# Table of Contents

About This Bulletin ................................................................................................................. 4

About Washington University in St. Louis ................................................................................ 5

  Trustees & Administration ................................................................................................. 5

  Academic Calendar ........................................................................................................ 5

  Campus Resources ......................................................................................................... 6

  University Policies ......................................................................................................... 8

  University Affiliations ................................................................................................... 13

Arts & Sciences ..................................................................................................................... 14

  Doctoral Degrees .......................................................................................................... 14

    Academic Information .................................................................................................. 14

    Financial Information ................................................................................................. 19

  Master's Degrees ........................................................................................................... 20

    Academic Information ................................................................................................. 20

    Financial Information ................................................................................................. 23

Fields of Study ..................................................................................................................... 24

  American Culture Studies ............................................................................................... 25

  Anthropology .................................................................................................................. 26

  Art History and Archaeology ......................................................................................... 29

  Biology & Biomedical Sciences ...................................................................................... 31

  Business Administration ................................................................................................. 34

  Chemistry .......................................................................................................................... 41

  Classics ............................................................................................................................ 43

  Comparative Literature .................................................................................................. 46

  Dance .................................................................................................................................. 48

  Data Science in the Humanities ......................................................................................... 50

  Earth and Planetary Sciences ......................................................................................... 52

  East Asian Languages and Cultures ................................................................................. 53

  East Asian Studies .......................................................................................................... 55

  Economics .......................................................................................................................... 57

  Education ............................................................................................................................ 59

Engineering & Applied Science .............................................................................................. 61

  Biomedical Engineering .................................................................................................. 61

  Computer Science & Engineering ................................................................................... 63

  Electrical & Systems Engineering .................................................................................... 66

  Energy, Environmental & Chemical Engineering ........................................................... 69
<table>
<thead>
<tr>
<th>Department</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials Science &amp; Engineering</td>
<td>71</td>
</tr>
<tr>
<td>Mechanical Engineering &amp; Materials Science</td>
<td>77</td>
</tr>
<tr>
<td>English</td>
<td>80</td>
</tr>
<tr>
<td>Film and Media Studies</td>
<td>82</td>
</tr>
<tr>
<td>Germanic Languages and Literatures</td>
<td>84</td>
</tr>
<tr>
<td>History</td>
<td>87</td>
</tr>
<tr>
<td>Jewish, Islamic and Near Eastern Languages and Cultures</td>
<td>90</td>
</tr>
<tr>
<td>Latin American Studies</td>
<td>93</td>
</tr>
<tr>
<td>Mathematics</td>
<td>95</td>
</tr>
<tr>
<td>Movement Science</td>
<td>99</td>
</tr>
<tr>
<td>Music</td>
<td>100</td>
</tr>
<tr>
<td>Philosophy</td>
<td>102</td>
</tr>
<tr>
<td>Physics</td>
<td>105</td>
</tr>
<tr>
<td>Political Science</td>
<td>108</td>
</tr>
<tr>
<td>Psychological &amp; Brain Sciences</td>
<td>110</td>
</tr>
<tr>
<td>Public Health Sciences</td>
<td>114</td>
</tr>
<tr>
<td>Rehabilitation and Participation Science</td>
<td>116</td>
</tr>
<tr>
<td>Romance Languages and Literatures</td>
<td>117</td>
</tr>
<tr>
<td>Social Work</td>
<td>119</td>
</tr>
<tr>
<td>Speech and Hearing Sciences</td>
<td>123</td>
</tr>
<tr>
<td>Theater and Performance Studies</td>
<td>124</td>
</tr>
<tr>
<td>Urban Studies</td>
<td>125</td>
</tr>
<tr>
<td>Women, Gender, and Sexuality Studies</td>
<td>128</td>
</tr>
<tr>
<td>Writing</td>
<td>131</td>
</tr>
<tr>
<td>University College</td>
<td>132</td>
</tr>
<tr>
<td>UCollege - American Culture Studies</td>
<td>133</td>
</tr>
<tr>
<td>UCollege - Biology</td>
<td>133</td>
</tr>
<tr>
<td>UCollege - Education</td>
<td>134</td>
</tr>
<tr>
<td>UCollege - Human Resources Management</td>
<td>134</td>
</tr>
<tr>
<td>UCollege - International Affairs</td>
<td>134</td>
</tr>
<tr>
<td>UCollege - Liberal Arts</td>
<td>135</td>
</tr>
<tr>
<td>UCollege - Nonprofit Management</td>
<td>135</td>
</tr>
<tr>
<td>UCollege - Statistics</td>
<td>136</td>
</tr>
<tr>
<td>Degrees Offered</td>
<td>136</td>
</tr>
<tr>
<td>Administration</td>
<td>137</td>
</tr>
<tr>
<td>Admissions</td>
<td>138</td>
</tr>
<tr>
<td>Policies</td>
<td>139</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Interdisciplinary Opportunities</td>
<td>141</td>
</tr>
<tr>
<td>Inter-University Exchange Program</td>
<td>141</td>
</tr>
<tr>
<td>Skandalaris Center for Interdisciplinary Innovation and Entrepreneurship</td>
<td>142</td>
</tr>
<tr>
<td>Index</td>
<td>144</td>
</tr>
</tbody>
</table>
About This Bulletin

The graduate and professional bulletins are the catalogs of programs, degree requirements and policies of the following schools of Washington University in St. Louis: Architecture & Urban Design; Art; Arts & Sciences; Engineering & Applied Science; Law; Medicine; and Social Work & Public Health.

The University College Bulletin is the catalog of University College, the professional and continuing education division of Arts & Sciences at Washington University in St. Louis. The catalog includes programs, degree requirements, course descriptions, and pertinent university policies for students earning a degree through University College.

The 2017-18 bulletins are entirely online but may be downloaded in PDF format for printing. Individual pages may be downloaded in PDF format using the "Download This Page as a PDF" option on each page. To download a full PDF, please choose from the following:

• Architecture & Urban Design (PDF) (http://bulletin.wustl.edu/grad/Bulletin_2017-18_grad_architecture.pdf)
• Art (PDF) (http://bulletin.wustl.edu/grad/Bulletin_2017-18_grad_art.pdf)
• Arts & Sciences (PDF) (http://bulletin.wustl.edu/grad/Bulletin_2017-18_graduate_school.pdf)
• Law (PDF) (http://bulletin.wustl.edu/grad/Bulletin_2017-18_law.pdf)
• Medicine (PDF) (http://bulletin.wustl.edu/grad/Bulletin_2017-18_medicine.pdf)
• Social Work & Public Health (PDF) (http://bulletin.wustl.edu/grad/Bulletin_2017-18_brownschool.pdf)
• University College (undergraduate and graduate) (PDF) (http://bulletin.wustl.edu/grad/Bulletin_2017-18_university_college.pdf)

The degree requirements and policies in the 2017-18 Bulletin apply to students entering Washington University during the 2017-18 academic year.

Every effort is made to ensure that the information, applicable policies and other materials presented in the Bulletin are accurate and correct as of the date of publication (September 30, 2017). Washington University reserves the right to make changes at any time without prior notice. Therefore, the electronic version of the Bulletin 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.
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 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 90 programs and almost 1,500 courses leading to 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 University Facts page (http://wustl.edu/about/facts) of our website.

Enrollment by School

For enrollment information, please visit the University Facts page (http://wustl.edu/about/facts/#students) of our website.

Committed to Our Students: Mission Statement

Washington University’s mission is to discover and disseminate knowledge, and protect the freedom of inquiry through research, teaching and learning. Washington University creates an environment to encourage and support an ethos of wide-ranging exploration. Washington University’s faculty and staff strive to enhance the lives and livelihoods of students, the people of the greater St. Louis community, the country and the world.

Our goals are:

• to welcome students, faculty and staff from all backgrounds to create an inclusive community that is welcoming, nurturing and intellectually rigorous;
• to foster excellence in our teaching, research, scholarship and service;
• to prepare students with attitudes, skills and habits of lifelong learning and leadership thereby enabling them to be productive members of a global society; and
• to be an institution that excels by its accomplishments in our home community, St. Louis, as well as in the nation and the world.

To this end we intend:

• to judge ourselves by the most exacting standards;
• to attract people of great ability from diverse backgrounds;
• to encourage faculty and students to be bold, independent and creative thinkers;
• to provide an exemplary, respectful and responsive environment for living, teaching, learning and working for present and future generations; and
• to focus on meaningful measurable results for all of our endeavors.

Trustees & Administration

Board of Trustees

Please visit the Board of Trustees website (http://boardoftrustees.wustl.edu) for more information.

University Administration

In 1871, Washington University co-founder and then-Chancellor William Greenleaf Eliot sought a gift from Hudson E. Bridge, charter member of the university’s Board of Directors, to endow the chancellorship. Soon it was renamed the “Hudson E. Bridge Chancellorship.”

Led by the chancellor, the officers of the university administration are detailed on the university website (http://wustl.edu/about/leadership).

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. Individual schools, particularly our graduate and professional schools, may have varying calendars due to the nature of particular fields of study. Please refer to each school’s website for more information.

Fall Semester 2017

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 28</td>
<td>Monday</td>
<td>Classes begin</td>
</tr>
<tr>
<td>September 4</td>
<td>Monday</td>
<td>Labor Day holiday</td>
</tr>
<tr>
<td>October 14-17</td>
<td>Saturday-Tuesday</td>
<td>Fall Break</td>
</tr>
<tr>
<td>November 22-26</td>
<td>Wednesday-Sunday</td>
<td>Thanksgiving Break</td>
</tr>
<tr>
<td>December 8</td>
<td>Friday</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>December 11-13</td>
<td>Monday-Wednesday</td>
<td>Reading Days</td>
</tr>
<tr>
<td>December 14-20</td>
<td>Thursday-Wednesday</td>
<td>Final Examinations</td>
</tr>
</tbody>
</table>
Most services are free, and each year, more than 2,000 undergraduate students who are low-income, the first in their family to go to college, and/or have a documented disability. TRiO, a federally-funded program that offers advising, leadership development, financial assistance, and other support to undergraduate students who are low-income, the first in their family to go to college, and/or have a documented disability. Additionally, Cornerstone administers TRIO, a federally-funded program that offers advising, leadership development, financial assistance, and other support to undergraduate students who are low-income, the first in their family to go to college, and/or have a documented disability.

On Sundays and weekday evenings, we offer flexible space where students can study, work on class projects, or relax. Most services are free, and each year, more than 2,000 students participate in one or more of our programs. For more information, visit our website (http://cornerstone.wustl.edu) or call 314-935-5970.

Disability Resources. Cornerstone is also home to Disability Resources, which assists students with disabilities and students with suspected disabilities by providing guidance and accommodations to ensure equal access to our campus, both physically and academically. Disability Resources serves both undergraduate and graduate students enrolled in the schools on the Danforth Campus. Students enrolled as students in the School of Medicine should contact their program director or their program's Student Affairs staff member. Students enrolled in the Division of Biology & Biomedical Sciences (DBBS) are considered graduate students in Arts & Sciences and are served by Disability Resources. Students may visit our website (http://disability.wustl.edu) or call Cornerstone at 314-935-5970 for more information.

Office for International Students and Scholars. If a student is joining the university from a country other than the United States, this office can assist that individual through its orientation programs, by issuing certificates of eligibility (visa documents), and by offering special services for non-native English speakers in the English Language Programs. In addition, the office provides personal and cross-cultural counseling and arranges social, cultural and recreational activities that foster international understanding on campus.

The Office for International Students and Scholars is located in the Stix International House at 6470 Forsyth Boulevard and on the Medical School campus in the Mid Campus Center (MCC Building), 4590 Children's Place, Room 2043. For more information, visit our website (http://oiss.wustl.edu) or call 314-935-5910.

Medical Student Support Services. For information about Medical Student Support Services, please visit the School of Medicine website (https://medicine.wustl.edu).

The Writing Center. The Writing Center, a free service, offers writing advice 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. Appointments are preferred and can be made online (http://writingcenter.wustl.edu).

The Writing Center is located in Olin Library on level one.
Meningococcal vaccine proof is required for all incoming year old. (A titer may be provided in lieu of the immunizations.)

two measles, mumps, rubella vaccines after the age of one

All incoming students must provide proof of immunization for any test ordered by our providers.

Insurance plan as a preferred provider. The SHS lab can collect all testing that is ordered by SHS is completed by LabCorp.

LabCorp serves as our reference lab and is on the student health insurance plan. The SHS lab provides full laboratory services. Approximately 20 tests can be performed in the SHS lab. The remainder of all testing that is ordered by SHS is completed by LabCorp. LabCorp serves as our reference lab and is on the student health insurance plan as a preferred provider. The SHS lab can collect any test ordered by our providers.

All incoming students must provide proof of immunization for two measles, mumps, rubella vaccines after the age of one year old. (A titer may be provided in lieu of the immunizations.) Meningococcal vaccine proof is required for all incoming undergraduate students. A PPD skin test in the past six months is required for students entering the university from certain countries. This list of countries may be found on our website. We suggest all students also have Tetanus Diphtheria immunization within the past five years, Hepatitis A vaccine series, Hepatitis B vaccine series and Varicella vaccine. Medical History Forms are available online (http://shs.wustl.edu). Failure to complete the required forms will delay registration and will prevent entrance into housing assignment. Please visit our website (http://shs.wustl.edu) for complete information about requirements and deadlines.

Mental Health Services staff members work with students to resolve personal and interpersonal difficulties, including conflicts with or worry about friends or family, concerns about eating or drinking patterns, and feelings of anxiety and depression. Although some concerns are more frequent than others, students’ experiences are as varied as the students themselves. Staff members help each person figure out their own situation. Services include individual, group, and couples counseling; crisis counseling; psychiatric consultation; and referral for off-campus counseling. Call 314-935-6666 or visit our website (http://shs.wustl.edu) to schedule an appointment.

Health Promotion Services staff members provide information and resources on issues of interest to Washington University students including alcohol and other drugs, weight and body image, sexual health, sleep and stress; customize professional health education programs for groups; and work with groups of students dedicated to educating their peers about healthy decision making. Call 314-935-7139 for more information.

Important Information About Health Insurance, Danforth Campus

Washington University has a student health fee designed to improve the health and wellness of the entire Washington University community. This fee supports health and wellness services and programs on campus. In addition, all full-time, degree-seeking Washington University students are automatically enrolled in the Student Health Insurance Plan upon completion of registration. Students may opt out of this coverage if there is proof of existing comprehensive insurance coverage. Information concerning opting out of the student health insurance plan can be found online (http://shs.wustl.edu) after June 1 of each year. Student Health Services does provide billing services to many of the major insurance companies in the United States. Specific fees and co-pays apply to students using Medical Services and Mental Health Services; these fees may be billable to your insurance plan. More information is available on our website (http://shs.wustl.edu).

Student Health Services, Medical Campus

For information about student health services on the Medical Campus, please visit the Student Health Services page (http://
bulletin.wustl.edu/medicine/departments/student-health) of the medical school Bulletin.

**Campus Security**

The Washington University campus is among the most attractive in the nation and enjoys a safe, relaxed atmosphere. Your personal safety and the security of your 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, use of closed circuit television, card access, good lighting, 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, alert campus community. Washington University has developed several programs to help make your experience here a safe and secure one. 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 your exact location. In addition to the regular shuttle service, an evening walking escort service or mobile Campus Circulator is 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 — from 7:00 p.m. to 4:00 a.m. seven days a week. The shuttle leaves from both the Mallinckrodt Center and the Brookings Drive steps and takes passengers directly to the front doors of their buildings. Shuttle drivers then will 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 Police Department offers a variety of crime prevention programs including a high-security bicycle lock program, free personal-safety whistles, computer security tags, personal safety classes for women and men, property inventory services and security surveys. For more information on these programs, check out the Washington University Police Department website (http://police.wustl.edu).

In compliance with the Campus Crime Awareness and Security Act of 1990, Washington University publishes online an annual report (http://police.wustl.edu/clerylogsandreports/Pages/default.aspx), Safety & Security: Guide for Students, Faculty, and Staff & Annual Campus Security and Fire Safety Reports, which is available to all current and prospective students on the Danforth Campus and university employees on the Danforth, North and West campuses. To request a hard copy, contact the Washington University Police Department, CB 1038, One Brookings Drive, St. Louis, MO 63130-4899, 314-935-9011.

For information regarding protective services at the School of Medicine, please visit the Security page (https://facilities.med.wustl.edu/security) of the Washington University Operations & Facility Management Department.

**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 (http://registrar.wustl.edu) and on the university's Compliance and Policies page (http://wustl.edu/policies). 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.

**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, or treatment or employment in, its programs and activities on the basis of race, color, age, religion, sex, sexual orientation, gender identity or expression, national origin, 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, veteran status, disability or genetic information. Harassment based on any of these classifications is a form of discrimination and 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 Policy on Discrimination and Harassment (http://hr.wustl.edu/policies/Pages/DiscriminationAndHarassment.aspx) is available on the Human Resources website.

**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:

**Discrimination and Harassment Response Coordinators**

Apryle Cotton, Asst. Vice Chancellor for Human Resources  
Section 504 Coordinator  
Phone: 314-362-6774  
Email: apryle.cotton@wustl.edu

Leanne Stewart, Employee Relations Manager  
Phone: 314-362-8278  
Email: leannerstewart@wustl.edu

**Title IX Coordinator**

Jessica Kennedy, Director of Title IX Office  
Title IX Coordinator  
Phone: 314-935-3118  
Email: jw kennedy@wustl.edu

You may also submit inquiries or a complaint regarding civil rights to the United States Department of Education's Office of Civil Rights at 400 Maryland Avenue, SW, Washington, DC 20202-1100 or by visiting the U.S. Department of Education website (http://ed.gov) or calling 800-421-3481.

**Student Health**

**Drug and Alcohol Policy**

Washington University is committed to maintaining a safe and healthful 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 (http://hr.wustl.edu/policies/DrugsandAlcoholPolicy.aspx) or Alcohol Service Policy (http://pages.wustl.edu/prograds/alcohol-service-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 policy (http://hr.wustl.edu/policies/Pages/tobaccofreepolicy.aspx) is available on the Human Resources website.

**Medical Examinations**

Entering students must provide medical information to Student Health Services. This will include completion of a health history and a record of all current immunizations. The university strongly recommends appropriate vaccination for meningococcal disease.

If students fail to comply with these requirements prior to registration, they will be required to obtain vaccinations for measles, mumps and rubella at Student Health Services, if there is no evidence of immunity. They will be assessed the cost of the vaccinations. Students will be unable to complete registration for classes until all health requirements have been satisfied.

If students are unimmunized, they 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 Services (http://shs.wustl.edu) website. All students who have completed the registration process should access the website and create a student profile by using their WUSTL key. Creating a student profile enables a student to securely access the medical history form. Fill out the form and follow the instructions for transmitting it to Student Health Services. Student information is treated securely and confidentially.

**Student Conduct**

The Student Conduct Code sets forth community standards and expectations for Washington University students. These community standards and expectations are intended to foster an environment conducive to learning and inquiry. Freedom of thought and expression is essential to the university's academic mission.

Disciplinary proceedings are meant to be informal, fair and expeditious. Charges of non-serious misconduct are generally heard by the student conduct officer. With limited exceptions, serious or repeated allegations are heard by the campuswide Student Conduct Board or the University Sexual Assault Investigation Board where applicable.

Complaints against students that include allegations of sexual assault or certain complaints that include allegations of sexual harassment in violation of the Student Conduct Code are governed by the procedures found in the University Sexual Assault Investigation Board Policy (https://wustl.edu/about/compliance-policies/governance/usaib-procedures-complaints-sexual-assault-filed-students), which is available online or in hard copy from the Title IX coordinator or the director 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 (https://wustl.edu/about/compliance-policies/academic-policies), visit the university website.
Undergraduate Student Academic Integrity Policy

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 work 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.

Scope and Purpose

This statement on academic integrity applies to all undergraduate students at Washington University. Graduate students are governed by policies in each graduate school or division. All students are expected to adhere to the highest standards of behavior.

The purpose of the statement is twofold:

- To clarify the university's expectations with regard to undergraduate students' academic behavior, and
- To provide specific examples of dishonest conduct. The examples are only illustrative, not exhaustive.

Violations of This Policy Include, but Are Not Limited To:

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 acknowledgment. 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 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 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 and represent that work as one's 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 permit another student to copy one's 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 or 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 one's 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 one's own. This includes but is not limited to sitting for another person's exam; both parties will be held responsible.
• 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 the assistant to the instructor for guidance.

Reporting Misconduct

Faculty Responsibility
Faculty and instructors are strongly encouraged to report incidents of student academic misconduct to the academic integrity officer in their school or college in a timely manner so that the incident may be handled fairly and consistently across schools and departments. Assistants to the instructor are expected to report instances of student misconduct to their supervising instructors. Faculty members are expected to respond to student concerns about academic dishonesty in their courses.

Student Responsibility
If a student observes others violating this policy, the student is strongly encouraged to report the misconduct to the instructor, to seek advice from the academic integrity officer of the school or college that offers the course in question, 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 Resource Center, if applicable.

Procedure

Jurisdiction
This policy covers all undergraduate students, regardless of their college of enrollment. Cases 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.

Administrative Procedures
Individual undergraduate colleges and schools may design specific procedures to resolve allegations of academic misconduct by students in courses offered by that school, so long as the procedures are consistent with this policy and with the Student Conduct Code.

Student Rights and Responsibilities in a Hearing
A student accused of an academic integrity violation, whether by a professor, assistant to instructor, academic integrity officer or student, is entitled to:

• Review the written evidence in support of the charge.
• Ask any questions.
• Offer an explanation as to what occurred.
• Present any material that would cast doubt on the correctness of the charge.
• Determination of the validity of the charge without reference to any past record of misconduct.

When responding to a charge of academic misconduct, a student may:

• Deny the charges and request a hearing in front of the appropriate academic integrity officer or committee.
• Admit the charges and request a hearing to determine sanction(s).
• Admit the charges and accept the imposition of sanctions without a hearing.
• Request a leave of absence from the university. The academic integrity matter must be resolved prior to re-enrollment.
• 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 Conduct 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 transcript.

If Found in Violation of the Academic Integrity Policy
If, after a hearing, a student is found to have acted dishonestly, or if a student has admitted to the charges prior to a hearing, the school's academic integrity officer or committee 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.
• In cases serious enough to warrant suspension or expulsion from the university, refer the matter to the Student Conduct Board for consideration.

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

Withdrawing from the course will not prevent the academic integrity officer 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.

Appeals

If a student believes the academic integrity officer or the committee did not conduct a fair hearing, or if a student believes the sanction imposed for misconduct is excessive, they may appeal to the Student Conduct Board within 14 days of the original decision. Appeals are governed by Section VII C of the Student Conduct Code.

Records

Administrative Record-Keeping Responsibilities
It is the responsibility of the academic integrity officer in each school to keep accurate, confidential records concerning academic integrity violations. When a student has been found to have acted dishonestly, a letter summarizing the allegation, the outcome and the sanction shall be placed in the student's official file in the office of the school or college in which the student is enrolled.

Additionally, each school's academic integrity officer shall make a report of the outcome of every formal accusation of student academic misconduct to the director of Student Conduct and Community Standards, 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 by an academic integrity officer, a committee, or the Office of Student Conduct and Community Standards, the person in charge of administering the hearing shall query the Office of Student Conduct and Community Standards about the student(s) accused of misconduct. The director shall provide any information in the records concerning that student to the integrity officer. Such information will be used in determining sanctions only if the student is found to have acted dishonestly in the present case. Evidence of past misconduct may not be used to resolve the issue of whether a student has acted dishonestly in a subsequent case.

Reports to Faculty and Student Body

School and college academic integrity officers are encouraged to make periodic (at least annual) reports 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.

Graduate Student Academic Integrity Policies

For graduate student academic integrity policies, please refer to each individual graduate school.

Statement of Intent to Graduate

Students are required to file an Intent to Graduate at WebSTAC (https://acadinfo.wustl.edu) prior to the semester in which they intend to graduate. Additional information is available in the dean's offices of each school and in the Office of the University Registrar (http://registrar.wustl.edu).
Student Academic Records and Transcripts

The Family Educational Rights and Privacy Act of 1974 (FERPA) — Title 20 of the United States Code, Section 1232g, as amended — provides current and former students of the university with specific rights of access to and control over their student record information. In compliance with the statute, appropriate federal regulations and guidelines recommended by the American Association of Collegiate Registrars and Admissions Officers, the university has adopted procedures that implement these rights.

A copy of the university policies regarding educational records and the release of student record information is available from the Office of the University Registrar (http://registrar.wustl.edu) and the university website (http://www.wustl.edu).

Transcript requests may be submitted to the Office of the University Registrar through WebSTAC. Instructions and additional information are available on the University Registrar website (http://registrar.wustl.edu).

University Affiliations

Washington University is accredited by the Higher Learning Commission (https://www.hlcommission.org) (800-621-7440). Washington University is a member of the Association of American Universities, the American Council on Education, the College Board, and the Independent Colleges and Universities of Missouri.

The College of Arts & Sciences is a member of the Center for Academic Integrity and the American Association of College Registrars.

The College of Architecture was one of the eight founding members of the Association of Collegiate Schools of Architecture (ACSA) in 1912.

The Graduate School is a founding member of both the Association of Graduate Schools and the Council of Graduate Schools.

The Graduate School of Architecture & Urban Design’s Master of Architecture degree is accredited by the National Architectural Accreditation Board (NAAB).

The Sam Fox School of Visual Arts & Design (Art) is a founding member of, and is accredited by, the National Association of Schools of Art and Design (NASAD).

The Olin Business School is a charter member of the Association to Advance Collegiate Schools of Business International (AACSB) (AACSB).

In the School of Engineering & Applied Science, many of the professional degrees are accredited by the Engineering Accreditation Commission of ABET (http://abet.org).

University College is a member of the University Professional and Continuing Education Association, the North American Association of Summer Sessions, the Association of University Summer Sessions and the Center for Academic Integrity. Business-related programs in University College are not accredited by the Association to Advance Collegiate Schools of Business (AACSB International).

The School of Law is accredited by the American Bar Association. The School of Law is a member of the Association of American Law Schools, the American Society of Comparative Law, the Clinical Legal Education Association, the Southeastern Association of Law Schools, the Central Law Schools Association, the Mid-America Law Library Consortium, the American Association of Law Libraries, and the American Society of International Law.

The School of Medicine is a member of the Liaison Committee on Medical Education.

The Brown School at Washington University is accredited by the Council on Social Work Education and the Council on Education for Public Health.

The University Libraries are a member of the Association of Research Libraries.

The Mildred Lane Kemper Art Museum is nationally accredited by the American Alliance of Museums.
Arts & Sciences

The Graduate School confers all Master of Arts (AM) and Doctor of Philosophy degrees at Washington University. Every AM program and 29 PhD programs are housed in Arts & Sciences departments. In addition, the Graduate School cooperates with the schools of Business, Engineering & Applied Science, Medicine, and Social Work on the administration of 27 PhD programs housed in those schools.

Governance

The Graduate Council serves as the legislative branch of the Graduate School. The Council consists of one faculty representative and one graduate student representative from each degree-granting program; it is chaired by the dean of the Graduate School and vice provost for graduate education. Much of the work of the Council occurs in committees, on which students serve alongside faculty members. This model of shared governance — equal representation and equal responsibility for faculty and graduate students — is believed to be unique among U.S. universities.

Contact Information

The Graduate School
Cupples II, Suite 204
Washington University in St. Louis
CB 1187
One Brookings Drive
St. Louis, MO 63130-4899
Phone: 314-935-6880
Fax: 314-935-4887
Website: http://graduateschool.wustl.edu
Email: GraduateArtSci@wustl.edu

Doctoral Degrees

The PhD is not only an exploration of the knowledge in a given discipline but also an original contribution to it. To the extent that doctoral education has been successful, the student’s relationship to learning is significantly changed. Having made a discovery, developed an insight, tested a theory, or designed an application, the PhD recipient is no longer a student but a colleague of the faculty. It is for this reason that the PhD is the highest degree offered by a university.

The core mission of PhD programs at research universities is to educate the future faculty of other research universities and institutions of higher education. Graduates of Washington University participate in research and teaching; they also make valuable contributions to society by applying the analytical and creative skills required for scholarship to careers in business, government, and nonprofit sectors. The Graduate School therefore works with other university offices to ensure that students have the opportunity to develop these transferable skills.

Among the critical components the university provides for these purposes are a small and select graduate student body, faculty members dedicated to scholarly work, and the physical facilities needed for research. In these regards Washington University compares favorably to the finest graduate institutions in the world. But the key ingredients of PhD completion must be provided by the student: a love of learning and a desire to increase the sum of human knowledge. Motivation and perseverance are prerequisites for success in PhD programs.

Academic Information

General Requirements

To earn a PhD at Washington University, a student must complete all courses required by their department, maintain satisfactory academic progress, pass certain examinations, fulfill residence and teaching requirements, write, defend, and submit a dissertation, and file an Intent to Graduate form on WebSTAC (https://acadinfo.wustl.edu).

Enrollment and Registration

Students newly admitted to the Graduate School receive from the university registrar information on creating a WUSTL Key that is used to register for courses online via WebSTAC during open registration periods. All registrations require online approval by the student’s faculty adviser and are monitored by the Graduate School.

Regular Enrollment

Students admitted to a PhD program in the Graduate School must maintain full-time continuous enrollment throughout the approved length of their programs. Most of our PhD programs will be completed within five or six years. During those years students will be considered full-time if they are:

• registered for 9 or more course units or
• registered in a zero-unit course (LGS 9000 Full-time Graduate Research/Study or LGS 9001 Full-time Graduate Study in Absentia) that indicates the student’s full-time engagement in research or academic writing.

Students will be administratively registered in LGS 9000 based on recommendations from their advisers stating the students are making satisfactory progress toward their degrees.

During a student's period of regular registration, they may have a need or opportunity to study away from Washington University. Recommendations from departments for students’ registration in absentia will be considered by the Graduate School on a case-by-case basis. If approved by the Graduate School, these will be registered for LGS 9001 Full-time Graduate Study in Absentia. Students may be allowed to register for LGS 9001 for up to four consecutive or nonconsecutive fall/spring semesters. Semesters...
in which a student is registered in absentia are counted as part of the student's program length.

Full-time students registered within their program length and making satisfactory academic progress will receive full funding, tuition remission, and the 90 percent health insurance and wellness fee subsidies. Tuition each semester will be calculated based on the number of registered course units.

**Enrollment Extension**

Students may be permitted to register for one additional year beyond their program length. When recommended by their department and approved by the Graduate School, these students will be registered in a zero-unit course LGS 9002 Full-time Graduate Study Extension which confers full-time enrollment status. Students registered for LGS 9002 will not receive Graduate School stipend support, but will receive other benefits available to full-time PhD students in the Graduate School including health insurance and wellness fee subsidies.

Students may be registered for LGS 9002 for a maximum of two semesters. There will be no exceptions to this limit. Students who do not complete their programs within this time limit must either withdraw from the program or be designated as Degree Candidacy Extended.

**Degree Candidacy Extended**

Upon the recommendation of their departments and the approval of the Graduate School, students who do not complete their PhD degrees after the one-year enrollment extension may remain doctoral candidates for up to five years. Departmental recommendations and Graduate School approval are required for each year of extended degree candidacy. Extended degree candidates are not registered for any courses, have no enrollment status, and receive none of the benefits available to registered Washington University students, including student loan deferment. International students are not eligible for Degree Candidacy Extended status.

**Part-Time Students**

PhD candidates are not admitted as part-time students. Part-time status will be calculated strictly on the basis of registration in fewer than 9 course units without LGS 9000 registration and will be permitted only in extraordinary circumstances.

**Courses and Tuition Remission**

The Graduate School will approve tuition remission for up to 72 units of course work. The 72-unit calculation includes course work transferred from other graduate programs.

Students pursuing a certificate or an unrelated master's degree in addition to their PhD must consult the departments and advisers about credit sharing between the programs. Tuition remission for units in excess of 72 will not be provided by the Graduate School.

To be eligible for tuition remission, courses must be offered at the graduate level, taken for a grade, and approved in advance by the student's adviser and program as necessary for the student's degree. Depending on the program, graduate-level work begins with courses numbered in the 400s or 500s. Audited courses and courses taken pass/fail are not eligible for tuition remission. Students should consult their advisers regarding course selection.

When certain conditions apply, graduate students may be permitted to register for Arts & Sciences courses numbered below 400, but they may not ordinarily be covered by tuition remission unless approved by the dean of the Graduate School or their designee. Full-time students in the Graduate School who wish to take graduate courses in University College or Summer School must obtain the approval both of their academic adviser and of the dean of the Graduate School. Tuition remission may be available for such approved course work.

**Grades**

Credit-conferring grades for students in the Graduate School are these: A, outstanding; B, good; C, conditional (an A, B or C grade may be modified by a plus or minus); S, satisfactory; and U, unsatisfactory (used almost exclusively for credit hours earned by doing research). Other grades are F, failing; N, not submitted yet; X, final examination missed; and I, incomplete. The mark of I becomes a permanent part of the student's record after the lapse of one calendar year unless the program in which the mark was assigned requests an extension of time.

The Graduate School uses a 4-point scale for calculating grade point averages, with A = 4, B = 3, and C = 2. A plus adds .3 to the value of a grade, whereas a minus subtracts .3 from the value of the grade.

Zero-unit LGS 9xxx courses will have only the satisfactory/unsatisfactory grade option. A successful grade (S) will be assigned to these courses when a student is approved for subsequent registration or completes the degree, or when the Graduate School dean approves a special grade report submitted by the student's adviser.

**Retaking a Course**

Graduate students may be allowed to retake a course once with prior permission from their department or program. The department can refuse the student’s request. If permission to retake a course is granted, both registrations will show on the transcript. The grade for the first enrollment will always be replaced by the symbol R. Whether or not it is lower than or equal to the original grade, the grade for the second enrollment will be used to calculate the GPA. The grade for the first enrollment will not be replaced with an R until the second enrollment is completed and its grade has posted. A student who retakes a course without prior permission might not receive permission retroactively. No student may use the retake option to replace a grade received as a sanction for violation of the
Academic Integrity Policy. The R option may be invoked only once per course, and the original grade option must be retained.

**Transferred Credit**

Credit for previous course work will be transferred to a student's Washington University record only to fulfill departmental course/credit requirements. Departments may request transfer credit from official transcripts after a student's admission to a PhD program.

**Satisfactory Academic Progress**

Satisfactory academic progress for students in PhD programs is monitored by the Graduate School as well as the degree program. Failure to maintain satisfactory academic progress may result in immediate dismissal or in placement on academic probation for the ensuing year. Most financial awards, and all federally funded awards, are contingent on the maintenance of satisfactory academic progress. Moreover, satisfactory academic progress is a prerequisite for service on any committee authorized by the Graduate School. The following are minimal standards of satisfactory academic progress for PhD students; degree programs may set stricter standards, but must not relax these.

1. Students are expected to proceed at a pace appropriate to enable them to finish within the time limits discussed below. No later than the end of the fourth year of full-time graduate study, students are expected to have completed all PhD requirements except for the dissertation.
2. Students are expected to maintain a cumulative grade point average of at least 3.0 on a 4.0 scale. Note that plus and minus marks alter the numerical value of a letter grade.
3. Students are expected not to carry at one time any more than 9 credit hours for which the grades of I (incomplete), X (final examination missed), or N (not yet submitted) are recorded. The Graduate School may deny a student with more than 9 credit hours for which the grades of I, X, or N are recorded. The Graduate School may deny a student with more than 9 credit hours for which the grades of I (incomplete), X (final examination missed), or N (not yet submitted) are recorded. The Graduate School may deny a student with more than 9 credit hours for which the grades of I (incomplete), X (final examination missed), or N (not yet submitted) are recorded.
4. After four years of full-time graduate study, doctoral students who cannot identify three faculty members who are willing to serve on their Research Advisory Committee are not considered to be making satisfactory academic progress. The Title, Scope, and Procedure form must be filed before the fifth year in order to identify membership of the student’s Research Advisory Committee.
5. Students may take five or six years to complete the PhD depending upon the program. A one-year extension is available if circumstances warrant. Extensions are obtained by application by the student to the degree program, endorsement by the degree program to the Graduate School, and approval by the Graduate School.

