Communications Elective - 1000 Level

This course listing is to be used for transfer credit, only.

Credit 1-6 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring Half B, Spring Half A, Spring, Spring Intersession, Fall Half B, Fall Half A, Fall

### CAPS-COMM 2000 Foundations of Communications

Foundations of Communication is designed to help students be more effective communicators by examining the principles and contexts of human communication. It introduces fundamental elements (including self-awareness, perception, listening and responding, and verbal and nonverbal messages) and models of communication, basic communication theory, interpersonal communication, small group communication, and public speaking, with an emphasis on a practical application at each level. Students will learn the skills and techniques essential to effective communication and will be expected to demonstrate those in each communication context throughout the semester.

Credit 3 units.

Typical periods offered: Spring

### CAPS-COMM 2010 Writing for Business Communication

Effective and appropriate written communication skills are a distinct advantage to any employee and an essential requirement for today's manager. In this course we will take a creative and active approach to increasing your knowledge of communications principles and formats as well as your ability to express yourself in a variety of written forms, including memos, proposals, presentations and reports. Communications strategy, and the importance of how the message, medium and an understanding of the audience all relate to affect communications outcomes, will also be reviewed.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

### CAPS-COMM 2016 Search Engine Optimization Strategies

The greatest tool for discovery today is the search bar. More than 80 percent of people search online for products and services, but from a marketing perspective, how do you ensure your website result will be shown to them? It is imperative to consider search engine optimization for any digital campaign you embark upon, and SEO work is best learned by doing. Through this course, we aim to deconstruct and demystify how search engines work and what brands, organizations and individuals can do to improve their own search engine standing. Specifically, we will focus on understanding the algorithms that power search engines; how keyword strategies can be researched and constructed; the elements of strong SEO performance; and how to devise and measure tactics that improve a site's overall ranking.

Credit 1 unit.

Typical periods offered: Summer

### CAPS-COMM 2017 Oral Communication

Oral Communication is an introductory course that bridges the most prominent areas in the study of interpersonal and speech communication, including effective one-to-one, small and large group, intercultural, relational, organizational and professional, and public speaking. It will emphasize theoretical/conceptual approaches as well as skill development and the application of oral and speech communication tactics to various communication settings and contexts. Students will explore and apply effective communication strategies that incorporate elements in persuasion, mindful listening, cultural awareness, and group management and leadership.

Credit 3 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring, Fall

### CAPS-COMM 2090 Website Design and Development

This course covers Web site development using the three methods that have been used since Web design first began: hand-coding HTML using a text editor; building Web pages using a WYSIWYG editor like Dreamweaver; and using the most modern method, a Content Management System that separates design from content while making it easy for non-technical users to update a site. We will cover design principles, Cascading Style Sheets, server-side vs. client-side technologies, Web browsers, and Web servers. We will conclude the course with a brief overview of the future of Web development: XHTML and XML.

Credit 3 units.

Typical periods offered: Fall, Spring

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**CAPS-COMM 2210 Marketing Communications**

An introduction to advertising, public relations, and promotions and how they influence communications, journalism, and mass media. Students explore each of the three sisters of marketing and how they are used to build integrated marketing programs. Specific tools, including special events, direct mail, sponsorship, and press materials, will be discussed. In addition, the class will examine current and memorable marketing campaigns, view new technologies, and learn techniques and trends from professionals in the marketing field.

Credit 3 units.

Typical periods offered: Summer

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**CAPS-COMM 2230 Integrated Strategic Communications**

Strategic communication programs enable organizations to accomplish business goals by building and maintaining trusted relationships with their most important communities. A strategic communication plan includes clear and measurable objectives, is based on positioning that clearly differentiates the organization, and takes advantage of appropriate and effective tactics. This course provides an overview of all aspects of strategic communication and how they relate to each other in corporate, agency and not-for-profit environments. It covers the critical concepts needed to manage diverse communication disciplines - including marketing, branding, advertising, public relations, promotions, graphic design, traditional and new media. This course provides the foundation in theory and practice required by today's business executives and professional communicators to create and manage successful programs, using all available strategic communication techniques.

Credit 3 units. UColl: SSC

Typical periods offered: Summer 3, Spring, Fall, Summer

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**CAPS-COMM 2250 Fundamentals of Public Affairs: Messaging Strategies, Public Policy and Advocacy**

This course examines the relationships between the public and influential institutions, especially different levels of government and media communication networks. Students also study how changes in communications and media, including the Internet, print, and social media, have influenced the field of public affairs. Related course topics include lobbying, publishing, and entertainment, their interface with political, economic, and social issues, and their influence on the work of public affairs professionals. We also will analyze how changes in the media impact international communication, and how these influence our understanding of other cultures, regions, and countries.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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**CAPS-COMM 2996 Communications Elective - 2000 Level**

This course listing is to be used for transfer credit, only.

Credit 1-6 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring Half B, Spring Half A, Spring, Spring Intersession, Fall Half B, Fall Half A, Fall

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**CAPS-COMM 3008 Website Design: Principles and Practice**

The Web is its own design medium, and it requires a specific set of skills. This hands-on course teaches students the concepts, issues, and skills needed to design attractive, usable, and accessible websites that work across a wide range of devices. Bringing together graphic design and code, topics will include design principles, color, typography, layout, and multimedia. Graphic design tools will be introduced and explained.

Credit 3 units.

Typical periods offered: Fall, Spring

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**CAPS-COMM 3010 Market Research and Communications Strategies**

This course provides an overview of market research techniques with an emphasis on planning for communications campaigns. The course provides a hands-on look at several popular market research techniques used in supporting communications, such as focus groups and phone surveys. No previous knowledge of statistics is necessary. Recent case studies are used to illustrate how research results have influenced communications campaigns.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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**CAPS-COMM 3020 Digital Paid Media**

In this course, students will receive an introduction to digital paid media. Students will learn about the various ad networks and platforms that help reach consumers online. Digital paid media includes search engine marketing, social media ads, display, mobile, and video ads. This course delves into best-practice approaches to planning and measuring digital paid media campaigns, as well as how to leverage complex algorithms.

Credit 1 unit.

Typical periods offered: Summer 4, Summer 3, Summer 2

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**CAPS-COMM 3031 Organizational Communication**

Organizational Communication provides an overview of communication dynamics within and between organizations. Students will analyze these processes using various analytical frameworks, concepts, theories, and methods aimed at both examining and improving organizational communication strategies. Emphasis will be given to contemporary issues and challenges facing communication professionals and organizations at large. This course's guiding principle is to teach students how to lead their organizations in gaining a competitive advantage in a strategic communications context.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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**CAPS-COMM 3050 Social Media for Public Relations**

This class introduces students to the various ways social media may be used in the practice of public relations and marketing. We use the traditional steps of research, strategy, and measurement and apply them to online campaigns. We learn about various emerging social media technologies—including blogs, wikis, Facebook, Twitter, and LinkedIn—and how they have changed the world of PR and marketing.

Credit 1 unit.

Typical periods offered: Summer

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**CAPS-COMM 3060 Making the Cut: Editing Digital Video**

This course introduces students to video editing: reducing hours of recorded video to compelling moments and creatively weaving together the best parts to attract and hold viewers. Students will use supplied video material to learn how to guide the viewer's attention, build suspense, and inform the audience. We will also learn tricks to fix common mistakes made in the field and explore higher-level production methods (e.g., color correction, picture-in-a-picture technique) to achieve a professional look. By the end of the course, students will be proficient in making simple edits to create the equivalent of a basic short narrated video package or promotional video. Students will also learn to improve their videography skills by seeing what works in the editing suite.

Credit 3 units.

Typical periods offered: Fall, Spring

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## **CAPS-COMM 3110 Advanced Web Site Design and Development**

This course focuses on one of the most important parts of Web development: Cascading Style Sheets (CSS), which allow developers to set the formatting and positioning of content in webpages. We will cover topics such as CSS selectors, media-specific styles, animation, navigation, layouts with Flexbox and Grid, lightboxes, and we'll take an in-depth look Responsive Web Design via Bootstrap and other frameworks.

Credit 3 units.

Typical periods offered: Spring

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## **CAPS-COMM 3440 Public Relations Principles and Practices**

This course provides an overview of public relations and its social media and online components. We will consider theoretical and practical applications of communications with various publics: media, employees, consumers, the community, and shareholders.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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## **CAPS-COMM 3452 Effective Editing**

Today's communicators don't just write, they also must edit their work for posting on a website or publishing in print. Learn about editing, including the basics of professional-grade grammar, punctuation and style usage. Most editing today involves not just copyediting, however. Communicators must know how to spot sexist and racist language, poor organization and imprecise sentences. This class will help you edit others' work, and, most importantly, your own.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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## **CAPS-COMM 3630 Crisis Communications**

Both profit and nonprofit organizations are increasingly embroiled in controversies and crises. Consequently, demands are growing for public relations practitioners to help restore an organization's good name and reputation, along with its financial stability. In learning to construct, implement and evaluate a crisis communication plan, students will research and analyze an organizational crisis, identify the communication demands of various audiences affected by a crisis, and develop strategies and communication tools for managing a crisis.

Credit 3 units.

Typical periods offered: Spring

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## **CAPS-COMM 3650 Communications Technology and New Media**

This course explores concepts, production, design, publications, strategies and practical applications of interactive media. The course focuses on emerging topics and technologies to help students develop strategies for addressing and resolving both basic and complex issues associated with interactive media. Case studies will be introduced to examine a range of interactive media topics including photography, blogging, videography, ethics and social media marketing.

Credit 3 units.

Typical periods offered: Fall, Summer 3

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## **CAPS-COMM 3680 The Business of Communications**

This course presents the business side of journalism and media organizations, from publication and creation of content to day-to-day operations. Students will study business practices and procedures of all types of media organizations, with emphasis on sales and marketing, product distribution, production, and audience identification and engagement. We also will learn to develop publications and products which speak to readers and viewers.

Credit 3 units.

Typical periods offered: Fall

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## **CAPS-COMM 3710 Digital Communications Analytics**

For the last quarter century, organizations, companies and brands have entered into an increasingly evolving world of digital communications, offering unbridled opportunities to reach and engage their key stakeholder audiences. This course delves deep into how to uncover and utilize data analytics and their related insights to better understand, plan and optimize communications within digital channels and platforms. It goes into detail on how the digital ecosystem has evolved and is still evolving due to technological advances, regulatory actions, and other cultural impacts. It explores how to use digital data to better understand audiences and their behavior as well as for specific marketing and communications objectives, such as launching a new product and planning for a crisis.

Credit 3 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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## **CAPS-COMM 3993 Internship in Communications**

The Communications Internship course provides students with supervised, experiential learning opportunities in media, marketing, strategic, or organizational communication settings. Students will apply communication theories, concepts, and strategies, develop career-ready skills, and explore potential career paths within the media/communications field. Students may earn up to six internship credits toward their degree; therefore, the course may be taken a maximum of two times. As a culminating assignment, students complete a reflective paper connecting their internship experiences to academic and professional development goals. Before enrolling, students must consult with their Student Navigator to review eligibility requirements, internship plans, and credit options.