**Qualifying Examinations**

Progress toward the PhD is contingent upon passing examinations variously called preliminary, qualifying, general, comprehensive, or major field exams. The qualifying process varies according to the program. In some programs, it consists of a series of incremental, sequential, and cumulative exams over a considerable time. In others, the exams are held in a relatively short period. Exams may be taken orally or in writing; they may be replaced by one or more papers. The program, which determines the form these required examinations take, is responsible for notifying the Graduate School of the student’s successful completion of them.

**Residence Requirement**

Each student must spend at least one academic year enrolled full-time at Washington University. Any exceptions must be approved by the dean of the Graduate School.

**Teaching Requirement**

Graduate students must meet department and Graduate School-wide teaching requirements. PhD students must demonstrate competency in teaching at the basic level and at the advanced level. For more information, students should consult their director of graduate studies for discipline-specific guidelines on fulfilling the requirements.

**The Dissertation**

Each candidate, as evidence of mastery of a specific field of knowledge and capacity for original, scholarly work, must complete a dissertation. The subject must be approved by a Research Advisory Committee consisting of at least three tenured or tenure-track faculty members. This committee is ordinarily led by the student’s major adviser and must be approved by the Graduate School.

A Title, Scope, and Procedure Form for the dissertation must be signed by the committee members and by the program chair. It must be submitted to the Graduate School at least six months before the degree is expected to be conferred or before beginning the fifth year of full-time enrollment, whichever is earlier.

A Doctoral Dissertation Guide and a Template, which give instructions regarding the format of the dissertation, are available on the Graduate School’s Policies and Guides (http://graduateschool.wustl.edu/policies-and-guides) page; both should be read carefully at every stage of thesis preparation.

The Graduate School requires each student to make the full text of the dissertation available to the committee members for their review at least one week before the defense. Most degree programs require two or more weeks for the review period; students should check with their faculty.
**Dissertation Defense**

 Approval of the dissertation by the Research Advisory Committee is necessary to bring it to the defense. The committee before which the student is examined consists of at least five members, who normally meet two independent criteria:

1. Four of the five must be tenured or tenure-track Washington University faculty; one of these four may be a member of the emeritus faculty. The fifth member must have a doctoral degree and an active research program, whether at Washington University, at another university, in government, or in industry.
2. Three of the five normally come from the student's degree program; at least one of the five must not.

All committees must be approved by the dean of the Graduate School or by their designee, regardless of whether they meet the normal criteria.

The committee is appointed by the dean of the Graduate School upon the request of the degree program. 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. Faculty and graduate students 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 members. Though 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.

**Dissertation Submission**

After the defense, the student must submit an electronic copy of the dissertation online to the Graduate School. The submission website requires students to choose among publishing and copyrighting services offered by ProQuest's ETD Administrator, but the university permits students to make whichever choices they prefer. 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 program chair or director, to the Graduate School. Students who defend their dissertations successfully have not completed their PhD requirements; they finish earning the degree only when their dissertation online to the Graduate School. The submission of the dissertation itself and its relation to the student's field of expertise.

**Graduation Information**

Students are responsible for filing an Intent to Graduate form in order to have each earned degree conferred. The Intent to Graduate is available online through WebSTAC (https://acadinfo.wustl.edu). Deadlines for filing an Intent to Graduate are listed on the Graduate School’s website. No degree will be awarded if this form has not been filed. Students who do not complete their degree requirements by their intended graduation date must refile for the next graduation date.

**Specific Circumstances**

**Changes in Program of Study**

Students are usually admitted to the Graduate School to study toward specific degrees. Therefore, a change in the degree objective (e.g., from AM to PhD) is subject to the approval of the student's program and of the Graduate School. A request for a change in the subject of study (e.g., from economics to history) requires the approval of both programs concerned, as well as that of the Graduate School. Students may be required to fill out a new application for admission before making such changes, but they will not be charged a second application fee.

**Student Grievance Procedures**

From time to time, students may feel that they have legitimate complaints regarding academic matters or an interaction with a faculty member. It is important that students and faculty have a common understanding of how such complaints may be expressed and resolved. Students with complaints regarding academic matters should initially seek resolution from their faculty adviser, then from their director of graduate studies, and finally the chair of their degree program. Complaints which remain unresolved may be addressed to any of the deans in their school. The final court of appeal for all students in the Graduate School is the dean of the Graduate School.

All complaints regarding academic and professional integrity should be addressed to an associate dean of the Graduate School.

Washington University policies state that members of the university community can expect to be free from discrimination and harassment. Students, faculty, staff, and outside organizations working on campus are required to abide by specific policies prohibiting harassment.

An allegation of sexual discrimination may be appealed to the vice chancellor for Human Resources, who will determine whether to convene the Title IX Grievance Committee to hear the case. Visit the Sexual Harassment (http://hr.wustl.edu/policies/pages/sexualharassment.aspx) webpage for more information.

**Leaves of Absence**

Students may request and be approved for a leave of absence during their regular registration period if they are not registered in absentia. Leaves of absence must be endorsed by the degree program and approved by the Graduate School for up to one year. Extensions must be reapproved.

Approved leaves of absence are not counted as part of a student's program length and will not be approved for semesters beyond the program length including enrollment extension. While on leave of absence, students are not registered and have no student status at Washington University. Students who begin
a leave during any semester will be dropped from all course registration for that semester and will receive no course credit for work completed during that semester prior to the leave.

Leaves of absence may be personal or medical. In the case of a medical leave the student must present authorization from Student Health Services at the beginning and again at the end of the leave. The student must have met the required prerequisites and have the approval both of their department and of the course instructor. At the end of any leave of absence, a student is reinstated into the Graduate School under the conditions prevailing at the time the leave was granted. Being on leave suspends student status and financial support from the university. Taking a leave therefore may adversely affect loan deferment, visa status, the right to rent university-owned housing, etc. Most visa types would prevent international students from remaining in the United States while taking a leave of absence; such students should consult the Office for International Students and Scholars (http://oiss.wustl.edu) as well as their faculty adviser, their program’s director of graduate studies, and perhaps a dean.

Withdrawals

Students wishing to withdraw from their program must give notice in writing by filling out the Graduate School’s Withdrawal Form (http://graduateschool.wustl.edu/forms). This form must include the date when the withdrawal should be considered effective. Without such information, there may be serious financial repercussions for the student and/or the university.

Dismissals

A program may wish to dismiss a student for a number of reasons: willful misrepresentation to gain admission to graduate study, breaches of academic integrity, academic failure, or behavior destructive of the welfare of the academic community. Dismissals are recommended by the degree program and are not final until approved by the Graduate School. Any student who believes their dismissal was undeserved may appeal to the dean of the Graduate School, who may accept or decline the program’s recommendation to dismiss the student.

Interdisciplinarity

Interdisciplinary Course Work

PhD students can discuss with their advisers individual courses available outside their school that may advance their research or professional goals. A university tuition agreement signed by all the deans of the university's graduate and professional schools fosters interdisciplinary study across the schools and allows enrollment in classes outside the student’s home school. Many courses, undergraduate as well as graduate, are available for graduate student enrollment subject to eligibility guidelines:

- Students must be enrolled full time in graduate degree programs and have the approval of their faculty adviser or administrative officer to take a course outside their home school.

- Courses will be open to students outside the discipline only if the students have met the required prerequisites and have the approval both of their department and of the course instructor.

- Finally, courses in the evening divisions, including University College and its Summer School, are not part of this agreement, and courses requiring individualized instruction and/or additional fees (such as independent studies or individual music lessons) are also excluded.

Joint and Dual Degree Programs

The university has set up numerous programs permitting students to earn two graduate and/or professional degrees at the same time. One of these programs includes a PhD:

Medical Scientist Training Program (MD/PhD in various disciplines)

The Graduate School uses the term “joint degree” to refer to programs in which one or more credit hours are counted toward both degrees. The Graduate School uses the term “dual degree” to refer to programs in which no credit hours are counted toward both degrees. Interested students must apply to and be admitted by each degree program separately, but ideally all applications should be made before beginning graduate or professional study. Joint and dual degrees are ordinarily conferred simultaneously, after all the requirements for both degrees have been met.

Students wishing to pursue joint or dual degrees other than these may be permitted to do so, but such requests are considered on a case-by-case basis.

Admission to an individualized joint degree program between two Graduate School disciplines on the Danforth Campus must be recommended by the directors of graduate studies for both disciplines and approved by the dean of the Graduate School. Admission to an individualized joint degree program involving another school of the university must be recommended by the directors of graduate studies for both disciplines and approved by the deans of both schools. Recommendations should address a variety of academic and administrative concerns, including the timeline for completion of both degrees and responsibility for funding the student and remitting the tuition. Students should not undertake study toward an individualized joint degree program until it has been fully approved.

Graduate Certificates

The certificates offered to full-time students in the Graduate School are all interdisciplinary in nature:

- American Culture Studies (p. 25)
- Data Science in the Humanities (p. 50)
- Film and Media Studies (p. 82)
- Language Instruction (p. 117)
- Latin American Studies (p. 93)
Graduate certificates are open to students in PhD programs at Washington University. They require 15-18 credit hours. Interested students must fill out an application for admission to a certificate program and receive the approval of their degree program's chair, the certificate program's director, and the dean of the Graduate School. The application form (http://graduateschool.wustl.edu/forms) is posted on the Graduate School's website. Tuition remission may be available for the credit hours required to complete a certificate program if the student's total units do not exceed 72. Earning a certificate does not increase a student's expected time to degree or amount of Graduate School support. No student will be admitted to, given tuition remission for, or awarded more than one graduate certificate.

Financial Information

The amounts and vehicles of financial support for graduate students are usually decided by individual schools. Washington University is committed to funding most PhD students for 4-6 years, depending on the time needed to complete their particular program. Funding typically consists of full tuition remission and 10-12 months of a stipend to defray living expenses. Monetary support may come from the university or from outside sources, and it may be administered by an individual faculty member or by the staff of the program or the school.

Financial Support

Tuition Scholarships

Scholarships to cover part or all the costs of tuition are available to both new and continuing students. Since perception of academic merit is the sole criterion for the award of tuition scholarships, they are not subject to taxation under federal tax law at this time.

Research Assistantships

Except in unusual cases, research assistantships are available only to doctoral students who have completed at least one full year of graduate study. They are generally, but not exclusively, found in the natural and social sciences, and are offered through departments, committee-run programs, and research centers. Research assistantships allow participation in collaborative enterprises of research and in the discipline's community of scholars.

Traineeships

Many degree programs, especially in the biological and behavioral sciences, fund students by means of traineeships. They may be awarded on an annual basis or may be renewable for periods up to three years, subject to satisfactory academic progress. Traineeships frequently emphasize research, but in the applied social sciences they might combine theory, research, and clinical experience in the field.

Fellowships

Fellowships, which provide a living stipend, may be awarded to a student by the Graduate School, the student's degree program, or the student's adviser. In addition, a student may apply for and win certain fellowships that are awarded directly to the student. These require administration by the Graduate School, which also administers two unique universitywide fellowships: the Chancellor's Graduate Fellowships (http://pages.wustl.edu/cgfp) and the Mr. and Mrs. Spencer T. Olin Fellowships (http://pages.wustl.edu/olinfellowship). These awards provide year-round funding for four to five years. Prospective students must apply for them at the time of their application for admission, not after they have enrolled here as graduate students.

Loans

Federally underwritten loans are another centrally administered resource for students who are U.S. citizens or permanent residents. Unsubsidized Stafford loans can be arranged for graduate students. Applicants for these loans are required to submit the Free Application for Federal Student Aid (FAFSA). The Graduate School determines eligibility and processes loan applications for all PhD students at Washington University. For more information about applying for loans, please visit the Graduate School's Financial Information (http://graduateschool.wustl.edu/prospective_students/financial-information) webpages.

Financial Costs

Tuition Charges and Refunds

The maximum tuition fee is the equivalent of 9 semester hours. Students who enroll for 9 or more hours per semester are automatically regarded as full-time students and are charged a flat full-time rate. Students enrolled for fewer than 9 units are charged on a per-unit basis. The tuition rate is subject to annual change.

Requests for refund of tuition paid by a student who is withdrawing from a degree program should be made by submitting a Withdrawal Form (http://graduateschool.wustl.edu/forms) to the Graduate School office. Requests for refund of tuition paid by a student who is withdrawing from a specific course should be submitted in writing to the Graduate School registrar. The last date of class attendance is ordinarily used in determining the amount that can be refunded. Students withdrawing within the first two weeks of classes will receive a full refund; those withdrawing before the end of the fourth week pay 20 percent; those withdrawing before the end of the eighth week pay 40 percent. There is no refund after the eighth week of the semester except for reasons of health. Such reasons
must be certified or verified by Student Health Services, in which case the university will make a prorated refund of tuition if notice of withdrawal is received before the end of the 12th week of the semester. Students who have had their full tuition remitted for them by their school or by a third party will not receive any refund.

**Health Fees**

All full-time students on the Danforth Campus are charged a mandatory health fee. This fee gives access to Student Health Services. In addition, full-time students on the Danforth Campus must either enroll in the student health insurance plan or present proof of comparable coverage. Both the health fee and the health insurance premium are subject to annual change. The Graduate School subsidizes both costs for most full-time fully supported students.

There is also a health fee for full-time students in degree programs based on the Medical Campus. It includes coverage equivalent to a health insurance plan. Details can be found on the Student & Occupational Health Services (http://wusmhealth.wustl.edu) website.

**Master's Degrees**

There are different ways to earn a master's degree at Washington University:

- Students who have not previously earned a master's degree in the same field as their PhD may earn the Master of Arts (AM) on the way to their PhD. This option is available in some disciplines but not in all of them.
- Students who have not previously earned a master's degree in the same field as their PhD may be awarded an AM for work done in a PhD program that they are leaving without completing. This option is available in some disciplines but not in all of them.
- There are a number of Arts & Sciences disciplines that admit students to pursue a terminal master's degree. Half of these are daytime programs for full-time students; these are described by their departments in other sections (p. 24) of this Bulletin. The other half of these terminal master's programs are designed primarily for part-time students and offer their classes in the evening; these are described by University College (p. 132) in its section of this Bulletin.
- Undergraduate students in Arts & Sciences at Washington University may apply for the accelerated AB/AM program, in which graduation with an AB is followed by one year of graduate study leading to the AM. This option is described in the Accelerated AB/AM (p. 20) section of this Bulletin.

---

### Academic Information

#### General Requirements for AM Degrees

The minimum requirement of the Master of Arts degree (AM) is 30 credits. If the AM is awarded in a program of study in which Washington University awards a PhD with an identical disciplinary title, the minimum requirement is 36 credits.

Any master's degree program can require a master's thesis, make the thesis optional, or decline to offer a thesis. No more than 6 credits toward the AM can be awarded for master's thesis research. A master's thesis must be defended before a committee of no fewer than three faculty members. A master's without thesis must include an examination which tests competence in the field of study. Degree programs are free to add additional requirements. In addition, master's students must maintain satisfactory academic progress and fulfill residence requirements.

#### Registration

Students newly admitted to the Graduate School receive from the university registrar information on creating a WUSTL Key that is used to register for courses online via WebSTAC during open registration periods. All registrations require online approval by the student's faculty adviser and are monitored by the Graduate School.

#### Credit Hours

Full-time students register for 9-12 hours per semester. Master's students who have completed their course work and need additional time to complete other degree requirements will be registered for LGS 9000 Full-time Graduate Research/Study.

#### Courses

To count toward a master's degree, courses must be offered at the graduate level, taken for a grade, and approved in advance by the student's adviser and program as eligible to count toward the student's degree. Depending on the program, graduate-level work begins with courses numbered in the 400s or 500s. Audited courses and courses taken pass/fail (or credit/no credit) cannot be counted toward the degree and may not be eligible for tuition remission. Students should consult their advisers regarding these options.

#### Grades

Credit-conferring grades for students in the Graduate School are these: A, outstanding; B, good; C, conditional (an A, B or C grade may be modified by a plus or minus); S, satisfactory; and U, unsatisfactory (used almost exclusively for credit hours earned by doing research). Other grades are F, failing; N, not submitted yet; X, final examination missed; and I, incomplete. The mark of I becomes a permanent part of the student's record.
after the lapse of one calendar year unless the program in which
the mark was assigned requests an extension of time.

The Graduate School uses a 4-point scale for calculating grade
point averages, with A = 4, B = 3, and C = 2. A plus adds .3 to
the value of a grade, whereas a minus subtracts .3 from the
value of a grade.

**Retaking a Course**

Graduate students may be allowed to retake a course once
with prior permission from their department or program. The
department can refuse the student's request. If permission
to retake a course is granted, both registrations will show on
the transcript. The grade for the first enrollment will always be
replaced by the symbol R. Whether or not it is lower than or
equal to the original grade, the grade for the second enrollment
will be used to calculate the GPA. The grade for the first
enrollment will not be replaced with an R until the second
enrollment is completed and its grade has posted. A student
who retakes a course without prior permission might not receive
permission retroactively. No student may use the retake option
to replace a grade received as a sanction for violation of the
Academic Integrity Policy. The R option may be invoked only
once per course, and the original grade option must be retained.

**Transferred Credits**

A maximum of 6 credit hours may ordinarily be transferred from
an institution of recognized graduate standing toward fulfillment
of requirements for the master's degree from Washington
University, except that a maximum of 15 credit hours may be
transferred toward fulfillment of the requirements for the degree
Master of Arts in Education (MAEd) from institutions that have
entered into special cooperative agreements with Washington
University for this purpose.

Applications to transfer credits for a master's degree are not
ordinarily approved until one full semester of study (12 credit
hours) has been completed at Washington University. Academic
credits applied to complete requirements for the bachelor's
degree are ordinarily not transferable toward the fulfillment
of advanced degree requirements at Washington University.
Likewise, academic credits counted toward requirements for any
completed graduate degree are ordinarily not transferable toward
a subsequent degree of equivalent or lower level.

**Satisfactory Academic Progress**

Satisfactory academic progress is monitored by the Graduate
School as well as the degree program. Failure to maintain
satisfactory academic progress may result in immediate
dismissal or in placement on academic probation for the
ensuing year. Most financial awards, and all federally funded
awards, are contingent on the maintenance of satisfactory
academic progress. Moreover, satisfactory academic progress
is a prerequisite for service on any committee authorized by
the Graduate School. The following are minimal standards of
satisfactory academic progress for master's students; degree
programs may set stricter standards, but must not relax these.

1. Students are expected to proceed at a pace appropriate
to enable them to finish within the time limits customary in
their degree program. At most, students enrolled in master's
degree programs have four calendar years, dated from their
first registration in a graduate degree program at Washington
University, to complete degree requirements.

2. Students are expected to maintain a cumulative grade point
average of at least 3.0 on a 4.0 scale in courses that count
toward their credit hours. Thus, among courses of equal
weight, each grade of C must be balanced by at least one A.
(Note that plus and minus marks alter the numerical value of
a letter grade.)

3. Students are expected not to carry at one time any more
than 9 credit hours for which the grades of I (incomplete),
X (final examination missed) or N (not yet submitted) are
recorded. The Graduate School may deny a student with
more than 9 unfinished credits permission to register.

**Residence Requirement**

The residence requirement for master's degree students is that
each student must spend at least one academic year registered
for full-time credits (9-12 in the fall followed by 9-12 in the spring)
at Washington University. Any exceptions to this requirement
must be approved by the dean of the Graduate School. All
daytime programs prefer that students remain full-time and in
residence throughout their work toward the degree.

**Thesis**

The thesis topic is subject to approval by the student's faculty
adviser and by the chair of the degree program. As soon
as the thesis topic has been approved, but no later than six
months before the thesis defense is likely to occur, students
should submit the Title, Scope, and Procedure form (http://
graduateschool.wustl.edu/forms) to the Graduate School. It must
be signed by the three-member committee before whom the
student will defend the thesis, and by the chair of the degree
program. At least three members of the thesis committee must
be Washington University faculty; at least two of them must be
appointed in the student's degree program; and at least two of
them (not necessarily the same two) must be tenured or tenure-
track, including the committee chair or co-chair. Exceptions
must be approved by the dean of the Graduate School or their
designee.

A Master's Thesis Guide and Template, which give instructions
regarding the format of the thesis, are available on the Graduate
School's Policies and Guides (http://graduateschool.wustl.edu/
policies-and-guides) page; both should be read carefully at every
stage of thesis preparation.

The Graduate School requires each student to make the full text
of the thesis available to the committee members for their review
at least one week before the defense. Most degree programs
require two or more weeks for the review period; students should check with their faculty.

After the defense, the student must submit an electronic copy of the thesis online to the Graduate School. The degree program is responsible for delivering the Master's Approval form, signed by the committee members at the defense and then by the program chair, to the Graduate School. Students who defend their theses successfully have not completed their master's requirements; they finish earning the degree only when their thesis submission has been accepted by the Graduate School.

**Graduation Information**

Students are responsible for filing an Intent to Graduate form in order to have their earned degree conferred. The Intent to Graduate is available online through WebSTAC (https://acadinfo.wustl.edu). Deadlines for filing an Intent to Graduate are listed on the Graduate School's website. No degree will be awarded if this form has not been filed. Students who do not complete their degree requirements by their intended graduation date must refile for the next graduation date.

**Specific Circumstances**

**Changes in Program of Study**

Students are usually admitted to the Graduate School to study toward specific degrees. Therefore, a change in the degree objective (e.g., from AM to PhD) is subject to the approval of the student's program and of the Graduate School. A request for a change in the subject of study (e.g., from economics to history) requires the approval of both programs concerned, as well as that of the Graduate School. Students may be required to fill out a new application for admission before making such changes, but they will not be charged a second application fee.

**Student Grievance Procedures**

From time to time, students may feel that they have legitimate complaints regarding academic matters or an interaction with a faculty member. It is important that students and faculty have a common understanding of how such complaints may be expressed and resolved. Students with complaints regarding academic matters should initially seek resolution from their faculty adviser, then from their director of graduate studies, and finally the chair of their degree program. Complaints which remain unresolved may be addressed to any of the deans in their school. The final court of appeal for all students in the Graduate School is the dean of the Graduate School.

All complaints regarding academic and professional integrity should be addressed to an associate dean of the Graduate School.

Washington University policies state that members of the university community can expect to be free from discrimination and harassment. Students, faculty, staff, and outside organizations working on campus are required to abide by specific policies prohibiting harassment.

An allegation of sexual discrimination may be appealed to the vice chancellor for Human Resources, who will determine whether to convene the Title IX Grievance Committee to hear the case. Visit the Sexual Harassment (http://hr.wustl.edu/policies/pages/sexualharassment.aspx) webpage for more information.

**Leaves of Absence**

Students who wish to suspend their graduate study should apply for a leave of absence. A student's application for a leave of absence must be endorsed by the degree program and then approved by the Graduate School.

Such a leave may be personal or medical. In the case of a medical leave the student must present authorization from Student Health Services at the beginning and again at the end of the leave. At the end of a leave of absence, a student is reinstated into the Graduate School under the conditions prevailing at the time the leave was granted. Being on leave suspends full-time student status and financial support from the university. Taking a leave therefore may adversely affect loan deferment, visa status, the right to rent university-owned housing, etc. Most visa types would prevent international students from remaining in the United States while taking a leave of absence; such students should consult the Office for International Students and Scholars (http://oiss.wustl.edu) as well as their faculty adviser, their program's director of graduate studies, and perhaps a dean.

Prior to taking a leave of absence, students should consider their need for health insurance coverage. The continuation of student health insurance and access to Student Health Services depends on such factors as the kind of leave (medical or personal), the length of time the student has already been covered during the current insurance year, and the student's location during the leave. Students should consult the Student Health Services (http://shs.wustl.edu) website for current policies with regard to leaves of absence; these policies may change annually if insurance carriers change.

**Withdrawals**

Students wishing to withdraw from their program must give notice in writing by filling out the Graduate School's Withdrawal Form (http://graduateschool.wustl.edu/forms). This form must include the date when the withdrawal should be considered effective. Without such information, there may be serious financial repercussions for the student and/or the university.

**Dismissals**

A program may wish to dismiss a student for a number of reasons: willful misrepresentation to gain admission to graduate study, breaches of academic integrity, academic failure, or behavior destructive of the welfare of the academic community. Dismissals are recommended by the degree program and are
not final until approved by the Graduate School. Any student who believes their dismissal was undeserved may appeal to the dean of the Graduate School, who may accept or decline the program's recommendation to dismiss the student.

**Interdisciplinarity**

**Joint and Dual Degree Programs**

The university has set up numerous programs permitting students to earn two graduate and/or professional degrees at the same time. Five of these programs include an AM degree:

- Joint Master of Social Work / Master of Arts in Jewish Studies
- Joint Master of Social Work / Master of Arts in Education
- Joint Master of Business Administration / Master of Arts in East Asian Studies
- Joint Juris Doctoris / Master of Arts in East Asian Studies
- Master's Program for Medical Students (MD/AM in Biology & Biomedical Sciences)

The Graduate School uses the term "joint degree" to refer to programs in which one or more credit hours are counted toward both degrees. The Graduate School uses the term "dual degree" to refer to programs in which no credit hours are counted toward both degrees. Interested students must apply to and be admitted by each degree program separately, but ideally all applications should be made before beginning graduate or professional study. Joint and dual degrees are ordinarily conferred simultaneously, after all the requirements for both degrees have been met. For details of the programs listed above, students should consult the websites of the two disciplines.

**Accelerated AB/AM Program**

This program allows qualified Washington University undergraduates to complete a Master of Arts (AM) degree in a one-year accelerated program after completing the AB degree. The undergraduate and graduate degrees are awarded sequentially, with admission to the master's degree, if approved, for the fall semester following completion of the undergraduate degree in the preceding December, May or August. The application deadline is August 1; applications may be submitted any time during the senior year up to the deadline. The GRE is not required. The program is available only to students currently in their senior year and only for continuous enrollment in the next year. There is no option for deferred admissions.

In order to complete an AM in one year, students may apply five courses taken at the 400 level or above as an undergraduate (with a maximum of 16 units) toward master's degree programs which require 36 or more units for completion. For master's programs which require fewer than 36 units, three courses at the 400 level or above (with a maximum of 12 units) may be applied. Master's programs requiring more than 36 units may require an additional semester or summer of enrollment. Undergraduate courses must be acceptable to the department or program offering the master's degree and must be completed with a final grade of B or higher. All admissions are provisional until the successful completion of the AB. Some departments may not participate in this program, and some departments that do not otherwise offer a master's degree may provide this opportunity to Washington University undergraduates. Please consult the home department and the Accelerated AB/AM Program webpage for more detailed information. Actual award of each degree is contingent on successful completion of all requirements for that degree. The application for admission must be made to the department, which forwards the application and the department's recommendation for admission to the Graduate School. There is no application fee. Students accepted into the program will retain their student ID numbers and will not need to replace their ID cards. In every other respect, they will be treated as new students in the Graduate School and should familiarize themselves with the relevant sections of this Bulletin.

**Financial Information**

Master's degree programs vary considerably in the extent to which they are eligible for financial support from the Graduate School or degree program. Typical awards for day students include scholarships for part or all of their tuition charges. Part-time employment and student loans are possible sources of support. Students in some master's programs may be able to obtain work as an instructional aide.

**Tuition Scholarships**

Scholarships to cover part or all the costs of tuition are available to both new and continuing students. Since perception of academic merit is the sole criterion for the award of tuition scholarships, they are not subject to taxation under federal tax law at this time.

**Loans**

Federally underwritten loans are another resource for students who are U.S. citizens or permanent residents. Unsubsidized Stafford loans can be arranged for graduate students. Applicants for these loans are required to submit the Free Application for Federal Student Aid (FAFSA). The Graduate School determines eligibility and processes loan applications for all full-time master's students in daytime programs. For more information about applying for loans, please visit the Graduate School's Financial Information pages.

**Instructional Aides**

These are awarded to eligible students based on curricular needs of departments and programs and are not guaranteed in
advance. Students can be assigned to assist a faculty member in teaching a course. The duties of instructional aides vary widely across the disciplines. They may include assisting faculty in the preparation, instruction and grading of an undergraduate course, in monitoring the laboratory segment of an undergraduate course, or in tutorial responsibilities.

**Financial Costs**

**Tuition Charges and Refunds**

The maximum tuition fee is the equivalent of 9 semester hours. Students who enroll for 9 or more hours per semester are automatically regarded as full-time students and are charged a flat full-time rate. Students enrolled for fewer than 9 units are charged on a per-unit basis. The tuition rate is subject to annual change.

Requests for refund of tuition paid by a student who is withdrawing from a degree program should be made by submitting a Withdrawal Form (http://graduateschool.wustl.edu/forms) to the Graduate School office. Requests for refund of tuition paid by a student who is withdrawing from a specific course should be submitted in writing to the Graduate School registrar. The last date of class attendance is ordinarily used in determining the amount that can be refunded. Students withdrawing within the first two weeks of classes will receive a full refund; those withdrawing before the end of the fourth week pay 20 percent; those withdrawing before the end of the eighth week pay 40 percent. There is no refund after the eighth week of the semester except for reasons of health. Such reasons must be certified or verified by Student Health Services, in which case the university will make a prorated refund of tuition if notice of withdrawal is received before the end of the 12th week of the semester. Students who have had their full tuition remitted for them by their school or by a third party will not receive any refund.

**Health Fees**

All full-time students in Arts & Sciences are charged a mandatory health fee. This fee gives access to Student Health Services. In addition, they must either enroll in the student health insurance plan or present proof of comparable coverage. Both the health fee and the health insurance premium are subject to annual change.

**Fields of Study**

American Culture Studies (p. 25)
Anthropology (p. 26)
Art History and Archaeology (p. 29)
Biology & Biomedical Sciences (p. 31)
Business Administration (p. 34)
Chemistry (p. 41)
Classics (p. 43)
Comparative Literature (p. 46)
Dance (p. 48)
Data Science in the Humanities (p. 50)
Earth and Planetary Sciences (p. 52)
East Asian Languages and Cultures (p. 53)
East Asian Studies (p. 55)
Economics (p. 57)
Education (p. 59)
Engineering & Applied Science (p. 61)
  • Biomedical Engineering (p. 61)
  • Computer Science & Engineering (p. 63)
  • Electrical & Systems Engineering (p. 66)
  • Energy, Environmental & Chemical Engineering (p. 69)
  • Materials Science & Engineering (p. 71)
  • Mechanical Engineering & Materials Science (p. 77)
English (p. 80)
Film and Media Studies (p. 82)
Germanic Languages and Literatures (p. 84)
History (p. 87)
Jewish, Islamic and Near Eastern Languages and Cultures (p. 90)
Latin American Studies (p. 93)
Mathematics (p. 95)
Movement Science (p. 99)
Music (p. 100)
Philosophy (p. 102)
Physics (p. 105)
Political Science (p. 108)
Psychological & Brain Sciences (p. 110)
Public Health Sciences (p. 114)
Quantitative Data Analysis (p. 110)
Rehabilitation and Participation Science (p. 116)
Romance Languages and Literatures (p. 117)
Social Work (p. 119)
Speech and Hearing Sciences (p. 123)
Theater and Performance Studies (p. 124)
Urban Studies (p. 125)
Women, Gender, and Sexuality Studies (p. 128)
American Culture Studies

The Graduate Certificate in American Culture Studies (AMCS) enables doctoral students to develop multidisciplinary expertise and encourages them to bring that added competence to bear in dissertation research that, while satisfying the demands of their principal disciplines, is broad-based and informed by work from across the humanities and the social sciences.

AMCS brings together a community of graduate students and faculty with overlapping interests in American topics. Through formal and informal intellectual exchange, they share knowledge, methods and ideas across the boundaries that define the traditional academic disciplines. This intellectual community promotes the give-and-take of ideas, making graduate study more stimulating, and graduate research more original and creative.

Students who satisfy certificate requirements will receive the Graduate Certificate in American Culture Studies along with the award of the PhD. This is one of several interdisciplinary certificates offered by the Graduate School, intended as credentials of special competency. The certificate helps its holders build academic careers, including careers involving interdisciplinary teaching, and it helps them develop distinctive research profiles.

Contact: Jennifer Gallinat  
Phone: 314-935-5569  
Email: gallinat@wustl.edu  
Website: http://amcs.wustl.edu/academics/graduate_certificate.php

Faculty

The American Culture Studies program is enriched by its diverse community of faculty, lecturers, students and staff. Please visit our AMCS Directory webpage (http://amcs.wustl.edu/directory) for a description and list of our teaching and affiliated faculty and other important members of our community.

Degree Requirements

Graduate Certificate in American Culture Studies

The Graduate Certificate in American Culture Studies is awarded to students who complete the PhD in a department of the Graduate School and who satisfy the following requirements:

- Complete 15 total credits of course work as outlined below:
  - The core seminar (3 credits), Introduction to American Culture Studies (AMCS 645).
  - Multidisciplinary courses (6 credits): two graduate courses on American topics (400-level or above) specifically designed in explicitly multidisciplinary terms. These may be from within the student's home field of study. These are sometimes team-taught by faculty representing two different departments. Courses satisfying this requirement will be determined in consultation with the graduate director.
  - Extradesartmental courses (6 credits): two graduate courses on American topics (400-level or above) based in fields that complement work in the home department, to be determined in consultation with the graduate director.
- Routine consultation with an AMCS faculty adviser outside the home department, in addition to the student's principal PhD adviser.
- Completion of a PhD dissertation in the home department, with the AMCS faculty adviser serving as one of the "outside" readers on the oral-defense committee.

The PhD Certificate program features and requires the AMCS 645 Graduate Core Course, offered every other year; two Multi-Disciplinary (MD) courses, which foreground explicit conversation between field-specific discourses; and two Extra-Disciplinary (ED) courses, which are methodologically substantive courses outside the student's home department.

The PhD Certificate program also gives students the opportunity to participate in Professionalization Projects, which are AMCS-mentored and funded projects in which students interact with scholars in their fields outside Washington University (for example, an on-campus symposium in which outside scholars participate or a panel at the annual meeting of a major scholarly professional association), as well as AMCS mentored teaching experiences and AMCS teaching (where appropriate and with the approval of the AMCS director of graduate studies, the dissertation adviser, the home department director of graduate studies, and, in the case of the AMCS mentored teaching experience, the course instructor).

Finally, PhD Certificate students are expected to regularly attend and participate in the monthly Americanist Dinner Forum, a flagship AMCS event which stages cross-disciplinary
conversations among Americanist faculty to probe productive
nodes of shared concern.

For more information about program activities and requirements,
please visit our Graduate Studies [http://amcs.wustl.edu/
academics/graduate_certificate.php] webpage.

Anthropology

The graduate program in Anthropology at Washington University
is a PhD program designed to educate and develop scholars and
researchers who study the human condition through time and
across cultures. Our graduates apply these skills to academics,
business, government, and non-governmental jobs and careers.
While candidates may receive an AM degree during the course
of their study, the department does not admit students seeking
a terminal master's degree. The anthropology department has
a strong tradition of graduate student satisfaction and close
mentoring by faculty advisers. In addition, graduates of the
Washington University Anthropology PhD program have a solid
history of placement in highly desirable academic and non-
academic positions.

The department has a strong three-field approach with
active programs in Archaeology, Sociocultural Anthropology,
and Biological Anthropology. Program strengths in
Archaeology include the origins of agriculture and pastoralism;
paleoethnobotany; zooarchaeology; geoarchaeology, landscape
archaeology; and environmental archaeology. Sociocultural
Anthropology foci include politics, pluralism and religion;
indigenous political movements; the politics of gender and
sexuality; fertility and population; global health and the
environment; and medical anthropology. Program strengths in
Biological Anthropology include human and primate evolution;
the ecology and conservation of modern primates; human
physiology; quantitative studies of morphology and genetics; and
human life history.

Contact Information

Email: Michael Frachetti, frachetti@wustl.edu
( frachetti@wustl.edu) or Kirsten Jacobsen, kjacobsen@wustl.edu

Phone: 314-935-5870 or 314-935-7770 or 314-935-5252

Website: [http://anthropology.artsci.wustl.edu/
graduate](http://anthropology.artsci.wustl.edu/graduate)

Faculty

Chair

T.R. Kidder [http://anthropology.artsci.wustl.edu/kidder_tr]
Edward S. and Tedi Macias Professor in Arts & Sciences
PhD, Harvard University

Endowed Professors

John Baugh [http://anthropology.artsci.wustl.edu/baugh_john]
Margaret Bush Wilson Professor in Arts & Sciences
PhD, University of Pennsylvania

John R. Bowen [http://anthropology.artsci.wustl.edu/
bowen_john]
Dunbar-Van Cleve Professor in Arts & Sciences
PhD, University of Chicago

Pascal R. Boyer [http://anthropology.artsci.wustl.edu/
boyer_pascal]
Henry Luce Professor of Collective and Individual Memory
PhD, University of Paris–Nanterre

Fiona Marshall [http://anthropology.artsci.wustl.edu/
marshall_fiona]
James W. and Jean L. Davis Professor in Arts & Sciences
PhD, University of California, Berkeley

Richard J. Smith [http://anthropology.artsci.wustl.edu/
smith_richard]
Ralph E. Morrow Distinguished University Professor
PhD, Yale University

Erik Trinkaus [http://anthropology.artsci.wustl.edu/trinkaus_ekir]
Mary Tileston Hemenway Professor in Arts & Sciences
PhD, University of Pennsylvania

Lewis Wall [http://anthropology.artsci.wustl.edu/wall_lewis]
Selina Okin Kim Conner Professor in Arts & Sciences
MD, University of Kansas
DPhil, Oxford University

James V. Wertsch [http://anthropology.artsci.wustl.edu/
wertsch_james]
Marshall S. Snow Professor in Arts & Sciences
PhD, University of Chicago

Professors

Lois Beck [http://anthropology.artsci.wustl.edu/beck_lois]
PhD, University of Chicago

Geoff Childs [http://anthropology.artsci.wustl.edu/childs_geoff]
PhD, Indiana University

Glenn C. Conroy [http://anthropology.artsci.wustl.edu/
conroy Glenn]
PhD, Yale University

David Freidel [http://anthropology.artsci.wustl.edu/freidel_david]
PhD, Harvard University

Gayle J. Fritz [http://anthropology.artsci.wustl.edu/fritz_gayle]
PhD, University of North Carolina at Chapel Hill

Jane Phillips-Conroy [http://anthropology.artsci.wustl.edu/
phillips-conroy_ janne]
PhD, New York University
Carolyn Sargent [http://anthropology.artsci.wustl.edu/sargent_carolyn](http://anthropology.artsci.wustl.edu/sargent_carolyn)  
PhD, Michigan State University

Glenn D. Stone [http://anthropology.artsci.wustl.edu/stone_glenn](http://anthropology.artsci.wustl.edu/stone_glenn)  
PhD, University of Arizona

David Strait [http://anthropology.artsci.wustl.edu/strait_david](http://anthropology.artsci.wustl.edu/strait_david)  
PhD, State University of New York--Stony Brook

**Associate Professors**

Peter Benson [http://anthropology.artsci.wustl.edu/benson_peter](http://anthropology.artsci.wustl.edu/benson_peter)  
PhD, Harvard University

Michael Frachetti [http://anthropology.artsci.wustl.edu/frachetti_michael](http://anthropology.artsci.wustl.edu/frachetti_michael)  
PhD, University of Pennsylvania

PhD, Harvard University

Rebecca J. Lester [http://anthropology.artsci.wustl.edu/lester_rebecca](http://anthropology.artsci.wustl.edu/lester_rebecca)  
PhD, University of California, San Diego

Shanti A. Parikh [http://anthropology.artsci.wustl.edu/parikh_shanti](http://anthropology.artsci.wustl.edu/parikh_shanti)  
PhD, Yale University

Elizabeth A. Quinn [http://anthropology.artsci.wustl.edu/quinn_ea](http://anthropology.artsci.wustl.edu/quinn_ea)  
PhD, Northwestern University

Crickette Sanz [http://anthropology.artsci.wustl.edu/sanz_crickette](http://anthropology.artsci.wustl.edu/sanz_crickette)  
PhD, Washington University

Bradley P. Stoner [http://anthropology.artsci.wustl.edu/stoner_bradley](http://anthropology.artsci.wustl.edu/stoner_bradley)  
MD, PhD, Indiana University

**Assistant Professors**

Sarah Baitzel [http://anthropology.artsci.wustl.edu/baitzel_sarah](http://anthropology.artsci.wustl.edu/baitzel_sarah)  
PhD, University of California, San Diego

PhD, Princeton University

Xinyi Liu [http://anthropology.artsci.wustl.edu/liu_xinyi](http://anthropology.artsci.wustl.edu/liu_xinyi)  
PhD, University of Cambridge

Krista Milich [http://anthropology.artsci.wustl.edu/milich_krista-0](http://anthropology.artsci.wustl.edu/milich_krista-0)  
PhD, University of Illinois at Urbana-Champaign

Priscilla Song [http://anthropology.artsci.wustl.edu/song_priscilla](http://anthropology.artsci.wustl.edu/song_priscilla)  
PhD, Harvard University

Kedron Thomas [http://anthropology.artsci.wustl.edu/thomas_kedron](http://anthropology.artsci.wustl.edu/thomas_kedron)  
PhD, Harvard University

Helina Woldekiros [http://anthropology.artsci.wustl.edu/woldekiros_helina-0](http://anthropology.artsci.wustl.edu/woldekiros_helina-0)  
PhD, Washington University

Emily Wroblewski [http://anthropology.artsci.wustl.edu/wroblewski_emily](http://anthropology.artsci.wustl.edu/wroblewski_emily)  
PhD, University of Minnesota

**Senior Lecturer**

John Kelly [http://anthropology.artsci.wustl.edu/kelly_john](http://anthropology.artsci.wustl.edu/kelly_john)  
PhD, University of Wisconsin-Madison

**Lecturers**

Johnelle Lamarque [http://anthropology.artsci.wustl.edu/lamarque_johnelle](http://anthropology.artsci.wustl.edu/lamarque_johnelle)  
PhD, Rutgers University

Heather O’Leary [http://anthropology.artsci.wustl.edu/oleary_heather](http://anthropology.artsci.wustl.edu/oleary_heather)  
PhD, University of Minnesota

**Adjunct Associate Professors**

Carolyn Lesorogol [http://brownschool.wustl.edu/Faculty/FullTime/Pages/CarolynLesorogol.aspx](http://brownschool.wustl.edu/Faculty/FullTime/Pages/CarolynLesorogol.aspx)  
PhD, Washington University

M. Priscilla Stone [http://studyabroad.sit.edu/sn/sit-faculty-staff/faculty-bios/m-priscilla-stone](http://studyabroad.sit.edu/sn/sit-faculty-staff/faculty-bios/m-priscilla-stone)  
PhD, University of Arizona

**Professors Emeriti**

David L. Browman [http://anthropology.artsci.wustl.edu/browman_david](http://anthropology.artsci.wustl.edu/browman_david)  
PhD, Harvard University

Robert L. Canfield [http://anthropology.artsci.wustl.edu/canfield_robert](http://anthropology.artsci.wustl.edu/canfield_robert)  
PhD, University of Michigan

Pedro C. Cavalcanti  
PhD, University of Warsaw

James M. Cheverud [http://anthropology.artsci.wustl.edu/cheverud_james](http://anthropology.artsci.wustl.edu/cheverud_james)  
PhD, University of Wisconsin-Madison

G. Edward Montgomery  
PhD, Columbia University
**Degree Requirements**

**Departmental Requirements and Graduate Student Evaluation Procedures**

These are the general requirements of the Department of Anthropology. Each subdiscipline also has its own additional guidelines and requirements. All students in the PhD program are expected to satisfy the academic performance requirements of the Graduate School, which can be found in the *Graduate School Bulletin* General Requirements (p. 14) section. Similarly, all subdisciplinary requirements are in addition to those set out here for the department as a whole. 

A student’s progress is monitored by the entire faculty until they are formally admitted to the doctoral program (usually by the end of the fourth semester). Up until that point, the entire faculty vote upon decisions regarding the student’s evaluation and fulfillment of requirements. From the point at which students are formally admitted to the doctoral program, progress is evaluated by their committee, which will always consist of a minimum of three full-time permanent members of the anthropology faculty. This committee has authority to set specific PhD candidacy requirements for the student. The committee also recommends to the chair that a student be advanced to PhD candidacy.

**Universal Departmental Requirements**

**AM Degree**

1. **Theory Requirement** (Anthro 472 Social Theory and Anthropology). All students are required to take Anthropology 472 in their first year. Under special circumstances this requirement may be delayed or waived by petitioning the entire departmental faculty.

2. **Two Subdisciplinary Course Requirements**. All students must complete at least one course taught by a faculty member of the anthropology department in each of the two subdisciplines other than their own: Anthropology 472 may satisfy the sociocultural requirement. Students with good cause to substitute prior extensive courses in the subdiscipline, especially in the context of a master’s degree at another university, for one or both of the other subdisciplinary requirements, may petition the relevant subdisciplinary faculty to do so.

3. **Courses with Six Faculty**. All graduate students are required to have had courses with at least six different departmental faculty members. Team-taught courses may count for both faculty members.

4. **Credit Hours**. The anthropology department requires 36 credit hours for the award of an AM degree without thesis; 24 credit hours are required for an AM degree with thesis.

5. **Petition for the Award of the Master’s Degree**. Once a student has completed all requirements for the AM degree, the student and their adviser submit a petition to the chair; the chair circulates the petition to the entire faculty and forwards it to the Graduate School. This petition should include documentation of satisfactory completion of all the Graduate School requirements (including cumulative credits, thesis if one was done, and grade point average), the four requirements listed above (1-4), as well as any special requirements set by the student’s subdiscipline (refer to the relevant subdisciplinary requirements: Archaeology (http://anthropology.artsci.wustl.edu/graduate/archaeology), Biological Anthropology (http://anthropology.artsci.wustl.edu/graduate/biological), Sociocultural Anthropology (http://anthropology.artsci.wustl.edu/graduate/sociocultural)). Sample petitions are available in the academic coordinator’s office (http://anthropology.artsci.wustl.edu/jacobse/Kirsten).

**PhD Degree**

All AM degree requirements are also requirements for doctoral candidacy whether the student actually receives the AM degree or not. Continuation for the PhD involves being advanced to doctoral candidacy.

1. **Student-Specific Requirements for Doctoral Candidacy**. Students may be asked by their committees to fulfill additional requirements, directly relevant to their doctoral dissertation research, prior to admission to candidacy. These may include a foreign language or specialized preparation outside of the anthropology department in other areas such as statistics, computer programming, or laboratory techniques. Students will be formally notified by their committees of such additional requirements.

2. **Defense of the Doctoral Proposal**. All students must defend a doctoral proposal prior to admission to PhD candidacy. Proposals must be defended before a faculty committee consisting of an adviser and at least two other permanent members of the anthropology faculty.

3. **Petition for Admission to Doctoral Candidacy**. Once a student’s doctoral proposal has been successfully defended, and all other requirements set by the Graduate School, anthropology department, subdiscipline, and the student’s committee have been met, the student and adviser should submit a petition to the chair for advancement to candidacy; the chair will then inform the entire faculty and forward the petition to the Graduate School. Petitions should be in the form of a memorandum explaining how all of the requirements were satisfied. Sample petitions are available in the academic coordinator’s office.

4. **Teaching Requirement**. As part of the professionalization of graduate students in Anthropology, the department requires...
all students to participate in a minimum of five Mentored Teaching Experiences. All students must also attend the Graduate School Teaching Orientation.

5. **Professionalization Requirement** Students in the fifth and sixth years are required to take the year-long department graduate professional seminar if they are in residence. This seminar is designed to support graduate students in their post-fieldwork period, to help them attain relevant professional experience and mentoring, and to allow them to enhance their ability to find employment following graduation.

6. **The Doctoral Dissertation.** The doctoral dissertation must constitute an integrated, coherent original work, whose parts are logically connected to each other. Normally, the doctoral dissertation consists of a sequence of integrated chapters that introduce the dissertation research, provide the background and the methods for the research, present and interpret the results, and then tie the various portions of the dissertation together in a concluding chapter, with appropriate citations. In this context, it may be appropriate for the dissertation to consist in part of research articles that have been written, and may be published (refer to Criteria for Acceptance of Collected Articles for a Dissertation (PDF) (http://bulletin.wustl.edu/grad/gsas/anthro/Article_Publish_Policy_Anthropology.pdf)), by the graduate student during the course of the doctoral research. Whether this dissertation format is appropriate for a given dissertation (within a subfield that accepts such a dissertation) needs to be determined a priori by the student and their doctoral committee. Should it be deemed appropriate, it must have an introductory chapter that provides the theme and core questions of the dissertation research and that explains the relationship(s) between the constituent chapters and parts, and it must also have a concluding chapter that brings together the information and ideas expressed in the thesis, relates them to the introduction, and shows how they constitute a coherent whole. Refer to "Minimal Requirements for Dissertations" in the Graduate School Dissertation Guide (available on the Graduate School's Policies and Guides page (http://graduateschool.wustl.edu/policies-and-guides)) for the Graduate School requirements regarding a dissertation that includes previously written materials.

**Specific Subfield Requirements**

Please visit the following websites for more information regarding specific subfield requirements:

- Archaeology (http://anthropology.artsci.wustl.edu/graduate/archaeology)
- Biological Anthropology (http://anthropology.artsci.wustl.edu/graduate/biological)
- Sociocultural Anthropology (http://anthropology.artsci.wustl.edu/graduate/sociocultural)

---

**Art History and Archaeology**

The department offers the degrees of **Master of Arts** (AM) and **Doctor of Philosophy** (PhD). Particular areas of strength include ancient art, European art of the Renaissance and early modern periods, Asian art, and modern and contemporary art of Europe and the Americas. The size of our graduate program ensures that our students receive an exceptional level of advising and mentoring. Every student has a faculty adviser; the research of PhD students is supervised by a Research Advisory Committee, a core group of three members of the faculty. PhD students gain teaching experience within the department or in other programs (as a mentored teaching experience or as instructors of record) as part of their professional preparation.

Our faculty prepares students to acquire skills in empirical and theoretical methods in art history; museum, archival, and site research; visual and textual analysis; and descriptive and analytic writing. Students also take advantage of curatorial or research internships at the university’s Kemper Art Museum, the Saint Louis Art Museum, and other local institutions, as well as art museums outside the region. The department supports students’ professional development and research projects through funded field trips to major art centers and financial subvention of travel for research and presentation of conference papers. Such education and support prepares our students for a variety of professional opportunities at the highest level.

Students with a PhD from the department go on to teaching or administrative appointments in colleges and universities; positions as curators, registrars and educators in art museums; jobs with auction houses, arts publications, and art appraisers. Students with the AM degree from the department have pursued doctoral studies at Washington University or in other PhD programs, as well as taken a variety of positions in arts journalism, art libraries, art advising, secondary school teaching, and commercial art galleries.

**Faculty**

**Interim Chair**

**John Klein** (http://arthistory.artsci.wustl.edu/people/john-klein)
Professor
PhD, Columbia University

**Chair**

**Elizabeth C. Childs** (http://arthistory.artsci.wustl.edu/people/elizabeth-c-childs)
Etta and Mark Steinberg Professor of Art History
PhD, Columbia University
Endowed Professor
William E. Wallace (http://arthistory.artsci.wustl.edu/people/william-wallace)
Barbara Murphy Bryant Distinguished Professor of Art History
PhD, Columbia University

Professor
Angela Miller (http://arthistory.artsci.wustl.edu/people/angela-miller)
PhD, Yale University

Associate Professor
Kristina Kleutghen (http://arthistory.artsci.wustl.edu/people/kristina-kleutghen)
David W. Mesker Associate Professor
PhD, Harvard University

Assistant Professors
Nathaniel Jones (http://arthistory.artsci.wustl.edu/people/nathaniel-jones)
PhD, Yale University
Ila Sheren (http://arthistory.artsci.wustl.edu/people/ila-sheren)
PhD, Massachusetts Institute of Technology

Lecturer
Esther Gabel (http://arthistory.artsci.wustl.edu/people/esther-gabel-0)
PhD, University of Cambridge

Postdoctoral Teaching Fellows
Alexis Clark
PhD, Duke University
Sophia Powers
PhD, University of California, Los Angeles
Deborah Spivak
PhD, University of California, Santa Barbara

Affiliated Faculty
David Freidel (http://anthropology.artsci.wustl.edu/freidel_david)
Professor of Archaeology, Department of Anthropology
PhD, Harvard University

Rebecca Messbarger (http://rll.wustl.edu/people/messbarger)
Professor of Italian; History; and Women, Gender and Sexuality Studies
PhD, University of Chicago

Eric Mumford (http://samfoxschool.wustl.edu/portfolios/faculty/eric_mumford)
Rebecca and John Voyles Professor of Architecture
PhD, Princeton University

Professors Emeriti
Susan Rotroff
Jarvis Thurston & Mona Van Duyn Prof Emerita
PhD, Princeton University
Sarantis Symeonoglou
PhD, Columbia University
Mark S. Weil
E. Desmond Lee Professor Emeritus
PhD, Columbia University

Affiliated Curators, Mildred Lane Kemper Art Museum, Washington University
Sabine Eckmann
Director and Chief Curator
PhD, University of Erlangen–Nürnberg
Meredith Malone
Associate Curator
PhD, University of Pennsylvania
Allison Unruh
Associate Curator
PhD, Institute of Fine Arts, New York University

Affiliated Curators and Directors, Saint Louis Art Museum
Brent Benjamin
Director
MA, Williams College
Nichole Bridges
PhD, University of Wisconsin–Madison
Lisa Çakmak
PhD, University of Michigan
David Conradsen
MA, University of Delaware
Phillip Hu
MA, Institute of Fine Arts, New York University
Simon Kelly
PhD, Oxford University
Hannah Klemm
MA, Courtauld Institute of Art, PhD Candidate, University of Chicago
Eric Lutz
PhD, University of California, Santa Barbara
Judith Mann
PhD, Washington University
Degree Requirements

Applicants for admission to the graduate program are normally expected to have completed 18 hours of undergraduate study in art history. However, the department welcomes applications from students with less background in art history who show strong preparation in such fields as classics, history, philosophy, literature, anthropology and Asian studies.

Master of Arts in Art History and Archaeology

Requirements for the AM degree

Normally twelve courses over four semesters, including the required graduate seminar, Methods in Art History; and a capstone course in the fourth semester in which the candidate revises two seminar papers for presentation to the faculty as Qualifying Papers. In addition, students must pass a reading proficiency exam in a modern foreign language (or exempt this requirement through graded course work in the language). Students in ancient art and Asian art may have additional language requirements. Students continuing for the PhD are strongly advised to demonstrate reading proficiency in a second modern foreign language before the start of their fifth semester in the graduate program.

PhD in Art History and Archaeology

Requirements for the PhD degree

In addition to AM requirements completed at Washington University, over the next two semesters a PhD student takes additional courses (normally six courses, of which three are seminars or independent study); demonstrates reading proficiency in a second modern foreign language; prepares for and passes a Comprehensive Exam (two courses); prepares and defends a Dissertation Prospectus (one course); begins dissertation research. Students in ancient art and Asian art may have additional language requirements.

Thus, by the end of the sixth semester of graduate study overall, students will normally have:

- completed all required courses;
- determined a three-person Research Advisory Committee for the dissertation;
- passed the Comprehensive Exam in the Major Area and one Minor Area;
- defended the Dissertation Prospectus;
- demonstrated reading proficiency in not fewer than two modern foreign languages.

Students admitted to the PhD program who have an approved master's degree from another university will normally complete these requirements by the end of their fourth semester at Washington University.

Biology & Biomedical Sciences

The 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 and Structural Biology
- Computational and Systems Biology
- Developmental, Regenerative and Stem Cell Biology
- Evolution, Ecology and Population Biology
- Human and Statistical Genetics
- Immunology
- Molecular Cell Biology
- Molecular Genetics and Genomics
- Molecular Microbiology and Microbial Pathogenesis
- Neurosciences
- Plant and Microbial Biosciences

A collaborative, interdisciplinary approach to research and education is a hallmark of Washington University and the Division. As a universitywide consortium, the Division transgresses 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 currently consists of 670 graduate students and over 500 faculty members from 37 departments.

Washington University in St. Louis provides unique opportunities in translating basic science to practical application. The university's BioMed 21 (http://biomed21.wustl.edu/index_fla.html) initiative provides $300 million to support research that bridges the gap from bench to bedside; the project included construction of a 215,000 square-foot building dedicated to such research. 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 in plant, population, evolutionary, and ecological sciences benefit from our close affiliation with the internationally renowned Missouri Botanical Garden [http://www.mobot.org] and the Danforth Plant Science Center [http://www.danforthcenter.org/default.asp].

To help prepare graduates for a career in academia, government, industry or another field of their choice, educational opportunities are offered for skills development and career exploration. Through our Career Talks program, professionals from a variety of fields, such as biotech start-ups and patent law, provide presentations and Q & A sessions to students throughout the year. In addition, through partnerships with groups such as the Teaching Center, the BALSA Group and ProSPER, students have additional opportunities to develop experiences relevant to future career goals.

**Phone:** 314-362-3365 or 800-852-9074  
**Email:** DBBS-Info@email.wustl.edu  
**Website:** [http://dbbs.wustl.edu](http://dbbs.wustl.edu)

## Programs and Faculty

### Biochemistry, Biophysics and Structural Biology [http://dbbs.wustl.edu/divprograms/biophysics/Pages/BBSB.aspx]

*Areas of study:* DNA repair, replication and recombination, allostery and enzymology, molecular signaling, cell cycle regulation, biochemistry of host-pathogen interactions, mechanisms of microbial immune invasion, mechanisms of neural degeneration, nucleic acid-protein interactions, nanotechnology and chemical biology, cellular transport and trafficking, computational biophysics.

Visit our website for information about program faculty members. ([http://dbbs.wustl.edu/divprograms/biophysics/Pages/Faculty.aspx](http://dbbs.wustl.edu/divprograms/biophysics/Pages/Faculty.aspx))

### Computational and Systems Biology [http://dbbs.wustl.edu/programs/CompBio]

*Areas of study:* systems biology, genomics, sequence analysis, regulatory networks, synthetic biology, metagenomics, metabolomics, proteomics, epigenomics, transcriptomics, lipidomics, single cell dynamics, high-throughput technology development, applied math and mathematical models of biological processes, computational biology, comparative genomics, personalized medicine, genome engineering, machine learning, big data science, next generation sequencing and its applications, bioinformatics.

Visit our website for information about program faculty members. ([http://dbbs.wustl.edu/divprograms/compbio/Pages/Faculty.aspx](http://dbbs.wustl.edu/divprograms/compbio/Pages/Faculty.aspx))

### Developmental, Regenerative and Stem Cell Biology [http://dbbs.wustl.edu/programs/DevBio]

*Areas of study:* development, stem cell biology, regenerative biology, cell biology, genetics, cell signaling, the biology of cancer, epigenetics, circadian rhythms, systems biology.

Visit our website for information about program faculty members. ([http://dbbs.wustl.edu/divprograms/devbio/Pages/Faculty.aspx](http://dbbs.wustl.edu/divprograms/devbio/Pages/Faculty.aspx))


*Areas of study:* population ecology, community ecology, plant and animal evolution; microbial evolution, evolution of behavior, phylogenetics, systematics, theoretical and experimental population genetics.

Visit our website for information about program faculty members. ([http://dbbs.wustl.edu/divprograms/eepb/Pages/Faculty.aspx](http://dbbs.wustl.edu/divprograms/eepb/Pages/Faculty.aspx))

### Human and Statistical Genetics [http://dbbs.wustl.edu/programs/hsg]

*Areas of study:* human genetics, statistical genetics, functional genomics, molecular genetics, Mendelian disease, complex disease, human disease models, systems biology.

Visit our website for information about program faculty members. ([http://dbbs.wustl.edu/divprograms/hsg/Pages/Faculty.aspx](http://dbbs.wustl.edu/divprograms/hsg/Pages/Faculty.aspx))

### Immunology [http://dbbs.wustl.edu/programs/immunology]

*Areas of Study:* cellular immunology, molecular immunology, lineage development, autoimmunity, cancer immunotherapy, transcription factors, epigenomics, mucosal immunity, innate immunity, bacterial, viral, and parasite immunity, immune evasion, antigen processing and presentation, dendritic cells, T cell signaling, antigen receptor diversification.

Visit our website for information about program faculty members. ([http://dbbs.wustl.edu/divprograms/immunology/Pages/Faculty.aspx](http://dbbs.wustl.edu/divprograms/immunology/Pages/Faculty.aspx))
Molecular Cell Biology ([http://dbbs.wustl.edu/programs/cellbio](http://dbbs.wustl.edu/programs/cellbio))

Areas of study: cell adhesion, protein trafficking and organelle biogenesis, cell cycle, receptors, signal transduction, gene expression, metabolism, cytoskeleton and motility, membrane excitability, molecular basis of diseases.

Visit our website for information about program faculty members. ([http://dbbs.wustl.edu/divprograms/cellbio/Pages/Faculty.aspx](http://dbbs.wustl.edu/divprograms/cellbio/Pages/Faculty.aspx))

Molecular Genetics and Genomics ([http://dbbs.wustl.edu/programs/mgg](http://dbbs.wustl.edu/programs/mgg))

Areas of study: genetics, genetic basis of disease, genomics, epigenetics, genetic engineering, genome editing, model organism genetics, development, cell biology, molecular biology, complex traits, bioinformatics, systems biology.

Visit our website for information about program faculty members. ([http://dbbs.wustl.edu/divprograms/genetics/Pages/Faculty.aspx](http://dbbs.wustl.edu/divprograms/genetics/Pages/Faculty.aspx))

Molecular Microbiology and Microbial Pathogenesis ([http://dbbs.wustl.edu/programs/micro](http://dbbs.wustl.edu/programs/micro))

Areas of study: Host-pathogen interactions, cellular microbiology, molecular microbiology, microbial pathogenesis, pathogen discovery, emerging infectious diseases, microbial physiology and biochemistry, comparative genomics, gene expression and regulation, microbiome and host interactions, virology, bacteriology, mycology, parasitology.

Visit our website for information about program faculty members. ([http://dbbs.wustl.edu/divprograms/micro/Pages/Faculty.aspx](http://dbbs.wustl.edu/divprograms/micro/Pages/Faculty.aspx))

Neurosciences ([http://dbbs.wustl.edu/programs/neuro](http://dbbs.wustl.edu/programs/neuro))

Areas of study: neurobiology, neurology, functional imaging, behavior, cognition, computational neuroscience, electrophysiology, sensory systems, motor systems, neuroglia, neuronal development, learning, memory, language, synaptic plasticity, mind, consciousness, neurodegeneration, diseases of the nervous system, neuronal injury, clinical neuroscience, motor control, biological rhythms, connectivity mapping.

Visit our website for information about program faculty members. ([http://dbbs.wustl.edu/divprograms/neuro/Pages/Faculty.aspx](http://dbbs.wustl.edu/divprograms/neuro/Pages/Faculty.aspx))

Plant and Microbial Biosciences ([http://dbbs.wustl.edu/programs/plantbio](http://dbbs.wustl.edu/programs/plantbio))

Areas of study: cell biology; development; physiology, signaling, development, metabolic regulation, photosynthesis, bioenergy, protein structure-function, synthetic biology, biogeochemistry, environmental microbiology, ecology, population genetics and molecular evolution.

Visit our website for information about program faculty members. ([http://dbbs.wustl.edu/divprograms/PlantMicroBioSci/Pages/Faculty.aspx](http://dbbs.wustl.edu/divprograms/PlantMicroBioSci/Pages/Faculty.aspx))

Degree Requirements

PhD Degrees

Each program has its own steering committee, which provides students with guidance, addresses their needs, and monitors their progress. The committee also helps each student customize the course of study to match their individual needs. Each of the 11 programs establishes its own degree requirements.

Across all the programs, the course of study consists of five distinct parts:

Courses

This generally requires two to five semesters and usually consists of four to nine courses in areas fundamental to the student's program. Students are expected to maintain a B average in graduate courses.

Laboratory Rotations

Selecting a thesis adviser is the most important decision a student makes in graduate school. To help each student make an informed, thoughtful choice, the Division builds in flexibility to explore options. Students usually participate in three lab rotations during their first year. Additional rotations can be arranged, and rotation lengths are flexible. Students usually begin their thesis research by the end of their first year.

Qualifying Examination

After required courses are completed, each student takes a preliminary, or qualifying, examination to assess mastery of the field and the ability to integrate information across fields. Upon successful completion of the qualifying exam, the student concentrates on thesis research.

Thesis Research

Thesis research begins once the student has chosen a laboratory in which to work. With their mentor — the laboratory's principal investigator — the student devises a thesis project and chooses an advisory committee. Typically between the end of their second year and middle of their third year, students present their thesis proposals to the thesis committee. Upon
Successful approval of the thesis proposal, the student officially becomes a doctoral candidate. For the rest of the student's program of study, the thesis committee monitors progress and meets at least once a year to provide analysis and advice. It also serves as the thesis defense committee when the thesis is ready for presentation. Most students complete and defend their dissertations by the end of their sixth year.

Scientific Scholarship
Keeping abreast of scientific developments is critical for faculty and students alike. The Division offers many ways to stay current. More than 15 weekly biology seminars provide excellent opportunities to meet outstanding scientists from outside Washington University. Several annual symposia bring internationally recognized speakers to campus. Journal clubs meet weekly for students, postdoctoral fellows, and faculty to present and discuss current scientific literature. A number of Special Emphasis Pathways (http://dbbs.wustl.edu/custudents/SpecialEmphasisPathways/Pages/SpecialEmphasisPathways.aspx) allow students to enhance their PhD program. Program retreats allow for informal interaction among students and faculty. The Division also provides funds for each student to defray the costs of attending a national scientific meeting.

Business Administration
Washington University's Olin Business School is one of the nation's leading research institutions, with a faculty whose research productivity consistently ranks among the highest in the business school community. Olin faculty members are recognized the world over for their important contributions to the creation of new knowledge. We also take great pride in our commitment to excellence in teaching.

Our PhD students are guided by highly productive researchers who are among the nation's top scholars. Faculty work closely with students to help them hone their research skills, often building one-on-one mentoring relationships that include co-authoring research papers.

Development of strong problem-solving skills equips our students to strategically address complex, unstructured business issues that result in innovative thinking and new ideas for research that have value to the academic community and application in the business world.

Olin's PhD program in business provides:

- A challenging core curriculum and a strong background in basic disciplines.
- Emphasis on collaborative relationships between faculty and students, which enhances the educational process and the search for the student's first faculty appointment.
- Personalized advising for successful completion of PhD program requirements and a customized course of study that fits the student's particular area of interest.
- A collegial network built on mutual respect and a shared school of thought. Olin faculty members promote one-on-one mentoring relationships, often partnering with students for research that leads to co-authoring papers.
- A competitive edge in the business education market.

Contact:
Erin Murdock
Phone: 314-935-6340
Email: murdockel@wustl.edu
Website: http://olin.wustl.edu/EN-US/academic-programs/PhD

Faculty
Dean
Mark Taylor (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=mark.p.taylor)
PhD, Birbeck College, University of London

Endowed Professors
Nicholas S. Argyres (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=argyres)
Vernon W. and Marion K. Piper Professor of Strategy
PhD, University of California, Berkeley

William P. Bottom (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=bottomb)
Joyce and Howard Wood Distinguished Professor of Organizational Behavior
PhD, University of Illinois at Urbana-Champaign

J. Stuart Bunderson (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=bunderson)
George and Carol Bauer Professor of Organizational Ethics and Governance
PhD, University of Minnesota

Siddhartha Chib (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=chib)
Harry C. Hartkopf Professor of Econometrics and Statistics
PhD, University of California, Santa Barbara

Kurt T. Dirks (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=dirks)
Bank of America Professor of Managerial Leadership
PhD, University of Minnesota

Philip H. Dybvig (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=dybvig)
Boatmen's Bancshares Professor of Banking and Finance
PhD, Yale University
Bulletin 2017-18
Arts & Sciences (10/17/17)

Hillary Anger Elfenbein (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=helfenbein)
John K. Wallace Jr. and Ellen A. Wallace Distinguished Professor
PhD, Harvard University

Richard M. Frankel (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=frankel)
Beverly and James Hance Professor of Accounting
PhD, Stanford University

Barton H. Hamilton (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=hamiltonb)
Robert Brooking Smith Distinguished Professor of Entrepreneurship
PhD, Stanford University

Ronald R. King (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=rking)
Myron Northrop Professor of Accounting
PhD, University of Arizona

Panos Kouvelis (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=kouvelis)
Emerson Professor of Operations and Manufacturing Management
PhD, University of Arizona

Hong Liu (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=liuh)
Fossett Distinguished Professor in Finance
PhD, University of Pennsylvania

Glenn M. MacDonald (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=macdonald)
John M. Olin Distinguished Professor of Economics and Strategy
PhD, University of Rochester

Judi McLean Parks (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=mcleanparks)
Reuben C. and Anne Carpenter Taylor Professor of Organizational Behavior
PhD, University of Iowa

Todd T. Milbourn (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=milbourn)
Hubert C. and Dorothy R. Moog Professor of Finance
PhD, Indiana University

Chakravarthi Narasimhan (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=narasimhan)
Philip L. Siteman Professor of Marketing
PhD, University of Rochester

Jackson A. Nickerson (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=nickerson)
Frahm Family Professor of Organization and Strategy
PhD, University of California, Berkeley

Stephen M. Nowlis (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=nowlis)
August A. Busch Jr. Distinguished Professor of Marketing
PhD, University of California, Berkeley

Robert A. Pollak (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=pollak)
Henrie Distinguished Professor of Economics
PhD, Massachusetts Institute of Technology

P.B. (Seethu) Seetharaman (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=seethu)
W. Patrick McGinnis Professor of Marketing
PhD, Cornell University

Anjan Thakor (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=thakor)
John E. Simon Professor of Finance
PhD, Northwestern University

Guofu Zhou (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=zhou)
Frederick Bierman and James E. Spears Professor of Finance
PhD, Duke University

Professors

Tat Y. Chan (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=chan)
PhD, Yale University
(Marketing)

Lingxiu Dong (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=dong)
PhD, Stanford University
(Operations and Manufacturing Management)

Radhakrishnan Gopalan (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=gopalan)
PhD, University of Michigan
(Finance)

Ohad Kadan (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=kadan)
PhD, Hebrew University
(Finance)
Anne Marie Knott (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=knott)  
PhD, University of California, Los Angeles  
(Strategy)

J. Lamar Pierce (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=pierce)  
PhD, University of California, Berkeley  
(Strategy)

Stephen Ryan (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=stephen.p.ryan)  
PhD, Duke University  
(Economics)

Fuqiang Zhang (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=fzhang22)  
PhD, University of Pennsylvania  
(Operations and Manufacturing Management)

**Associate Professors**

Mariagiovanna Baccara (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=mbaccara)  
PhD, Princeton University  
(Economics)

Markus Baer (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=baer)  
PhD, University of Illinois at Urbana-Champaign  
(Organizational Behavior)

Cynthia Cryder (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=cryder)  
PhD, Carnegie Mellon University  
(Marketing)

Daniel Elfenbein (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=ellenbein)  
PhD, Harvard University  
(Organization and Strategy)

Ignacio Esponda (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=iesponda)  
PhD, New York University  
(Economics)

Armando Gomes (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=gomes)  
PhD, Harvard University  
(Finance)

Todd Gormley (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=gormley)  
PhD, Massachusetts Institute of Technology  
(Finance)

Baojun Jiang (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=baojunjiang)  
PhD, Carnegie Mellon University  
(Marketing)

Andrew P. Knight (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=knightap)  
PhD, University of Pennsylvania  
(Organizational Behavior)

Mark Leary (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=leary)  
PhD, Duke University  
(Finance)

Robyn LeBoeuf (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=leboeuf)  
PhD, Princeton University  
(Marketing)

Asaf Manela (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=amanela)  
PhD, University of Chicago  
(Finance)

Xiumin Martin (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=xmartin)  
PhD, University of Missouri-Columbia  
(Accounting)

Raymond T. Sparrowe (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=sparrowe)  
PhD, University of Illinois at Chicago  
(Organizational Behavior)

Raphael Thomadsen (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=thomadsen)  
PhD, Stanford University  
(Marketing)

Danko Turcic (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=Turcic)  
PhD, Case Western Reserve University  
(Operations Manufacturing and Management)