Credit 1-6 units.

Typical periods offered: Summer 3, Summer, Fall Intercession, Spring, Summer Intercession, Spring Intercession, Fall

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## **CAPS-COMM 3996 Communications Elective - 3000 Level**

This course listing is to be used for transfer credit, only.

Credit 1-6 units.

Typical periods offered: Summer 4, Summer 3, Summer 2, Summer 1, Summer, Spring Half B, Spring Half A, Spring, Spring Intercession, Fall Half B, Fall Half A, Fall

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## **CAPS-COMM 3999 Independent Study in Communications**

Instructor and CAPS approval required.

Credit 1-4 units.

Typical periods offered: Summer 3, Spring, Fall, Summer

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## **CAPS-COMM 4050 Topics in Public Relations**

An advanced-level examination of public relations functions through studies in special subjects related to the field. A major research paper or project is required. For information about current offerings, consult the Course Schedule.

Credit 3 units.

Typical periods offered: Fall, Summer 3, Spring

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## **CAPS-COMM 4161 Communications Ethics and the Law**

In this course, we will analyze principles that influence ethical judgment in the newsroom, the public relations firm, and the broader communications business. We will look at historical foundations of ethical thought in communications, study laws governing mass communications, and examine tools and strategies for ethical

judgment in the field. We will also consider how one's personal ethical framework influences judgment, and we will use case studies to analyze ethical questions associated with social responsibility, commercial speech vs. political speech, and censorship.

Credit 3 units. UColl: ML

Typical periods offered: Spring

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**CAPS-COMM 4994 Internship in Public Relations and Advertising**

Requires CAPS permission

Credit 3 units.

Typical periods offered: Fall, Spring, Summer

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**CAPS-COMM 4999 Independent Study in Communications**

Requires CAPS permission

Credit 3 units.

Typical periods offered: Fall Intercession, Summer 3, Spring, Summer Intercession, Spring Intercession, Fall

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# Sustainability Certificate

**Note:** This program has stopped accepting new students as of Spring 2026.

The **Certificate in Sustainability** provides an interdisciplinary foundation for understanding and addressing today's most pressing and complex social, environmental and economic challenges.

This certificate covers the broad sustainability knowledge, skills, and competencies needed for those interested in either advancing within their current field or seeking a new direction. It can apply across a wide range of fields, from management, design, and planning to environmental services in business, nonprofit, and public institutions. The program addresses the collaborative and integrative nature of sustainability with an emphasis on applied learning — taking the lessons from the classroom into St. Louis.

Learners are able to complete this certificate online. However, course availability may vary depending on the semester.

Contact: CAPS  
Phone: 314-935-6700  
Email: [caps@wustl.edu](mailto:caps@wustl.edu)  
Website: <https://caps.washu.edu/programs/certificates/certificate-in-sustainability/>

## Requirements

# Certificate in Sustainability

## Required Courses: 15 units

| Code               | Title                                                       | Units     |
|--------------------|-------------------------------------------------------------|-----------|
| CAPS-BUS 3210      | Strategic Planning                                          | 3         |
| CAPS-SUST 2010     | Foundations and Practice of Sustainability                  | 3         |
| CAPS-SUST 2020     | Introduction to Environmental Studies                       | 3         |
| CAPS-SUST 3045     | Planning Sustainable & Racially Equitable Urban Communities | 3         |
| CAPS-SUST 3060     | Environmental Law: Applications Toward Sustainability       | 3         |
| <b>Total Units</b> |                                                             | <b>15</b> |

*This program is offered either mostly or fully online. Students entering the U.S. on an F-1 or J-1 Visa must enroll in a program full time. F-1 students are only permitted to enroll in one online course per semester and J-1 students may only enroll in non-credit online courses that do not count toward their degree program. WashU Continuing & Professional Studies (CAPS) cannot guarantee face-to-face enrollment options each semester of full time enrollment, therefore cannot issue an I-20 or DS 2019 to F-1 and J-1 students for this program. If you are an F-1 or J-1 student and wish to enroll in a CAPS program while here on a Visa, please contact our recruitment team to discuss your options for face-to-face program enrollment. F-1 and J-1 students should not enroll in online courses or programs without first consulting the university's Office for International Students and Scholars (OISS).*

# Community Programs

WashU Continuing & Professional Studies (CAPS) is expanding educational boundaries in the St. Louis region through three innovative community programs: English Language Programs (ELP), the Master of Arts in Teaching and Learning (MATL), and the Prison Education Project (PEP). These programs democratize access to education and foster continuous learning by supporting the region's international population, bringing new teachers into St. Louis-area schools, and offering pathways for personal and professional growth to incarcerated individuals.

Contact: CAPS  
Phone: 314-935-6700  
Email: [CAPS@wustl.edu](mailto:CAPS@wustl.edu)  
Website: <https://caps.washu.edu/programs/community-programs/>



## Program Information

### English Language Programs (p. 165)

CAPS English Language Programs (ELP) are designed to strengthen and advance the English language capacities of those who speak English as an additional language, facilitating students' academic and professional success at the university and beyond.

### Master of Arts in Teaching and Learning (p. 63)

The Master of Arts in Teaching and Learning (MATL), a collaboration between WashU Continuing & Professional Studies (CAPS) and Teach St. Louis, trains both current and aspiring public school teachers in the St. Louis region to become leaders in their schools.

### Prison Education Project (p. 166)

The CAPS Prison Education Project (PEP) is a transformative program that offers a college education to incarcerated students at the Missouri Eastern Correctional Center (MECC) and the Women's Eastern Reception, Diagnostic and Correctional Center (WERDCC).

## English Language Programs

WashU Continuing & Professional Studies (CAPS) English Language Programs (ELP) are designed to strengthen and advance English language capacities through courses, support, and assessments. ELP helps WashU students who speak English as an additional language achieve academic and professional success.

## Academic Pathways

ELP has offered an academic and professional language support program for WashU graduate students and scholars for over 40 years. This program is designed to connect students' and scholars' knowledge of English with the skills of scholarship through courses in three academic pathways: academic writing, conversational proficiency, and presentations and teaching. Refer to the ELP Academic Program Pathways tab for further details.

## ELP Resources

- Language proficiency assessment for WashU international undergraduate and graduate students, postdoctoral scholars, and other WashU-affiliated individuals
- Individualized meetings for resources, planning, and feedback to support students in developing their English language skills for academic and professional success

## English on Demand

ELP offers customized, on-demand programming in English for specific professional purposes, Community English, English for Researchers, and Pronunciation for Clear Communication. Drawing on a long history of expertise in applied linguistics, ELP can develop programming tailored to specific needs based on the principles of effective language instruction and adult learning. To learn more about existing English on Demand programs, visit the CAPS ELP website and scroll to the bottom of the page.

Contact: Katie Blackburn Brown  
Phone: 314-935-6700  
Email: [brownkb@wustl.edu](mailto:brownkb@wustl.edu)  
Website: <https://caps.washu.edu/programs/community-programs/english-language-programs/>

## ELP Academic Program Pathways

### Academic Pathways

English Language Programs has offered an academic and professional language support program for WashU graduate students and scholars for over 40 years. This program is designed to connect students' and scholars' knowledge of English with the skills of scholarship through courses in three academic pathways: Academic Writing, Conversational Proficiency, and Presentations and Teaching.

### Academic Writing Pathway

The Academic Writing Pathway is designed to help students develop their English skills for success in writing academic papers.

| Code          | Title                                                  | Units |
|---------------|--------------------------------------------------------|-------|
| CAPS-ELP 1108 | Skills & Strategies for Academic Writing               | 2     |
| CAPS-ELP 1115 | Writing for Academic and Professional Communication    | 2     |
| CAPS-ELP 2208 | Research Writing for International Students & Scholars | 2     |
| CAPS-ELP 3350 | Advanced Research Writing Institute                    | 2     |
| CAPS-ELP 4499 | Writing Intensive Tutorial                             | 1     |

## Conversational Pathway

The Conversational Pathway is designed to help students develop their English skills for talking with fellow students and professors on campus and in the broader St. Louis community.

| Code          | Title                                                       | Units |
|---------------|-------------------------------------------------------------|-------|
| CAPS-ELP 1101 | Pronunciation for Clear Communication I                     | 2     |
| CAPS-ELP 2202 | Talking to Americans: Casual and Professional Conversations | 2     |
| CAPS-ELP 4498 | Pronunciation Tutorial                                      | 1     |

## Presentation and Teaching Pathway

The Presentation and Teaching Pathway is designed to help students develop their English skills, present their research, and more effectively serve in a teaching capacity.

| Code          | Title                                                                | Units |
|---------------|----------------------------------------------------------------------|-------|
| CAPS-ELP 1170 | Presentation Skills for Academic & Professional Settings             | 2     |
| CAPS-ELP 1171 | Talk Like TED: Interdisciplinary Communication & Presentation Skills | 2     |
| CAPS-ELP 4470 | Language, Culture, and Interaction Strategies for Instruction        | 2     |

## Prison Education Project

CAPS also administers the WashU Continuing & Professional Studies (CAPS) Prison Education Project (PEP). CAPS PEP offers credit-bearing college courses and degrees to incarcerated students at two Missouri prisons: the Missouri Eastern Correctional Center in Pacific, MO, and the Women's Eastern Reception, Diagnostic, and Correctional Center in Vandalia, MO. As part of CAPS, PEP offers both an Associate in Arts and a Bachelor of Science in Integrated Studies (with concentrations in Humanities, Social Sciences, and Natural Science & Mathematics). PEP cultivates a rigorous college-in-prison environment that encourages and supports lifelong curiosity, dialogue, and collaboration. By offering courses, degrees, and other opportunities for intellectual engagement in the liberal arts, PEP strives to nurture thinkers and social change agents who positively impact their communities, families, and each other. In addition to its programs for incarcerated students, PEP offers staff at the Missouri Department of Corrections the opportunity to pursue courses and degrees through CAPS.

## Special Programs

WashU Continuing & Professional Studies (CAPS) offers the following additional undergraduate programs:

- ACTRAC (Advanced Track) for Undergraduates in Bachelor's Programs (p. 166)
- Combined Bachelor's/Master's Program (p. 166)
- Special Audit Program (p. 167)
- Undergraduate Honors Program (p. 167)

## Accelerated Track (ACTRAC) Program

Learners wanting to advance more quickly toward their degree can do so with the Accelerated Track program (ACTRAC). Eligible WashU Continuing & Professional Studies (CAPS) students may enroll in courses that carry the ACTRAC option. By completing additional coursework prescribed by the instructor, learners earn 4 credits for each ACTRAC course rather than the usual 3 credits. By taking ACTRAC courses, students can reduce the total number of courses they must take before they graduate.