**Assistant Professors**

Deniz Aydin (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=daydin)  
PhD, Stanford University  
(Finance)
Taylor Begley (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=tbegley)
PhD, University of Michigan (Finance)

Kimball Chapman (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=kimballchapman)
PhD, Pennsylvania State University (Accounting)

Phech Colatat (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=pcolatat)
PhD, Massachusetts Institute of Technology (Strategy)

Joseph Cullen (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=jacullen)
PhD, University of Arizona (Economics)

Kaitlin Daniels (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=k.daniels)
PhD, University of Pennsylvania (Operations Management)

Jennifer Dlugosz (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=jdlugosz)
PhD, Harvard University (Finance)

Jason Donaldson (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=j.r.donaldson)
PhD, London School of Economics (Finance)

Amr Farahat (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=farahat)
PhD, Massachusetts Institute of Technology (Operations and Manufacturing Management)

Jacob Feldman (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=jbfeldman)
PhD, Cornell University (Operations and Manufacturing Management)

Tarek Ghani (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=tghani)
PhD, University of California, Berkeley (Business Administration)

Arun Gopalakrishnan (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=agopalai)
PhD, University of Pennsylvania (Marketing)

Daniel Gottlieb (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=d.gottlieb)
PhD, Massachusetts Institute of Technology (Economics)

Chad Ham (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=cham)
PhD, University of Maryland (Accounting)

Ashley Hardin (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=aehardin)
PhD, University of Michigan (Organizational Behavior)

Xing Huang (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=xing.huang)
PhD, University of California, Berkeley (Finance)

Jared Jennings (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=jaredjennings)
PhD, University of Washington (Accounting)

Zachary Kaplan (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=zrkaplan)
PhD, University of Chicago (Accounting)

Kevin Koharki (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=kkoharki)
PhD, Pennsylvania State University (Accounting)

Jeongmin Lee (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=jlee89)
PhD, University of Maryland (Finance)

Zawadi Lemayian (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=lemayian)
PhD, Massachusetts Institute of Technology (Accounting)

Thomas Maurer (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=thomas.maurer)
PhD, London School of Economics (Finance)
Yulia Nevskaya (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=yulia.nevskaya) PhD, University of Rochester
(Marketing)

Hannah Perfecto (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=perfecto) PhD, University of California, Berkeley
(Marketing)

Iva Rashkova (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=irashkova) PhD, London Business School
(Management Science and Operations)

Rachel Ruttan (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=riruttan) PhD, Northwestern University
(Organizational Behavior)

Sydney Scott (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=sydneyscott) PhD, University of Pennsylvania
(Marketing)

Bernardo Silveira (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=silveira) PhD, New York University
(Economics)

Janis Skrastins (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=jskrastins) PhD, London Business School
(Finance)

Ngoc-Khanh Tran (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=ntran) PhD, Massachusetts Institute of Technology
(Finance)

Ulya Tsolmon (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=utsolmon) PhD, Duke University
(Strategy)

Dennis Zhang (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=denniszhang) PhD, Northwestern University
(Operations and Manufacturing Management)

Senior Lecturers

Sergio Chayet (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=chayet) PhD, Northwestern University
(Operations and Manufacturing Management)

Samuel S. Chun (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=schun) PhD, Washington University
(Marketing)

Charles J. Cuny (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=cuny) PhD, Stanford University
(Finance)

Thomas D. Fields (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=tfields) PhD, Northwestern University
(Accounting)

Michael R. Gordinier (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=gordinier) PhD, University of Wisconsin-Madison
(Management)

Clifford K. Holekamp (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=holekampc) MBA, Washington University
(Entrepreneurship)

John Horn (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=johnhorn) PhD, Harvard University
(Economics)

Konstantina Kiousis (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=kiousis) PhD, University of California, Los Angeles
(Business Administration)

Lee J. Konczak (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=konczak) PhD, University of Missouri-St. Louis
(Organizational Behavior and Leadership Development)

David R. Meyer (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=dmeyer24) PhD, University of Chicago
(Management)

Patrick Riske (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=priske) PhD, Binghamton University
(Finance)

Richard Ryffel (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=ryffel) MBA, Boston University
(Finance)
James Sawhill (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=sawhill)
PhD, University of California, Berkeley (Marketing)

Eli M. Snir (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=snir)
PhD, University of Pennsylvania (Management)

Mark E. Soczek (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=soczek)
ABD, Northwestern University (Accounting)

Durai Sundaramoorthi (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=sundaramoorthi)
PhD, University of Texas at Arlington (Management)

Lecturers

Cathy Dunkin (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=cdunkin)
BA, University of Missouri-Columbia (Management)

Ivan Lapuka (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=ilapuka)
PhD, University of South Florida (Marketing)

Staci Thomas (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=staci_thomas)
MA, Webster University (Communications)

Adjunct and Other Faculty

Pier Alsup (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=alsup.pier.y)
MS, Webster University (Marketing)

Amy Altholz (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=altholza)
MBA, Washington University (Accounting)

Yossi Aviv (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=aviv)
PhD, Columbia University (Operations Manufacturing and Management)

Richard Batsell (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=batsell)
PhD, University of Texas at Austin (Marketing)

Anatoliy Belaygorod (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=belaygorod)
PhD, Washington University (Finance)

Peter Boumgarden (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=boumgarden)
PhD, Washington University (Organizational Behavior)

Spencer Burke (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=burkesb)
JD, University of Pennsylvania (Management)

David Butler (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=david.butler)
MBA, Washington University (Health Care Management)

Amy Choy (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=amychoy)
PhD, Washington University (Accounting)

Robert Collins (https://olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=rbcollins)
MS, Harvard University (Accounting)

Jeremy Degenhart (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=jdegenhart9876)
BS, BA, Washington University (Finance)

William R. Emmons (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=emmons)
PhD, Northwestern University (Finance)

Peter S. Finley (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=finley)
MBA, Stanford University (Entrepreneurship)

Ronald K. Fisher (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=fisher)
JD, Washington University (Labor and Employment Laws)
David Fritsch
MBA, Washington University
(Business Administration)

Bruce Lee Hall
PhD, MD, Duke University
(Health Care Management)

Carol F. Johanek
MBA, Saint Louis University
(Marketing)

Nevada Kent IV
BSBA, Tennessee Technical University
(Accounting)

Sarah Luem
JD, Saint Louis University
(Management)

Steven Malter
PhD, University of Missouri-St. Louis
(Management)

Mary Mason
MD, Washington University
(Management)

Tom McCain
MBA, Washington University
(Management)

Mark McLaren
MBA, Columbia University
(Management)

Paul W. Paese
PhD, University of Illinois at Urbana-Champaign
(Organizational Behavior)

Donald W. Paule
LLM, Washington University
(Business Law)

David Pearson
DBA, Indiana University
(Accounting)

Jeff Plunkett
JD, Saint Louis University
(Accounting)

David A. Poldoian
MBA, Harvard University
(Entrepreneurship)

Robert A. Portnoy
PhD, University of Missouri-Columbia
(Human Resource Management)

Casey Quinn
MBA, Washington University
(Health Care Management)

Ryan Rakestraw
MBA, Washington University
(Finance)

Anthony Sardella
MBA, Northwestern University
(Management)

Russell Scalpone
PhD, Claremont Graduate University
(Operations Manufacturing and Management)

Martin K. Sneider
MBA, Harvard University
(Marketing)

Mark Sophir
JD, University of Texas School of Law
(Management)

Bill Squadron
JD, University of California, Berkeley
(Management)

Callie Tucker
JD, Washington University
(Management)
Cynthia A. Wichelman (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=wichelmanc)
MD, Stanford University
(Business and Medicine)

Robert Zafft (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=robertzafft)
JD, Harvard University
(Law)

Profsessors Emeriti
Nicholas Baloff
(Business and Public Administration)

Nicholas Dopuch
Hubert C. & Dorothy R. Moog Professor Emeritus of Accounting

Stuart I. Greenbaum (http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=greenbaum)
Former Dean and Bank of America Professor Emeritus of Managerial Leadership
PhD, Johns Hopkins University

James T. Little
Donald Danforth Jr. Distinguished Professor Emeritus of Business
PhD, University of Minnesota

Ambar Rao
Fossett Distinguished Professor Emeritus of Marketing

J. George Robinson
Professor Emeritus of Marketing

Robert L. Virgil Jr.
Dean Emeritus of the John M. Olin Business School and Professor Emeritus of Accounting

John E. Walsh Jr.
(Management)

Degree Requirements

PhD in Business Administration

PhD students must complete 72 semester hours, maintain satisfactory academic progress, pass certain examinations, fulfill residence and teaching requirements, and write, defend, and submit a dissertation.

Upon successful completion of business PhD study, the student is awarded a PhD from the Graduate School at Washington University.

Core Foundation

- A strong foundation in microeconomics or psychology, probability & statistics, and quantitative methods
- Exposure to the student's area of specialization and the required research tools
- Successful completion of the core exam

Specialization

- Course work in one or more areas of study
- In-depth knowledge in chosen field
- Active association with the research process through faculty mentoring
- Completion of the field exam

Research

- Participation with faculty in research activities
- Research paper presentation
- Individual research pursuing a specialized topic of interest
- Preparation and defense of the student's dissertation

Chemistry

The Department of Chemistry offers a PhD in Chemistry, with research specializations available in biological, organic, inorganic, physical, and nuclear chemistry. Doctoral students often work at the interface of two or more subfields of chemistry; they may also work at the interface of different scientific disciplines. Lab assignments are therefore made according to each student's research project. Chemistry students may work in a lab outside the department or alongside students from other departments in a chemistry lab.

The department's research strengths in each subfield of chemistry are as follows:

- Biological: Biophysical, Bioorganic, Bioinorganic, Biochemistry
- Organic: Synthetic, Organometallic, Bioorganic, Physical Organic, Asymmetric Catalysis
- Inorganic: Coordination, Organometallic, Materials, Bioinorganic, Main Group
- Physical: Computational, Laser Spectroscopy, Theoretical, Magnetic Resonance
- Interdisciplinary: Biophysical, Physical Organic, Materials
- Nuclear and Radiochemistry: Stability of Nuclei, Radioisotopes for Medical Studies

Washington University's graduate student stipends are in the top 25 percent of stipends at similar universities, and St. Louis has a low cost of living. The department has an excellent record of placing its graduates in a wide variety of jobs: academic, industrial, governmental, legal, consulting, writing/editing, and entrepreneurial.

Contact Information

Email: loomis@wustl.edu or rachel.dunn@wustl.edu or barbara22@wustl.edu
Faculty

Chair
William E. Buhro (http://www.chemistry.wustl.edu/faculty/buhro)
George E. Pake Professor of Arts & Sciences
PhD, University of California, Los Angeles

Endowed Professors
Joseph J.H. Ackerman (http://www.chemistry.wustl.edu/faculty/ackerman)
William Greenleaf Eliot Professor
PhD, Colorado State University

Robert E. Blankenship (http://www.chemistry.wustl.edu/people/primary-faculty/robert-blankenship)
Lucille P. Markey Distinguished Professor of Arts & Sciences
PhD, University of California, Berkeley

Regina F. Frey (http://www.chemistry.wustl.edu/faculty/frey)
Florence Moog Professor of STEM Education
Associate Professor, Department of Chemistry
PhD, University of Utah

Jacob Schaefer (http://www.chemistry.wustl.edu/faculty/schaefer)
Charles Allen Thomas Professor of Chemistry
PhD, University of Minnesota

Holden Thorp (http://provost.wustl.edu/about/provost-thorp)
Provost
Rita Levi-Montalcini Distinguished University Professor
PhD, California Institute of Technology

Professors
John R. Bleeke (http://www.chemistry.wustl.edu/faculty/bleeke)
PhD, Cornell University

Peter P. Gaspar (http://www.chemistry.wustl.edu/faculty/gaspar)
PhD, Yale University

Michael L. Gross (http://www.chemistry.wustl.edu/faculty/mgross)
PhD, University of Minnesota

Sophia E. Hayes (http://www.chemistry.wustl.edu/people/primary-faculty/sophia-e-hayes)
PhD, University of California, Santa Barbara

J. Dewey Holten (http://www.chemistry.wustl.edu/faculty/holten)
PhD, University of Washington

Ronald A. Lovett (http://www.chemistry.wustl.edu/faculty/lovett)
PhD, University of Rochester

Liviu Mirica (http://www.chemistry.wustl.edu/faculty/mirica)
PhD, Stanford University

Kevin D. Moeller (http://www.chemistry.wustl.edu/faculty/moeller)
PhD, University of California, Santa Barbara

Jay Ponder (http://www.chemistry.wustl.edu/faculty/ponder)
PhD, Harvard University

Demetrios G. Sarantites (http://www.chemistry.wustl.edu/faculty/sarantites)
PhD, Massachusetts Institute of Technology

Lee G. Sobotka (http://www.chemistry.wustl.edu/faculty/sobotka)
PhD, University of California, Berkeley

John-Stephen Taylor (http://www.chemistry.wustl.edu/faculty/taylor)
PhD, Columbia University

Mark S. Wrighton (http://www.chemistry.wustl.edu/people/executive-faculty/mark-s-wrighton)
Chancellor
PhD, California Institute of Technology

Associate Professors
Vladimir B. Birman (http://www.chemistry.wustl.edu/people/primary-faculty/vladimir-birman)
PhD, University of Chicago

Richard A. Loomis (http://www.chemistry.wustl.edu/faculty/loomis)
PhD, University of Pennsylvania

Richard Mabbs (http://www.chemistry.wustl.edu/faculty/mabbs)
PhD, University of Nottingham (U.K.)

Gary Patti (http://www.chemistry.wustl.edu/faculty/patti)
PhD, Washington University

Assistant Professors
Alexander Barnes (http://www.chemistry.wustl.edu/faculty/barnes)
PhD, Massachusetts Institute of Technology

Jonathan Barnes (http://www.chemistry.wustl.edu/people/primary-faculty/jonathan-barnes)
PhD, Northwestern University

Julio D’Arcy (http://www.chemistry.wustl.edu/faculty/darcy)
PhD, University of California, Los Angeles

Meredith Jackrel (https://www.chemistry.wustl.edu/people/primary-faculty/meredith-jackrel)
PhD, Yale University

Bryce Sadtler (http://www.chemistry.wustl.edu/faculty/sadtler)
PhD, University of California, Berkeley
Degree Requirements

PhD in Chemistry

Requirements:
• 72 semester hours of graduate credit in courses and research
• Satisfactory performance on written cumulative examinations
• Satisfactory performance on annual pre-thesis committee meetings
• Demonstration of teaching competence
• Dissertation research and preparation of dissertation
• Satisfactory performance on a final oral dissertation defense

On average, students take between five and six years to complete the PhD.

Requirements specific to Chemistry include attendance at Thursday evening research presentations during the student's first fall semester, presenting and passing an oral examination within the first four semesters, and annual re-certification in laboratory safety.

Almost all students participate in mentored teaching experiences in their first two years and must perform satisfactorily. Students must also make annual research presentations to their advisory committee, prepare a satisfactory dissertation research proposal, and pass an oral examination.

Classics

The Department of Classics is committed to the threefold study of Greco-Roman antiquity via the languages and literatures, the history, and the art and architectural remains. The Master of Arts in Classics is ideal preparation either for PhD work or for a career in secondary teaching, and has a strong placement record in both areas. The Doctor of Philosophy program prepares candidates primarily for careers in research and university teaching, although the department will also help them explore alternative careers. Both programs provide rigorous instruction in Greek and Latin languages and literatures, exposure to the subfields of Classics, opportunities to cultivate special fields of research, and teaching experience in departmental courses.

While both graduate programs are built around preparation in the core fields of Classics, opportunities exist for collaboration with numerous other departments and programs. PhD candidates have the option to pursue one of several special interdisciplinary tracks: Ancient History, Ancient Performance, Ancient Music, and Ancient Philosophy. Washington University also possesses several special collections of interest to the Classics researcher: the John Max Wulfing Coin Collection, an internationally recognized resource that can be applied to studies in numismatics, history, economics and art; a collection of papyri housed in Olin Library; and a departmental archive of epigraphical and papyrological materials.

Contact: Zoe Stamatopoulou
Phone: 314-935-5123
Email: classics@wustl.edu
Website: https://classics.artsci.wustl.edu

Faculty

Endowed Professor

Timothy Moore (https://classics.artsci.wustl.edu/moore)
John and Penelope Biggs Distinguished Professor of Classics
Director of Undergraduate Studies
PhD, University of North Carolina

Professor Moore's work concentrates on several areas of classical antiquity, including the comic theatre of Greece and Rome, Greek and Roman music, and Roman historiography. Current projects include a book on music in ancient theater, articles on the history and performance of Roman comedy, and work on Greek tragedy in the modern world. He also has interests in the history of theatre, especially American musical theatre and Japanese Kyogen comedy.

Professor and Chair

Catherine Keane (https://classics.artsci.wustl.edu/keane)
Department Chair
PhD, University of Pennsylvania

Professor Keane's interests range broadly over Greek and Roman literature and culture, but her research centers on the comic genres and their engagement with moral, social, and literary problems, particularly the Roman verse satirists Lucilius, Horace, Persius, and Juvenal and the epigrammatist Martial.
Associate Professors

William Bubelis (https://classics.artsci.wustl.edu/bubelis)
Curator of the Wulfing Coin Collection
PhD, University of Chicago
Professor Bubelis' research in Greek history focuses on the intersection of economy, religion, and public institutions. His work utilizes the evidence of inscriptions (epigraphy), coins (numismatics), and other material remains alongside the literary texts of ancient historians, poets, orators, and the like. While most of his scholarship has engaged with classical Athens, Bubelis avidly explores the societies of the eastern Mediterranean across antiquity, including Iron Age Cyprus and the Achaemenid Persian Empire to Hellenistic Egypt. He is currently working on several projects, including a multi-year project investigating and mapping how various Greek coinages circulated in the northern Aegean.

Zoe Stamatopoulou (http://classics.artsci.wustl.edu/zoe-stamatopoulou)
Director of Graduate Studies
PhD, University of Virginia
Professor Stamatopoulou's research and teaching encompass several aspects of ancient Greek literature and culture, but her work focuses primarily on archaic and classical poetry (Homer, Hesiod, lyric poetry, drama). She is also interested in the symposium, in ancient biographies of poets, and in the reception of archaic Greece in Imperial Greek literature (esp. Plutarch).

Assistant Professors

Karen Acton (https://classics.artsci.wustl.edu/karen-acton)
PhD, University of Michigan
Professor Acton's research focuses on the history of Rome, especially in the late republic and early Empire, Roman historiography, and Roman numismatics.

Nicola Aravecchia (https://classics.artsci.wustl.edu/nicola-aravecchia)
PhD, University of Minnesota
Professor Aravecchia's research interests encompass the art and archaeology of Graeco-Roman and Late Antique Egypt. He has taught courses of classical languages, ancient history, art and archaeology in the United States, Egypt and Australia. His current work focuses on the origins and development of Early Christian architecture in rural Egypt. Since 2005, he has been involved in archaeological projects in the Dakhla Oasis, located in the Western Desert of Upper Egypt.

Thomas Keeline (https://classics.artsci.wustl.edu/tom-keeline)
PhD, Harvard University
Professor Keeline works primarily on Latin literature, the history of classical scholarship and education from antiquity to the present, rhetoric, textual criticism, lexicography and metrics.

Luis Alejandro Salas (https://classics.artsci.wustl.edu/luis-salas)
PhD, University of Texas
Professor Salas specializes in Greek and Roman medicine, philosophy, and intellectual history. He is also interested in Aristotelian psychology. His research focuses on medical and philosophical sectarianism, especially in the work of Galen of Pergamum.

Lecturers

Joan Carr
PhD, Saint Louis University

Lance Jenott (https://classics.artsci.wustl.edu/lance-jenott)
PhD, Princeton University

Grizelda McClelland (https://classics.artsci.wustl.edu/grizelda-mcclelland)
Assistant Dean, College of Arts & Sciences
PhD, Washington University

Kathryn Wilson (http://classics.artsci.wustl.edu/kathryn-wilson)
PhD, University of Pennsylvania
Professor Wilson's research interests focus on the intersection of poetry and science. She is especially interested in Hellenistic literature, and the relationship between different intellectual enterprises occurring during that time. She is also interested in the evolution of the genre of didactic poetry.

Professors Emeriti

Carl W. Conrad (http://classics.artsci.wustl.edu/conrad)
PhD, Harvard University

Robert D. Lamberton (http://classics.artsci.wustl.edu/lamberton)
PhD, Yale University

George M. Pepe (http://classics.artsci.wustl.edu/pepe)
PhD, Princeton University

Susan I. Rotroff (http://classics.artsci.wustl.edu/rotroff)
Jarvis Thurston & Mona Van Duyn Professor Emerita
PhD, Princeton University
Degree Requirements

AM in Classics

Candidates may obtain an AM degree in Classics by completing 36 graduate units of credit, completing a reading list, and taking a series of examinations. Students planning to continue in the Classics department's PhD program must also write a master's thesis. Others may choose to complete the AM with or without a thesis.

Courses: 36 units, including:
Specific required courses: 6 units
Classics 502 Research and Publication on the Greco-Roman World (3 units) - a proseminar on materials and methods of the profession
Classics 510 Comparative Greek and Latin Grammar (3 units) (offered every two years, alternating with Classics 502)
Other course requirements: 24 units (for AM with thesis)
All units must be at the 400 level or above.
At least 6 units in Greek (L09) (one or more options is offered every semester)
At least 6 units in Latin (L10) (one or more options is offered every semester)
Most remaining courses will be in Greek, Latin and Classics. With the guidance of the director of graduate studies, students may take 3 course units outside of the Classics department.

Research Credits: 6 units
The master's thesis counts for 6 units. Any student opting not to write a thesis will fulfill these units with additional courses.

Modern Language Competence

German, French or Italian; the requirement may be fulfilled by courses or examination.

Program Exams

Greek and Latin Sight Reading
Greek Reading List
Latin Reading List

Students not planning to go on to a PhD program in Classics may opt to take the Reading List exam in one language (Greek or Latin) only. Those who pursue this option must still complete at least 6 units in the other language at the 400 level. The examination will require the student to demonstrate competence in translation and interpretation, as well as knowledge of the relevant scholarship.

Teaching

While there is no teaching requirement for the AM, most students in the program have the opportunity to pursue mentored teaching experiences in undergraduate courses and to take the department's course on Classics pedagogy for graduate students.

PhD in Classics

The Classics PhD requires 72 graduate units of courses and research in combination. Up to 24 of these units may be transferred from an outside AM program in Classics, at the discretion of the Graduate Committee. (Requirements listed below include requirements for the AM in Classics at Washington University.) All units must be at the 400 level or above. With the guidance of the director of graduate studies, students may take up to 12 units outside the Classics department to enhance their graduate study. Every PhD candidate also completes a teaching requirement through assignments as Assistant to Instructor and Instructor of Record.

Courses: 54 units, including:
Specific required courses: 9 units
Classics 502 Research and Publication on the Greco-Roman World (3 units) - a proseminar on materials, methods, and professional issues in Classics
Classics 505 Seminar in Classics Pedagogy for Graduate Students (3 units) (to be offered every two or three years)
Classics 510 Comparative Greek and Latin Grammar (3 units) (offered every two years, alternating with Classics 502)
Other course requirements: 27 units
At least 12 units in Greek (L09) (one or more options is offered every semester)
At least 12 units in Latin (L10) (one or more options is offered every semester)
At least 3 units in ancient history (at least one course will be offered every two years)
Elective courses: 18 units
Includes courses for individual tracks, optional independent studies in preparation for exams, and other courses, to be chosen after consultation with the director of graduate studies.

Research Credits: 18 units
Master's thesis: 6 units
Dissertation credits: 12 units

Program Exams

Greek and Latin Sight Reading
Greek Reading List
Latin Reading List
Comprehensive Exam
Special Field Exam
Teaching
8 semesters of mentored teaching experiences, including at least two courses as Instructor of Record.

Modern Language Competence
German and French, or German and Italian; the requirement may be fulfilled by courses or examination in each case.

Dissertation Requirements
Dissertation prospectus
Dissertation colloquium
Dissertation
Dissertation defense

Comparative Literature
The Comparative Literature program at Washington University offers an AM; a PhD; a combined PhD with Chinese, English, French, German, Japanese or Spanish; and a graduate certificate in Translation Studies. Additionally, a track within the PhD program for international writers targets promising authors and public intellectuals from around the world who wish to enhance their career by coupling it with academic preparation in comparatist literary studies in the U.S. In close cooperation with other humanities programs, Comparative Literature enables students to tailor a course of study appropriate to their areas of interests, strengths, and long-term goals.

At its core, Comparative Literature aims to provide students with a grounding in contemporary and historically significant methodologies and approaches to comparative literature, including especially those pertinent to the following four areas: transcultural studies; translation studies; literature, politics and society; and new and old media. Students combine this core with thorough study of at least one primary literature, usually nationally or geographically defined, and two secondary fields. Depending on the focus of their degree and course of study, graduates typically apply for academic positions in comparative literature programs; language, literature, and culture departments; and such programs as gender studies, theater, performing arts, and area studies. Some graduates may choose to pursue employment in publishing and arts-related fields outside of academia.

Contact: Rebecca O’Laughlin
Phone: 314-935-5170
Email: complit@wustl.edu
Website: http://complit.artsci.wustl.edu

Faculty
Director
Lynne Tatlock (http://complit.artsci.wustl.edu/people/lynne-tatlock)
Hortense and Tobias Lewin Distinguished Professor in the Humanities
PhD, Indiana University

Endowed Professors
Robert E. Hegel (http://complit.artsci.wustl.edu/people/robert-hegel)
Liselotte Dieckmann Professor of Comparative Literature in Arts & Sciences; Professor of Chinese
PhD, Columbia University

Paul Michael Lützeler (http://complit.artsci.wustl.edu/people/paul-michael-lutzeler)
Rosa May Distinguished University Professor in the Humanities
PhD, Indiana University

Timothy Moore (http://classics.artsci.wustl.edu/moore)
John and Penelope Biggs Distinguished Professor of Classics
PhD, University of North Carolina

Gerhild Scholz Williams (http://complit.artsci.wustl.edu/people/gerhild-williams)
Barbara Schaps Thomas and David M. Thomas Professor in the Humanities; Associate Vice Chancellor for Academic Affairs; Vice Provost
PhD, University of Washington

Professors
Nancy E. Berg (http://complit.artsci.wustl.edu/people/nancy-berg)
PhD, University of Pennsylvania

Matt Erlin (http://complit.artsci.wustl.edu/people/matt-erlin)
PhD, University of California, Berkeley

Robert K. Henke (http://complit.artsci.wustl.edu/people/robert-henke)
PhD, University of California, Berkeley

Joseph Loewenstein (http://complit.artsci.wustl.edu/people/joe-loewenstein)
PhD, Yale University

Marvin H. Marcus (http://ealc.wustl.edu/people/marvin-marcus)
PhD, University of Michigan

Anca Parvulescu (http://complit.artsci.wustl.edu/people/anca-parvulescu)
PhD, University of Minnesota

Wolfram Schmidgen (http://complit.artsci.wustl.edu/people/wolfram-schmidgen)
PhD, University of Chicago
Henry Schvey (http://pad.artsci.wustl.edu/henry-i-schvey)
Professor of Drama
PhD, Indiana University

Michael Sherberg (http://rll.wustl.edu/people/sherberg)
PhD, University of California, Los Angeles

Harriet Stone (http://complit.artsci.wustl.edu/people/harriet-stone)
PhD, Brown University

Associate Professors
Miriam Bailin (http://complit.artsci.wustl.edu/people/miriam-bailin)
PhD, University of California, Berkeley

Andrew Brown (http://rll.wustl.edu/people/brown)
PhD, University of Virginia

J. Dillon Brown (http://complit.artsci.wustl.edu/people/j-dillon-brown)
PhD, University of Pennsylvania

Lingchei Letty Chen (http://complit.artsci.wustl.edu/people/letty-chen)
PhD, Columbia University

Tili Boon Cuillé (http://complit.artsci.wustl.edu/people/tili-boon-cuille)
PhD, University of Pennsylvania

Jennifer Kapczynski (http://german.wustl.edu/people/kapczynski_jennifer)
PhD, University of California, Berkeley

Catherine Keane (http://classics.artsci.wustl.edu/keane)
PhD, University of Pennsylvania

Stephanie Kirk (http://complit.artsci.wustl.edu/people/stephanie-kirk)
PhD, New York University

Tabea Linhard (http://complit.artsci.wustl.edu/people/tabea-linhard)
PhD, Duke University

Erin McGlothlin (http://complit.artsci.wustl.edu/people/erin-mcglothlin)
PhD, University of Virginia

Jessica Rosenfeld (http://english.artsci.wustl.edu/Jessica_Rosenfeld)
PhD, University of Pennsylvania

Assistant Professors
Kurt Beals (http://german.wustl.edu/people/kurt-beals)
PhD, University of California, Berkeley

Ignacio Infante (http://complit.artsci.wustl.edu/people/ignacio-infante)
PhD, Rutgers University

Caroline Kita (http://german.wustl.edu/people/caroline-kita)
PhD, Duke University

Long Le-Khac (http://english.artsci.wustl.edu/people/long-le-khac)
PhD, Stanford University

Anne-Marie McManus (http://complit.artsci.wustl.edu/people/anne-marie-mcmanus)
PhD, Yale University

Christian Schneider (http://german.wustl.edu/people/christian-schneider-0)
PhD, Heidelberg University

Lecturers
Emma Kafalenos (http://complit.artsci.wustl.edu/people/emma-kafalenos)
Honorary Senior Lecturer
PhD, Washington University

Philip Purchase (http://complit.artsci.wustl.edu/people/philip-purchase)
PhD, University of Southern California

Professors Emeriti
Milica Banjanin (http://complit.artsci.wustl.edu/people/milica-banjanin)
PhD, Washington University

Naomi Lebowitz (http://complit.artsci.wustl.edu/people/naomi-lebowitz)
Hortense and Tobias Lewin Distinguished Professor Emerita in the Humanities
PhD, Washington University

Stamos Metzidakis (http://complit.artsci.wustl.edu/people/stamos-metzidakis)
PhD, Columbia University

Degree Requirements
PhD in Comparative Literature

The PhD in Comparative Literature program requires 60 units of course credit plus a dissertation. Course distribution normally entails the following: at least 12 core credits in comparative literature seminars, including Comp Lit 502; 12 credits in one nationally, ethnically, or geographically defined literature; and 6 credits in a second such literature. Drama may be substituted for either the primary or secondary literature. The program also requires the study of a third discipline relevant to the student's intellectual and critical concerns, e.g., a third literature, music, the plastic arts, philosophy, history, film. Students need to demonstrate (as a minimum), in addition to superior skills in English, superior ability in at least a second language and reading skills in a third language. Beyond the minimum, the choice and number of languages required correspond to each
already be enrolled in a PhD program at Washington University.

which may be allocated only to the certificate. Applicants must count toward both the certificate and the PhD degree, and 9 of

certificate requires 15 course credits overall, 6 of which may
cultural hybridity, postcolonial theory, and interdisciplinarity. The
turn to translation and the critical and theoretical assessment
by Comparative Literature explicitly supports both the practical
term. The Graduate Certificate in Translation Studies offered
function and value of “translation” in the widest sense of the
literature implicitly performs and assesses theoretically the
cultures, and national literatures, the discipline of comparative

AM in Comparative Literature

The AM in Comparative Literature may be earned along the
way to the PhD; Comparative Literature normally does not admit
students who intend to pursue the AM only. It requires 36 units
of course credit, including CompLit 502 and three additional
courses in Comparative Literature on the graduate level. The
remaining 24 units may be pursued in Comparative Literature
or in affiliated departments or programs. All students earning an
AM in Comparative Literature must demonstrate superior skills
in English and, as a minimum, reading ability in one additional
language pertinent to their areas of interest. These 36 units
count toward the PhD requirement. Students participating in
a mentored teaching experience may teach in Comparative
Literature and/or in one of our allied programs, including
language instruction. In order to be qualified to serve as an
assistant to instructor in a language department, students may
be required to take the relevant course in language pedagogy.
The program strives to give students a variety of teaching
experiences that prepare them for the academic market in their
areas of concentration.

Graduate Certificate in Translation Studies

With its interest in crossing the borders between languages,
cultures, and national literatures, the discipline of comparative
literature implicitly performs and assesses theoretically the
function and value of “translation” in the widest sense of the
term. The Graduate Certificate in Translation Studies offered
by Comparative Literature explicitly supports both the practical
turn to translation and the critical and theoretical assessment
of translation in the context of globalization, multiculturalism,
cultural hybridity, postcolonial theory, and interdisciplinarity. The
certificate requires 15 course credits overall, 6 of which may
count toward both the certificate and the PhD degree, and 9 of
which may be allocated only to the certificate. Applicants must
already be enrolled in a PhD program at Washington University.

Dance

The Master of Fine Arts program in Dance in the Performing
Arts Department at Washington University offers an innovative
approach to dance technique, composition, improvisation and
production. It involves an energetic interplay of studio work
with professionally distinguished dance instructors, seminars
with faculty who are experts in their fields, and independent
studies in choreography. This two-year program will expand
students’ dance skills while engaging them with current concepts
doctor of dance as an art form, as an expression of culture and identity,
and as a mode of critical thinking. The overarching goal of this
program is to develop each dancer’s personal artistic practice
while encouraging a global perspective on dance studies,
performance, pedagogy and choreography.

The department offers performance experience through its
repertory company, Washington University Dance Collective, for
which students may audition.

Members of our dance faculty have performed with such
companies as American Ballet Theatre, Alvin Ailey American
Dance Theater, Dance Theatre of Harlem, National Ballet of
Washington D.C., Dayton Contemporary Dance Company, and
Utah Repertory Dance Theatre. In addition, a distinctive feature
of our MFA program is that it is run in collaboration with St.
Louis’ Center of Creative Arts (COCA) (http://www.cocastl.org),
involving a sharing of facilities and faculty born out of a
common vision of the importance of the performing arts. As the
leading dance school in the region, COCA is also the largest
multidisciplinary arts organization in St. Louis and has a world-
renowned faculty. We have a long history of engaging the talents
of contemporary guest choreographers and répétiteurs from
ballet, modern and performance art who bring a broad range of
challenging new processes, concepts and choreography to our
students.

Contact: Christine Knoblauch-O’Neal
Phone: 314-935-4475
Email: ckoneal@wustl.edu
Website: http://pad.artsci.wustl.edu/MFA

Faculty

Dance

Mary-Jean Cowell (http://pad.artsci.wustl.edu/maryjean_cowell)
Associate Professor
PhD, Columbia University
Modern dance technique; theory and composition; dance history
and ethnology

Joanna Dee Das (http://pad.artsci.wustl.edu/joanna-dee-das)
Assistant Professor
PhD, Columbia University
Global dance history & theory; modern dance; African diasporic
dance; musical theater; politics of performance
Christine Knoblauch-O’Neal (http://pad.artsci.wustl.edu/christine-knoblauch-oneal)
Professor of the Practice
PhD, Texas Women’s University
Ballet; applied anatomy; musical theater; performance studies

David Marchant (http://pad.artsci.wustl.edu/david-marchant)
Professor of the Practice
MFA, University of Iowa
Modern dance; composition; improvisation; Alexander Technique; somatic studies

Cecil Slaughter (http://pad.artsci.wustl.edu/cecil-slaughter)
Professor of the Practice
MFA, University of Iowa
Horton modern dance technique

Theater Studies

Pannill Camp (http://pad.artsci.wustl.edu/pannill_camp)
Associate Professor
PhD, Brown University
18th-century French theater; dramatic theory; theater architecture

Robert Henke (http://pad.artsci.wustl.edu/robert_henke)
Professor
PhD, University of California, Berkeley
Ancient and Renaissance theater and performance; comparative literature; dramatic theory

Paige McGinley (http://pad.artsci.wustl.edu/paige-mcginley)
Assistant Professor
PhD, Brown University
20th-century theater and performance; race, ethnicity and performance; American studies

Henry I. Schvey (http://pad.artsci.wustl.edu/henry-i-schvey)
Professor
PhD, Indiana University
Modern American and European drama; Shakespeare in production; expressionism and the arts; Tennessee Williams

Julia Walker (http://pad.artsci.wustl.edu/julia-walker)
Associate Professor
PhD, Duke University
Theatrical modernism; performance theory; history of acting

Acting and Directing

Ron Himes (http://pad.artsci.wustl.edu/ron-himes)
Henry E. Hampton Jr. Artist-in-Residence
BA, Washington University
African-American theater

Jeffery Matthews (http://pad.artsci.wustl.edu/jeffery-matthews)
Professor of the Practice
MFA, Virginia Commonwealth University
Acting; directing; voice and speech

Annamaria Pileggi (http://pad.artsci.wustl.edu/annamaria-pileggi)
Professor of the Practice
MFA, Brandeis University
Acting; movement; musical theater; robotics and expressive simulation; theatre for social change

Andrea Urice (http://pad.artsci.wustl.edu/andrea-urice)
Senior Lecturer
MFA, University of Virginia
Directing; acting; creative studies

William Whitaker (http://pad.artsci.wustl.edu/william-whitaker)
Professor of the Practice
MFA, Florida Atlantic University
Acting; directing

Design and Technical Theater

Robert Mark Morgan (http://pad.artsci.wustl.edu/robert-mark-morgan)
Senior Lecturer
MFA, San Diego State University
Scenic design

Sean Savoie (http://pad.artsci.wustl.edu/sean-savoie)
Senior Lecturer
MFA, University of Cincinnati-College Conservatory of Music
Lighting design; production management

Playwriting

Carter W. Lewis (http://pages.wustl.edu/lewis)
Playwright-In-Residence
MA, University of Oklahoma
Playwriting; dramaturgy, A.E. Hotchner Playwriting Festival

Degree Requirements

MFA in Dance

Degree Requirements: 60 units (15 units/semester) during two years to degree

At the end of their first year, students will propose a culminating project — typically a dance concert or other public presentation of creative work largely expressed in dance — and submit a paper about its production, including analysis and critique, that they will defend orally.