## Program Requirements

Eligible students must meet the following requirements:

- Be admitted to a CAPS undergraduate degree program
- Have successfully completed at least 12 credits in CAPS
- Have completed an English composition course at CAPS with a grade of B or better
- Have a 3.0 minimum grade point average
- Have written approval from a CAPS Student Success Navigator

Once approved, learners register and pay for 4 credits for each ACTRAC course. The ACTRAC option must be chosen at the beginning of the semester, and it is not available to WashU day students.

The extra credit work is determined by the instructor and will normally include extra reading, writing and research.

## Combined Bachelor's/Master's Program

The Combined Bachelor's/Master's Degree Program at WashU Continuing & Professional Studies (CAPS) is designed for students who wish to pursue rigorous and accelerated study that will lead to both a Bachelor of Science and either a Master of Arts or Master of Science in areas of study for which there are degree programs at CAPS.



## Eligibility Requirements

Eligibility requirements for the Combined Bachelor's/Master's Degree Program in CAPS include the following:

- Admission to a Bachelor of Science degree program in CAPS.
- Completion of a minimum of 90 units toward the Bachelor of Science degree, including transfer credit, with a 3.0 or higher cumulative grade point average.
- Completion of a minimum of 15 units of undergraduate course work in CAPS, at least 12 of which must be at the advanced level (3000- and 4000-level courses), with a 3.0 or higher cumulative grade point average.
- Completion of a Combined Bachelor's/Master's Degree Program application for contingent admission.
- Statement of Intent (no more than one page) focusing on why this degree pathway was chosen and what goals are for the future.
- Writing sample: this should be a research paper with citations that is a minimum of 10 to 12 pages long, with references.
- Two letters of recommendation (at least one academic).

## Program Requirements

Students who meet the eligibility requirements should meet with a CAPS Student Success Navigator to complete the Combined Bachelor's/Master's Degree Program application. After they have been granted contingent admission, students must do the following:

- Complete of a minimum of 135 units of coursework (undergraduate and graduate), including all residency requirements for the Bachelor of Science degree.
- Complete all requirements in the relevant graduate program, including a final written project where required, and in accordance with all academic policies and procedures for undergraduate and graduate study in CAPS.
- Continue their master's degree coursework in the semester (fall or spring) immediately following completion of the bachelor's degree.
  - Students receiving contingent admission are required to submit a graduate application during their final 30 to 36 units of undergraduate study, at which time their academic performance and potential for continued graduate study will be reevaluated.

A maximum of 15 to 18 units of graduate coursework (depending on the specific master's program) at the 4000 and 5000 levels may count toward requirements for the graduate degree and as unrestricted electives for the undergraduate degree.

For more information or to schedule an appointment to discuss the program, please call 314-935-6700.

## Special Audit Program

Individuals may audit a wide selection of undergraduate courses at WashU Continuing & Professional Studies (CAPS) for \$450 per course. The Special Audit option makes it easier than ever for learners to challenge themselves with high-quality, continuing education at WashU.

All CAPS courses available through the Special Audit program are tagged with the option in each term's course listings. Courses taken as Special Audit do not appear on a WashU transcript, do not carry academic credit, and do not apply to degree requirements in a CAPS program of study. Individuals taking courses as Special Audit do not turn in written coursework, take exams, or participate in graded projects; they are, however, expected to keep up with course reading and possibly to participate in course discussion, depending on instructor preference.

Please note that CAPS cannot provide technology support for students enrolled in Special Audit courses. This includes fully online, online hybrid, and in-classroom courses.

|          |                                                                                                                                                               |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact: | Amanda Mueller                                                                                                                                                |
| Phone:   | 314-935-6720                                                                                                                                                  |
| Email:   | <a href="mailto:amanda.mueller@wustl.edu">amanda.mueller@wustl.edu</a>                                                                                        |
| Website: | <a href="https://caps.washu.edu/programs/special-programs/special-audit-program/">https://caps.washu.edu/programs/special-programs/special-audit-program/</a> |

## Undergraduate Honors Programs

WashU Continuing & Professional Studies (CAPS) Honors programs provide students with multiple opportunities to deepen and extend their knowledge, earn scholarships and academic awards, and join communities of intellectually and socially engaged learners. Undergraduate Honors programs at CAPS include the following:

### Latin Honors

Latin honors are awarded to CAPS learners who do the following:

1. Complete a CAPS baccalaureate degree program;
2. Earn a minimum of 45 credit units in residence at CAPS;
3. Have no outstanding academic integrity or disciplinary sanctions at the time of degree conferral; and
4. Meet the cumulative grade point average (GPA) thresholds established below.

Latin honors are determined at the time of degree conferral based on the student's final cumulative CAPS GPA.

The following Latin honors distinctions are awarded based on the student's cumulative CAPS GPA:

- Summa Cum Laude (with highest honor): GPA of 3.900 to 4.000
- Magna Cum Laude (with high honor): GPA of 3.800 to 3.899
- Cum Laude (with honor): GPA of 3.600 to 3.799

## Calculation of GPA

1. Latin honors are calculated using the cumulative institutional GPA.
2. Transfer credits are excluded from GPA calculations for Latin honors but may count toward the minimum credit requirement for degree completion, unless otherwise specified.
3. Courses graded on a Pass/No Pass basis are excluded from GPA calculation for Latin honors.

## Thesis Option for Students Below the In-Residence Credit Requirement

Students who do not meet the minimum CAPS residency requirement for Latin honors may petition to qualify through completion of an approved Honors Thesis.

Students may apply for the Thesis Option if they do the following:

1. Complete at least 30 credit units in residence at CAPS;
2. Have a minimum cumulative institutional GPA of 3.500 at the time of application; and
3. Receive approval from their program of study's Academic Director.

## Thesis Requirements

1. The student should be enrolled in the BSIS Capstone (3 credit units) course.
2. The student will enroll in 1 credit unit concurrently with the BSIS Capstone course, for a total of 4 credit units.
3. The student must complete substantial original research, creative practice, or applied project components under faculty supervision.
4. The capstone and thesis combined must be equivalent in scope and rigor to 4 credit units of upper-division coursework.
5. A thesis committee of at least one Academic Director and one faculty member will evaluate the work.
6. The thesis must receive a final evaluation of Honors Pass or equivalent designation.

## Thesis Approval Process

1. The student submits a formal Latin Honors Thesis Request no later than one semester prior to graduation.
2. Academic Directors review and approve the proposal.
3. Upon successful completion of thesis work and committee approval, the designated Academic Director submits certification to the Assistant Director of Academic Services prior to degree conferral.
4. Final Latin honors designation remains contingent upon the student meeting the GPA thresholds outlined above.

## Limitations

1. Completion of a thesis does not guarantee Latin honors; GPA thresholds must still be met.
2. Students who do not successfully complete the thesis (where relevant) will graduate without Latin honors unless they meet the standard residency requirements.

## Alpha Sigma Lambda

Alpha Sigma Lambda is a national honor society that recognizes high-achieving modern learners. The CAPS chapter invites eligible undergraduate students to join the organization each spring. Eligibility is determined as follows:

- The learner has accrued a minimum of 24 credits in residence at CAPS.
- The learner must be in their first undergraduate degree program.
- The learner has accrued a minimum of 12 credits from liberal arts and sciences coursework. (These courses can be from within or outside their field of study and can be comprised of combined CAPS and transfer credits.)
- The learner has a minimum GPA of 3.5.

CAPS grants approval for membership based on the learner's entire record.

## Dean's List

Recognition on the Dean's List is given to learners who are undergraduate degree or certificate candidates at WashU Continuing & Professional Studies who have completed a minimum of 6 units of coursework at Washington University during the preceding semester with a GPA of at least 3.6.

## Phi Beta Kappa

For more than 200 years, election to Phi Beta Kappa has been a distinctive recognition of intellectual accomplishment in the liberal arts and sciences. Candidates for Phi Beta Kappa should have demonstrated superior scholarship as well as breadth and depth of interest in the liberal arts. Study of a foreign language and of



mathematics, while not required, strongly enhance candidacy. In addition, at least 112 credits must be completed by the end of the fall semester, at least 45 of which must be earned at WashU. Candidacy is determined by a selection committee of WashU faculty and administrators; although the committee takes GPA into account, it focuses on the breadth and depth of students' academic pursuits to inform the selection process.

Contact: CAPS  
Phone: 314-935-6700  
Email: [caps@wustl.edu](mailto:caps@wustl.edu)  
Website: <https://caps.washu.edu/programs/special-programs/>

## Online Learning Programs

Whether learners are degree-seeking or taking courses for personal enrichment, WashU Continuing & Professional Studies (CAPS) offers a diverse array of fully online and hybrid options.

Life is busy, and CAPS recognizes the need for flexible programming for modern learners with varied schedules. Accordingly, they offer a selection of certificates, undergraduate degrees, and master's degrees encompassing a variety of fully online and/or hybrid courses. Online-hybrid courses combine on-campus class meetings with online coursework, activities, and resources.

CAPS online courses are distinguished by small class sizes, and students engage directly with faculty and classmates. Many of these courses are offered asynchronously and can be accessed at convenient times; instructors assign weekly deadlines to keep learners motivated and on-pace. Instructors may also offer synchronous, live, online office hours, lectures, or discussion sessions.

For information about online learning in CAPS, including course and degree program options, visit the CAPS Programs webpage.

## Programs Offered

- Forensic Psychology Certificate (p. 152)
- Foundations of Counseling Psychology and Behavioral Health, BSIS (p. 115)
- Geographic Information Systems Certificate (p. 152)
- Health Care Management, BSIS (p. 120)
- Health Care Transitions Certificate (p. 153)
- Health Sciences, BSIS (p. 125)
- Humanities, BSIS (p. 130)
- Leadership and Management, BSIS (p. 131)
- Leadership and Organizational Development Certificate (p. 154)
- Marketing Certificate (p. 154)
- Pharmaceutical Sciences, BS (p. 110)
- Pre-Nursing Program Details (p. 145)
- Prison Education Project (p. 166)
- Project Management Certificate (p. 155)
- Social Sciences, BSIS (p. 136)
- Somatic Studies Certificate (p. 156)
- Special Audit Program (p. 167)
- Strategic Communication Certificate (p. 160)
- Strategic Communications, BSIS (p. 137)
- Sustainability Certificate (p. 164)
- Undergraduate Honors Program (p. 167)
- Accelerated Track (ACTRAC) Program (p. 166)
- Applied GeoAI Certificate (p. 147)
- Associate in Arts Degree (p. 142)
- Associate in Arts Degrees in Pre-Nursing (p. 142)
- Business Certificate (p. 148)
- Business Writing Certificate (p. 149)
- Clinical Research Management Certificate (p. 149)
- Clinical Research Management, BSIS (p. 111)
- Combined Bachelor's/Master's Program (p. 166)
- Creative Writing Certificate (p. 150)
- Data Analytics and Applications, BSIS (p. 114)
- Data Analytics Certificate (p. 151)
- English Language Programs (p. 165)

# Academic Policies

Students are required to satisfy all degree, program of study, and other school requirements as published in the *Bulletin* and on the WashU Continuing & Professional Studies (CAPS) website at the date of admission to a CAPS program of study (with a 10-year statute of limitations). If any changes are made to degree, program of study, or other school requirements prior to July 1, 2026, and noted on the CAPS website, students who have been admitted to a program of study prior to these changes being made may retain the requirements associated with the original program as printed in the *Bulletin*; alternatively, with CAPS authorization, they may make appropriate changes to their original program of study in order to adapt to the newer requirements. Students admitted to a program of study after program changes are made are required to meet the new requirements and not the original requirements as posted in the previous iteration of the *Bulletin*.

If a student has been away from CAPS for 10 or more years and the original program of study is no longer offered, the student must select a new, currently-offered program of study. If a student has been away from CAPS for 10 or more years and the original program of study is currently offered but has changed, CAPS will first review the requirements associated with the original program and, in consultation with the student and relevant academic units, select degree and program of study requirements, including appropriate course substitutions from either the original or current program.

More academic policy information is contained in the following sections of this page:

## Courses and Credits

The number of units assigned to each course is noted in a term's Course Schedule. Courses numbered 1000-3999 carry credit toward an undergraduate degree. Courses numbered 4000-4999 possibly can carry undergraduate or graduate credit. Graduate-level courses numbered 5000 and above are open only to students admitted to a graduate program or by permission of the instructor and the program director.

## Grades

The WashU Continuing & Professional Studies (CAPS) grading system is based on a rated 4.0 scale. The scale and grade points per unit of academic credit for each letter grade are as follows:

| Grade   | Points per Unit |
|---------|-----------------|
| A or A+ | 4.0             |
| A-      | 3.7             |
| B+      | 3.3             |
| B       | 3.0             |
| B-      | 2.7             |
| C+      | 2.3             |
| C       | 2.0             |

|         |                                                                                   |
|---------|-----------------------------------------------------------------------------------|
| C-      | 1.7                                                                               |
| D+      | 1.3                                                                               |
| D       | 1.0                                                                               |
| D-      | 0.7                                                                               |
| F       | 0.0                                                                               |
| Pass    | Credit awarded, but work was not subjected to more precise evaluation             |
| No Pass | No credit/student's work was not satisfactory                                     |
| N       | No grade received by the Registrar's Office by the grading deadline               |
| I       | Incomplete/semester's work not finished, including failure to complete final exam |
| W       | Withdrawal/student withdrew from course prior to completion                       |
| R       | Repeat/course has been retaken                                                    |
| L       | Audit/student satisfactorily audited the course throughout the semester           |
| Z       | Audit/student did not satisfactorily audit the course                             |

These grading policies apply to all CAPS courses. Only courses taken for a letter grade may be applied toward a graduate program of study. Courses taken as Pass/No Pass or Audit will not count toward a graduate program of study. Grades below C will not count toward a graduate program of study. Students are responsible for knowing the specific grading criteria and course requirements set by individual instructors. Grades are posted online at the end of the semester. No grades are given by telephone or orally in the CAPS offices.

CAPS recommends the following grading scale:

- A: 94-100%
- A-: 90-93%
- B+: 87-89%
- B: 83-86%
- B-: 80-83%
- C+: 77-79%
- C: 73-76%
- C-: 70-72%
- D+: 67-69%
- D: 60-66%
- F: 0-59%

## Grading Options

Students usually may choose among two or three grading options at the time of registration: Quality Graded Credit (AKA letter grade), Pass/No Pass, or Audit. Changes from one option to another must be made by the dates indicated on the CAPS Academic Calendar. Grade option changes are not permitted after a semester is over.

When undergraduate courses are taken for a letter grade, all grades of D and above are considered passing grades and satisfy the course requirements. However, grades of D are not counted toward/do not fulfill basic/general education and distribution requirements,

certificate requirements, field of study requirements, or graduate degree requirements. Grades of F may be given for failing work or for cases in which a student has failed to attend a single class or submit work. Courses graded with an F do not count toward a degree. Any required, non-elective courses that are failed must be retaken. The grade for the original course is replaced by the grade for the retaken course. Students using the WashU employee tuition benefit may only attempt to retake a course twice.

## Pass/No Pass

The Pass/No Pass option is available for many courses. Under this option, students receive credit for courses satisfactorily completed, but a grade is not assigned or calculated in the student's cumulative grade point average. *A course taken for Pass/No Pass credit is considered successfully "passed" if the student earns the equivalent of a 65% for an undergraduate course and 75% for a graduate course.* Undergraduate degree candidates may take no more than 6 units for an associate's degree and no more than 12 units for a bachelor's degree using this option. Courses intended to satisfy the basic and advanced writing requirements for the Associate in Arts and Bachelor of Science degrees, courses in the field of study, and courses specific to a graduate degree or any certificate are excluded from the Pass/No Pass option. Graduate schools and current employers may require specific letter grades rather than grades of Pass/No Pass. A specific grade may also be required as a prerequisite for more advanced coursework in that subject area. A few courses particularly designated by departments may require enrollment on a Pass/No Pass basis, in which case the course would not be included in the limit.

## N Grades

A grade of N indicates that no grade has been received by the Registrar's Office by the grading deadline. Sixty days after the end of a term, a grade of N will be converted to an F. Continuing master's research is the only exception to the above policy, in which case the permanent grade is N.

## Incompletes

Students (both undergraduate and graduate) may request a grade of Incomplete for a course for which they have completed a substantial amount of coursework but for which they are unable to complete all work by the end of the term. Students should seek approval from their instructor prior to the end of the term. A grade of I (Incomplete) indicates that the instructor has agreed to withhold a final grade pending the completion of a small portion (e.g., exam, final paper, presentation) of required work normally due at the end of a term. In these circumstances, the following process should be followed:

- With consent of the instructor, the student submits an Incomplete Agreement form prior to the last day of the term. No later than 60 days after the term ends, instructors will convert any I grade to the appropriate grade based on work completed.
- A grade of Incomplete without an Incomplete Agreement form submitted within 60 days of the end of the term will be converted to an F.

- The submitted grade *may later be adjusted* in accordance with the Incomplete Agreement, within a period of one calendar year from the end of the term, after which time the submitted grade will be considered permanent.

Washington University Employees may have additional requirements. Please refer to the HR policy on incomplete grades for more information.

## Retaking a Course

Students may retake a course, in which case only the highest grade will be included when calculating the student's GPA. All enrollments will appear on the student's transcript, but the symbol "R" will be added to the grade for the enrollment with the lower grade. If the attempts result in the same grade, the grade for the original attempt will have an "R" added to it. Unless a course is designated as repeatable, credit may only be earned once for a course. Students using the WashU employee tuition benefit may only attempt to retake a course twice.

## Auditing Courses

The regular Audit grade may be chosen if a student wishes to have the registration and grade for a course recorded on an official transcript but does not seek academic credit for the course. Students must meet the requirements established by the instructor to successfully audit a course. As an auditor, normally the student is required to attend and participate in the course but not required to complete all written assignments and examinations.

The *Special* Audit option is offered only for a select number of CAPS courses (and is not a grade type). Courses taken as Special Audit will not appear on a Washington University transcript, and a grade report is not issued. Courses taken as Special Audit do not carry academic credit and do not apply to degree requirements in a CAPS program of study. Special auditors attend lectures and discussions but are not required to complete written work, exams, and so on.

## Transfer Credit

WashU Continuing & Professional Studies (CAPS) has a generous transfer credit policy for coursework completed at other accredited institutions. In deciding whether to accept credit from another institution, CAPS considers such factors as the following:

- The institution's status as a fully accredited institution of higher education at the time of course completion, either according to U.S. Department of Education standards or by the National Ministry of Education (for non-U.S. institutions)
- That accreditation's type and nature
- The information that can be found in institutional Bulletins and guides

*Any transfer credit awarded is at the sole discretion of CAPS.* CAPS will determine, for all credit accepted, whether the credits apply to specific program requirements. These additional rules apply:

- A maximum of 84 units overall may be transferred for the Bachelor of Science degree.
- A maximum of 66 units from a community college may be transferred for the Bachelor of Science degree.
- A maximum of 60 credits from approved Associate in Applied Science programs may be transferred for the Bachelor of Science degree.
- A maximum of 24 units may be transferred for the Associate in Arts degree.
- Courses numbered as undergraduate level, according to transcript key, may be eligible for transfer credit.
- Where a relevant division or department exists, credit will be granted in that division or department. Otherwise, general elective credit will be granted.
- Transfer credit is awarded toward all categories of coursework in CAPS: general education, field of study, upper level, and so on.
- Courses with grades of C or higher are eligible for transfer credit to undergraduate degrees.
- Transfer credit is not typically awarded for internships, independent study, courses associated with vocational and technical training, or study for trade certification. In some cases, credit for prior learning may be applied on a case-by-case basis.

To receive transfer credit, a student must be admitted to a WashU Continuing & Professional Studies (CAPS) degree or certificate program and submit official transcripts from all institutions previously attended. All records must be in English. International records must be evaluated for transfer credit by an accredited transcript evaluation agency. Student Success Navigators will evaluate transcripts to determine transfer credit and remaining course requirements for completing a CAPS degree or certificate.

WashU Continuing & Professional Studies (CAPS) accepts units from the following for transfer credit: College Level Examination Program (CLEP), Advanced Placement courses, DANTES Subject Standardization Tests (DSST), and International Baccalaureate courses. The combined total number of units accepted in transfer credit from these sources, combined, may not exceed 30 units.

Students may receive a total of 15 units of advanced placement credit from standardized placement tests that were completed prior to being admitted to a CAPS undergraduate degree program. Units earned through advanced placement may apply toward CAPS distribution requirements. To receive advanced placement credit, students should submit official score reports from Advanced Placement Examinations, College Board Achievement and Aptitude Tests, the International Baccalaureate (higher levels), and British A-level examinations.

CAPS also accepts credit for prior learning evaluated by the American Council on Education (ACE) via the National Guide or the Military Guide and recommended at the baccalaureate level.

Students who have completed English composition courses at other colleges or universities should be well-prepared for the required writing courses at CAPS. Transfer credit will be granted for this coursework according to our standard transfer credit policies. All undergraduate students will be assessed for writing proficiency. Students who are new to CAPS must begin with CAPS-ECOMP 1110

Analytical Writing. Those who demonstrate strong writing skills in the assessment may enroll in CAPS-ECOMP 2020 Critical and Researched Writing instead. All students must complete CAPS-ECOMP 2020 Critical and Researched Writing and at least one 3000- or 4000-level writing-intensive or 3000-/4000-level writing course at CAPS. Students in graduate programs or those who have completed bachelors' degrees within the previous five years are exempt from taking the writing assessment.

## Advanced Courses

In order to receive the Bachelor of Science degree, students must complete a minimum of 30 units of advanced courses (equivalent to 3000- and 4000-level course numbers at Washington University); at least 18 units of advanced courses must be taken in the field of study. Transfer credit may be awarded for additional advanced courses.