I. Technical Development: 15 units

10 units from the following:

Dance 401 Theory and Technique of Modern Dance V (3 units; may be repeated once)
Dance 4021 Theory and Technique of Modern Dance VI (3 units; may be repeated once)
Dance 415 High Intermediate Ballet I (2 units; may be repeated once)
Dance 416 High Intermediate Ballet II (2 units; may be repeated once)
Dance 4281 Classical Ballet III (2 units; may be repeated once)
Dance 4291 Classical Ballet IV (2 units; may be repeated once)

plus an additional 5 units from the above or from the following:
Dance 403 Jazz III (2 units; may be repeated)
Dance 407 Topics in Dance Techniques (variable credit; 3 units max)
Dance 418 Variations in the Ballet (1 unit)
Dance 423 Pointe Technique (1 unit)

II. Choreography and Performance: 20 units
Dance 508 Dance Composition Laboratory I: Exploring Process and Format (3 units)
Dance 509 Dance Composition Laboratory II: Exploring Alternative Venues and Audience Connections (3 units)
Dance 510 Approaches to Improvisation and Spontaneous Composition (3 units)
Dance 511 Independent Choreography Project I, II, III (3 units/course; total 9 units)
Dance 512 Performance Artistry (1 unit; must be taken twice for a total of 2 units)

III. Research and Integrated Learning: 12 units
Required:
Dance 520 Dance 520 Research Methods Colloquium: (3 units)

Plus 9 units from the following:
Dance 413 Modern Dance and the African American Legacy II (2 units)
Dance 426 Performing the Political in American Dance (3 units)
Dance 478 The Eye of the Mask: A Multicultural History of the Theater through Mask Making and Design (3 units)
Dance 506 Topics in Contemporary Arts Practice Research (3 units)
Dance 507 Topics in Contemporary Theoretical and Historical Research (3 units)
Dance 517 Workshop in Dance as Cultural Identity (3 units)
Dance 519 Guest Artist Residency Workshop (1 unit; may be repeated once)

Dance 530 Theories of the Body in Performance (3 units)
Dance 543 Critical Thinking in Western Theatrical Dance (3 units)

IV. Electives: 7 units
7 units at the 400 level or above with at least one course at the 500 level. These may be from any areas of the performing arts or relevant areas in other departments or programs.
MFA students are encouraged to pursue courses that support or help define an individual trajectory as an artist. These may include 400- or 500-level Performing Arts Department courses in costumes, stage lighting and design, or theater history. Students may also wish to pursue study in the departments of Women, Gender, and Sexuality Studies; Music; Psychological & Brain Sciences; Anthropology; Art History and Archaeology; or other courses relevant to the student's particular development.

V. Final Project: 6 units
Dance 550 Final Project I (3 units); to be taken fall semester of the student's second year
Dance 551 Final Project II (3 units); to be taken spring semester of the student's second year
At the end of the first year, the MFA student will propose a plan for the final project and form a final project committee who will evaluate the final project. A concert is the typical format of the MFA final project. This concert or public presentation of the student's creative work must be largely expressed in dance. The concert or public presentation will be followed by submission of a written Production Book with analysis and critique. In some cases, the written documents may include research related to the production, or a complementary research paper may accompany the Production Book. The student will have an oral defense of the work in front of an invited audience and submit a final version of the written component, as well as a DVD of the concert or public presentation, for archival purposes within the department.

Data Science in the Humanities
In response to increasing graduate involvement in the Humanities Digital Workshop (HDW) and its associated faculty-led projects, we offer a Graduate Certificate in Data Science in the Humanities (DASH), combining traditional humanities inquiry with computational methods and analysis. All graduate students in the humanities, regardless of home PhD program, are welcome to pursue this certificate. A data-driven approach can complement and enrich any humanities field, and the certificate features appreciable cross-disciplinary engagement. Recent HDW projects have been supervised by faculty in fields as diverse as history; music; German; Asian and Near Eastern languages and literature; American studies; philosophy-neuroscience-psychology; women, gender, and sexuality studies; and English. Our goal is to enrich the analytic skills
that students can bring to bear on research in their home disciplines, and to enable them to contribute thoughtfully and resourcefully in other disciplines of the humanities.

The curriculum addresses data management, statistics, text analysis, geospatial analysis, digital prosopography, data visualization and information design. This curriculum will acquaint any PhD student with new methodologies and techniques, and will foster an awareness of the theoretical implications of using them.

This certificate program is distinguished by its emphasis on collaborative research and pedagogical development. Students will participate on a faculty project in the HDW, and most fulfill this requirement through the HDW summer workshop, an eight-week program that pairs faculty with a small group of graduate and undergraduate fellows. The collaborative environment, combined with weekly project meetings and skills workshops, makes these immersive summer programs an unusual counterpoint to traditional graduate education. The DASH certificate also requires 3 units of mentored teaching experience in a digital humanities course, ensuring that pedagogical development accompanies more traditional courses.

**Application**

Students interested in pursuing the DASH graduate certificate should contact the program director (jfloewen@wustl.edu?subject=DASH Grad Certificate). PhD students in good standing a should apply before the end of their second year. Master's students are not eligible. Applicants should write a letter detailing their interest in data science or digital humanities as well as any relevant background; their letter should be supplemented by a letter of support from the director of graduate studies (DGS) of the home doctoral program. Upon review, the DASH program director will make recommendations for admission to the dean of the Graduate School for final approval. In order to receive the DASH graduate certificate, students must fulfill all the PhD requirements of their home department. The certificate is granted to the student upon completion of the PhD.

**Website:**
https://iph.wustl.edu/
DASHGradCertificate

**Faculty**

**Participating Faculty**

**Jami Ake** (https://college.artsci.wustl.edu/jami_ake)
Assistant Dean
PhD, Indiana University

**Anupam Basu** (https://english.artsci.wustl.edu/people/anupam-basu)
Assistant Professor
PhD, University of Wisconsin–Madison

**Kurt Beals** (https://german.wustl.edu/people/kurt-beals)
Assistant Professor
PhD, University of California, Berkeley

**Matt Erlin** (https://german.wustl.edu/people/erlin_matt)
Professor; Chair, Department of Germanic Languages and Literatures
PhD, University of California, Berkeley

**Peter Kastor** (https://history.artsci.wustl.edu/peter_kastor)
Professor; Chair, Department of History
PhD, University of Virginia

**Doug Knox** (https://computing.artsci.wustl.edu/staff/knox)
Assistant Director, Humanities Digital Workshop
MA, University of Chicago

**Long Le-Khac** (https://english.artsci.wustl.edu/people/long-le-khac)
Assistant Professor
PhD, Stanford University

**Joe Loewenstein** (https://english.artsci.wustl.edu/Joe_Loewenstein)
Director, Humanities Digital Workshop
PhD, Yale University

**Melanie Micir** (https://english.artsci.wustl.edu/people/melanie-micir)
Assistant Professor
PhD, University of Pennsylvania

**Steven B. Miles** (https://history.artsci.wustl.edu/steve_miles)
Associate Professor
PhD, University of Washington

**Stephen Pentecost** (https://computing.artsci.wustl.edu/staff/pentecost)
Senior Digital Humanities Specialist
MA, Washington University

**Lynne Tatlock** (https://german.wustl.edu/people/tatlock_lynne)
Hortense and Tobias Lewin Distinguished Professor in the Humanities
PhD, Indiana University

**Abram Van Engen** (https://english.artsci.wustl.edu/Abram_Van_Engen)
Associate Professor
PhD, Northwestern University

**Degree Requirements**

**Graduate Certificate in Data Science in the Humanities**

15 units are required to complete the DASH Graduate Certificate. Six of those units may also count toward the PhD requirements, but the remaining 9 cannot. Thus students pursuing a Graduate Certificate may complete a total of 81 units
rather than the 72 units required for the PhD alone, and can request additional tuition remission and stipend support from their PhD home department.

For 15 units total, students must take:

- 6 units from the Core Curriculum (https://iph.wustl.edu/scrapbook/core-curriculum)
- 3 units from participating on a faculty project in the HDW, which most students will undertake during the Humanities Digital Workshop's summer program (https://hdw.artsci.wustl.edu/fellows/summer-fellows)
- 3 units Teaching Practicum in either DASH 1, DASH 2, DAMS + PROTA, or IPH 312 (Intro to Digital Humanities)
- 3 units from the list of electives (https://iph.wustl.edu/electives)

Earth and Planetary Sciences

The Department of Earth and Planetary Sciences offers PhD and AM degrees. This is one of the few departments in the country with an integrated program of graduate instruction and research that treats Earth as a planet and makes direct use of knowledge gained by exploring the solar system. Our field is changing rapidly and becoming more interdisciplinary as links emerge among geology, geochemistry, geophysics and geobiology. New opportunities are developing as research in natural hazards, energy sources, and the environment become more important to the global economy, and new space missions are developed to explore the solar system. The relatively small size of the department engenders a friendly and personal place, offering a lot of personal interaction with faculty and researchers. Our graduate students have the opportunity to use cutting-edge laboratory equipment, high-speed parallel computers, and the latest planetary mission data in the course of their research. They travel to field sites around the world and publish research in the leading scientific journals.

The PhD program is open to qualified students who have previously specialized in earth sciences, physics, chemistry, biology, environmental science, soil science, mathematics or engineering. Both students with traditional degrees in geoscience areas and those with diverse academic backgrounds regularly enroll in our program because of the inherently interdisciplinary nature of our field. Doctoral education has a strong research emphasis that begins immediately upon arrival and emphasizes modern, quantitative approaches to studying earth, planetary, and environmental systems. Graduate study may involve field and laboratory work as well as theory and advanced computation. Students earn the AM degree during the first phase of the PhD program; the department generally does not admit students for a terminal AM degree. After degree completion our graduates go on to careers in academia, research laboratories, government agencies and the private sector, serving as leaders in the field of earth and planetary sciences.

Faculty

Chair

Viatcheslav S. Solomatov (http://eps.wustl.edu/people/slava_solomatov)
PhD, Moscow Institute of Physics and Technology

Endowed Professors

Raymond E. Arvidson (http://eps.wustl.edu/people/Raymond_Arvidson)
James S. McDonnell Distinguished University Professor
PhD, Brown University

Bradley L. Jolliff (http://eps.wustl.edu/people/brad_jolliff)
Scott Rudolph Professor of Earth and Planetary Sciences
PhD, South Dakota School of Mines and Technology

Douglas A. Wiens (http://eps.wustl.edu/people/douglas_wiens)
Robert S. Brookings Distinguished Professor
PhD, Northwestern University

Professors

Robert E. Criss (http://eps.wustl.edu/people/Bob_Criss)
PhD, California Institute of Technology

Robert F. Dymek (http://eps.wustl.edu/people/Bob_Dymek)
PhD, California Institute of Technology

M. Bruce Fegley (http://eps.wustl.edu/people/Bruce_Fegley)
PhD, Massachusetts Institute of Technology

William B. McKinnon (http://eps.wustl.edu/people/Bill_McKinnon)
PhD, California Institute of Technology

Jill D. Pasteris (http://eps.wustl.edu/people/Jill_Pasteris)
PhD, Yale University

Jennifer Smith (http://eps.wustl.edu/people/Jen_Smith)
Dean of the College of Arts & Sciences
PhD, University of Pennsylvania

William Hayden Smith (http://eps.wustl.edu/people/Bill_Smith)
PhD, Princeton University

Michael E. Wysession (http://eps.wustl.edu/people/michael-e-wysession)
PhD, Northwestern University

Associate Professors

Jeffrey G. Catalano (http://eps.wustl.edu/people/jeff_catalano)
PhD, Stanford University

David A. Fike (http://eps.wustl.edu/people/Dave_Fike)
PhD, Massachusetts Institute of Technology
Philip A. Skemer (http://eps.wustl.edu/people/phil_skemer)
PhD, Yale University

Assistant Professors

Alexander S. Bradley (http://eps.wustl.edu/people/Alexander_Bradley)
PhD, Massachusetts Institute of Technology

Bronwen L. Konecky (http://eps.wustl.edu/people/bronwen_konecky)
PhD, Brown University

Michael Krawczynski (http://eps.wustl.edu/people/mike_krawczynski)
PhD, Massachusetts Institute of Technology

Rita Parai (http://eps.wustl.edu/people/rita_parai)
PhD, Harvard University

Kun Wang (http://eps.wustl.edu/people/kun_wang)
PhD, Washington University

Professors Emeriti

Ghislaine Crozaz (http://eps.wustl.edu/people/Ghislaine_Crozaz)
PhD, Université Libre de Bruxelles

Harold L. Levin (http://eps.wustl.edu/people/harold-l-levin)
PhD, Washington University

Roger J. Phillips (http://eps.wustl.edu/people/roger-j-phillips)
PhD, University of California, Berkeley

Frank A. Podosek (http://eps.wustl.edu/people/Frank_Podosek)
PhD, University of California, Berkeley

Degree Requirements

PhD in Earth and Planetary Sciences

The degree requirements for a PhD in Earth and Planetary Sciences are intended to ensure that all students develop independence and originality of thought and acquire knowledge that has sufficient breadth and depth to be scientific leaders in their field. Students are required to complete eight courses, six of which must be taken in the Department of Earth and Planetary Sciences. Students entering with an AM degree in a closely related field may waive two of these course requirements if approved by the faculty.

Students begin research early in the program, completing a small project in their second semester. At this time each student selects a faculty member to serve as the major adviser as well as two additional faculty members to provide additional guidance; these three faculty members comprise each student’s Research Advisory Committee. During their second year, students continue this research as they work toward the oral examination at the end of their second year, which requires preparation of a research paper, an oral presentation of research results, and a question and answer session with the Research Advisory Committee. Students are also required to obtain experience in teaching during their studies. The PhD program culminates in the writing of a dissertation and its defense in an oral presentation.

AM in Earth and Planetary Sciences

The department offers two tracks for completion of the AM degree. Both tracks require completion of six courses, five of which must be taken in the Department of Earth and Planetary Sciences. One track toward the AM degree is a component of the PhD degree program, with students being awarded an AM upon successful completion of the oral examination in the second year of the program. The other track is for students seeking a terminal AM degree. This requires completion of a master’s thesis and its defense in an oral presentation by the end of the second year of study.

East Asian Languages and Cultures

The Department of East Asian Languages and Cultures (EALC) offers advanced degrees in the traditional and modern literatures and cultures of East Asia, based on substantial knowledge of at least one East Asian language. EALC offers the AM in Chinese and Japanese, and the PhD in Chinese Language and Literature, Japanese Language and Literature, Chinese Comparative Literature, and Japanese and Comparative Literature.

The goal of these programs is to produce scholars well-trained in their chosen languages, firmly grounded in the relevant linguistic and literary traditions, and thoroughly conversant with critical discourses (indigenous and Western) relevant to their fields. With research strengths that cover premodern poetry and poetics, gender and sexuality, religious texts and traditions, narrative, memoir, dramatic literature, postmodernity and more, our internationally recognized faculty is poised to offer graduate students careful and consistent mentoring. Admitting only a select number of graduate students a year, our programs allow individualized guidance. In the completion of these programs at the PhD level, candidates have extended firsthand exposure to the modern societies whose languages, literatures, and cultures they study as well as significant teaching experience in both language and literature classes.

Phone: 314-935-4448
Email: ealc@wustl.edu
Website: http://ealc.wustl.edu
Faculty

Chair
Rebecca Copeland (http://ealc.wustl.edu/people/rebecca-copeland)
Professor
PhD, Columbia University
Japanese literature

Endowed Professor
Robert Hegel (http://ealc.wustl.edu/people/hegel_robert-e)
Liselotte Dieckmann Professor of Comparative Literature
PhD, Columbia University
Chinese literature

Professors
Beata Grant (http://ealc.wustl.edu/people/grant_beata)
PhD, Stanford University
Chinese; religious studies

Marvin H. Marcus (http://ealc.wustl.edu/people/marvin-marcus)
PhD, University of Michigan
Japanese literature

Associate Professors
Lingchei Letty Chen (http://ealc.wustl.edu/people/chen_lingchei-letty)
PhD, Columbia University
Chinese literature

Ji-Eun Lee (http://ealc.wustl.edu/people/lee_ji-eun)
PhD, Harvard University
Korean literature

Zhao Ma (http://ealc.wustl.edu/people/ma_zhao)
PhD, Johns Hopkins University
Chinese history

Jamie Newhard (http://ealc.wustl.edu/people/jamie-newhard)
PhD, Columbia University
Japanese literature

Professor of the Practice
Virginia S. Marcus (http://ealc.wustl.edu/people/ginger-marcus)
MA, University of Michigan, New York University
Japanese language

Teaching Professor
Mijeong Mimi Kim (http://ealc.wustl.edu/people/kim_mijeong-mimi)
EdD, University of San Francisco
Korean language

Senior Lecturers
Shino Hayashi (http://ealc.wustl.edu/people/shino-hayashi)
MA, University of Wisconsin, University of Minnesota
Japanese language

Xia Liang (http://ealc.wustl.edu/people/liang_xia)
MA, Beijing Normal University
Chinese language

Judy Zhijun Mu (http://ealc.wustl.edu/people/mu_judy-zhijun)
PhD, University of Illinois at Urbana-Champaign
Chinese language

Wei Wang (http://ealc.wustl.edu/people/wang_wei)
MA, University of Minnesota, Beijing Language and Culture University
Chinese language

Fengtao Wu (http://ealc.wustl.edu/people/wu_fengtao)
MA, Indiana University Bloomington
Chinese language

Lecturers
Wenhui Chen (http://ealc.wustl.edu/people/chen_wenhui)
MA, National Taiwan Normal University
Chinese language

In Sung Ko (http://ealc.wustl.edu/people/insung-ko)
PhD, University of Hawaii at Manoa
Korean language

Ke Nie (http://ealc.wustl.edu/people/nie_ke)
MA, Capital Normal University
Chinese language

Zihan Qin (http://ealc.wustl.edu/people/zihan-qin)
MA, University of Iowa
Chinese language

Jingyi Wang (http://ealc.wustl.edu/people/jingyi-wang)
MA, Capital Normal University
Chinese language

Kanako Yao (http://ealc.wustl.edu/people/kanako-yao)
MA, Ohio State University
Japanese language

Degree Requirements

Master of Arts in Chinese or Japanese

The Master of Arts in Chinese or Japanese requires 36 units of graduate study in Chinese or Japanese, which may include courses from related fields such as East Asian Studies and Comparative Literature, including the following:

1. Language proficiency through the fourth level, and two semesters of classical Chinese or Japanese. No more than 12 units in language preparation may be applied.
2. At least two semesters of literary history courses.
3. A research proseminar, preferably in the first year of study.
4. Either a master's thesis or a master's essay, or successful completion of a comprehensive written exam.

The degree is completed in four semesters.

**PhD in Chinese Language and Literature or PhD in Japanese Language and Literature**

The PhD in Chinese Language and Literature or Japanese Language and Literature combines the study of Chinese or Japanese literature with literary theory and critical methodology. Students are required to take courses in Chinese or Japanese literature, in another East Asian literature or culture, and in literary and cultural theory and critical methodology; some of these may focus on other literatures. Doctoral students must demonstrate native or near-native competence both in English and in either Chinese or Japanese. If needed for research in the chosen area of specialization, sufficient proficiency in one or more additional languages may be required.

Students must pass a qualifying examination at the end of their first year and three comprehensive examinations at the end of their third year. In addition, before the beginning of the fourth year, students must submit a dissertation prospectus for committee approval. Unless the student has taken graduate-level course work in the relevant research language(s) or demonstrated sufficient competence in other ways, language competence examinations will be required by the end of course work. All students gain teaching experience in both language and literature with extensive hands-on instruction in pedagogical methodologies.

**PhD in Chinese and Comparative Literature or PhD in Japanese and Comparative Literature**

The PhD in Chinese and Comparative Literature and the PhD in Japanese and Comparative Literature are offered jointly with the Committee on Comparative Literature. The focus of these programs is comparison of the contents, theoretical basis, and methodologies of Chinese or Japanese literature and a second literature (Western or non-Western), within the contexts of a familiarity with the cultural and historical backgrounds of the literary works and of the critical and historical methodology of modern literary study. Whether or not applicants enter the program with a relevant master's degree, the requirements for our AM in Chinese or Japanese must be met as part of the requirements for the joint PhD degree. Required course work, qualifying examination, comprehensive examinations, dissertation prospectus, demonstration of language proficiency, and teaching opportunities are analogous to those in the PhD programs solely in Chinese or Japanese.

---

**East Asian Studies**

The East Asian Studies program consists of faculty members with Asian specializations drawn from various departments, including Anthropology; Art History and Archaeology; East Asian Languages and Cultures; Film and Media Studies; History; and International and Area Studies. The program offers the AM in East Asian Studies, a broad-ranging study of East Asia across regional, historical, and disciplinary boundaries. Students may pursue language study in Chinese, Japanese or Korean.

**Phone:** 314-935-4448  
**Email:** eas@wustl.edu  
**Website:** http://eas.wustl.edu

**Faculty**

**Director**

Lori Watt (http://history.artsci.wustl.edu/lori_watt)  
Associate Professor  
PhD, Columbia University  
History; International and Area Studies

**Endowed Professor**

Robert E. Hegel (http://ealc.wustl.edu/people/hegel_robert-e)  
Lieselotte Dieckmann Professor of Comparative Literature  
PhD, Columbia University  
East Asian Languages and Cultures

**Professors**

Rebecca Copeland (http://ealc.wustl.edu/people/rebecca-copeland)  
PhD, Columbia University  
East Asian Languages and Cultures

Beata Grant (http://ealc.wustl.edu/people/grant_beata)  
PhD, Stanford University  
East Asian Languages and Cultures

Marvin H. Marcus (http://ealc.wustl.edu/people/marvin-marcus)  
PhD, University of Michigan  
East Asian Languages and Cultures

**Associate Professors**

Lingchei Letty Chen (http://ealc.wustl.edu/people/chen_lingchei-letty)  
PhD, Columbia University  
East Asian Languages and Cultures

Kristina Kleutghen (http://arthistory.artsci.wustl.edu/people/kristina-kleutghen)  
David W. Mesker Associate Professor  
PhD, Harvard University  
Art History
Ji-Eun Lee (http://ealc.wustl.edu/people/lee_ji-eun)
PhD, Harvard University
East Asian Languages and Cultures

Zhao Ma (http://ealc.wustl.edu/people/ma_zhao)
PhD, Johns Hopkins University
East Asian Languages and Cultures

Steven B. Miles (http://history.artsci.wustl.edu/steve_miles)
PhD, University of Washington
History

Jamie Newhard (http://ealc.wustl.edu/people/jamie-newhard)
PhD, Columbia University
East Asian Languages and Cultures

Assistant Professors

Diane Lewis (http://fms.artsci.wustl.edu/people/diane-wei-lewis)
PhD, University of Chicago
Film and Media Studies

Priscilla Song (http://anthropology.artsci.wustl.edu/
song_priscilla)
PhD, Harvard University
Anthropology

Professor of the Practice

Virginia S. Marcus (http://ealc.wustl.edu/people/ginger-marcus)
MA, University of Michigan, New York University
East Asian Languages and Cultures

Teaching Professor

Mijeong Mimi Kim (http://ealc.wustl.edu/people/kim_mijeong-
mimi)
EdD, University of San Francisco
East Asian Languages and Cultures

Senior Lecturers

Shino Hayashi (http://ealc.wustl.edu/people/shino-hayashi)
MA, University of Wisconsin-Madison
East Asian Languages and Cultures

Xia Liang (http://ealc.wustl.edu/people/liang_xia)
MA, Beijing Normal University
East Asian Languages and Cultures

Judy Zhijun Mu (http://ealc.wustl.edu/people/mu_judy-zhijun)
PhD, University of Illinois at Urbana-Champaign
East Asian Languages and Cultures

Wei Wang (http://ealc.wustl.edu/people/wang_wei)
MA, University of Minnesota, Beijing Language and Culture University
East Asian Languages and Cultures

Fengtao Wu (http://ealc.wustl.edu/people/wu_fengtao)
MA, University of Indiana Bloomington
East Asian Languages and Cultures

Lecturers

Wenhui Chen (http://ealc.wustl.edu/people/chen_wenhui)
MA, Taiwan Normal University
East Asian Languages and Cultures

Linling Gao-Miles (http://ias.wustl.edu/people/linling-xu)
PhD, Nagoya University
International and Area Studies

Insung Ko (http://ealc.wustl.edu/people/insung-ko)
PhD, University of Hawaii at Manoa
East Asian Languages and Cultures

Ke Nie (http://ealc.wustl.edu/people/nie_ke)
MA, Capital Normal University
East Asian Languages and Cultures

Zihan Qin (http://ealc.wustl.edu/people/zihan-qin)
MA, University of Iowa
East Asian Languages and Cultures

Jingyi Wang (http://ealc.wustl.edu/people/jingyi-wang)
MA, Capital Normal University
East Asian Languages and Cultures

Kanako Yao (http://ealc.wustl.edu/people/kanako-yao)
MA, Ohio State University
East Asian Languages and Cultures

Degree Requirements

Master of Arts in East Asian Studies

The Master of Arts in East Asian Studies, which requires 30 units of graduate study, offers advanced interdisciplinary courses in Chinese, Japanese, and Korean studies in areas that include literature, history, anthropology, and art history. Students are required to take the core seminar, normally in their first semester, and at least two substantial writing seminars. Students must achieve at least third-year proficiency in one Asian language, with no more than 12 units of language applying to the degree. For the exit requirement, a student may choose to write a master’s thesis or master's essay, or take the exit exam. The degree can be completed in three or four semesters; with the thesis option, the degree requires four semesters.

Joint Law and East Asian Studies Program

The Joint Law and East Asian Studies program, leading to the Juris Doctor (http://bulletin.wustl.edu/law/juris-doctor) and Master of Arts degrees, combines the regular curriculum of the School of Law and special strengths in international legal studies with the broad offerings of the interdisciplinary East Asian Studies program. The joint program offers an integrated curriculum with courses that may be applied toward both degrees. Nine units are cross-counted between the degrees; the program can be
completed in seven semesters. Applicants must apply to and be accepted by both programs.

**Joint Business and East Asian Studies Program**

The Joint Business and East Asian Studies program, leading to an MBA from the Olin Business School and an AM in East Asian Studies, offers the opportunity to develop an expertise in business practice within an East Asian context. Six units are cross-counted between the degrees; the program can be completed in six semesters. Applicants must apply to and be accepted by both programs.

**Economics**

The Department of Economics at Washington University has a strong reputation in teaching and developing high-quality PhD students for academic positions and for private- and public-sector jobs. We are seeking qualified students from any field who possess strong analytical abilities in mathematics and statistics and who are willing to complete a challenging PhD degree in **Economics**. At this time, we do not offer a terminal AM in our program.

The department offers students financial support while in good academic standing.

**Phone:** 314-935-5646  
**Email:** economics@wustl.edu  
**Website:** [http://economics.wustl.edu/graduate](http://economics.wustl.edu/graduate)

**Faculty**

**Chair**

John Nachbar  
Professor  
PhD, Harvard University  
Economic theory

**Associate Chair**

Yongseok Shin  
Professor  
PhD, Stanford University  
Macroeconomics; economic growth

**Endowed Professors**

Costas Azariadis  
Edward Mallinckrodt Distinguished Professor in Arts & Sciences  
PhD, Carnegie Mellon University  
Macroeconomic dynamics; economic development; monetary and fiscal policy

Michele Boldrin  
Joseph Gibson Hoyt Distinguished Professor in Arts & Sciences  
PhD, University of Rochester  
Economic theory; economic growth; macroeconomics

Francisco (Paco) Buera  
Sam B. Cook Professor of Economics  
PhD, University of Chicago  
Macroeconomics; macroeconomic development

Steven Fazzari  
Bert A. and Jeanette L. Lynch Distinguished Professor of Economics  
PhD, Stanford University  
Macroeconomics; Keynesian economics; investment and finance

Rodolfo Manuelli  
James S. McDonnell Distinguished University Professor  
PhD, University of Minnesota  
Economic growth and development economics; macro and monetary economics

Werner Ploberger  
Thomas H. Eliot Distinguished Professor in Arts & Sciences  
PhD, Vienna University of Technology  
Statistics; econometric methodology; time-series econometrics

Robert Pollak  
Herrnreich Distinguished Professor of Economics  
PhD, Massachusetts Institute of Technology  
Environmental economics; microeconomics/industrial organization; business and government; political economy

Norman Schofield  
Dr. William Taussig Professor of Political Economy  
LittD (Doctor of Letters), Liverpool University  
Doctorat d’Etat en Sciences Economiques, Universite de Caen  
PhD, Essex University  
Formal theory; comparative politics

Ping Wang  
Seigle Family Professor  
PhD, University of Rochester  
Growth/development; money/macro; economic theory; spatial/health economics

**Professors**

Gaetano Antinolfi  
PhD, Cornell University  
Macroeconomics; monetary and international economics
Marcus Berliant  (http://economics.wustl.edu/berliant)
PhD, University of California, Berkeley
Public finance; mathematical economics; urban economics

Robert Parks  (http://economics.wustl.edu/people/parks)
PhD, Purdue University
Econometrics; public finance

Bruce Petersen  (http://economics.wustl.edu/people/bruce_petersen)
PhD, Harvard University
Financial economics; applied microeconomics

Associate Professors

George-Levi Gayle  (http://economics.wustl.edu/people/george-levi-gayle)
PhD, University of Pittsburgh
Econometric theory; contract theory; labor economics; personnel economics; corporate governance

Limor Golan  (http://economics.wustl.edu/people/limor-golan)
PhD, University of Wisconsin–Madison
Labor economics; applied microeconomics; applied econometrics

Sukkoo Kim  (http://economics.wustl.edu/people/sukkoo_kim)
PhD, University of California, Los Angeles
Economic history; urban and regional economics; trade and development

Brian Rogers  (http://economics.wustl.edu/people/brian-rogers)
PhD, California Institute of Technology
Microeconomic theory, in particular the fields of network formation, social learning, and applied game theory

Jonathan Weinstein  (http://economics.wustl.edu/people/jonathan-weinstein)
PhD, Massachusetts Institute of Technology

Assistant Professors

Ana Babus  (https://economics.wustl.edu/people/ana-babus)
PhD, Erasmus University Rotterdam
Microeconomic theory; finance

Ian Fillmore  (https://economics.wustl.edu/people/ian-fillmore)
PhD, University of Chicago
Intersection of industrial organization, labor economics, and econometrics; economics of education and education markets

Sanghmitra Gautam  (https://economics.wustl.edu/people/sanghmitra-gautam)
PhD, University College London
Development economics; applied microeconometrics; public economics

SangMok Lee  (https://economics.wustl.edu/people/sangmok-lee)
PhD, California Institute of Technology
Microeconomics

Anqi Li  (http://economics.wustl.edu/people/anqi-li)
PhD, Stanford University
Mechanism design; micro theory

Paulo Natenzon  (http://economics.wustl.edu/people/paulo-natenzon)
PhD, Princeton University
Behavioral economics; decision theory; economic theory

Carl Sanders  (http://economics.wustl.edu/people/carl-sanders)
PhD, University of Wisconsin
Labor Economics particularly models with multidimensional human capital and their implications for occupational mobility and wage growth

Postdoctoral Fellow

Valerio Dotti  (https://valeriodotti.github.io)
PhD, University College London
Political economy

Degree Requirements

PhD in Economics

General Course Requirements

The PhD in Economics takes five years to complete and requires at least two years of courses in 500-level classes with a 3.0 grade point average. Students may transfer up to 24 units of graduate credits completed elsewhere but are advised to make such a transfer only after consultation with the director of graduate studies.

Courses must include the following classes:

1. Microeconomic Theory and Macroeconomic Theory: 12 units (Econ 501, Econ 502, Econ 503, Econ 504);
2. Quantitative methods and econometrics: 9 units (Econ 511, Econ 512, Econ 5161).

An Ideal Chronology of PhD Study

Summer Before the First Year (August)

• Mathematics Review and Statistics Review

Year 1

Core Courses:

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Econ 501 Macroeconomics I</td>
<td>Econ 502 Macroeconomics II</td>
</tr>
<tr>
<td>Econ 503 Microeconomics I</td>
<td>Econ 504 Microeconomics II</td>
</tr>
<tr>
<td>Econ 511 Quantitative Methods I</td>
<td>Econ 5161 Applied Econometrics</td>
</tr>
<tr>
<td>Econ 512 Quantitative Methods in Economics II</td>
<td></td>
</tr>
</tbody>
</table>

Year 2
• Preliminary exams in late August, retake preliminary exams (if necessary) in December
• Field courses
• Research paper proposal

Year 3
• Complete research paper
• Field courses
• Dissertation proposal

Year 4
• Write dissertation
• Prepare and present job market paper

Year 5
• Enter the job market
• Finish and defend the dissertation

More information on degree requirements can be found on the Department of Economics (http://economics.wustl.edu) website.

Education

The Department of Education offers full-time programs for graduates who desire either a master's degree for teacher certification or a PhD in Education. The teacher certification master's programs are ideal for recent graduates who have few, if any, formal courses in education. The Master of Arts in Teaching (MAT) is for students seeking secondary teacher certification in a specific subject area; the Master of Arts in Education (MAEd) is for students seeking elementary teacher certification. Students interested in the elementary certification program may also consider the MAEd/MSW joint degree program with the Brown School. The teacher education program principles include: a commitment to an equitable and just education for all students; a knowledge of both the subject(s) to be taught and best practices in pedagogy; and the enactment of the role of teacher-as-enquirer.

Doctoral study in Education is aimed at strengthening and deepening the student's analytical understanding of education in both research and practice. The PhD in Education focuses on three main strands of study: Social Contexts of Educational Research; Science and Mathematics Education; and Applied Linguistics in Education. In addition, students may select concentrations in the following areas: mathematics and science education; policy studies; urban education and American culture studies; second language research; English language learners.

Students working toward a PhD in Education are expected to acquire an understanding of education as a complex social, cultural, and moral/political activity and as a field of study with rich literature bases and strong ties to disciplinary knowledge, classroom practice, and a variety of technologies. Our faculty bring special interests and expertise to the examination of educational interactions in such sites as schools, families, and other cultural institutions. Students are expected to acquire theoretical and empirical expertise in an area of concentration even as they demonstrate their broader understanding of educational processes and problems. Finally, students are expected to acquire methodological competence in empirical inquiry and to pursue questions that are of interest and import for the student individually as well as a larger educational community.

Graduates of the PhD program should be prepared to join the community of professional educators who contribute to our understanding of the complexity of education and to continue inquiring into educational processes and problems wherever they choose to work.