## Overlap Policy

Learners enrolled in an associate's degree program must complete 15 units of Basic Requirements and 6 units in each of three distribution areas: Natural Sciences & Mathematics, Social Sciences, and Humanities. Each distribution area must include coursework from at least two different disciplines. Courses that satisfy the numerical applications, moral reasoning, and cultural diversity Basic Requirements may also count toward the Distribution Requirements.

A course that fulfills a Program of Study's Concentration Requirements, Basic Requirements, and/or a Distribution Requirement can count in every area it fulfills. For example, Cross-Cultural Psychology can be used as a Program of Study requirement for the BSIS in Foundations of Counseling Psychology and Behavioral Health, the Cultural Diversity Basic Requirement, and the Social Science Distribution Requirement. *Overlap limitations between a bachelor's degree and a certificate still apply.*

If a learner is pursuing a bachelor's degree and a certificate, overlap is allowed between the field of study and the certificate. If the certificate consists of 15 units or fewer, there should be at least 6 units unique to the certificate. For certificates of 16 units or more, there should be at least 9 units unique to the certificate. (An exception to the restriction applies to sequential programs of the same name, such as Clinical Research Management, in which case all certificate courses may apply to the next-level program.) If a learner is pursuing multiple certificate programs, overlap between certificates is allowed up to 9 units.

## Residency Requirement

The final 36 units of coursework toward the Bachelor of Science degree must be completed at Washington University. At least half of the units for the program of study must be completed at Washington University. Students with a gap in their studies at WashU Continuing & Professional Studies of more than 10 years are required to meet the 36-unit residency requirement upon their return.

## Satisfactory Academic Progress, Academic Probation, and Suspension

The minimum GPA requirements needed to maintain eligibility are dictated by a student's specific program of study. In each case, per the requirements of 34 C.F.R. 668.34(a)(4)(iii), the program requires a minimum of a C average, but any specific program may have a higher minimum GPA. A student whose previous semester's work is unsatisfactory (below a 2.0 for undergraduate students or below a 3.0 for graduate students), whose cumulative record is unsatisfactory (below 2.0 for undergraduate students or below 3.0 for graduate students), or who has a history of failure to complete coursework without adequate reason may be deemed an Academic Concern. Assigning a status of Academic Concern serves to warn a student who is not making satisfactory progress. Unless the quality of work improves during the next semester, a student may be placed on Academic Notice, suspended, or dismissed from their program, and future enrollment may not be allowed. WashU Continuing & Professional Studies (CAPS) reserves the right to cancel the registration of students who have been placed on academic suspension or who have been dismissed. Subsequent readmission will be determined on an individual basis.

## Grade Appeals

Course instructors are responsible for establishing grading criteria and for fairly evaluating students' academic performance. Students are responsible for meeting academic standards established by course instructors. The occasion may arise in which a WashU Continuing & Professional Studies (CAPS) student has a grievance with a faculty member over what the student considers an unfair grade for an assignment, an exam, or a final course grade.

Unfair grading is defined as work graded by a different standard than was applied to equivalent students in the course.\* A grade is also considered unfair if it can be proven that an instructor assigned a grade using criteria that were substantially different from those previously announced or stated in the course syllabus.

When this happens, a student may request that their grade be reevaluated by the instructor who assigned said grade (see below for instructions). This process is not intended as a general review of the instructor's evaluation of the student's academic performance. Dissatisfaction with the grade earned is not a basis for a grade appeal. Students should have an evidence-based grievance/concern about the final grade submitted to initiate this process.

\* Different grading criteria are applied to the work of graduate students who might be enrolled in courses in which undergraduate students are also enrolled. Those differing grading standards should be announced or stated in the course syllabus.

The following steps should be taken when a student wishes to report an unfair grade:

1. *Address the instructor.*

The student should make an earnest attempt to resolve the situation with the instructor. It may be best to set up an appointment to meet with the instructor outside of class time. The student should prepare an evidence-based justification as to why their work should be reevaluated.

2. *Contact the Program Director or Department Coordinator.*

If the instructor is unwilling to discuss the situation with the student or refuses to consider the student's arguments after a meeting and if the student believes their situation merits consideration from a higher authority, the next step is for the student to meet with the relevant program director or department coordinator. Serious complaints alleging breaches of a faculty member's responsibilities should be brought directly to the program director or department coordinator.

3. *Meet with a Washington University or WashU Continuing & Professional Studies Facilitator.*

If the student has met with both the instructor and the program director or department coordinator and feels that their situation still needs attention, the next step is for the student to make an appointment to meet with a facilitator. Graduate students should contact the graduate student ombuds. Undergraduate students should contact the facilitator for CAPS (the Vice Dean). The facilitator's role is to consider student grievances from a neutral perspective; they are accountable to both the faculty and to the student body. The facilitator will attempt to help resolve the issue. If the student's grievance involves a faculty member from another school, the facilitator will contact the facilitator for that school regarding the complaint. As part of the grievance process, the facilitator will make a brief written record of the grievance, including the names of the parties, the nature of the accusation, the responsive explanation of the faculty member, and the resolution of the case. In processing any type of grievance, the facilitator will strive to protect, to the greatest extent possible, the confidentiality of the complainant, but complete confidentiality cannot be guaranteed in every instance. The facilitator may be contacted at any time during the grievance resolution process for advice, direction, referrals to other sources of information or help, and mediation.

4. *Escalate to the Grievance Committee.*

Depending on the situation, the facilitator may recommend moving the complaint to the Grievance Committee. The Grievance Committee consists of representatives from the student success team, faculty, and the registrar's office. The Grievance Committee will advise the Dean of WashU Continuing & Professional Studies, who will make a final determination.

**Note:** Depending on the specific nature of the allegations, the complaint may also be referred to another university office for resolution.

## Intent to Graduate and Commencement

All degree and certificate candidates are required to apply to graduate in order to have their progress evaluated and approved for degree conferral and to participate in graduation events, including Commencement exercises. Students completing a degree or certificate must apply for program completion either in Workday (preferred) or at the CAPS website prior to their last term. Students are responsible for meeting the filing deadline. All graduates are invited to Commencement and recognition ceremonies in May, when degrees are conferred and certificates presented.

## Independent Study, Directed Research, and Internships

Through independent study or directed research, students may pursue topics of special interest under the supervision of a member of the faculty. Internships offer opportunities to apply classroom theory and concepts to practical work situations and to explore possible career directions. Students must submit a completed Independent Study form or Internship Learning Agreement to the WashU Continuing & Professional Studies office no later than four weeks prior to the relevant term's start date. A maximum of 6 units of credit in independent work, including internships and study abroad, may count toward the Associate in Arts and Bachelor of Science degrees for students who complete 60 units or fewer at Washington University; students who earn more than 60 units at Washington University may include up to 9 units of independent work. No more than 6 units of independent study, including internships and study abroad, may be applied toward the program of study, and no more than 6 units of independent study may be attempted in a single semester. CAPS per-unit tuition rates apply.

Internships require 33.3 to 50 hours of work and a minimum of three pages of written work per credit hour earned. Upon completion of the internship, learners are required (in order to receive credit) to submit an Internship Evaluation Form and to give an oral presentation that discusses the experience and includes self-evaluation of the work.

No more than 6 units of independent study may be applied toward a Master of Arts or Master of Science. No more than 6 credits of independent study may be applied toward a certificate program that requires 19 units of credit or more. No more than 3 credits of independent study may be applied toward a certificate program that requires 18 units of credit or fewer.

## ACTRAC Accelerated Option

ACTRAC, the accelerated study option in WashU Continuing & Professional Studies (CAPS), is available in most CAPS undergraduate fields of study as well as for some other, preselected courses.

Eligible CAPS students may enroll in courses that carry the ACTRAC option. Students choosing ACTRAC may earn 1 additional credit unit in a designated 3000- or 4000-level course by arranging with the instructor to do additional reading, research, and writing. To be eligible for ACTRAC, the following requirements must be met:

- Admission to a CAPS undergraduate degree program;
- Successful completion of at least 12 units of credit at CAPS;
- Completion of a CAPS English composition course with a grade of B or better;
- A 3.0 minimum; and
- Written approval from a CAPS Student Success Navigator.

Once approved, students register and pay for the appropriate number of credits for each ACTRAC course. The ACTRAC option must be chosen at the beginning of the semester, and it is limited to students admitted to CAPS undergraduate degree programs.

## Student Academic Records

A permanent record of courses, grades, and credit for each student is maintained in the Office of the University Registrar (OUR), which will issue official transcripts upon written authorization by the student. Transcript requests must include the student's name, student number, date of birth, and approximate dates of attendance. The Family Educational Rights and Privacy Act of 1974 (FERPA) provides current and former students of the university with specific rights of access to and control over their student record information. A copy of the university policies and procedures regarding educational records and the release of student record information may be obtained from the OUR.

## Academic Integrity

All WashU Continuing & Professional Studies (CAPS) students are governed by the University Student Conduct Code to "foster an environment conducive to working, learning and inquiry." Among the forms of misconduct covered in the University Student Conduct Code is academic misconduct that "...includes, but is not limited to, cheating, plagiarism, fabrication of data or records, impermissible collaboration, résumé or credential falsification, unauthorized use of resources, violation of test-taking conditions or otherwise engaging in activity prohibited by the University or applicable School's Academic Integrity and Professional Integrity policies."

Knowingly making false allegations of academic misconduct against another student will itself be considered a form of academic misconduct. In addition to the University Student Conduct Code, all CAPS students are expected to follow principles and practices of academic integrity as defined by the applicable Academic and Professional Integrity Policy, which is based upon student status and further described below.

All CAPS undergraduate students--part-time, full-time, degree-seeking, and non-degree-seeking--are governed by the Washington University Undergraduate Student Academic Integrity Policy. If a student subject to the Washington University Undergraduate Student Academic Integrity Policy is alleged to have committed a violation of academic integrity, the case will be heard by school-specific committees according to the school in which the class is *listed*, not the school in which the student is enrolled. All violations and sanctions will be reported to the student's college of enrollment.

If a student enrolled in a graduate program administered through CAPS takes a course through CAPS and is accused of an academic integrity violation in that course, the student will be subject to the CAPS Graduate Student Academic and Professional Integrity Policy. Note that those students enrolled in another graduate or professional school at Washington University will be subject to the academic and professional integrity policies and procedures applicable to the respective school. For example, if a student enrolled in a graduate program in Arts & Sciences also takes a course through CAPS and is accused of an academic integrity violation in that course, the student will be subject to the Office of Graduate Studies, Arts & Sciences, Academic and Professional Integrity Policy for Graduate Students. Violations of the Graduate Student Academic and Professional Integrity Policy include plagiarism and other misappropriation of the work of another, cheating, copying or collaborating on assignments without permission, fabrication or falsification of data or records, research misconduct, obstruction of the academic activities of another, abuse of confidentiality, and other forms of deceit, dishonesty, and inappropriate conduct. Professional integrity violations consist of behavior that is inconsistent with ethical standards in the professional roles for which the student is being trained that are not covered by policies governing academic integrity. Please refer to the detailed Academic and Professional Integrity Policy for Graduate Students of the Office of Graduate Studies for definitions and examples of each of these categories.

All violations of academic integrity will be reported to and investigated by the academic integrity officer in CAPS. If it is determined that a student has acted dishonestly or if a student has admitted to the charges prior to a formal investigation or hearing, an appropriate sanction will be imposed; this may include but is not limited to automatic failure of the assignment or course or, in the case of serious or repeat violations, suspension or expulsion from the university. Withdrawing from a course will not prevent the dean from imposing or recommending sanctions.

## Student Success Navigators (Advising) and Academic Support Services

WashU Continuing & Professional Studies (CAPS) recognizes the rich array of backgrounds and experiences modern learners bring to the classroom, and we are aware that adults entering or returning to higher education may need academic counseling, guidance, and special services. Information about CAPS degree and certificate programs and courses is available on the CAPS website. Students are encouraged to meet with a Student Success Navigator to discuss academic goals and interests prior to submitting an application for admission. Navigators are available to provide guidance and information about admissions, transfer and registration procedures, academic and degree requirements, course selection, special programs, student services, and other facets of WashU. After being admitted to a degree or certificate program, students should consult with their navigator on a regular basis to discuss course sequences, degree requirements, policies, and other important information related to the particular program of study. It is the responsibility of the student to arrange these periodic conferences. For information about navigators and all student services, call the CAPS Office of Admissions and Student Services at 314-935-6777 or visit the CAPS website.

## Honors & Awards

### Latin Honors

The WashU Continuing & Professional Studies Honors program provides students with multiple opportunities to deepen and extend their knowledge, earn scholarships and academic awards, and join a community of intellectually and socially engaged adults. The most prestigious distinction is Latin Honors, which allows students to graduate *summa cum laude*, *magna cum laude*, or *cum laude*. Students should speak with CAPS about tailoring an honors experience that meets their learning goals.

### Alpha Sigma Lambda

Alpha Sigma Lambda, the national honorary society for part-time evening students, is available to qualified WashU Continuing & Professional Studies students. To be eligible for membership, a student must have earned a GPA of at least 3.5 in a minimum of 24 units of coursework in residence toward a degree in CAPS, with at least 12 units in the liberal arts and sciences.

## **Phi Beta Kappa**

For more than 200 years, election to Phi Beta Kappa has been a distinctive recognition of intellectual accomplishment in the liberal arts and sciences. Candidates for Phi Beta Kappa should have demonstrated superior scholarship as well as breadth and depth of interest in the liberal arts. Study of a foreign language and of mathematics, while not required, strongly enhance candidacy. In addition, at least 112 credits must be completed by the end of the fall semester, at least 45 of which must be earned at Washington University.

## **Dean's List**

Recognition on the Dean's List is given to students who are undergraduate degree or certificate candidates at CAPS who have completed a minimum of 6 units of coursework at Washington University during the preceding semester with a GPA of at least 3.6.

## **Dean's Award for Academic Excellence**

The Dean's Award for Academic Excellence is given to one or more graduating undergraduate student(s) with outstanding academic records as measured by (but not limited to) the GPA.

## **Dean's Award for University Service**

The Dean's Award for University Service is awarded to one or more graduating students who have made a significant contribution to CAPS and WashU in areas beyond academic performance.

## **Dean's Faculty Award**

The Dean's Faculty Award is given to a CAPS instructor with many years of service in order to recognize excellence in teaching and dedication to students.

## **In St. Louis for St. Louis Award**

The In St. Louis for St. Louis Award is given to a leader whose contributions to CAPS have had an impact on the St. Louis community. Recipients are known for their consistent dedication to meeting the needs of the community and for ensuring that the students, staff, and faculty with whom they work are contributing to upward social and economic mobility.

## **Dean's Award for Excellence**

The Dean's Award for Excellence is bestowed upon a staff member who has contributed to improvements in one or more of the following: morale, efficiency, student experience, faculty rapport, and student success. As a collaborative colleague, this individual embodies the values of CAPS while having an innovative impact to drive the school's mission forward.

# Tuition and Financial Information

WashU Continuing & Professional Studies (CAPS) provides access to a world-class education that modern learners can afford. CAPS is designed to meet the educational needs of those who are seeking to expand their professional skills, who wish to earn a degree or certificate, or who are lifelong learners with a yen to explore new fields and interests.

We realize that financing an education can be a challenge. Explore our tuition payment methods for guidance or look over financial aid terminology to gain a better understanding of the terms and definitions related to student aid.

## Tuition and Fees

Tuition rates for CAPS undergraduate and graduate courses can be found online on the Paying for School webpage. Tuition varies according to course and program.

## Refunds

All refunds are calculated from *either* the date on which the learner makes the change directly in *Workday* *or* the date the learner completes an online [course change form](#) (these must be completed prior to the Schedule Finalization deadline). If the original payment was made by credit card, a refund will be applied to the learner's credit card. Otherwise, individuals have the option to receive refunds via direct deposit or check. For more information, visit the Student Accounts webpage.

CAPS grants full refunds to individuals called to active military duty.

More information can be found on the Refund Policies & Deadlines webpage.

## Financial Aid & Tuition

Financial assistance is available to part-time and full-time CAPS learners in the form of grants, loans, scholarships, remission, and payment plans. Learn more about available financial aid at CAPS.

## Satisfactory Academic Progress

Federal Satisfactory Academic Progress (SAP) is evaluated for all students at the end of the spring semester. The minimum grade point average (GPA) required to maintain eligibility for federal student aid is determined by the student's specific program of study. In accordance

with 34 C.F.R. 668.34(a)(4)(ii), undergraduate students must maintain at least a C average (equivalent to a 2.0 GPA) to be eligible for federal financial aid. However, individual degree or certificate programs may require a higher minimum GPA to meet SAP standards.

Students must also complete their program within 150% of the published program length, as measured in attempted credit hours.

To remain in good standing for SAP:

- *Undergraduate students* must complete at least 67% of attempted coursework and maintain a minimum GPA of 2.0.
- *Graduate students* must complete at least 67% of attempted coursework and maintain a minimum GPA of 3.0.

Students who are not meeting SAP standards may appeal based on documented extenuating circumstances.

## Other Financial Assistance and Payment Options

### WashU Employees

Full-time WashU employees and their families are eligible for CAPS tuition remission. Learn more about WashU's Employee Tuition Assistance program.

### Postdoctoral Appointees

Individuals appointed under the Postdoctoral Education Policy (effective July 1, 2004) having the titles of Postdoctoral Research Associate and Postdoctoral Research Scholar are eligible for the Postdoctoral Tuition Plan. Qualified individuals receive tuition remission on up to 4 credits per semester of CAPS undergraduate, for-credit coursework. Courses may be taken at any time during the day or evening but must be taken at the undergraduate level (4000 level and below) and for career development purposes only. Courses may be taxable to Postdoctoral Research Scholars (non-employees). A passing grade in the course is required for the student to retain the tuition remission. For more information, visit the Office of Postdoctoral Affairs website and the Employee Tuition Assistance webpage.

### Employer Tuition Reimbursement

Many companies in the St. Louis area pay all or part of their employees' tuition. If an employer has a tuition reimbursement plan that pays all or part of their employee's tuition, the employee can defer all or part of the tuition until the end of the semester. (This option requires written verification at the time of registration.) Interested individuals should contact their supervisor or personnel/human resources department at their place of employment to

determine if a tuition reimbursement plan is available. Payment is due approximately 30 days after the end of the semester. *This payment option is not available during the summer.* For more information, visit the Tuition & Fees webpage.

## Dependent Child Benefits

After seven years of full-time service (or its equivalent if one works part-time), eligible dependent children may receive up to eight semesters of tuition assistance for undergraduate studies. The level of benefit paid is determined by the date of hire and full- or part-time status at the time the employee utilizes the benefit. Tuition assistance benefits are tax-free for birth, adopted, and stepchildren. Benefits for children of domestic partners are a taxable benefit to the employee.

**Note:** Prior full-time service at another accredited university may count toward the service requirement for this benefit. WashU provides two forms of tuition assistance benefits for dependent children of its full- and part-time employees who meet certain eligibility requirements: 1) a full tuition remission benefit at WashU and a partial tuition remission benefit at other accredited institutions for the dependent children of full-time employees; and 2) a partial tuition remission benefit at WashU and other accredited institutions for the dependent children of part-time employees. Learn more about the Dependent Child Tuition Assistance benefit.



## Administration

**Sean Armstrong**

Dean

**Katie Brown**

Director, English Language Programs

**Kilinyaa Cothran**

Vice Dean, Director of Health Programs

**Karen Novak**

Associate Dean and Chief of Staff

**Kallie Reyes**

Director of Student Engagement and Success

**Pam Hayek**

Assistant Director for Academic Services

**Marlene Holt**

Student Success Navigator

**Jacquelin Meadors Booth**

Career Specialist

**Patrick Myers**

Student Success Navigator

**Ebony Shippy**

Student Success Navigator

**Christopher Thurmond**

Student Success Navigator

# Interdisciplinary Opportunities

Washington University offers courses through interdisciplinary programs that include studies in a variety of disciplines that cross traditional academic boundaries and support academic areas outside of the schools.

- A limited opportunity for some Washington University students to enroll in courses at Saint Louis University and the University of Missouri-St. Louis is available through the Inter-University Exchange Program (p. 180).
- ROTC (p. 181) courses are offered in conjunction with the U.S. Air Force and U.S. Army.
- The Skandalaris Center (p. 184) offers cocurricular programming and practical, hands-on training and funding opportunities to students and faculty in all disciplines and schools.

## Inter-University Exchange Program

The Inter-University Exchange (IE) program between Washington University, Saint Louis University (SLU), and the University of Missouri–St. Louis (UMSL) began in 1976 as an exchange agreement encouraging greater inter-institutional cooperation at the graduate level. Over time, this program has evolved to include undergraduate education. The basic provisions of the original agreement are still in place today, and participation continues to be at the discretion of each academic department or unit.

At Washington University, there are several schools that *do not participate* in this program (i.e., degree-seeking students in these schools are not eligible to participate in the IE program, and courses offered in these schools are not open to SLU and UMSL students attending Washington University through the IE program). They are the School of Law, the School of Medicine, the McKelvey School of Engineering, and the School of Continuing & Professional Studies. The Washington University schools that are open to participation in the IE program may have specific limitations or requirements for participation; details are available in those offices.

The following provisions apply to all coursework taken by Washington University students attending SLU or UMSL through the IE program:

- Such courses can be used for the fulfillment of degree or major requirements. (Students should consult with their dean's office for information about how IE coursework will count toward their grade-point average, units and major requirements.)
- Such courses are not regularly offered at Washington University.