In addition, through University College, the department offers part-time students the opportunity to earn teacher certification (elementary and secondary) through a non-degree post-AB program, and those currently working in a classroom the opportunity to earn an MAEd through evening classes. For more information on part-time programs, visit the University College – Education (p. 134) page of this Bulletin.

Phone: 314-935-6791
Website: http://education.wustl.edu

Faculty

Chair
Kit Wellman (http://philosophy.artsci.wustl.edu/people/kit-wellman)
Professor
PhD, University of Arizona

Endowed Professors
William F. Tate (http://education.wustl.edu/people/tate_william-f)
Edward Mallinckrodt Distinguished University Professor in Arts & Sciences
PhD, University of Maryland, College Park

Carol Camp Yeakey (http://education.wustl.edu/people/yeakey_carol-camp)
Marshall S. Snow Professor of Arts & Sciences
PhD, Northwestern University

Professor
Cindy Brantmeier (http://education.wustl.edu/people/cindy-brantmeier)
Professor of Education and Applied Linguistics
PhD, Indiana University, Bloomington

Associate Professors
Garrett A. Duncan (http://education.wustl.edu/Duncan)
PhD, Claremont Graduate University
Master of Arts in Teaching

The MAT program for students seeking secondary teacher certification requires at least 36 hours in Professional Education courses plus 12 graduate credit hours in their teaching subject area during semesters when their schedules allow. The courses are typically completed in four semesters. The first fall semester includes professional education courses in adolescent development and a foundations of education course, along with appropriate courses in the content area. The second semester includes educational psychology courses with 30 school observation hours and appropriate content area courses. The third semester includes a field experience seminar requiring 50 hours of school observation, a curriculum and instruction course for the content area, a reading intervention course, and a possible content area course. The final (fourth) semester consists of 12-14 weeks of student teaching (8 credit hours), as well as courses for reading in the content area and a teaching-learning process course. When students successfully complete the program and the state-mandated certification assessments, they are eligible for initial teacher certification in Missouri for their selected subject area.

Students may be certified in the following areas: (grades 9-12) Biology, Chemistry, Earth Science, Physics, Mathematics, Social Science (history, political science, psychology, anthropology, etc.), English; (grades K-12) Art, Dance, Foreign Language (Latin, Chinese, French, German, Japanese, Russian, Spanish). There are specific subject area requirements for each subject, which students may fulfill from both their undergraduate courses and the 12 credit hours of subject area graduate courses required in the MAT program. It is strongly suggested that students apply for a subject in which they have completed (or will complete) a bachelor's degree (or earned the credits equivalent to an undergraduate major).

PhD in Education

Our doctoral program focuses on three major strands of study: Social Contexts of Educational Research; Science and Mathematics Education; and Applied Linguistics in Education. Students are afforded an opportunity to build unique programs of study by combining concentrations from: urban education and American culture studies, mathematics and science education, policy studies, second language acquisition, or English language learners. These concentrations are supplemented by core studies in history and methodology and by a seminar shared by all doctoral students. Many courses have fieldwork and research components, opportunities to attend and present at local and national conferences, and seminars. Required and elective courses provide the student with a broad understanding of scholarship and research in education and prepare the student for meeting the qualifying examination requirements and for dissertation research and writing.

Students are required to take graduate-level courses in history, methodology, and doctoral seminars, as well as in their major strand of study and additional concentrations. By the third year, students should be completing their courses and submitting a Qualifying Portfolio of written work before moving on to the dissertation phase of the program. Students must have a dissertation proposal approved, generally by the fourth year, before they continue with the bulk of their research and writing for the dissertation. A dissertation is then completed and defended, usually between the fifth and seventh year of study.

Integrating teaching and research with scholarly development involves the doctoral candidate in the central responsibilities of the professional educator. An advantage of a small department within Arts & Sciences is that students have multiple opportunities to work closely with many of the faculty in the
department. In addition, the university offers a climate supporting interdisciplinary conversations across schools, departments and programs. As Education faculty, we encourage students to pursue learning experiences and contacts with faculty in other programs. Students encounter a diversity of disciplinary perspectives within and outside of the Department of Education in order to provide a broad understanding of the field.

School of Engineering & Applied Science

The School of Engineering & Applied Science is ranked among the top 50 engineering schools in *U.S. News & World Report*, and focuses intellectual efforts through a new convergence paradigm, particularly as applied to medicine and health (http://bulletin.wustl.edu/medicine/overview), energy and environment, entrepreneurship (http://engineering.wustl.edu/our-school/initiatives/Pages/entrepreneurship.aspx), and security.

For further information about PhD programs in engineering, please visit the following pages:

- Biomedical Engineering (p. 61)
- Computer Science & Engineering (p. 63)
- Electrical & Systems Engineering (p. 66)
- Energy, Environmental & Chemical Engineering (p. 69)
- Materials Science & Engineering (p. 71)
- Mechanical Engineering & Materials Science (p. 77)

Biomedical Engineering

Biomedical engineering (BME) seeks to advance and integrate life science knowledge with engineering methods and innovations that contribute to improvements in human health and well-being. Our vision is that lasting knowledge of biomedical systems and paradigm-shifting engineering technology will arise from integrating engineering concepts and basic science knowledge across molecular to whole-body levels. We believe that those taught to work across multiple disciplines, and to integrate modeling and experimental systems approaches, will be uniquely positioned to advance and generate new disciplines in biomedical engineering. With this vision in mind, we are committed to educating the next generation of biomedical engineers. We have leveraged our interdisciplinary strengths in engineering, and clinical and life sciences, to build a biomedical engineering department around research programs of excellence and translational potential: Biomedical & Biological Imaging; Cancer Technologies; Cardiovascular Engineering; Molecular & Cellular Systems Engineering; Neural Engineering; Orthopedic Engineering; and Regenerative Engineering in Medicine. These areas provide exciting opportunities for students with a variety of backgrounds and interests.

Students seeking the **PhD in Biomedical Engineering** may choose to study in one of seven multidisciplinary research programs that represent frontiers in biomedical engineering. Our core faculty work collaboratively with more than 90 affiliated faculty to offer students the opportunity to learn in a diverse and rich spectrum of BME research areas. Students graduating with the PhD in Biomedical Engineering are prepared to pursue paths in research and development in academic and industry settings, and are well-prepared to contribute to teaching and research translation. The **MD/PhD in Biomedical Engineering**, given jointly with the top-ranked School of Medicine, gives students in-depth training in modern biomedical research and clinical medicine. The typical MD/PhD career combines patient care and biomedical research but leans toward research.

**Contact:** Karen Teasdale  
**Phone:** 314-935-6164  
**Email:** teasdalek@wustl.edu  
**Website:** http://bme.wustl.edu/graduate

**Faculty Chair**

**Lori A. Setton** (https://engineering.wustl.edu/Profiles/Pages/Lori-Setton.aspx)  
Lucy and Stanley Lopata Distinguished Professor of Biomedical Engineering  
PhD, Columbia University  
Biomaterials for local drug delivery; tissue regenerations specific to the knee joints and spine

**Endowed Professors**

**Rohit V. Pappu** (https://engineering.wustl.edu/Profiles/Pages/Rohit-Pappu.aspx)  
Edwin H. Murty Professor of Engineering  
PhD, Tufts University  
Macromolecular self assembly and function; computational biophysics

**Yoram Rudy** (https://engineering.wustl.edu/Profiles/Pages/Yoram-Rudy.aspx)  
Fred Saigh Distinguished Professor of Biomedical Engineering  
PhD, Case Western Reserve University  
Cardiac electrophysiology; modeling of the cardiac system

**Frank Yin** (https://engineering.wustl.edu/Profiles/Pages/Frank-Yin.aspx)  
Stephen F. and Camilla T. Brauer Distinguished Professor of Biomedical Engineering  
MD, PhD, University of California, San Diego  
Tissue and cell biomechanics; hemodynamics
**Professors**

Mark Anastasio (https://engineering.wustl.edu/Profiles/Pages/Mark-Anastasio.aspx)
PhD, University of Chicago
Imaging sciences; phase-contrast; x-ray imaging

Jianmin Cui (https://engineering.wustl.edu/Profiles/Pages/Jianmin-Cui.aspx)
PhD, State University of New York–Stony Brook
Ion channels; channel structure-function relationship; biophysics

Daniel Moran (https://engineering.wustl.edu/Profiles/Pages/Daniel-Moran.aspx)
PhD, Arizona State University
Motor control; neural engineering; neuroprosthetics; movement biomechanics

Quing Zhu (https://engineering.wustl.edu/Profiles/Pages/Quing-Zhu.aspx)
PhD, University of Pennsylvania
Biophotonics and multimodality ultrasound and optical imaging

**Associate Professors**

Dennis L. Barbour (https://engineering.wustl.edu/Profiles/Pages/Dennis-Barbour.aspx)
MD, PhD, Johns Hopkins University
Auditory physiology; sensory cortex neurocircuitry; novel perceptual diagnostics and therapeutics

Vitaly Klyachko (https://engineering.wustl.edu/Profiles/Pages/Vitaly-Klyachko.aspx)
PhD, University of Wisconsin-Madison
Synaptic function and plasticity; neural circuits; information analysis; neurological disorders

Baranidharan Raman (https://engineering.wustl.edu/Profiles/Pages/Barani-Raman.aspx)
PhD, Texas A&M University
Computational and systems neuroscience; neuromorphic engineering; pattern recognition; sensor-based machine olfaction

Jin-Yu Shao (https://engineering.wustl.edu/Profiles/Pages/Jin-Yu-Shao.aspx)
PhD, Duke University
Cell mechanics; receptor and ligand interactions; molecular biomechanics

Kurt A. Thoroughman (https://engineering.wustl.edu/Profiles/Pages/Kurt-Thoroughman.aspx)
PhD, Johns Hopkins University
Human motor control and motor learning; neural computation

**Assistant Professors**

Jan Bieschke (https://engineering.wustl.edu/Profiles/Pages/Jan-Bieschke.aspx)
PhD, Max Planck Institute for Biophysical Chemistry/University of Braunschweig
Single molecule fluorescence and other biophysical methods to probe the mechanistic underpinnings of protein misfolding

Hong Chen (https://engineering.wustl.edu/Profiles/Pages/Hong-Chen.aspx)
PhD, University of Washington
Physical acoustics; therapeutic ultrasound and ultrasound imaging

Nate Huebsch (https://bme.wustl.edu/faculty/Pages/default.aspx)
PhD, Harvard University
Joining January 2018

Kristen Naegle (https://engineering.wustl.edu/Profiles/Pages/Kristen-Naegle.aspx)
PhD, Massachusetts Institute of Technology
Computational systems biology with emphasis on cellular networks involved in cancer and diabetes

Jon Silva (https://engineering.wustl.edu/Profiles/Pages/Jonathan-Silva.aspx)
PhD, Washington University
Ion channel biophysics

Michael D. Vahey (https://bme.wustl.edu/faculty/Pages/default.aspx)
PhD, Massachusetts Institute of Technology
Joining March 2018

**Senior Professors**

Larry Taber (https://bme.wustl.edu/faculty/Pages/faculty.aspx?bio=19)
PhD, Stanford University
Mechanics of growth and development; cardiac mechanics

**Lecturers**

Noah Ledbetter (https://bme.wustl.edu/faculty/Pages/default.aspx)
PhD, University of Utah

Patricia Widder (https://bme.wustl.edu/faculty/Pages/default.aspx)
MS, Washington University

**Degree Requirements**

PhD and Combined MD/PhD in Biomedical Engineering

The department offers programs leading to the doctor of philosophy (PhD) in Biomedical Engineering and combined MD/
PhD degrees. The latter degree is given jointly with the School of Medicine.

The doctoral degree requires a minimum of 72 credits beyond the bachelor's level, with a minimum of 36 being course credits (including the core curriculum) and a minimum of 24 credits of doctoral dissertation research.

The core curriculum that must be satisfied by all PhD students consists of the following:

- One graduate-level course in life sciences
- One graduate-level course in mathematics
- One graduate-level course in computer science or exemption by proficiency
- Four BME courses from an approved list

Please visit the Biomedical Engineering (BME) website (https://bme.wustl.edu/graduate/phd/Pages/default.aspx) for a comprehensive list of the approved core and course curriculum courses.

The core requirements represent 6-7 courses, with a total of 9 graduate courses required for the PhD. Up to 9 units of BME 601C Research Rotation (https://courses.wustl.edu/CourseInfo.aspx?sch=E&dept=E62&crs=601C) and/or BME 501C Graduate Seminar (https://courses.wustl.edu/CourseInfo.aspx?sch=E&dept=E62&crs=501C) may be counted toward the 36 units of graduate courses required for the PhD. Up to two 400-level courses may be counted toward the 9 courses of graduate courses required for the PhD (not including independent study courses, journal clubs or seminar-based courses). Graduate courses may be transferred in (up to 24 units) but must be evaluated and approved by the director of doctoral studies. The evaluation and approval may occur at any time but course transfer does not become official until after one year in residence at Washington University.

Students seeking the PhD in Biomedical Engineering enroll in two to three courses each semester and participate in two or three laboratory rotations in the first year. By the end of that year, students take their oral qualifying exam consisting of a presentation of their research done to date in the mentor's laboratory followed by an oral exam addressing any issues directly related to their rotation report or their oral presentation. Upon successfully passing the qualifying examination, they advance to candidacy and complete the balance of their requirements. During the second and third years, students complete their remaining courses, participate in one semester of a mentored teaching experience, and begin their thesis research. By the end of the third year, students must complete their thesis proposal. Students must also complete one accepted first author publication and complete a dissertation.

Students pursuing the combined MD/PhD in Biomedical Engineering must complete the degree requirements for both schools. MD/PhD students typically complete the first two years of the medical school pre-clinical curriculum while also performing one or more research rotations, then the remaining requirements for the doctoral degree, and finally the clinical training years of the medical degree. The department generally gives graduate course credits for some of the medical school courses toward fulfillment of course requirements for the PhD degree. This is arranged on an individual basis between the student, their academic adviser, and the director of doctoral studies.

**Computer Science & Engineering**

The Department of Computer Science & Engineering offers PhD programs in Computer Science and in Computer Engineering. Computer Science research encompasses the fundamentals of software and algorithm design, machine learning and bioinformatics, visual and cyber-physical computing, and human-computer interaction. Computer Engineering focuses on the interaction of software and hardware in the design of computing systems and networks. Our research groups have extensive interdisciplinary ties across the university, with collaborations in medicine, science, the humanities, and social work. Recent graduates have accepted research and teaching faculty positions, and research and engineering positions in leading technology companies.

Both PhD programs require a combination of courses, research and teaching. The required courses are often completed early in the program since students are integrated into research groups in their first year and the program emphasis is on creative research. The program has milestones with both written and oral components that provide structure to the five- to six-year degree. The program considers applicants with either bachelor’s or master’s degrees and has had successful applicants in the past whose background is outside of computer science.

**Faculty**

**Chair**

Roch Guérin (https://engineering.wustl.edu/Profiles/Pages/Roch-Gu%C3%A9rin.aspx)
Harold B. and Adelaide G. Welge Professor of Computer Science
PhD, California Institute of Technology
Computer networks and communication systems
**Professors**

Sanjoy Baruah ([https://engineering.wustl.edu/Profiles/Pages/Sanjoy-Baruah.aspx](https://engineering.wustl.edu/Profiles/Pages/Sanjoy-Baruah.aspx))  
PhD, The University of Texas at Austin  
Real-time and safety-critical system design, cyber-physical systems, scheduling theory, resource allocation and sharing in distributed computing environments

Aaron Bobick ([https://engineering.wustl.edu/Profiles/Pages/Aaron-Bobick.aspx](https://engineering.wustl.edu/Profiles/Pages/Aaron-Bobick.aspx))  
James M. McKelvey Professor and Dean  
PhD, Massachusetts Institute of Technology  
Computer vision, graphics, human-robot collaboration

Michael R. Brent ([https://engineering.wustl.edu/Profiles/Pages/Michael-Brent.aspx](https://engineering.wustl.edu/Profiles/Pages/Michael-Brent.aspx))  
Henry Edwin Sever Professor of Engineering  
PhD, Massachusetts Institute of Technology  
Systems biology, computational and experimental genomics, mathematical modeling, algorithms for computational biology, bioinformatics

Jeremy Buhler ([https://engineering.wustl.edu/Profiles/Pages/Jeremy-Buhler.aspx](https://engineering.wustl.edu/Profiles/Pages/Jeremy-Buhler.aspx))  
PhD, Washington University  
Computational biology, genomics, algorithms for comparing and annotating large biosequences

Roger D. Chamberlain ([https://engineering.wustl.edu/Profiles/Pages/Roger-Chamberlain.aspx](https://engineering.wustl.edu/Profiles/Pages/Roger-Chamberlain.aspx))  
DSc, Washington University  
Computer engineering, parallel computation, computer architecture, multiprocessor systems

Yixin Chen ([https://engineering.wustl.edu/Profiles/Pages/Yixin-Chen.aspx](https://engineering.wustl.edu/Profiles/Pages/Yixin-Chen.aspx))  
PhD, University of Illinois at Urbana-Champaign  
Mathematical optimization, artificial intelligence, planning and scheduling, data mining, learning data warehousing, operations research, data security

Patrick Crowley ([https://engineering.wustl.edu/Profiles/Pages/Patrick-Crowley.aspx](https://engineering.wustl.edu/Profiles/Pages/Patrick-Crowley.aspx))  
PhD, University of Washington  
Computer and network systems, network security

Ron K. Cytron ([https://engineering.wustl.edu/Profiles/Pages/Ron-Cytron.aspx](https://engineering.wustl.edu/Profiles/Pages/Ron-Cytron.aspx))  
PhD, University of Illinois at Urbana-Champaign  
Programming languages, middleware, real-time systems

Christopher D. Gill ([https://engineering.wustl.edu/Profiles/Pages/Christopher-Gill.aspx](https://engineering.wustl.edu/Profiles/Pages/Christopher-Gill.aspx))  
DSc, Washington University  
Distributed real-time embedded systems, middleware, formal models and analysis of concurrency and timing

Raj Jain ([https://engineering.wustl.edu/Profiles/Pages/Raj-Jain.aspx](https://engineering.wustl.edu/Profiles/Pages/Raj-Jain.aspx))  
PhD, Harvard University  
Wireless networks, network security, next generation internet, sensor networks, telecommunications networks, performance analysis, traffic management, quality of service

Tao Ju ([https://engineering.wustl.edu/Profiles/Pages/Tao-Ju.aspx](https://engineering.wustl.edu/Profiles/Pages/Tao-Ju.aspx))  
PhD, Rice University  
Computer graphics, visualization, mesh processing, medical imaging and modeling

Chenyang Lu ([https://engineering.wustl.edu/Profiles/Pages/Chenyang-Lu.aspx](https://engineering.wustl.edu/Profiles/Pages/Chenyang-Lu.aspx))  
Fullgraf Professor in the Department of Computer Science & Engineering  
PhD, University of Virginia  
Real-time and embedded systems, wireless sensor networks, mobile computing

Weixiong Zhang ([https://engineering.wustl.edu/Profiles/Pages/Weixiong-Zhang.aspx](https://engineering.wustl.edu/Profiles/Pages/Weixiong-Zhang.aspx))  
PhD, University of California, Los Angeles  
Computational biology, genomics, machine learning and data mining, combinatorial optimization

**Associate Professors**

Kunal Agrawal ([https://engineering.wustl.edu/Profiles/Pages/Kunal-Agrawal.aspx](https://engineering.wustl.edu/Profiles/Pages/Kunal-Agrawal.aspx))  
PhD, Massachusetts Institute of Technology  
Parallel computing, cyber-physical systems & sensing, theoretical computer science

Sanmay Das ([https://engineering.wustl.edu/Profiles/Pages/Sanmay-Das.aspx](https://engineering.wustl.edu/Profiles/Pages/Sanmay-Das.aspx))  
PhD, Massachusetts Institute of Technology  
Design of algorithms for complex environments, computational social science, machine learning

Caitlin Kelleher ([https://engineering.wustl.edu/Profiles/Pages/Caitlin-Kelleher.aspx](https://engineering.wustl.edu/Profiles/Pages/Caitlin-Kelleher.aspx))  
Hugo F. & Ina Champ Urbauer Career Development Associate Professor  
PhD, Carnegie Mellon University  
Human-computer interaction, programming environments, and learning environments

William D. Richard ([https://engineering.wustl.edu/Profiles/Pages/William-Richard.aspx](https://engineering.wustl.edu/Profiles/Pages/William-Richard.aspx))  
PhD, University of Missouri-Rolla  
Ultrasonic imaging, medical instrumentation, computer engineering
Assistant Professors

Ayan Chakrabarti (https://engineering.wustl.edu/Profiles/Pages/Ayan-Chakrabarti.aspx)
PhD, Harvard University
Computer vision computational photography, machine learning

Roman Garnett (https://engineering.wustl.edu/Profiles/Pages/Roman-Garnett.aspx)
PhD, University of Oxford
Active learning (especially with atypical objectives), Bayesian optimization, and Bayesian nonparametric analysis

Chien-Ju Ho (https://engineering.wustl.edu/Profiles/Pages/Chien-Ju-Ho.aspx)
PhD, University of California, Los Angeles
Design and analysis of human-in-the-loop systems, with techniques from machine learning, algorithmic economics, and online behavioral social science

Brendan Juba (https://engineering.wustl.edu/Profiles/Pages/Brendan-Juba.aspx)
PhD, Massachusetts Institute of Technology
Theoretical approaches to artificial intelligence founded on computational complexity theory and theoretical computer science more broadly construed

Ulugbek Kamilov (https://engineering.wustl.edu/Profiles/Pages/Ulugbek-Kamilov.aspx)
PhD, École Polytechnique Fédérale de Lausanne, Switzerland
Computational imaging, image and signal processing, machine learning, and optimization

Angelina Lee (https://engineering.wustl.edu/Profiles/Pages/I-Ting-Angelina-Lee.aspx)
PhD, Massachusetts Institute of Technology
Designing linguistics for parallel programming, developing runtime system support for multithreaded software, and building novel mechanisms in operating systems and hardware to efficiently support parallel abstractions

Benjamin Moseley (https://engineering.wustl.edu/Profiles/Pages/Ben-Moseley.aspx)
PhD, University of Illinois at Urbana-Champaign
Design and analysis of algorithms, online and approximation algorithms, parallel computing, large data analysis, green computing and algorithmic applications

Alvitta Ottley (https://cse.wustl.edu/faculty/Pages/faculty.aspx?bio=109)
PhD, Tufts University
Designing personalized and adaptive visualization systems, including information visualization, human-computer interaction, visual analytics, individual differences, personality, user modeling and adaptive interfaces

William Yeoh (https://engineering.wustl.edu/Profiles/Pages/William-Yeoh.aspx)
PhD, University of Southern California
Artificial intelligence, multi-agent systems, distributed constraint optimization, planning and scheduling

Professor of the Practice

Dennis Cosgrove (https://cse.wustl.edu/faculty/Pages/Dennis-Cosgrove.aspx)
BS, University of Virginia
Programming environments and parallel programming

Lecturers

Marion Neumann (https://cse.wustl.edu/faculty/Pages/Marion-Neumann.aspx)
PhD, University of Bonn, Germany
Machine learning with graphs; solving problems in agriculture and robotics

Jonathan Shidal (https://cse.wustl.edu/faculty/Pages/Jon-Shidal.aspx)
PhD, Washington University
Computer architecture and memory management

Douglas Shook (https://cse.wustl.edu/faculty/Pages/Doug-Shook.aspx)
MS, Washington University
Imaging sensor design, compiler design and optimization

William Siever (https://cse.wustl.edu/faculty/Pages/Bill-Siever.aspx)
Principal Lecturer
PhD, Missouri University of Science and Technology

Todd Sproull (https://cse.wustl.edu/faculty/Pages/Todd-Sproull.aspx)
PhD, Washington University
Computer networking and mobile application development

Senior Professors

Jerome R. Cox Jr.
ScD, Massachusetts Institute of Technology
Computer system design, computer networking, biomedical computing
Mark A. Franklin  
Hugo F. and Ina Champ Urbauer Professor of Engineering  
PhD, Carnegie Mellon University  
Computer architecture, systems analysis and parallel processing, storage systems design

Jonathan S. Turner  
PhD, Northwestern University  
Design and analysis of internet routers and switching systems, networking and communications, algorithms

Professors Emeriti

Takayuki D. Kimura  
PhD, University of Pennsylvania  
Communication and computation, visual programming

Seymour V. Pollack  
MS, Brooklyn Polytechnic Institute  
Intellectual property, information systems

Degree Requirements

PhD in Computer Science or Computer Engineering

Students can choose to pursue a PhD in Computer Science or Computer Engineering. The requirements vary for each degree. Here are the core requirements:

• Complete 72 units of regular courses (at least 33 units), seminars (at least 3 units), and research credits (at least 24 units), including 9 units of breadth requirements for both the PhD in Computer Science and Computer Engineering degrees.

• Satisfy fundamental teaching requirements by participating in mentored teaching experiences, pedagogical teaching requirements by completing a certain number of qualifying pedagogy workshops, and scholarly communication requirements by participating in the Doctoral Student Research Seminar.

• Pass milestones demonstrating abilities to understand research literature, communicate orally and in writing, and formulate a detailed research plan. These milestones include an oral qualifying examination, a portfolio review for admission to candidacy, and a dissertation proposal defense, culminating in a dissertation defense.

For more information, please refer to the Doctoral Program Guide on our website (https://cse.wustl.edu/graduate/current-students/Pages/phd-students.aspx).

Mathematics. Research activity in the department is focused in the following three areas:

• Applied mathematics, systems & control
• Electronics & optics
• Signal processing, imaging & communications

Students working in any of these areas will enjoy the benefits of programs that balance fundamental theoretical concepts with modern applications. In our department, students find ample opportunities for close interactions with faculty members working on cutting-edge research and technology development.

Prospective PhD students with previous degrees in engineering who are interested in PhD studies and research in mathematics or statistics are encouraged to apply for PhD studies in Mathematics and Statistics. For more details, visit the Graduate Programs in Mathematics and Statistics (http://wumath.wustl.edu/graduate) webpage.

Phone: 314-935-7520  
Website: http://ese.wustl.edu

Faculty

Chair

R. Martin Arthur (https://engineering.wustl.edu/Profiles/Pages/Martin-Arthur.aspx)  
Newton R. and Sarah Louisa Glasgow Wilson Professor of Engineering  
PhD, University of Pennsylvania  
Ultrasonic imaging, electrocardiography

Endowed Professors

Arye Nehorai (https://engineering.wustl.edu/Profiles/Pages/Arye-Nehorai.aspx)  
Eugene and Martha Lohman Professor of Electrical Engineering  
PhD, Stanford University  
Signal processing, imaging, biomedicine, communications

Joseph A. O’Sullivan (https://engineering.wustl.edu/Profiles/Pages/Joseph-O-Sullivan.aspx)  
Samuel C. Sachs Professor of Electrical Engineering  
Dean, UMSL/WUSTL Joint Undergraduate Engineering Program  
PhD, Notre Dame University  
Information theory, statistical signal processing, imaging science with applications in medicine and security, and recognition theory and systems

Lan Yang (https://engineering.wustl.edu/Profiles/Pages/Lan-Yang.aspx)  
Edward H. & Florence G. Skinner Professor of Engineering  
PhD, California Institute of Technology  
Nano/micro photonics, ultra high-quality optical microcavities, ultra-low-threshold microlasers, nano/micro fabrication, optical sensing, single nanoparticle detection, photonic molecules, photonic materials

Electrical & Systems Engineering

The Department of Electrical & Systems Engineering offers PhD degrees in Electrical Engineering and in Systems Science &
**Professors**

Shantanu Chakrabartty (https://ese.wustl.edu/faculty/Pages/default.aspx?bio=101)
PhD, Johns Hopkins University
New frontiers in unconventional analog computing techniques using silicon and hybrid substrates, fundamental limits of energy efficiency, sensing and resolution by exploiting computational and adaptation primitives inherent in the physics of devices

Hiroaki Mukai (https://engineering.wustl.edu/Profiles/Pages/Hiro-Mukai.aspx)
Professor
PhD, University of California, Berkeley
Theory and computational methods for optimization, optimal control, systems theory, electric power system operations, differential games

Heinz Schaettler (https://engineering.wustl.edu/Profiles/Pages/Heinz-Schaettler.aspx)
PhD, Rutgers University
Optimal control, nonlinear systems, mathematical models in biomedicine

**Associate Professors**

Jr-Shin Li (https://engineering.wustl.edu/Profiles/Pages/Jr-Shin-Li.aspx)
Das Family Distinguished Career Development Associate Professor
PhD, Harvard University
Mathematical control theory, optimization, quantum control, biomedical applications

Robert E. Morley Jr. (https://engineering.wustl.edu/Profiles/Pages/Robert-Morley.aspx)
DSc, Washington University
Computer and communication systems, VLSI design, digital signal processing

**Assistant Professors**

ShiNung Ching (https://engineering.wustl.edu/Profiles/Pages/ShiNung-Ching.aspx)
Das Family Distinguished Career Development Assistant Professor
PhD, University of Michigan
Systems and control in neural medicine, nonlinear and constrained control, physiologic network dynamics, stochastic control

Zachary Feinstein (https://engineering.wustl.edu/Profiles/Zachary-Feinstein.aspx)
PhD, Princeton University
Financial engineering, operations research, variational analysis

Ulugbek Kamilov (https://ese.wustl.edu/faculty/Pages/default.aspx?bio=120)
PhD, École Polytechnique Fédérale de Lausanne, Switzerland
Computational imaging, signal processing, biomedical imaging

Matthew D. Lew (https://engineering.wustl.edu/Profiles/Pages/Matthew-Lew.aspx)
PhD, Stanford University
Microscopy, biophotonics, computational imaging, nano-optics

Jung-Tsung Shen (https://engineering.wustl.edu/Profiles/Pages/Jung-Tsung-Shen.aspx)
Das Family Distinguished Career Development Assistant Professor
PhD, Massachusetts Institute of Technology
Theoretical and numerical investigations on nanophotonics, optoelectronics, plasmonics, metamaterials

Chuan Wang
PhD, University of Southern California
Flexible electronics, stretchable electronics, printed electronics, nanomaterials, nano electronics, optoelectronics

Shen Zeng (https://ese.wustl.edu/faculty/Pages/default.aspx?bio=121)
PhD, University of Stuttgart
Systems and control theory, data-based analysis and control of complex dynamical systems, inverse problems, biomedical applications

Xuan "Silvia" Zhang (https://engineering.wustl.edu/Profiles/Pages/Xuan-%28Silvia%29-Zhang.aspx)
PhD, Cornell University
Robotics, cyber-physical systems, hardware security, ubiquitous computing, embedded systems, computer architecture, VLSI, electronic design automation, control optimization, and biomedical devices and instrumentation

**Senior Professors**

I. Norman Katz
PhD, Massachusetts Institute of Technology
Numerical analysis, differential equations, finite element methods, locational equilibrium problems, algorithms for parallel computations

Paul S. Min
PhD, University of Michigan
Routing and control of telecommunication networks, fault tolerance and reliability, software systems, network management

William F. Pickard
PhD, Harvard University
Biological transport, electrobiology, energy engineering
Daniel L. Rode  
PhD, Case Western Reserve University  
Optoelectronics and fiber optics, semiconductor materials, light-emitting diodes (LEDs) and lasers, semiconductor processing, electronics

Ervin Y. Rodin  
PhD, University of Texas at Austin  
Optimization, differential games, artificial intelligence, mathematical modeling

Barbara A. Shrauner  
PhD, Harvard University (Radcliffe)  
Plasma processing, semiconductor transport, symmetries of nonlinear differential equations

Donald L. Snyder  
PhD, Massachusetts Institute of Technology  
Communication theory, random process theory, signal processing, biomedical engineering, image processing, radar

Barry E. Spielman  
PhD, Syracuse University  
High-frequency/high-speed devices, RF & MW integrated circuits, computational electromagnetics

Tzyh Jong Tarn  
DSc, Washington University  
Quantum mechanical systems, bilinear and nonlinear systems, robotics and automation, life science automation

Professors of Practice

Dedric Carter  
PhD, Nova Southeastern University  
MBA, MIT Sloan School of Management

Dennis Mell  
MS, University of Missouri-Rolla

Ed Richter  
MS, Washington University

Jason Trobaugh  
DSc, Washington University

Senior Lecturer

Martha Hasting  
PhD, Saint Louis University

Lecturers

Randall Brown  
PhD, Washington University

Randall Hoven  
MS, Johns Hopkins University

Vladimir Kurenok  
PhD, Belarus State University (Minsk, Belarus)

Tsitsi Madziwa-Nussinov  
PhD, University of California, Los Angeles

Jinsong Zhang  
PhD, University of Miami

Research Assistant Professors

Scott Marrus  
MD, PhD, Washington University School of Medicine  
Cardiac electrophysiology

Professors Emeriti

William M. Boothby  
PhD, University of Michigan  
Differential geometry and Lie groups, mathematical system theory

Lloyd R. Brown  
DSc, Washington University  
Automatic control, electronic instrumentation

David L. Elliott  
PhD, University of California, Los Angeles  
Mathematical theory of systems, nonlinear difference, differential equations

Robert O. Gregory  
DSc, Washington University  
Electronic instrumentation, microwave theory, circuit design

Degree Requirements

PhD in Electrical Engineering or Systems Science & Mathematics

The Department of Electrical & Systems Engineering (ESE) at Washington University in St. Louis offers two PhD programs. Both the PhD in Electrical Engineering and the PhD in Systems Science & Mathematics are academic doctoral degrees designed mainly for full-time students interested in an academic, laboratory, and/or industrial research and development career in a specialization within electrical engineering, systems, control, or applied mathematics.

Degree Requirements & Timeline

Students pursuing the Doctor of Philosophy degrees in Electrical Engineering or Systems Science & Mathematics must complete a minimum of 72 credit hours of post-baccalaureate study consistent with the residency and other applicable requirements of Washington University and the Graduate School. These 72 units must consist of at least 36 course units and at least 24 units of research, and may include work done to satisfy the requirements of a master’s degree in a related discipline. Up to 24 units may be transferred to Washington University from another institution.
Each candidate for the PhD degree in Electrical Engineering and the PhD degree in Systems Science & Mathematics must:

- Complete at least 36 credit hours of post-baccalaureate courses.
- Pass a written qualifying examination, to be taken before the second academic year of the program.
- Pass an oral preliminary research examination, to be completed within two years of passing the written qualifying examination, and at least one year prior to completion of the dissertation.
- Satisfy the general residency requirement for PhD degrees offered by the Graduate School.
- Satisfy the general teaching requirement for PhD degrees offered by the Graduate School.
- Write a doctoral dissertation that describes the results of original and creative research in a specialization within electrical engineering or systems science and mathematics.
- Pass a final oral examination in defense of the dissertation research.
- Take ESE 590 Electrical & Systems Engineering Graduate Seminar each semester.

The PhD degree should ordinarily take no more than five years to complete, for students who enter the program with a baccalaureate degree. While individual circumstances will vary, the typical timeline will be as follows:

- Year 1: Courses and written qualifying examination
- Year 2: Courses, preliminary research, research advisory committee selection
- Year 3: Courses and preliminary research examination
- Year 4: Research
- Year 5: Research, completion of dissertation, and final oral examination

Students who enter the program with a master's degree may be able to shorten this timeline by one year or more.

Energy, Environmental & Chemical Engineering

The Department of Energy, Environmental & Chemical Engineering (EECE) provides integrated and multidisciplinary programs of scientific education in cutting-edge areas, including the PhD in Energy, Environmental & Chemical Engineering. Research and educational activities of the department are organized into four clusters: aerosol science & engineering; engineered aquatic processes; multiscale engineering; and metabolic engineering & systems biology. These overlapping clusters address education and research in four thematic areas: energy; environmental engineering science; advanced materials; and sustainable technology for public health and international development. In addition to the core faculty in the department, faculty in the schools of Medicine, Arts & Sciences, Business, Law, and Social Work collaborate to provide students with a holistic education and to address topical problems of interest.

The department is a key participant in the university’s Energy, Environment & Sustainability (http://sustainability.wustl.edu) initiative and supports both the International Center for Advanced Renewable Energy and Sustainability (I-CARES (http://icares.wustl.edu)) and the McDonnell Academy Global Energy and Environment Partnership (MAGEEP (http://mageep.wustl.edu)). Major externally funded research centers in the department include the Consortium for Clean Coal Utilization (http://cleancoal.wustl.edu), the National Nanotechnology Infrastructure Node (http://nano.wustl.edu), and the Solar Energy Research Institute for India and the United States (SERIUS (http://www.serius.org)).

Contact: Rose Baxter
Email: rbaxter@wustl.edu
Website: https://eece.wustl.edu/graduate/

Faculty

Chair and Endowed Professor

Pratim Biswas (https://engineering.wustl.edu/Profiles/Pages/Pratim-Bisas.aspx)
Lucy and Stanley Lopata Professor
PhD, California Institute of Technology
Aerosol science and engineering, air quality and pollution control, nanotechnology, environmentally benign energy production

Endowed Professors

Richard L. Axelbaum (https://engineering.wustl.edu/Profiles/Pages/Richard-Axelbaum.aspx)
Stifel and Quinette Jens Professor
PhD, University of California, Davis
Combustion, advanced energy systems, clean coal, aerosols, nanoparticle synthesis, rechargeable battery materials, thermal science

Milorad P. Dudukovic (https://engineering.wustl.edu/Profiles/Pages/Milorad-Dudukovic.aspx)
Laura and William Jens Professor
PhD, Illinois Institute of Technology
Chemical reaction engineering, multiphase reactors, visualization of multiphase flows, tracer methods, environmentally benign processing
Daniel E. Giammar (https://engineering.wustl.edu/Profiles/Pages/Daniel-Giammar.aspx)
Walter E. Browne Professor of Environmental Engineering
PhD, California Institute of Technology
Aquatic chemistry, environmental engineering, water quality, water treatment

Vijay Ramani (https://eece.wustl.edu/faculty/Pages/faculty.aspx?bio=108)
Roma B. and Raymond H. Witcoff Distinguished University Professor of Environmental Engineering
PhD, University of Connecticut, Storrs
Electrochemical engineering, energy conversion

Professors
Young-Shin Jun (https://engineering.wustl.edu/Profiles/Pages/Young-Shin-Jun.aspx)
Director of Graduate Studies
PhD, Harvard University
Aquatic processes, molecular issues in chemical kinetics, environmental chemistry, surface/physical chemistry, environmental engineering, biogeochemistry, nanotechnology

Palghat A. Ramachandran (https://engineering.wustl.edu/Profiles/Pages/Palghat-Ramachandran.aspx)
PhD, University of Bombay
Chemical reaction engineering, applied mathematics, process modeling, waste minimization, environmentally benign processing

Associate Professors
John Fortner (https://engineering.wustl.edu/Profiles/Pages/John-Fortner.aspx)
InCEES Career Development Associate Professor
PhD, Rice University
Environmental engineering, aquatic processes, water treatment, remediation, and environmental implications and applications of nanomaterials

John T. Gleaves (https://engineering.wustl.edu/Profiles/Pages/John-Gleaves.aspx)
PhD, University of Illinois
Heterogeneous catalysis, particle chemistry

Yinjie Tang (https://engineering.wustl.edu/Profiles/Pages/Yinjie-Tang.aspx)
Francis Ahmann Career Development Associate Professor and Director of Undergraduate Studies
PhD, University of Washington, Seattle
Metabolic engineering, bioremediation

Jay R. Turner (https://engineering.wustl.edu/Profiles/Pages/Jay-Turner.aspx)
Vice Dean for Education
DSc, Washington University
Air quality planning and management; aerosol science and engineering, green engineering

Brent Williams (https://engineering.wustl.edu/Profiles/Pages/Brent-Williams.aspx)
Raymond R. Tucker Distinguished InCEES Career Development Associate Professor
PhD, University of California, Berkeley
Aerosols, global climate issues, atmospheric sciences

Fuzhong Zhang (https://engineering.wustl.edu/Profiles/Pages/Fuzhong-Zhang.aspx)
PhD, University of Toronto
Metabolic engineering, protein engineering, synthetic and chemical biology

Assistant Professors
Peng Bai (https://engineering.wustl.edu/Profiles/Pages/Peng-Bai.aspx)
PhD, Tsinghua University
Energy storage systems

Rajan Chakrabarty (https://engineering.wustl.edu/Profiles/Pages/Rajan-Chakrabarty.aspx)
PhD, University of Nevada, Reno
Characterizing the radiative properties of carbonaceous aerosols in the atmosphere; and researching gas phase aggregation of aerosols in cluster-dense conditions

Marcus Foston (https://engineering.wustl.edu/Profiles/Pages/Marcus-Foston.aspx)
PhD, Georgia Institute of Technology
Utilization of biomass resources for fuel and chemical production, renewable synthetic polymers

Tae Seok Moon (https://engineering.wustl.edu/Profiles/Pages/Tae-Seok-Moon.aspx)
PhD, Massachusetts Institute of Technology
Metabolic engineering and synthetic biology

Kimberly M. Parker (https://engineering.wustl.edu/Profiles/Pages/Kimberly-Parker.aspx)
PhD, Stanford University
Investigation of environmental organic chemistry in natural and engineered systems

Elijah Thimsen (https://engineering.wustl.edu/Profiles/Pages/Elijah-Thimsen.aspx)
PhD, Washington University
Gas-phase synthesis of inorganic nanomaterials for energy applications, and novel plasma synthesis approaches

Research Associate Professor
Tianxiang Li
PhD, University of Kentucky
Combustion and applications in energy, pollutant control, biofuel synthesis, flame synthesis of nanomaterials
Research Assistant Professors

Su Huang  
PhD, University of Washington, Seattle  
Photovoltaic materials and devices, nonlinear optical materials for photonic devices

Benjamin Kumfer  
DSc, Washington University  
Advanced coal technologies, biomass combustion, aerosol processes and health effects of combustion-generated particles

Lecturers

Janie Brennan  
PhD, Purdue University  
Biomaterials, synthetic biology, engineering education

Trent Silbaugh  
PhD, University of Washington  
Chemical engineering

Joint Faculty

Himadri Pakrasi ([http://wubio.wustl.edu/pakrasi](http://wubio.wustl.edu/pakrasi))  
PhD, University of Missouri-Columbia  
Systems biology, photosynthesis, metal homeostasis

Nathan Ravi ([http://ophthalmology.wustl.edu/Faculty/Ravi_N.aspx](http://ophthalmology.wustl.edu/Faculty/Ravi_N.aspx))  
PhD, Virginia Polytechnic Institute  
Cataract, ocular biomaterials

Adjunct Faculty

Robert Heider  
MME, Washington University  
Process control and process design

Timothy Michels  
MA, Washington University  
Energy economics, building construction and equipment sciences

Gary Moore  
MS, Missouri University of Science and Technology  
Environmental management

Nicholas J. Nissing  
BS, Washington University  
Product development and process design

Research Associate

Raymond Ehrhard  
BS, Missouri University of Science and Technology  
Water and wastewater treatment technologies, process energy management

Senior Professor

Rudolf B. Husar  
PhD, University of Minnesota  
Environmental informatics, aerosol science and engineering

Degree Requirements

Doctor of Philosophy (PhD) in Energy, Environmental & Chemical Engineering (EECE)

The doctoral degree requires a total of 72 credits beyond the bachelor's degree. Of these, a minimum of 36 must be graduate courses and a minimum of 30 must be doctoral thesis research units. To be admitted to candidacy, students must have completed at least 18 credits at Washington University, have an overall GPA equal to or greater than 3.25, and pass the qualifying examination. All students are required to enroll in the department seminar every semester to receive passing grades. The first year students must complete the core curriculum, perform two research rotations, and find a permanent research adviser. Then, within 18 months after the qualifying exam (generally in their third year), students should defend their thesis proposal.

After the successful proposal defense, students should provide the research updates through annual meetings or reports with their thesis committee until their graduation. While conducting doctoral research, students should perform professionally in a research lab including compliance with safety and regulatory requirements for their research project. During the doctoral program, students must satisfy their fundamental and advanced teaching requirements by participating in mentored teaching experiences in the department for two or three semesters, by attending professional development workshops from the Teaching Center, and by presenting at least two formal presentations at the local level or at a national or international conference. Upon completion of the thesis, students must present the thesis in a public forum and successfully defend the thesis before their thesis committee.

For more detailed guidelines, please refer to the EECE doctoral studies handbook available on the EECE Graduate Degree Programs ([https://eece.wustl.edu/graduate/programs/Pages/PhD-Energy-Environmental-Chemical-Eng.aspx](https://eece.wustl.edu/graduate/programs/Pages/PhD-Energy-Environmental-Chemical-Eng.aspx)) webpage.

Materials Science & Engineering

The Institute of Materials Science & Engineering (IMSE) at Washington University in St. Louis offers a truly interdisciplinary PhD in Materials Science & Engineering. Materials science and engineering is the interdisciplinary field focused on the development and application of new materials with desirable properties and microstructures. Disciplines in the physical
sciences (chemistry, physics, etc.) and engineering fields (mechanical engineering, electrical engineering, chemical engineering, etc.) frequently play a central role in developing the fundamental knowledge that is needed for materials studies. The discipline of materials science and engineering integrates this knowledge and uses it to design and develop new materials and to match these with appropriate technological needs.

The IMSE is well positioned to address the needs of a student seeking a truly interdisciplinary experience. Established in 2013, the IMSE brings together a diverse group of faculty from Arts & Sciences, the School of Engineering & Applied Science, and the School of Medical. The IMSE works to integrate and expand the existing materials interests at Washington University by establishing and overseeing shared research and instrument facilities, creating partnerships with industry and national facilities, and setting up outreach activities.

Current focused areas of research and advanced graduate education within the IMSE include:

- **Materials for Energy Generation, Harvesting, and Storage**
- **Materials for Environmental Technologies**
- **Materials for Biotechnology**
- **Interface Science and Engineering**
- **Computational Materials Science**

**Contact:** Beth Gartin  
**Phone:** 314-935-7191  
**Email:** bgartin@wustl.edu  
**Website:** http://imse.wustl.edu

### Faculty

#### Director

**Katharine M. Flores** (https://engineering.wustl.edu/Profiles/Pages/Kathy-Flores.aspx)  
Professor - Mechanical Engineering & Materials Science  
PhD, Stanford University  
Professor Flores’ primary research interest is the mechanical behavior of structural materials, with particular emphasis on understanding structure-processing-property relationships in bulk metallic glasses and their composites.

#### Professors

- **Richard Axelbaum** (https://engineering.wustl.edu/Profiles/Pages/Richard-Axelbaum.aspx)  
The Stifel & Quinette Jens Professor of Environmental Engineering Science  
PhD, University of California, Davis  
Rich Axelbaum studies combustion phenomena, ranging from oxy-coal combustion to flame synthesis of nanotubes. His studies of fossil fuel combustion focus on understanding the formation of pollutants, such as soot, and then using this understanding to develop novel approaches to eliminating them. Recently, his efforts have been focused on addressing global concerns over carbon dioxide emissions by developing approaches to carbon capture and storage (CCS).

- **Pratim Biswas** (https://engineering.wustl.edu/Profiles/Pages/Pratim-Biswas.aspx)  
Lucy & Stanley Lopata Professor & Department Chair - Energy, Environmental & Chemical Engineering  
PhD, California Institute of Technology  
Professor Biswas’s research interests include aerosol science and engineering; nanoparticle technology; air quality engineering; environmentally benign energy production; combustion; materials processing for environmental technologies, environmentally benign processing, environmental nanotechnology, and the thermal sciences.

- **William Buhro** (http://chemistry.wustl.edu/faculty/buhro)  
George E. Pake Professor in Arts & Sciences and Department Chair - Chemistry  
PhD, University of California, Los Angeles  
Synthetic inorganic and materials chemistry; optical properties of semiconductor nanocrystals, including quantum wires, belts and platelets; metallic nanoparticles; magic-size nanoclusters; nanoparticle growth mechanisms; and charge and energy transport in nanowires.

- **Shantanu Chakrabartty** (https://engineering.wustl.edu/Profiles/Pages/Shantanu-Chakrabartty.aspx)  
Professor - Electrical & Systems Engineering  
PhD, Johns Hopkins University  
Shantanu Chakrabartty’s research explores new frontiers in unconventional analog computing techniques using silicon and hybrid substrates. His objective is to approach fundamental limits of energy efficiency, sensing and resolution by exploiting computational and adaptation primitives inherent in the physics of devices, sensors and the underlying noise processes. Professor Chakrabartty is using these novel techniques to design self-powered computing devices, analog processors and instrumentation with applications in biomedical and structural engineering.
properties. Nano photonic devices from advanced materials with desired precursor solutions. It enables them to fabricate various micro/nano/micro structure of the glass by controlled variation in the main advantage of the spin-on glass is the easy tailoring of the sol gel or wet chemical synthesis to form a layer of glass. The glass is a kind of glass obtained by curing a special liquid using quality micro-resonators made from spin-on glass. The spin-on Currently, her group focuses on the silicon-chip based ultra-high-nano/micro photonic devices with outstanding optical properties. Professor Yang's research interests are fabrication, characterization, and fundamental understanding of advanced nano/micro photonic devices with outstanding optical properties. Her group focuses on the silicon-chip based ultra-high-quality micro-resonators made from spin-on glass. The spin-on glass is a kind of glass obtained by curing a special liquid using sol gel or wet chemical synthesis to form a layer of glass. The main advantage of the spin-on glass is the easy tailoring of the nano/micro structure of the glass by controlled variation in the precursor solutions. It enables them to fabricate various micro/nano photonic devices from advanced materials with desired properties.  

Associate Professors

John Fortner (https://engineering.wustl.edu/Profiles/Pages/John-Fortner.aspx)
I-CARES Career Development Associate Professor - Energy, Environmental & Chemical Engineering
PhD, Rice University

John Fortner's research is primarily focused on advancing water-related technologies and engineering novel material interfaces as they relate to critical environmental-based health, security and energy challenges. He has extensively studied the environmental fate, (photo) reactivity and applications (e.g., novel water treatment membranes) of engineered carbon nanomaterials, including fullerenes, carbon nanotubes, and graphene-based materials.

Harold Li (https://radonc.wustl.edu/faculty/harold-li)
PhD, Friedrich-Alexander-Universität Erlangen-Nürnberg
Associate Professor - Radiation Oncology

Srikant Singamaneni (https://engineering.wustl.edu/Profiles/Pages/Srikant-Singamaneni.aspx)
Associate 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.

Philip Skemer (http://eps.wustl.edu/people/phil_skemer)
Associate Professor - Earth and Planetary Sciences

Professor Skemer's research interests include mantle deformation, the formation and the dynamics of plate boundaries, and the interpretation of seismological data. The underlying motivation for his research is to understand the remarkable phenomenon of plate tectonics and its variability among the terrestrial planets. Although primarily an experimentalist, his research uses the microstructures of naturally deformed rocks to infer the importance of specific deformation processes in Earth, and then develops experiments to investigate the sensitivity of these processes to a range of deformation conditions. From these experiments, one can make predictions about rock deformation at conditions or locations that are inaccessible to direct observation.
Assistant Professors

Damena Agonafer (https://engineering.wustl.edu/Profiles/Pages/Damena-Agonafer.aspx)
Assistant Professor - Mechanical Engineering & Materials Science
PhD, University of Illinois
Professor Agonafer's research interest includes the areas of phase routing strategies for chemical separation and phase change heat transfer processes, and electrochemical storage applications. His research interest is at the intersection of thermal-fluid sciences, electrokinetics and interfacial transport phenomena, and renewable energy. His goal is to bring transformational changes in the areas related to electrochemical energy storage, cooling of high powered micro and power electronics, and water desalination by tuning and controlling solid-liquid-vapor interactions at micro/nano length scales.

Anupriya Agrawal
Research Assistant Professor - Mechanical Engineering & Materials Science
PhD, Ohio State University
Professor Agrawal's research focuses on investigating the structure and dynamics of polymers and metallic glasses using molecular dynamics simulations. She is interested in investigating the deformation behavior of metallic glasses and composites. Her interest also lies in exploring polymer properties such as deformation behavior, diffusion of small organic molecules and ionic aggregation at large length and time scales using multi-scale models.

Parag Banerjee (https://engineering.wustl.edu/Profiles/Pages/Parag-Banerjee.aspx)
Assistant Professor - Mechanical Engineering & Materials Science
PhD, University of Maryland, College Park
Professor Banerjee's research interests focus on two aspects of materials science and engineering. First, he is interested in the synthesis of nanomaterials with tunable properties using principles of self-assembly and self-limited reactions. Second and perhaps more importantly, he is interested in integrating these materials into *performance enhancing* nano-architectures for components such as biomedical sensors, energy storage, and energy harvesting devices.

Alexander Barnes (http://chemistry.wustl.edu/faculty/barnes)
Assistant Professor - Chemistry
PhD, Massachusetts Institute of Technology
Magnetic resonance; dynamic nuclear polarization; structural biology; rational drug design; HIV eradication; Alzheimer's; cancer; electrical engineering; gyrotron technology; molecular biology; biophysical chemistry.

Mikhail Y. Berezin (http://dbbs.wustl.edu/faculty/Pages/faculty_bio.aspx?SID=6263)
Assistant Professor - Radiology
PhD, Moscow Institute of Oil and Gas/Institute of Organic Chemistry
Professor Berezin's research interest lies in the investigation and application of molecular excited states and their reactions for medical imaging and clinical treatment. Excited states are the cornerstone of a variety of chemical, physical, and biological phenomena. The ability to probe, investigate, and control excited states is one of the largest achievements of modern science. The 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 and their applications in medicine.

Rajan Chakrabarty (https://engineering.wustl.edu/Profiles/Pages/Rajan-Chakrabarty.aspx)
Assistant Professor - Energy, Environmental & Chemical Engineering
PhD, University of Nevada, Reno
Rajan Chakrabarty's research focuses on two distinct themes: (i) Investigating the role of atmospheric aerosols in earth's energy balance using novel instrumentation and diagnostic techniques, and numerical models; and (ii) Understanding aerosol formation in combustion systems toward synthesis of high porosity and surface-area materials for energy applications.

Julio D'Arcy (http://www.chemistry.wustl.edu/faculty/darcy)
Assistant Professor - Chemistry
PhD, University of California, Los Angeles
The overarching goals of the D'Arcy laboratory are to discover and apply novel functional nanostructured organic and inorganic materials utilizing universal synthetic chemistry protocols that control chemical structure, nanoscale morphology, and intrinsic properties. We are interested in capacitive and pseudocapacitive nanostructured materials such as conducting polymers, metal oxides, and carbon allotropes possessing enhanced chemical and physical properties, i.e., charge carrier transport, ion transport, surface area, thermal and mechanical stability. Our concerted material discovery process is a multipronged approach; organic and inorganic nanostructured materials are synthesized via solution processing, electrochemistry, vapor phase deposition, and combinations thereof. Alternatively, we also develop self-assembly techniques that result in tailored materials.
Marcus Foston (https://engineering.wustl.edu/Profiles/Pages/Marcus-Foston.aspx)
Assistant Professor - Energy, Environmental & Chemical Engineering
PhD, Georgia Institute of Technology
Professor Foston's research objective is to create a top tier, world-recognized research program in the research and education of emerging technologies for exploitation of lignocellulosic biomass, in particular the lignin fraction of biomass, as a sustainable source for energy, chemicals and materials production.

Erik Henriksen (https://www.physics.wustl.edu/people/henriksen_erk)
Assistant Professor - Physics
PhD, Columbia University
We are an experimental condensed matter research lab with interests primarily in the quantum electronic properties of graphene and other novel two-dimensional systems. We utilize state-of-the-art nanofabrication techniques in combination with measurements made at low temperatures and high magnetic fields to explore both the fundamental electronic structures and emergent quantum phenomena of low-dimensional materials.

Mark Meacham (https://engineering.wustl.edu/Profiles/Pages/Mark-Meacham.aspx)
Assistant Professor - Mechanical Engineering & Materials Science
PhD, Georgia Institute of Technology
Mark 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 (https://engineering.wustl.edu/Profiles/Pages/Rohan-Mishra.aspx)
Assistant Professor - Mechanical Engineering & Materials Science
PhD, Ohio State University
In his lab at Washington University, Mishra plans to identify and develop a quantitative measure of structure-property correlations in materials, such as epitaxial thin films and materials with reduced dimensionality, using a synergistic combination of scanning transmission electron microscopy and atomic-scale theory, to create rational design of materials with properties tailored for electronic, magnetic, optical and energy applications.

Bryce Sadtler (http://www.chemistry.wustl.edu/faculty/sadtler)
Assistant Professor - Chemistry
PhD, University of California, Berkeley
The Sadtler research group seeks to understand and control structure-property relationships in adaptive, mesostructured materials. Through hierarchical design of the atomic composition, nanoscale morphology, and mesoscale organization of the individual components, we can direct the emergent chemical reactivity and physical properties of these complex systems. Research projects combine solution phase growth techniques to synthesize inorganic materials, external fields to control the growth and assembly of mesoscale architectures, and super-resolution imaging to provide spatiotemporal maps of the optical response and photocatalytic activity during the morphological evolution of these structures. Knowledge gained from these fundamental studies will be used to create functional materials, including plasmonic substrates that enhance absorption in thin-film semiconductors, mesostructured photocatalysts for solar fuels generation, and chemical sensors based on self-assembled photonic structures.

Simon Tang (http://www.orthoresearch.wustl.edu/content/Laboratories/3043/Simon-Tang/Tang-Lab/Overview.aspx)
Assistant Professor - Orthopaedics
PhD, Rensselaer Polytechnic Institute
With the overall theme of understanding the biological regulation of skeletal matrix quality, our research group integrates engineering and biology approaches for (1) understanding the effect of disease mechanisms on the structure-function relationships of skeletal tissues and (2) developing of translatable therapeutic and regenerative strategies for these diseases. The investigation of these scientific questions includes the application of finite element analyses, multiscale tissue mechanics, and the functional imaging of skeletal tissues for regenerative medicine with in vitro and in vivo biological systems.

Elijah Thimsen (https://engineering.wustl.edu/Profiles/Pages/Elijah-Thimsen.aspx)
Assistant Professor - Energy, Environmental & Chemical Engineering
PhD, Washington University
The Interface Research Group focuses on advanced gas-phase synthesis of nanomaterials for energy applications. We are currently exploring nonthermal plasma synthesis and atomic layer deposition (ALD). The goal is to discover and then understand useful interfacial phenomena. Examples of applications we are currently interested in are: transparent conducting oxides, photovoltaics, lithium-sulfur batteries, and coatings for high-temperature combustion.
Degree Requirements
Interdisciplinary PhD in Materials Science & Engineering

To earn a PhD degree, students must complete the Graduate School requirements, along with specific program requirements. Courses include:

- Four IMSE Core Courses (12 academic credits)
  - MEMS 5608 Introduction to Polymer Science and Engineering 3
  - Physics 537 Kinetics of Materials 3
  - EECE 502 Advanced Thermodynamics in EECE 3
  - Chem 465 Solid-State and Materials Chemistry 3
    or Physics 472 Solid State Physics 3

Total Units 12

- IMSE 500 First-Year Research Rotation (3 academic credits)
- IMSE 501 IMSE Graduate Seminar (1 academic credit; 2 required, 3 allowed for credit)
- Three courses (9 credits) from a preapproved list of Materials Science & Engineering electives
- Additional free electives from participating departments to reach 36 academic credits (~9 academic credits, ~3 courses)
  - A maximum of 3 credits of IMSE 502 Independent Study will be permitted toward the free electives requirement.

- A maximum of 12 credits of 400-level courses may be applied to the required 36 academic credits.
  - 400-level courses not included on the preapproved list of Materials Science & Engineering electives must be approved by the Graduate Studies Committee.

Students must maintain an average grade of B (GPA 3.0) for all 72 credits. Additionally, the required courses must be completed with no more than one grade below a B-. Up to 24 graduate credits may be transferred with the approval of the Graduate Studies Committee.

In addition to fulfilling the course and research credit requirements, the student must:

- Complete a Research Rotation
- Identify an IMSE faculty member willing and able to support the student's thesis research on a materials-related topic
- Fulfill the Teaching Requirement
  - Attend 2+ Teaching Center Workshops
  - 15 units of teaching experience (basic and advanced levels)
- Successfully complete the Qualifying Examination (oral and written)
- Maintain satisfactory research progress, as determined by the student's thesis adviser and mentoring committee
- Successfully complete the Thesis Proposal and Presentation
- Successfully complete and defend a dissertation

Failure to meet these requirements will result in dismissal from the program.

Course Plan

Year 1

Fall Semester (13 credits)
- Solid-State and Materials Chemistry (Chem 465) or Elective
- Advanced Thermodynamics in EECE (EECE 502)

Spring Semester (13 credits)
- Solid State Physics (Physics 472) or Elective
- Kinetics of Materials (Physics 537)
- Elective
- IMSE First-Year Research Rotation (IMSE 500)
- IMSE Graduate Seminar (IMSE 501)

Summer
- Begin thesis research
- Prepare for Qualifying Exam (August)
  - Written document and oral presentation on research rotation
  - Oral exam on fundamentals from core courses

Years 2 and beyond

- 3 electives (discuss with PhD adviser)
- IMSE Graduate Seminar (once more for credit)
- IMSE PhD Research
- Teaching Requirement
  - Attend 2+ Teaching Center Workshops
  - 15 units of teaching experience (basic and advanced levels)
- Annual (or more frequent) meetings with Faculty Mentoring Committee
- Thesis proposal and presentation (fifth semester)
- Dissertation and oral defense
Mechanical Engineering & Materials Science

The Department of Mechanical Engineering & Materials Science offers a PhD in either Mechanical Engineering or Aerospace Engineering. The department's research strengths include biomechanics, materials, energy, fluid mechanics, and rotary-wing aerodynamics. The doctoral student, with their adviser, designs the program of study and research project. The dissertation is defended at the end of the research effort. A typical time to PhD after an undergraduate engineering degree is four to five years, but the length of program may vary, depending on the individual and the area of study.

Contact: Prof. Jessica Wagenseil
Email: jessica.wagenseil@wustl.edu
Website: https://mems.wustl.edu/graduate/

Faculty

Chair

Philip V. Bayly (https://engineering.wustl.edu/Profiles/Pages/Philip-Bayly.aspx)
Lilyan and E. Lisle Hughes Professor of Mechanical Engineering
PhD, Duke University
Nonlinear dynamics, vibrations, biomechanics

Associate Chairs

Katharine M. Flores (Materials Science) (https://engineering.wustl.edu/Profiles/Pages/Kathy-Flores.aspx)
PhD, Stanford University
Mechanical behavior of structural materials

David A. Peters (Mechanical Engineering) (https://mems.wustl.edu/faculty/Pages/default.aspx?bio=92)
McDonnell Douglas Professor of Engineering
PhD, Stanford University
Aeroelasticity, vibrations, helicopter dynamics

Endowed Professors

Ramesh K. Agarwal (https://engineering.wustl.edu/Profiles/Pages/Ramesh-Agarwal.aspx)
William Palm Professor of Engineering
PhD, Stanford University
Computational fluid dynamics and computational physics

Mark J. Jakiela (https://engineering.wustl.edu/Profiles/Pages/Mark-Jakiela.aspx)
Lee Hunter Professor of Mechanical Design
PhD, University of Michigan
Mechanical design, design for manufacturing, optimization, evolutionary computation

Shankar M.L. Sastry (https://engineering.wustl.edu/Profiles/Pages/Shankar-Sastry.aspx)
Christopher I. Byrnes Professor of Engineering
PhD, University of Toronto
Materials science, physical metallurgy

Professor

Guy M. Genin (https://engineering.wustl.edu/Profiles/Pages/Guy-Genin.aspx)
PhD, Harvard University
Solid mechanics, fracture mechanics

Associate Professors

Srikanth Singamaneni (https://engineering.wustl.edu/Profiles/Pages/Srikanth-Singamaneni.aspx)
PhD, Georgia Institute of Technology
Microstructures of cross-linked polymers

Jessica E. Wagenseil (https://engineering.wustl.edu/Profiles/Pages/Jessica-Wagenseil.aspx)
DSc, Washington University
Arterial biomechanics

Assistant Professors

Damena D. Agonafer (https://mems.wustl.edu/faculty/Pages/default.aspx?bio=110)
PhD, University of Illinois at Urbana-Champaign
Computational fluid dynamics and computational physics

Parag Banerjee (https://engineering.wustl.edu/Profiles/Pages/Parag-Banerjee.aspx)
PhD, University of Maryland
Materials sciences and engineering, nanostructured materials, materials synthesis, and novel devices for storing and harvesting energy

Spencer P. Lake (https://engineering.wustl.edu/Profiles/Pages/Spencer-Lake.aspx)
PhD, University of Pennsylvania
Soft tissue biomechanics

J. Mark Meacham (https://engineering.wustl.edu/Profiles/Pages/Mark-Mecham.aspx)
PhD, Georgia Institute of Technology
Micro-/Nanotechnologies for thermal systems and the life sciences

Rohan Mishra (https://engineering.wustl.edu/Profiles/Pages/Rohan-Mishra.aspx)
PhD, Ohio State University
Computational materials science

Amit Pathak (https://engineering.wustl.edu/Profiles/Pages/Amit-Pathak.aspx)
PhD, University of California, Santa Barbara
Cellular biomechanics
Patricia B. Weisensee (https://mems.wustl.edu/faculty/Pages/default.aspx?bio=112)
PhD, University of Illinois at Urbana-Champaign
Thermal fluids

Professors of the Practice

Harold J. Brandon (https://mems.wustl.edu/faculty/Pages/Harold-Brandon.aspx)
DSc, Washington University
Energetics, thermal systems

Swami Karunamoorthy (https://mems.wustl.edu/faculty/Pages/Swami-Karunamoorthy.aspx)
DSc, Washington University
Helicopter dynamics, engineering education

Joint Faculty

Richard L. Axelbaum (EECE) (https://engineering.wustl.edu/Profiles/Pages/Richard-Axelbaum.aspx)
The Stifel & Quinette Jens Professor of Environmental Engineering Science
PhD, University of California, Davis
Combustion, nanomaterials

Elliot L. Elson (Biochemistry and Molecular Biophysics) (http://bmbweb.wustl.edu/faculty/faculty/elliot-elson)
Professor Emeritus of Biochemistry & Molecular Biophysics
PhD, Stanford University
Biochemistry and molecular biophysics

Michael D. Harris (Physical Therapy, Orthopaedic Surgery and MEMS) (https://pt.wustl.edu/faculty-staff/faculty/mike-harris-phd)
PhD, University of Utah
Whole body and joint-level orthopaedic biomechanics

Kenneth F. Kelton (Physics) (http://www.physics.wustl.edu/people/kelton_kenneth-f)
Arthur Holly Compton Professor of Arts & Sciences
PhD, Harvard University
Study and production of titanium-based quasicrystals and related phases

MD, University of Pennsylvania School of Medicine
Neurological surgery

Lori Setton (BME) (https://bme.wustl.edu/faculty/Pages/faculty.aspx?bio=105)
Lucy and Stanley Lopata Distinguished Professor of Biomedical Engineering
PhD, Columbia University
Biomechanics for local drug delivery: tissue regenerations specific to the knee joints and spine

Matthew J. Silva (Orthopaedic Surgery) (http://www.orthoresearch.wustl.edu/content/Laboratories/2963/Matthew-Silva/Silva-Lab/Overview.aspx)
Julia and Walter R. Peterson Orthopaedic Research Professor
PhD, Massachusetts Institute of Technology
Biomechanics of age-related fractures and osteoporosis

Simon Tang (Orthopaedic Surgery, BME) (http://www.orthoresearch.wustl.edu/content/Laboratories/3043/Simon-Tang/Tang-Lab/Overview.aspx)
PhD, Rensselaer Polytechnic Institute
Biological mechanisms

Senior Professors

Phillip L. Gould
PhD, Northwestern University
Structural analysis and design, shell analysis and design, biomechanical engineering

Kenneth L. Jerina
DSc, Washington University
Materials, design, solid mechanics, fatigue and fracture

Salvatore P. Sutera
PhD, California Institute of Technology
Viscous flow, biorheology

Barna A. Szabo
PhD, State University of New York–Buffalo
Numerical simulation of mechanical systems, finite-element methods

Lecturers

Emily J. Boyd
PhD, University of Texas at Austin
Thermofluids

J. Jackson Potter
PhD, Georgia Institute of Technology
Senior design

H. Shaun Sellers
PhD, Johns Hopkins University
Mechanics and materials

Louis G. Woodhams
BS, University of Missouri-St. Louis
Computer-aided design

Senior Research Associate

Ruth J. Okamoto
DSc, Washington University
Biomechanics, solid mechanics
Research Assistant Professor

Anupriya Agrawal
PhD, Ohio State University
Materials science

Adjunct Instructors

Ricardo L. Actis
DSc, Washington University
Finite element analysis, numerical simulation, aircraft structures

Robert G. Becnel
MS, Washington University
FE Review

John D. Biggs
MEng, Washington University
Thermal science

Andrew W. Cary
PhD, University of Michigan
Computational fluid dynamics

Dan E. Driemeyer
PhD, University of Illinois
Thermoscience

Richard S. Dyer
PhD, Washington University
Propulsion, thermodynamics, fluids

John M. Griffith
BS, Washington University
Manufacturing

Hanford Gross
BS, Washington University
Engineering project management

Jason Hawks
MS, Washington University
Structural analysis

Richard R. Janis
MS, Washington University
Building environmental systems

Rigoberto Perez
PhD, Purdue University
Fatigue and fracture

Dale M. Pitt
DSc, Washington University
Aeroelasticity

Gary D. Renieri
PhD, Virginia Polytechnic Institute and State University
Structural applications, composite materials

Hiroshi Tada
PhD, Lehigh University
Solid mechanics

Matthew J. Watkins
MS, Washington University
Finite elements

Michael C. Wendl
DSc, Washington University
Mathematical theory and computational methods in biology and engineering

Laboratory and Design Specialist

Mary K. Malast
DSc, Washington University
Materials science

Professor Emeritus

Wallace B. Diboll Jr.
MSME, Rensselaer Polytechnic Institute
Dynamics, vibrations, engineering design

Degree Requirements

PhD in Mechanical Engineering or Aerospace Engineering

Policies & Regulations

A key objective of the doctoral program is to promote cutting-edge multidisciplinary research and education in the areas of mechanical engineering and materials science. Students are selected for admission to the program by a competitive process, and they typically start in the fall semester. On arriving at Washington University in St. Louis, the student will be advised by the temporary adviser on all procedural issues. The student will choose a permanent adviser by the end of the first year of residency in the program.

The following is a brief summary of the requirements for doctoral students:

1. Pass the qualifying exams. Qualifying exams should be taken by the end of the third semester.
2. Prepare and defend a research proposal. The research proposal should be defended by the end of the fifth semester.
3. Write and successfully defend the doctoral dissertation.
4. Complete a minimum of 36 hours of course credit, and a minimum of 24 credits of doctoral research; total of 72 credits to earn the PhD degree.
5. Satisfy the applicable teaching requirements of the Graduate School.
Degrees Offered

The Department of Mechanical Engineering & Materials Science (MEMS) offers the following doctoral degrees:

- PhD in Mechanical Engineering
- PhD in Aerospace Engineering
- DSc in Mechanical Engineering, Aerospace Engineering, or Materials Science

The Doctor of Science (DSc) has similar requirements to the PhD but without the teaching requirement. For a list of differences, please refer to the DSc and PhD Comparison (PDF) (https://mems.wustl.edu/graduate/programs/Documents/DoctoralComparisonSection.pdf).

- One may also pursue a PhD in Materials Science — through the Institute of Materials Science & Engineering (IMSE) — but work with professors from the Department of Mechanical Engineering & Materials Science. For details on this program, visit the IMSE Graduate Program (http://imse.wustl.edu/program) webpage.

For more information on MEMS PhD degrees, visit the MEMS Graduate Degree Programs (https://mems.wustl.edu/graduate/programs/Pages/default.aspx) webpage.

English

The Department of English offers the degrees of Master of Arts and Doctor of Philosophy in English and American Literature and Doctor of Philosophy in English and Comparative Literature. Candidates for admission apply to the PhD program; we do not accept students for a terminal AM. The PhD is a six-year program.