- Registration for such courses requires preliminary approval of the student's major/department advisor, the student's division office or dean, and the academic department of the host university.
- Students at the host institution have first claim on course enrollment (i.e., a desired course at SLU or UMSL may be fully subscribed and unable to accept Washington University students).
- Academic credit earned in such courses will be considered as resident credit, not transfer credit.
- Tuition for such courses will be paid to Washington University at the prevailing Washington University rates; there is no additional tuition cost to the student who enrolls in IE coursework on another campus. However, students are responsible for any and all fees charged by the host school.
- Library privileges attendant on enrolling in a course on a host campus will be made available in the manner prescribed by the host campus.

## Instructions

Washington University students must be enrolled full-time to participate in the IE program and have no holds, financial or otherwise, on their academic record at Washington University or at the host institution.

1. The student must complete the IE program application form. Forms are available from the Office of the University Registrar website.
2. The student must provide all information requested in the top portion of the form and indicate the course in which they wish to enroll.
3. The student must obtain the approval signature of the professor teaching the class or the department chair at SLU or UMSL, preferably in person.
4. The student also must obtain the approval signatures of their major advisor at Washington University and the appropriate individual in their dean's office.
5. Completed forms must be submitted to the Office of the University Registrar in the Women's Building a minimum of one week before the start of the term.

Course enrollment is handled administratively by the registrars of the home and host institutions. Washington University students registered for IE coursework will see these courses on their class schedule and academic record with the subject codes SLU and UMSL. Final grades are recorded when received from the host institution. The student does not need to obtain an official transcript from SLU or UMSL to receive academic credit for IE coursework at Washington University.

|          |                                                                                                                                                                                                           |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact: | Office of the University Registrar                                                                                                                                                                        |
| Phone:   | 314-935-5959                                                                                                                                                                                              |
| Email:   | registrar@wustl.edu                                                                                                                                                                                       |
| Website: | <a href="http://registrar.wustl.edu/student-records/registration/the-inter-university-exchange-program">http://registrar.wustl.edu/student-records/registration/the-inter-university-exchange-program</a> |

# Reserve Officers Training Corps (ROTC)

The number of ROTC credits that may be counted toward graduation requirements depends on the student's program of study. ROTC students should consult with their academic advisor to determine if or how ROTC course work will satisfy their graduation requirements.

For more information about specific schools, please visit the following pages:

- Undergraduate Arts & Sciences Academic Policies
- Undergraduate Business Degree Requirements
- Undergraduate Engineering Academic Policies

## Air Force ROTC — Aerospace Studies

### Professor

**S. Michael Castlen**

Lieutenant Colonel, USAF

**Military Aerospace Science.** Our Core Values: Integrity First, Service Before Self, Excellence In All We Do. Air Force operations are currently conducted in the technologically demanding environments of air, space and cyberspace.

Air Force ROTC (AFROTC) is an officer development program that produces the leaders of tomorrow's Air Force. The program's purpose is to train and develop outstanding college students to earn commissions as U.S. Air Force Officers. Numerous Washington University students have participated in AFROTC and gone on to distinguish themselves as Air Force aviators, engineers, lawyers, physicians and astronauts.

In AFROTC, Washington University students have the opportunity to be challenged within a unique leadership environment, with the potential to earn a commission as a second lieutenant. Participation in AFROTC is available to undergraduate and graduate Washington University students and does not obligate these students to serve in the U.S. Air Force.

AFROTC attracts the very best and brightest college students. The categorization of officer candidates within AFROTC is based on competitive selection criteria.

For more information, contact AFROTC:

Detachment 207 in St. Louis  
314-977-8230  
Detachment 207 website

U.S. Air Force ROTC  
888-4-AFROTC

AFROTC website

For AFROTC scholarship information, refer to the Scholarship Funds section of this *Bulletin*.

## Army ROTC

**Military Science.** The Army ROTC program is designed to develop leaders for life. In doing so, it develops leadership, management and training skills, regardless of a student's career plans. Those who successfully complete the program earn commissions and serve as second lieutenants in the U.S. Army, Army Reserve or Army National Guard.

All students are eligible to participate in Army ROTC courses. Introductory courses are designed to develop a student's confidence, self-esteem and motivation. The intent is to develop and refine the student's leadership traits and skills to ensure their future success in military and nonmilitary environments. Instruction also includes the role of the military in national defense strategy. The number of ROTC credits that may be counted toward graduation requirements depends upon the student's program of study. ROTC students should consult with their academic advisor to determine if or how ROTC course work satisfies graduation requirements. Once a student accepts a scholarship or enters the advanced ROTC courses (3000 and 4000 levels), they incur a military obligation.

For more information, contact the Military Science Department, Washington University in St. Louis, 700 Rosedale Ave., Suite 1550, St. Louis, MO 63112; call 314-935-5521; visit the Washington University Army ROTC website; or email Lee Rodriguez (lee.e.rodriguez@wustl.edu), the Army ROTC Scholarships and Enrollment Officer.

For Army ROTC scholarship information, refer to the Financial Support section of this *Bulletin*.

## Requirements

## Air Force ROTC — Aerospace Studies Program Requirements

For more information, call the detachment for additional information about ROTC cadet in-processing and the first day of class at 314-977-8328. The Saint Louis University Air Force ROTC facility (main office) is located at 3450 Lindell Boulevard, Suite 1033, St. Louis, MO 63103.

## Army ROTC Program Requirements

Army ROTC provides the leadership skills needed to balance working with both civilians and enlisted personnel, instilling confidence as an officer, a leader, a trainer, and a mentor. Army ROTC prepares college students to succeed in any competitive environment. The leadership training and experiences that students have in Army ROTC will provide them with a foundation to become commissioned Army Officers upon graduation. Any undergraduate or graduate student can enroll in a Military Science course and participate only in the classes or in the additional military training, such as physical fitness training, leadership labs, and field training exercises.

### Courses

- MAIR (p. 182): Air Force ROTC — Aerospace Studies
- MARM (p. 183): Army ROTC

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## Air Force ROTC — Aerospace Studies

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### MAIR 1010 Heritage and Values of the United States Air Force 1

This course is the first part of a two-course sequence designed to introduce students to the United States Air Force and provides an overview of the basic characteristics, missions, and organization of the Air Force. Leadership Laboratory is mandatory for Air Force ROTC cadets and it complements this course by providing students with followership experiences and prepares them for Field Training. Classroom activity 1 hour and 15 minutes per week; Leadership Laboratory 2 hours per week.

Credit 0 units.

Typical periods offered: Fall

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### MAIR 1020 Heritage and Values of the United States Air Force 2

This course is the second part of a two course sequence designed to introduce students to the United States Air Force and provides an overview of the basic characteristics, missions, and organization of the Air Force. Leadership Laboratory is mandatory for Air Force ROTC cadets and it complements this course by providing students with followership experiences and prepares them for Field Training. Classroom activity 1 hour and 15 minutes per week; Leadership Laboratory 2 hours per week.

Credit 0 units.

Typical periods offered: Spring

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### MAIR 2010 Team and Leadership Fundamentals 1

This course is the first part of a two-course sequence that focuses on laying the foundation for teams and leadership. Topics include skills that will allow cadets to improve their leadership on a personal level and within a team. Leadership Laboratory is mandatory for Air Force ROTC cadets and it complements this course by providing the first

opportunity for applied leadership experiences and prepares them for Field Training. Classroom activity 1 hour and 15 minutes per week; Leadership Laboratory 2 hours per week. Prerequisites: I02 1010 and lab.

Credit 0 units.

Typical periods offered: Fall

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### MAIR 2020 Team and Leadership Fundamentals 2

This course is the second part of a two course sequence that focuses on laying the foundation for teams and leadership. Topics include skills that will allow cadets to improve their leadership on a personal level and within a team. Leadership Laboratory is mandatory for Air Force ROTC cadets and it complements this course by providing the first opportunity for applied leadership experiences and prepares them for Field Training. Classroom activity 1 hour and 15 minutes per week; Leadership Laboratory 2 hours per week. Prerequisites: I02 1020 and lab.

Credit 0 units.

Typical periods offered: Spring

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### MAIR 3010 Leading People and Effective Communication 1

This course is the first part of a two-course sequence that teaches advanced skills and knowledge in management and leadership. Special emphasis is placed on enhancing leadership skills and communication. A mandatory Leadership Laboratory complements this course for Air Force ROTC cadets. Leadership Laboratory provides advanced leadership experiences and gives cadets opportunities to develop and apply leadership skills. Classroom activity 3 hours per week; Leadership Laboratory 2 hours per week. Prerequisites: I02 1010, 1020, 2010, 2020, and labs.

Credit 0 units.

Typical periods offered: Fall

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### MAIR 3020 Leading People and Effective Communication 2

This course is the second part of a two course sequence that teaches advanced skills and knowledge in management and leadership. Special emphasis is placed on enhancing leadership skills and communication. A mandatory Leadership Laboratory complements this course for Air Force ROTC cadets. Leadership Laboratory provides advanced leadership experiences and gives cadets opportunities to develop and apply leadership skills. Classroom activity 3 hours per week; Leadership Laboratory 2 hours per week. Prerequisites: I02 1010, 1020, 2010, 2020, 3010, and labs.

Credit 0 units.

Typical periods offered: Spring

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### MAIR 4010 National Security Affairs/Preparation for Active Duty

Cadets learn about the role of the professional military leader in a democratic society; societal attitudes toward the armed forces; the requisites for maintaining adequate national defense structure; the impact of technological and international developments on strategic preparedness and the overall policy-making process; and military law. In addition, cadets will study topics that will prepare them for their first active-duty assignment as officers in the Air Force. A mandatory Leadership Laboratory complements this course. Leadership Laboratory provides advanced leadership experiences and gives cadets opportunities to develop and apply fundamental leadership and management skills while planning and conducting corps activities. Classroom activity 3 hours per week; Leadership Laboratory 2 hours per week. Aerospace Studies courses (MAIR 3010 through MAIR 4020) are advanced courses designed to improve communication and management skills required of Air Force officers. Prerequisites: I02 1010, 1020, 2010, 2020, 3010, 3020, and labs.

Credit 0 units.

Typical periods offered: Fall

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**MAIR 4020 Preparation for Active Duty**

Cadets learn about the role of the professional military leader in a democratic society; societal attitudes toward the armed forces; the requisites for maintaining adequate national defense structure; the impact of technological and international developments on strategic preparedness and the overall policy-making process; and military law. In addition, cadets will study topics that will prepare them for their first active-duty assignment as officers in the Air Force. A mandatory Leadership Laboratory complements this course. Leadership Laboratory provides advanced leadership experiences and gives cadets opportunities to develop and apply fundamental leadership and management skills while planning and conducting corps activities. Classroom activity 3 hours per week; Leadership Laboratory 2 hours per week. Aerospace Studies courses (MAIR 3010 through MAIR 4020) are advanced courses designed to improve communication and management skills required of Air Force officers. Prerequisites: I02 1010, 1020, 2010, 2020, 3010, 3020, 4010, and labs. Credit 0 units. EN: S  
Typical periods offered: Spring

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## Army ROTC

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**MARM 1010 Introduction to Leadership I**

Examine the challenges and competencies that are critical for effective leadership. You will learn how the personal development of life skills such as cultural understanding, goal setting, time management, mental/physical resiliency, and stress management relate to leadership, officership, and the Army profession. Open to all students and enrollment does not require a commitment to join the US Army. Credit 2 units.  
Typical periods offered: Fall

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**MARM 1020 Introduction to Leadership II**

Investigate leadership fundamentals such as problem-solving, listening, presenting briefs, providing feedback, and using effective writing skills. You will explore dimensions of leadership attributes and core leader competencies in the context of practical, hands-on, and interactive exercises. Learn fundamental military concepts and explore the Army's leadership philosophy. I25 MILS 1020 is open to all students and enrollment does not require a commitment to join the US Army. Credit 2 units.  
Typical periods offered: Spring

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**MARM 2010 Innovative Team Leadership**

Explore the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and leadership theories. The course continues to build on developing knowledge of leadership attributes and core leader competencies through the understanding of Army rank, structure, and duties as well as broadening knowledge of land navigation and squad tactics. Enrollment in I25 MILS 2010 does not require a commitment to join the US Army. Credit 3 units.  
Typical periods offered: Fall

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**MARM 2020 Foundations of Tactical Leadership**

Develop greater self-awareness as you assess your own leadership styles and practice communication and team building skills. Examine and practice the challenges of leading teams in the complex operational environment. Study dimensions of terrain analysis, patrolling, and operation orders. Explores the dynamics of adaptive leadership in the context of military operations. Enrollment in I25 MILS 2020 does not require a commitment to join the US Army. Credit 3 units.  
Typical periods offered: Spring

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**MARM 3010 Adaptive Team Leadership**

This is an academically challenging course where you will study, practice, and apply the fundamentals of Army leadership, officership, Army values and ethics, and small unit tactics. At the conclusion of this course, you will be capable of planning, coordinating, navigating, motivating, and leading a team or squad in the execution of a tactical mission during a classroom practical exercise (PE), a leadership lab, or during a military situational training exercise (STX) in a field environment. Prerequisites: successful completion of I25 MILS 1010, 1020, 2010, and 2020 or attendance at the Leader's Training Course (LTC). Contact the Military Science Department for more details. Credit 3 units.  
Typical periods offered: Fall

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**MARM 3020 Applied Team Leadership**

Continue to learn and apply the fundamentals of Army leadership, officership, Army values and ethics as you hone your leadership abilities in a variety of tactical environments and the classroom. Successful completion of this course will help prepare you for success at the ROTC Leader Development and Assessment Course (LDAC) which you will attend the summer following this course at Fort Lewis, Washington. You will receive systematic and specific feedback on your leadership attributes, values and core leader competencies from your instructors, other ROTC cadre, and senior cadets. Prerequisite: successful completion of I25 MILS 3010. Credit 3 units.  
Typical periods offered: Spring

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**MARM 4010 Adaptive Leadership**

This course focuses on practical application of adaptive leadership. Throughout the semester, students will apply the fundamentals of principles of training, the Army writing style, and military decision making. Students will study the special trust reposed to Army Officers by the US Constitution and the President of the United States--a special trust given to no other civilian professions. Students will also study the Army officer's role in the Uniform Code of Military Justice, and the counseling and development of subordinates. Prerequisite: successful completion of the ROTC Leadership Development and Assessment Course (LDAC) or permission of instructor. Credit 3 units.  
Typical periods offered: Fall

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**MARM 4020 Leadership in a Complex World**

Explore the dynamics of leading in the complex situation of current military operations in the contemporary operating environment. Examine differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. You will also explore aspects of interacting with non-government organizations, civilians on the battlefield and host nation support. Significant emphasis is placed on your transition to officership, preparing you for your branch school and first unit of assignment. Prerequisite: successful completion of I25 MILS 4010 or permission of instructor. Credit 3 units. EN: S

Typical periods offered: Spring

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**MARM 4500 Modern American Military History**

A survey of US military involvement beginning with the Treaty of Versailles following World War I and concluding with the current Global War on Terror. Students will follow a chronological study of crucial battles of World War II, Korea, and Vietnam and conclude with in-depth case studies from Iraq and Afghanistan. The class focuses on both tactical and strategic lessons learned and the political and cultural influences that affect the way wars are fought. Prerequisite: sophomore status and good standing in the ROTC program. Credit 3 units.

Typical periods offered: Fall

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**MARM 4501 Advanced American Military History**

This course is a continuation of the fall semester prerequisite Modern American Military History course, outlining major conflicts that have occurred throughout the course of American history in post WWII 20th and 21st Century. It aims to highlight the contemporary American military's efforts to modernize in a multi-polar international relations environment in its struggle to become the global hegemon. This course familiarizes students with the context of the current profession of arms. The philosophy guiding the curriculum is centered around how and why the military is structured in present form and how officership in particular has shaped the macro and micro aspects of combat over the last 75 years. Credit 3 units.

Typical periods offered: Spring

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# Skandalaris Center for Interdisciplinary Innovation and Entrepreneurship

The Skandalaris Center for Interdisciplinary Innovation and Entrepreneurship is the hub of creativity, innovation, and entrepreneurship at Washington University. We believe everyone can be entrepreneurial. Skandalaris provides programming where anyone can explore their creative and entrepreneurial interests, develop an entrepreneurial mindset, and go from ideation to launch.

## Mission

The Skandalaris Center fosters and empowers an inclusive community that finds opportunities in problems and transforms ideas into action. We build an ecosystem of education, research, and resources that engages all WashU students, faculty, alumni, and staff as entrepreneurial leaders and collaborators.

## Who We Serve

We work with the best and brightest at WashU — the change-makers, thought leaders, and visionaries — to solve the world's problems and meet local needs through innovation and entrepreneurship. As an interdisciplinary center, our initiatives serve students, faculty, staff, and alumni from all levels and disciplines.

## Our Initiatives

We develop programs for WashU entrepreneurs, creatives, innovators, and scholars. Our commitment to interdisciplinary innovation and entrepreneurship is motivated by the following beliefs:

- *Everyone can be creative.* We provide hands-on experiences and the creative means to solve problems.
- *Innovation is the backbone of entrepreneurship.* Our opportunities are designed to develop and share new ideas while connecting with other WashU entrepreneurs and innovators.
- *Good ideas are one opportunity away from success.* Our programs are created to help WashU entrepreneurs and innovators access the resources they need to take their ideas to the next level.
- *Knowledge and skills are key to innovation and entrepreneurship.* Our Center offers events and opportunities to help our community of WashU entrepreneurs, creatives, and innovators learn the ins and outs of innovation and entrepreneurship.

## Programs and Resources

- **Course: The Endgame of Entrepreneurship: Leveraging Capitalism for Good**  
This course is offered through the Beyond Boundaries Program. Students will learn to take advantage of the profit-seeking motive of capitalism while also learning from the mistakes and unintended consequences that capitalism has caused throughout history.
- **Experts on Call**  
This program provides an opportunity for the WashU community to connect with experts in the Skandalaris Center or remotely, free of charge.
- **Honors in Innovation & Entrepreneurship**  
Students who have shown exemplary involvement in innovation and entrepreneurship during their time at Washington University are recognized through this program. Honors are earned by accumulating points through a combination of curricular and cocurricular activities.
- **In-Residence Program**  
This program provides WashU students, faculty, staff, and alumni with the opportunity to learn from and work with professionals with extensive industry experience.
- **PhD Citation in Entrepreneurship**

This program provides opportunities for PhD students who are interested in developing skills and experiences in the areas of entrepreneurship and innovation.

- **Resources**

The Skandalaris Center, Washington University, and external services and resources are available to support innovators and entrepreneurs.

- **Skandalaris Spaces**

Our collaboration space is available for hosting meetings or events. Requests should be made a week in advance.

- **Skandalaris Startup Webinars, Panel Discussions, and Workshops**

These webinars provide an exciting way for alumni to reconnect and share their experiences with entrepreneurship. We also offer free, noncredit workshops designed to encourage creativity, innovation, and entrepreneurship.

- **Startup Venture Promotion**

The Skandalaris Center is happy to help Washington University in St. Louis students, faculty, staff, and alumni with promoting their startup ventures.

- **St. Louis Entrepreneurial Fellowship**

This year-long program gives WashU students a chance to explore entrepreneurship at WashU and in St. Louis. The experience includes a spring semester seminar that explores innovation and entrepreneurship, a 10-week paid summer internship at a St. Louis startup, a fall semester capstone project, professional development opportunities, and programs and events to engage with entrepreneurs, founders, and innovators.

- **Student Enterprise Program (StEP)**

StEP provides a unique opportunity for students to own and operate a business on campus that serves the WashU community. Student owners can supplement the valuable business and entrepreneurial skills they learn in the classroom while gaining real-world experience as they manage and lead their own businesses.

- **Student Groups**

There are many organizations that allow students to gain experience and make valuable interdisciplinary connections in the areas of creativity, innovation, and entrepreneurship.

- **Venture Development**

The WashU community is invited to set an appointment with a member of our team for help with ideas and businesses at any stage. We will work with these individuals to brainstorm ideas, strengthen financial models, draft business plans, perfect pitches, and more.

- **Washington University Entrepreneurship Courses**

Courses in entrepreneurship offered across the university are available to students at all levels and in all disciplines.

## Competitions

- **IdeaBounce®**

IdeaBounce® is both an online platform and an event for sharing venture ideas and making connections. This is an opportunity for participants to pitch their ideas (no matter how "fresh"), get feedback on them, and make connections. In-person events happen frequently throughout the fall and spring semesters.

- **Skandalaris Venture Competition (SVC)**

The SVC provides expert mentorship to new ventures and startups to ready them for commercializing their ideas, launching, and pitching to investors. Teams will develop materials focused on explaining the ideas that they are working on to a broad audience.

- **Who Can Apply:** Current Washington University students and alumni (within one year of graduation) with an early-stage venture or idea

- **Award:** Up to \$22,500

- **Global Impact Award (GIA)**

The GIA awards WashU-affiliated ventures with inventions, products, ideas, and business models that will have a broad and lasting impact on society.

- **Who Can Apply:** WashU students, postdocs, residents, and alumni who have graduated within the last 10 years

- **Award:** Up to \$50,000

## Learn More

Please contact the Skandalaris Center to sign up for our newsletter and for additional information about all programs.

|          |                                                                         |
|----------|-------------------------------------------------------------------------|
| Phone:   | 314-935-9134                                                            |
| Email:   | sc@wustl.edu                                                            |
| Website: | <a href="http://skandalaris.wustl.edu">http://skandalaris.wustl.edu</a> |

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