The graduate program in English and American literature at Washington University in St. Louis is innovative, approachably sized, and generously funded, with all incoming students receiving full tuition scholarships plus University Fellowships. Our faculty includes Guggenheim Fellows, winners of the National Book Critics Circle Award, and members of the American Academy of Arts and Sciences. A participant in the Carnegie Initiative on the Doctorate, we exemplify an integrated community of scholars and writers, and are home to one of the top ten MFA programs in the U.S. We sponsor multiple reading groups, regular faculty and student colloquia, and an extensive lecture series. The Hurst Visiting Professorship brings eight or more distinguished creative and critical voices to the department each year. Recent Hurst Professors have included Jerome McGann, Jed Esty, Charles Altieri, Carla Kaplan, Michael Wood, James Longenbach, Peter Coviello, Daniel Vitkus, Rita Felski, and Rita Copeland. They not only present public talks but also lead small workshops open only to graduate students.

Our program is rooted in the materials of literary history, medieval to post-postmodern, and we embrace the importance of interdisciplinarity. We believe that intellectual community is fostered by concrete working relationships between professors and students, and we offer collaborative teaching opportunities with experienced faculty. Graduate students in good standing can expect six years of full funding in all.

Contact: Sarah Hennessey
Phone: 314-935-5120
Email: sehennes@wustl.edu
Website: http://english.artsci.wustl.edu/graduate

Faculty

Chair
Wolfram Schmidgen (http://english.artsci.wustl.edu/Wolfram_Schmidgen)
Professor
PhD, University of Chicago

Endowed Professors

Gerald L. Early (http://english.artsci.wustl.edu/gerald_early)
Merle Kling Professor of Modern Letters
PhD, Cornell University

Vincent Sherry (http://english.artsci.wustl.edu/Vincent_Sherry)
Howard Nemerov Professor in the Humanities
PhD, University of Toronto

Steven Zwicker (http://english.artsci.wustl.edu/Steven_Zwicker)
Stanley Elkin Professor in the Humanities
PhD, Brown University

Professors

David Lawton (http://english.artsci.wustl.edu/david_lawton)
FAAH, PhD, University of York

Joseph Loewenstein (http://english.artsci.wustl.edu/Joe_Lowenstein)
PhD, Yale University

William Maxwell (http://english.artsci.wustl.edu/william_maxwell)
PhD, Duke University

Robert Milder (http://english.artsci.wustl.edu/robert_milder)
PhD, Harvard University

Anca Parvulescu (http://english.artsci.wustl.edu/Anca_Parvulescu)
PhD, University of Minnesota

Vivian Pollak (http://english.artsci.wustl.edu/vivian_pollak)
PhD, Brandeis University

Rafia Zafar (http://english.artsci.wustl.edu/Rafia-Zafar)
PhD, Harvard University
Degree Requirements
PhD in English and American Literature or English and Comparative Literature

The AM/PhD program in English at Washington University in St. Louis is a six-year course of study leading to a doctorate in English and American Literature or English and Comparative Literature. All English graduate students take a minimum of 12 elective 3-credit courses at the 400 or 500 level, along with two compulsory classes: Introduction to Graduate Study, and the Practicum in the Teaching of Composition. Aside from these two classes, there are no specific course requirements, though students must take at least two courses in historical periods before 1780 (not in the same period) and at least two in historical periods after 1780 (again, not in the same period).

For students entering in the fall semester of 2014 and after, at least six of 12 elective courses must be 500-level, graduate-only seminars (four such 500-level seminars must be taken by students who entered in the fall of 2013 or earlier). Students are encouraged to enroll in courses of special interest in other departments or programs whether or not they are cross-listed with the English department, but at least eight of their 12 electives must be home-based English courses, including (save in exceptional cases) at least six of their seminars.

It is assumed that all entering graduate students are aiming for the PhD; the English department does not admit students aiming for a terminal AM degree. The AM is awarded during the course of study when a student has completed 36 credit hours, usually at the end of the second year. To satisfy the Graduate School requirement of demonstrated excellence, candidates for the AM may also be asked to submit a graded seminar essay (or the equivalent) for review by the English Graduate Committee.

Students entering the program with a master's degree in hand normally follow the standard first-year curriculum. At the end of their third semester, the director of graduate studies (DGS) will review their AM credits taken elsewhere and determine how many credits (normally a limit of 9-12) may be applied toward the PhD at Washington University. Although students receiving transfer credit may be able to complete the PhD in fewer than six years, it is to their advantage to enter the program as first-year students since this ensures them four full semesters of study without teaching responsibilities. If, after three semesters and the review of transfer credit, the DGS determines that the
student has fulfilled the course requirements for the PhD, the student may elect not to take classes in semester four and to begin Major Field reading instead; their 6 credits of Major Field preparation in semester four will complete the requirements for the Washington University AM degree.

Students who wish to receive the combined PhD degree in English and Comparative Literature may do so by fulfilling the English department's requirements for combined degrees. More information on the combined degree may be found on our website (http://english.artsci.wustl.edu/graduate/combined_phd).

During the first seven semesters, credits are earned by taking courses, independent study, and directed reading: more precisely, 13 courses (39 credits) total across years one and two; the Practicum in Teaching (3 credits) in the fall of year three; 6 credits of directed reading in the spring of year three; and 6 credits of directed reading in the fall of year four.

Film and Media Studies

The program in Film and Media Studies (FMS) provides students who are interested in the history, criticism, and theories of moving image-based visual culture, from the 19th through the 21st centuries, an opportunity to extend their formal intellectual development and explore film and electronic media as evolving global phenomena. The certificate and the master's degree in FMS advance a student's scholarly understanding of all forms of the moving image and their artistic, cultural, industrial, philosophical, political, and social implications.

The certificate is by application and is open to PhD students in other academic units. It consists of 15 course units in FMS. Six units of the certificate may be counted in the student's PhD requirements. The master's degree emphasizes multiple approaches of academic study that may lead to curating, researching, teaching, and other professional activities centered on film and other moving image media.

Students already enrolled at Washington University with a major in film and media studies may wish to consider the master's program as part of an accelerated AB/AM option. Washington University students who are admitted in the combined AB/AM program may have up to 9 units of FMS course credit at the 400 level considered for application to AM degree requirements. Students who are currently enrolled as undergraduates at Washington University and are seeking the combined AB/AM degree should use the standard application form of the Graduate School to apply.

Students applying to the Film and Media Studies master's from outside the university should follow the standard application procedures of the Graduate School (available on the Graduate School Forms webpage (http://graduateschool.wustl.edu/forms)). Graduate Record Exam scores indicating an aptitude for graduate study are required, as well as strong letters of recommendations from three instructors who can speak to the applicant's academic skills relevant to graduate study in film and media studies. Applicants who have completed an undergraduate degree and show outstanding promise in writing about film and media but do not have formal film/media studies background may be admitted. All applicants to the master's program in FMS should have a strong academic foundation in critical writing and thinking. At least one writing sample of no less than 3,000 words is required, and a letter of approximately 500 words describing the candidate's interest in film and media studies and how their intellectual background has prepared them for graduate study in FMS.

All applicants to the certificate, AB/AM, or master's degree in FMS are welcome to consult with the director of graduate studies about the application process.

Phone: 314-935-4056
Email: gstudlar@wustl.edu
Website: http://fms.artsci.wustl.edu/graduate

Faculty

Director
Gaylyn Studlar (http://fms.artsci.wustl.edu/people/gaylyn-studlar)
David May Distinguished Professor in the Humanities
PhD, University of Southern California

Professor
William Paul (http://fms.artsci.wustl.edu/people/william-paul)
PhD, Columbia University

Assistant Professors
Colin Burnett (http://fms.artsci.wustl.edu/people/colin-burnett)
PhD, University of Wisconsin-Madison
Diane Wei Lewis (http://fms.artsci.wustl.edu/people/diane-wei-lewis)
PhD, University of Chicago

Senior Lecturer
Richard Chapman (http://fms.artsci.wustl.edu/people/richard-chapman)

Degree Requirements

Graduate Certificate in Film and Media Studies

Required courses for the graduate certificate:

Core Courses (9 units):

• Film 501 Advanced Moving Image Analysis and Criticism (3 units)
• Film 421 Film Historiography (3 units) or Film 502 Seminar in History of Film and/or Electronic Media (rotating topics) (3 units)

One of the following theory courses is required as part of the core:
• Film 419 Theories of Mass Media (3 units)
• Film 420 Film Theory (3 units)
• Film 450 American Film Genres (3 units) (genre theory)
• Any 400- or 500-level course in film or electronic media theory

Certificate students also have two electives (6 units) that may be taken at the 400 or 500 level and developed in an advising plan, subject to approval of the Film and Media Studies adviser and of the director of graduate studies of the student’s home unit.

Two Electives (6 units):
Each 3-unit elective course in Film and Media Studies must be at the 400 level or higher.

Elective: Courses originating in Film and Media Studies or cross-listed with Film and Media Studies, or offered in another unit and approved by the student’s Film and Media Studies adviser.

A student may choose to take one Independent Study of 3 units (Film 500) with a Film and Media Studies faculty member as an elective. This study should relate to a specialized topic mutually agreed upon by the student, their Film and Media Studies adviser, and the chair of the graduate certificate program. Although students are expected to benefit from elective courses offered by Film and Media Studies core and affiliated faculty, they may take other film-related courses as may be offered by other departments and by faculty not affiliated with Film and Media Studies. To be included in the graduate certificate courses, classes that fall within this category require approval by the student’s adviser in Film and Media Studies and their home unit’s director of graduate studies (DGS).

Master’s in Film and Media Studies

Course of Study
Students must fulfill the basic requirements for the AM degree (p. 20) as set forth in this Graduate School catalog. In addition, AM candidates must take the course of study described below that consists of 36 units of credit and a comprehensive examination.

There is one course of study for the AM in Film and Media Studies. There is no thesis option in this degree. Students complete 36 semester units (12 courses) defined by the three areas listed below. During their final semester of courses, students take a comprehensive written examination and meet with the examining committee for an oral defense. The examining committee will consist of the DGS, the student’s adviser, and one other faculty member, core or affiliated in Film and Media Studies. These exams are based on reading and screening lists as well as on courses. The student must meet expectations for broad knowledge of the field appropriate for a master’s degree student in the humanities. Normally, if the student expects a May graduation date, then they must complete the examinations by April 7 of the spring semester. All courses should be completed by the end of the semester in which the examination is scheduled.

Students should consult with the director of graduate studies (DGS) in their first semester in the program to obtain the master’s students’ reading and screening list and consult regularly with their adviser. Students entering the program from outside the university should expect to take two years to finish the master’s degree if they take 9 units per semester, less time if they take more.

Area I: Required Courses (15 units total)
The requirements for Area I may be fulfilled through the following courses:

1. Visual Analysis
   Film 501 Advanced Moving Image Analysis and Criticism
2. Moving Image Theory
   Film 419 Theories of Mass Media or Film 420 Film Theory or Film 502 Seminar in film and media theory (rotating topics)
3. Historiography of the Moving Image
   Film 421 Film Historiography or Film 423 Histories of Media Convergence
4. Television & Digital Studies
   Film 503 Seminar in Television Studies (rotating topics) or Film 504 Seminar in Digital Studies (rotating topics) or any 400- or 500-level Film and Media Studies course in television or electronic media
5. Cinema and Television Beyond the United States
   Any 400- or 500-level national, regional, or transnational cinemas or television studies course offered in FMS

Area II: Electives (18 units)
In addition, during their matriculation, students must take 18 units of credit at the 400 or 500 level to satisfy electives for the master’s in Film and Media Studies. In choosing electives, students must select any 400- or 500-level Film and Media Studies course not used for Area I. In addition, they can select up to 6 units in Film 500 Independent Study that is in a study area of film and media not ordinarily covered by regular course offerings. Any Film 500 must be approved by the DGS. Six units of courses at the 400 or 500 level offered through other departments or programs that are relevant to the degree’s intellectual focus may also be taken to satisfy this area with the permission of the DGS.
Area III: Practicum in Film and Media Studies

Students must complete one course (3 units) that consists of professional experience that brings to bear academic knowledge and skills associated with the study of Film and Media Studies. Every student presents a written proposal/plan to the DGS and to the faculty mentor/adviser they select for their practicum. Both faculty must give permission to the plan.

The practicum may take a number of forms, but in every case, the experience must be planned in a way that contributes to the student's professional development. It might consist of work curating films for a screening or mini-festival accompanied by screening notes, a website, or other forms of writing that enhance the academic value of the event. The student might organize a scholarly symposium or lecture to further the understanding of a particular aspect of the moving image at Washington University. The practicum may also consist of archival or curatorial work in film, television, or other forms of the moving image (such as digital art) at an archive, museum, or other nonprofit organization (such as a film festival), in which the student will have an on-site supervisor.

Students interested in combining primary research with their development as a "public intellectual" might write a book proposal and develop a bibliography in anticipation of writing a book or they may develop a website with consistent and significant critical, historical, or theoretical usefulness to those interested in film and media studies, such as one that offers critical analyses of current films, bibliographic information addressing one area of research in the field, etc. The practicum student might participate in other activities related to moving image exhibition or archival preservation or to grant application writing. The practicum may also be oriented toward teaching, with the creation of a course syllabus and sample lectures delivered by the graduate student in a venue organized by faculty.

Students may initiate other projects, but any practicum requires a faculty mentor and, in circumstances in which there is a collaborating organization, a letter of endorsement of the practicum from the student's on-site supervisor at the organization. This supervisor will also provide a letter upon completion of the practicum detailing the student's work and its quality. The faculty adviser will award the grade for the practicum.

Area IV: Mentored Teaching Experience

Believing that graduate education should foster a range of skills, including verbal skills and the ability to organize presentations about the subject, FMS requires every AM student to have three semesters of Mentored Teaching Experience (MTE) within FMS, including participation in at least one FMS course in which the student leads an undergraduate discussion section. The course number for MTE is LGS 600 (pass/no pass).

For returning AM students (who started the program in fall 2016), two MTEs in FMS will be required. One must involve leading a discussion section in an FMS undergraduate course. Only one MTE may be taken in any given semester.

Germanic Languages and Literatures

The Department of Germanic Languages and Literatures offers a comprehensive program in the language, literature, and culture — past and present — of Germany and German-speaking countries. Our faculty (http://german.wustl.edu/people) pursue a multiplicity of approaches in their research and offer seminars (http://german.wustl.edu/courses/archive) that provide a healthy balance of theory and the history of German literature and culture. The department offers numerous opportunities for interdisciplinary study (http://german.wustl.edu/graduate/interdisciplinary-study), including a one-of-a-kind joint PhD program with Comparative Literature (p. 46) and an innovative certificate program that gives students the option of developing an expertise in one of five associated fields. Both faculty and students teach and do research in a wide range of related disciplines, including art history; comparative literature; digital humanities; European studies; film and media studies; Jewish studies; Medieval and Renaissance studies; religious studies; and women, gender, and sexuality studies.

We consider international exchange to be a crucial component of graduate education. We maintain an exchange agreement on all levels (faculty, graduate, undergraduate) with the University of Tübingen, in addition to graduate student exchanges with the universities of Berlin, Cologne, and Munich. These arrangements enable us to guarantee a year abroad for all of our PhD candidates. At the same time, they enrich our program by bringing German exchange students to campus to study and teach alongside the full-time students in our program. Exchange is further facilitated by the Max Kade Center (http://german.wustl.edu/kade), which, in addition to numerous other activities, plays host each spring to a writer- and a critic-in-residence. The department also invites a distinguished visiting professor (http://german.wustl.edu/people/visiting-scholars) to campus every other year.

Departmental faculty are known across campus and across the discipline for their close mentoring of graduate students, who are integrated into the department through their participation in numerous activities, from the graduate student symposium (http://german.wustl.edu/events/graduate_symposium) and the department's biennial international symposium (http://german.wustl.edu/events/biennial) to outreach programs like German Day (http://german.wustl.edu/events/german_day). We also give close attention to teacher development (http://german.wustl.edu/graduate/teaching) through our unique pedagogy internships, through recurring workshops, and through a classroom mentoring program that ensures that all assistants
to instructors receive feedback and advice from a large number of faculty members. Graduate students have the opportunity to teach in our undergraduate German program at all levels, in both German and English, and many also have a chance to teach courses or sections in other programs.

The combination of our extremely competitive funding packages and the low cost of living in St. Louis ensures that students have the resources they need to stay focused on their academic work. As a consequence, our graduate students not only produce first-rate dissertations, they also go on to accept positions at top research universities and liberal arts colleges across the country.

Their success is facilitated by the outstanding research collections available at the Washington University library, including the Collection of Contemporary German Literature, the Suhrkamp/Insel Collection, the Rare Book Collection of Olin Library, the internationally famous Reformation Collection at Concordia Seminary, and the Vatican Manuscript Collection at St. Louis University. The Saint Louis Art Museum and the Washington University Mildred Lane Kemper Art Museum have extensive holdings in German expressionist and contemporary art.

For questions about the graduate application process or to request a brochure, please contact our Student Coordinator, Cecily Stewart Hawksworth, or our director of graduate studies, Professor Erin McGlothlin.

Contact: Prof. Erin McGlothlin or Cecily Stewart Hawksworth
Phone: 314-935-4288 or 314-935-4276
Email: mcglothlin@wustl.edu; cecilyhawksworth@wustl.edu
Website: http://german.wustl.edu/graduate

Faculty

Chair
Matt Erlin (http://german.wustl.edu/people/erlin_matt)
Professor of German
PhD, University of California, Berkeley
18th- & 19th-century German literature; intellectual history; digital humanities; material culture

Endowed Professors
Paul Michael Lützeler (http://german.wustl.edu/people/paul-michael-lutzeler)
Rosa May Distinguished University Professor in the Humanities
Director of the Max Kade Center
PhD, Indiana University
Contemporary and exile literature; Romanticism; literary discourses on Europe

Lynne Tatlock (http://german.wustl.edu/people/tatlock_lynne)
Director, Comparative Literature
Hortense and Tobias Lewin Distinguished Professor in the Humanities
PhD, Indiana University
17th-, 19th- & 20th-century novel and book history; gender; nationalism; translation

Gerhild Williams (http://german.wustl.edu/people/williams_gerhild)
Vice Provost
Barbara Schaps Thomas and David M. Thomas Professor in the Humanities
Associate Vice Chancellor for Academic Affairs
PhD in Comparative Literature, University of Washington
Early modern German and French literature and culture; demonology; Ottoman Eurasia

Associate Professors
Jennifer Kapczynski (http://german.wustl.edu/people/kapczynski_jennifer)
(On Leave)
PhD, University of California, Berkeley
20th- & 21st-century literature and film; democratization; gender theory; Holocaust studies

Erin McGlothlin (http://german.wustl.edu/people/mcglothlin_erin)
Director of Graduate Studies
PhD, University of Virginia
Contemporary literature; Holocaust studies; Jewish studies; narrative theory
Assistant Professors

Kurt Beals (http://german.wustl.edu/people/kurt-beals)
PhD, University of California, Berkeley
20th- & 21st-century German literature and media; poetry; translation; experimentalism; digital media

Caroline Kita (http://german.wustl.edu/people/caroline-kita)
(On Leave)
PhD, Duke University
Austrian literature; Jewish studies; music and sound studies; theater

Christian Schneider (http://german.wustl.edu/people/christian-schneider-0)
PhD, Heidelberg University
Medieval literature; narrative theory; courtly culture; history of knowledge

Postdoctoral Teaching Fellow

Alexis Briley (https://german.wustl.edu/people/alexis-briley)
PhD, Cornell University

PhD, University of North Carolina at Chapel Hill

Professor Emeritus

James Fitzgerald Poag (http://german.wustl.edu/people/poag_james-fitzgerald)
PhD, University of Illinois
Early and high Middle Ages; history of the German language; medieval Bible exegesis; medieval law and literature; medieval romance; middle high German; mysticism

Degree Requirements

PhD in Germanic Languages and Literatures

A summary of program requirements is provided below.

German students who are interested in our exchange programs should contact Cecily Stewart Hawksworth (cecilyhawksworth@wustl.edu) for more information.

Courses

The PhD requires 51 hours of courses (including 36 AM credits) home-based in German. Students who complete interdisciplinary graduate certificates will be required to enroll in additional units as specified by the certificate-granting department or program. Students may not exceed 72 hours of course credit.

Each student must take courses in the full range of German literature and culture, to be chosen in consultation with the director of graduate studies. The following courses are required (exceptions are only possible upon review by the Graduate Committee):

- German 453 Theories of Literary and Cultural Analysis (3 units)
- German 456 Introduction to Middle High German Language and Literature (3 units)
- German 457 Introduction to Linguistics and the Structure of German (3 units)
- German 5051 Introduction to the Teaching of German (1 unit)
- German 5052 Teaching Practicum (1 unit)
- German 5053 Seminar in Theories of Foreign Language Pedagogy / Theories of Second Language Acquisition (2 units)
- German 5061 Apprenticeship in the Teaching of Literature and Culture I (1 unit)
- German 5062 Apprenticeship in the Teaching of Literature and Culture II (1 unit)

In addition, students are required to take one additional course in German literature prior to 1700.

These rules regarding required courses to be taken at Washington University apply to students joining the department with a BA. Students entering with a master’s degree may already have fulfilled some of these requirements. The fulfillment of Washington University requirements with courses completed elsewhere should be discussed with the director of graduate studies, who will make a determination about transfer units.

Interdisciplinary Studies

Graduate students may wish to take courses in areas other than German. Of special interest are graduate offerings in art history; comparative literature; English; the digital humanities; film and media studies; history; music; philosophy; romance languages; and women, gender, and sexuality studies.

Students interested in completing one of our interdisciplinary certificates are generally required to complete additional seminars.

Examinations

Master’s Examination

Students who enter with a BA must complete an oral and written master's examination at the end of their second year. A student's performance on the exam serves the faculty as one important element in deciding whether the student will receive permission to proceed with their graduate studies. The department does not offer a terminal master's degree.

Qualifying Examinations and Dissertation Proposal

Students taking the qualifying exams should display general knowledge and understanding of the primary materials, historical
contexts, scholarly questions, and theoretical frameworks that are likely to drive their future dissertations. This process consists of three parts: two written qualifying papers and the dissertation proposal. Students typically choose a team of three faculty members at the beginning of the process, who will guide them through the exam procedure and serve as their readers. In the first exam, the student is required to situate their primary materials and their author(s) in their respective historical contexts and periods, with specific points of emphasis to be determined together with their advising team. The second exam serves to frame the student’s primary materials in theoretical terms. Within two months after passing the second qualifying exam, the student is required to write a 10-15 page dissertation proposal and present it orally to their advising team.

Foreign Language Requirement

Students planning to work primarily on post-1700 materials must display reading proficiency in French. The requirement may be satisfied by examination or by enrolling in and successfully completing French 400-401. Students are strongly encouraged to pursue reading knowledge in languages other than French if necessary to conduct particular research for their dissertation.

Students planning to work on pre-1700 materials must pass a reading exam in Latin. Reading knowledge of French is also strongly encouraged.

Teaching

PhD candidates are required to teach at least two years at Washington University under the guidance of the pedagogy specialist.

For more information beyond what is presented here, please contact our director of graduate studies, Erin McGlothlin (https://german.wustl.edu/people/mcglothlin_erin).

History

The Department of History offers the Doctor of Philosophy in History. In view of our commitment to the doctoral program, we do not offer a terminal AM. Although the department offers any historical specialization covered by a tenured faculty member, it specializes in the history of 17th- through 19th-century America, 20th-century America, Africa, American political culture, Central Europe, Medieval and Early Modern Europe, East Asia (China, Japan), international urban history, and the Middle East.

Many of our students pursue interdisciplinary studies and have teaching opportunities in other departments and programs: African and African-American Studies; American Culture Studies; East Asian Languages and Cultures; International and Area Studies; Jewish, Islamic and Near Eastern Languages and Cultures; and Women, Gender, and Sexuality Studies. The graduate program admits only a small number of students each year in order to promote a close working relationship between students and faculty. We encourage students to develop creative, self-tailored programs of study.

In considering applications for admission, the department places great emphasis on an applicant’s fit with a particular tenured faculty member (who will serve as the student’s primary adviser), on the applicant’s proposed future research as described in the personal statement, and on the writing sample submitted with the application.

Doctoral students generally devote their first three years to courses, preparing for qualifying examinations in three fields of history, and producing a portfolio containing two research papers of publishable quality.

Foreign Language Requirement

Students planning to work primarily on post-1700 materials must display reading proficiency in French. The requirement may be satisfied by examination or by enrolling in and successfully completing French 400-401. Students are strongly encouraged to pursue reading knowledge in languages other than French if necessary to conduct particular research for their dissertation.

Students planning to work on pre-1700 materials must pass a reading exam in Latin. Reading knowledge of French is also strongly encouraged.

Teaching

PhD candidates are required to teach at least two years at Washington University under the guidance of the pedagogy specialist.

For more information beyond what is presented here, please contact our director of graduate studies, Erin McGlothlin (https://german.wustl.edu/people/mcglothlin_erin).

History

The Department of History offers the Doctor of Philosophy in History. In view of our commitment to the doctoral program, we do not offer a terminal AM. Although the department offers any historical specialization covered by a tenured faculty member, it specializes in the history of 17th- through 19th-century America, 20th-century America, Africa, American political culture, Central Europe, Medieval and Early Modern Europe, East Asia (China, Japan), international urban history, and the Middle East.

Many of our students pursue interdisciplinary studies and have teaching opportunities in other departments and programs: African and African-American Studies; American Culture Studies; East Asian Languages and Cultures; International and Area Studies; Jewish, Islamic and Near Eastern Languages and Cultures; and Women, Gender, and Sexuality Studies. The graduate program admits only a small number of students each year in order to promote a close working relationship between students and faculty. We encourage students to develop creative, self-tailored programs of study.

In considering applications for admission, the department places great emphasis on an applicant’s fit with a particular tenured faculty member (who will serve as the student’s primary adviser), on the applicant’s proposed future research as described in the personal statement, and on the writing sample submitted with the application.

Doctoral students generally devote their first three years to courses, preparing for qualifying examinations in three fields of history, and producing a portfolio containing two research papers of publishable quality.

Phone: 314-935-5450
Email: history@wustl.edu
Website: http://history.artsci.wustl.edu/graduate-program

Faculty

Chair

Peter J. Kastor (http://history.artsci.wustl.edu/peter_kastor)
PhD, University of Virginia
(The American Frontier and Early Republic)

Endowed Professors

Jean M. Allman (http://history.artsci.wustl.edu/allman)
J.H. Hexter Professor in the Humanities
PhD, Northwestern University
(African History)

Daniel Bornstein (http://history.artsci.wustl.edu/daniel_bornstein)
Stella K. Darrow Professor of Catholic Studies
PhD, University of Chicago
(Medieval and Renaissance Europe)

Hillel J. Kieval (http://history.artsci.wustl.edu/hillel_kieval)
Gloria M. Goldstein Professor of Jewish History and Thought
PhD, Harvard University
(Jewish History)

Kenneth Ludmerer (http://history.artsci.wustl.edu/ludmerer)
Mabel Dorn Reeder Distinguished Professor in the History of Medicine
PhD, MD, Johns Hopkins University
(Medical History)

Linda J. Nicholson (http://history.artsci.wustl.edu/linda_nicholson)
Susan E. and William P. Stiritz Distinguished Professor of Women’s Studies
PhD, Brandeis University
(Women, Gender, and Sexuality Studies)
Professors

Iver Bernstein (http://history.artsci.wustl.edu/iver_bernst)
PhD, Yale University
(U.S. History and the Civil War)

Andrea S. Friedman (http://history.artsci.wustl.edu/andrea_friedman)
PhD, University of Wisconsin
(U.S. Women's History)

Margaret Garb (http://history.artsci.wustl.edu/margaret_garb)
PhD, Columbia University
(American Urban History)

Tim Parsons (http://history.artsci.wustl.edu/tim_parsons)
PhD, Johns Hopkins University
(African Military History)

Mark Pegg (http://history.artsci.wustl.edu/pegg)
PhD, Princeton University
(Medieval European History)

Associate Professors

Catherine S. Adcock (http://history.artsci.wustl.edu/cassie_adcock)
PhD, University of Chicago
(Modern South Asian History)

Elizabeth Borgwardt (http://history.artsci.wustl.edu/borgwardt)
PhD, Stanford University
(U.S. Foreign Relations)

Shefali Chandra (http://history.artsci.wustl.edu/chandra)
PhD, University of Pennsylvania
(Modern South Asian History)

Christine R. Johnson (http://history.artsci.wustl.edu/christine_johns)
PhD, Johns Hopkins University
(16th-Century German History)

Steven B. Miles (http://history.artsci.wustl.edu/steve_miles)
PhD, University of Washington
(Chinese History)

Sowandé Mustakeem (http://history.artsci.wustl.edu/mustakeem)
PhD, Michigan State University
(Atlantic Slave Trade and the Middle Passage)

Nancy Y. Reynolds (http://history.artsci.wustl.edu/nancy_reynolds)
PhD, Stanford University
(Middle Eastern History)

Corinna Treitel (http://history.artsci.wustl.edu/corinna_treitel)
PhD, Harvard University
(Modern German History)

Lori Watt (http://history.artsci.wustl.edu/lori_watt)
PhD, Columbia University
(Japanese History)

Hayrettin Yücesoy (http://jnelc.wustl.edu/people/y%C3%BCcesoy_hayrettin)
PhD, University of Chicago
(Medieval Middle Eastern History)

Assistant Professors

Monique Bedasse (http://history.artsci.wustl.edu/monique-bedasse)
PhD, University of Miami
(Caribbean History)

Venus Bivar (http://history.artsci.wustl.edu/venus_bivar)
PhD, University of Chicago
(Modern European History)

Alexandre Dubé (http://history.artsci.wustl.edu/alexandre-dube)
PhD, McGill University
(Early Modern Atlantic World)

Douglas Flowe (http://history.artsci.wustl.edu/douglas-flowe)
PhD, University of Rochester
(American History)

Diana J. Montaño (http://history.artsci.wustl.edu/diana-montano)
PhD, University of Arizona
(Latin American History)

Christina Ramos (http://history.artsci.wustl.edu/christina-ramos)
PhD, Harvard University
(Latin American History)

Anika Walke (http://history.artsci.wustl.edu/anika-walke)
PhD, University of California, Santa Cruz
(European History)

Senior Lecturer

Krister Knapp (http://history.artsci.wustl.edu/krister_knapp)
PhD, Boston University
(U.S. Intellectual History)

Affiliated Faculty

William Bubelis (http://classics.artsci.wustl.edu/bubelis)
Associate Professor of Classics
PhD, University of Chicago
(Classics)

Adrienne D. Davis (http://law.wustl.edu/faculty/pages.aspx?id=5768)
William M. Van Cleve Professor of Law
JD, Yale University School of Law
Mary Ann Dzuback (http://education.wustl.edu/people/dzuback_mary-ann)
Associate Professor of Education
PhD, Columbia University
(Education)

Martin Jacobs (http://pages.wustl.edu/mjacobs)
Professor of Rabbinic Studies
PhD and Habilitation, Free University of Berlin
(Jewish, Islamic and Near Eastern Languages and Cultures)

Zhao Ma (http://ealc.wustl.edu/people/ma_zhao)
Assistant Professor of Modern Chinese History and Culture
PhD, Johns Hopkins University
(East Asian Languages and Cultures)

Laurie F. Maffly-Kipp (http://rap.wustl.edu/bio/laurie-f-maffly-kipp)
Archer Alexander Distinguished Professor
PhD, Yale University
(Danforth Center on Religion and Politics)

Rebecca Messbarger (http://rll.wustl.edu/people/messbarger)
Professor of Italian and Women, Gender, and Sexuality Studies
PhD, University of Chicago
(Romance Languages and Literatures)

Eric P. Mumford (http://samfoxschool.wustl.edu/portfolios/faculty/eric_mumford)
Rebecca and John Voyles Professor of Architecture
PhD, Princeton University
(Architecture)

Leigh E. Schmidt (http://rap.wustl.edu/bio/leigh-e-schmidt)
Edward C. Mallinckrodt Distinguished University Professor
PhD, Princeton University
(Danforth Center on Religion and Politics)

Mark Valeri (http://rap.wustl.edu/bio/mark-valeri)
Reverend Priscilla Wood Neaves Distinguished Professor of Religion and Politics
PhD, Princeton University
(Danforth Center on Religion and Politics)

Steven Zwicker (http://english.artsci.wustl.edu/Steven_Zwicker)
Stanley Elkin Professor in the Humanities
PhD, Brown University
(English)

Professors Emeriti

Henry Berger (http://history.artsci.wustl.edu/henry_berger)
PhD, University of Wisconsin

Steven Hause (http://history.artsci.wustl.edu/steven_hause)
PhD, Washington University

Gerald N. Izenberg (http://history.artsci.wustl.edu/izenberg)
PhD, Harvard University

David T. Konig
PhD, Harvard University

Max J. Okenfuss (http://history.artsci.wustl.edu/okenfuss)
PhD, Harvard University

Peter Riesenberg (http://history.artsci.wustl.edu/peter-rienesberg)
PhD, Columbia University

Richard J. Walter (http://history.artsci.wustl.edu/walter)
PhD, Stanford University

Degree Requirements
PhD in History

Requirements and Academic Assessment

Doctoral candidates ordinarily spend at least two, and more often three, full academic years in residence. Before the dissertation defense takes place, doctoral candidates must have gained essential language and quantitative skills, completed the necessary courses, and researched and written a dissertation.

Languages and Quantitative Skills

Each graduate student's need for linguistic and quantitative skills is determined during the first semester in consultation with their adviser. This determination is subject to review by the Graduate Studies Committee. The student's examining committee will ascertain, by the time of the qualifying examination, that sufficient progress toward acquiring these skills for dissertation research has been made.

The minimum requirement is normally competence in the language of the documents or culture in which the student proposes to do dissertation research, and competence either in one other language (not English) or in the practice of a quantitative or other technical skill. Students normally demonstrate competency by successfully taking a particular course, by passing a translation examination, or by using foreign-language primary sources to write a research paper.

Grades

The performance of students in the Graduate School is marked by the grades A, B, C (Conditional), and F. The grade of C indicates unsatisfactory performance and will be awarded academic credit only if matched by an equivalent number of units graded A. Plus or minus grades may be given, except for grades of B- or C+. Some courses may be graded S (Satisfactory) or F.

Graduate students should expect to earn a grade of A or A- as a mark of good progress through the program. Although a grade of B+ or B will qualify a student for full credit, these should be viewed as a warning that they have not sufficiently demonstrated
a full mastery of the course material at the doctoral level. More than one or two grades at this level carry the risk of negatively impacting a student’s chances on the academic job market.

**Annual Letters of Review and the Second-Year Review**

The Department of History uses annual letters of review and the second-year review to keep students informed of our expectations of their progress and to identify any problems. At the end of each academic year, except the second year, students receive annual letters of review based on the observations of all faculty members with whom they have studied during the academic year, whether as students or as assistants to instructors. The letters will identify any areas in which the student needs to improve, and provide clear steps for addressing this. In January of the second year, students receive a second-year review letter.

The department uses the second-year review to identify students who are not performing at a satisfactory level. In consultation with the student’s primary adviser, the department then sets goals for that student to meet by the end of the second semester of the second year. If these goals are not met, then the student will not be allowed to proceed to the PhD qualifying examinations; instead, the student will be offered an opportunity to secure an AM degree before leaving the PhD program. In such cases, requirements for the AM degree are as follows:

- Students must have satisfactorily completed a minimum of 36 hours of credit. Since the department does not offer a separate AM degree, we do not require an AM thesis. Therefore, none of the required 36 hours will be awarded for thesis research.
- Students must have successfully completed the courses, History 5470 Writing Historical Proposals and Prospectuses, and History 5471 Literature of History.
- Students must develop expertise in two fields of historical study: one primary field and one secondary field.
- Students must pass an oral examination in these two fields of history.

**Additional History Department Requirements and Explanations**

A full-time graduate student shall not be allowed more than one incomplete per semester, and that incomplete must be removed by the end of the following semester. Within this requirement, faculty and students may wish to enter into contracts specifying conditions for the removal of the incomplete. To remain in good standing, a student should take the qualifying examinations by the first semester of the fourth year, at the very latest.

The Department of History’s Graduate Studies Committee manages all departmental decisions regarding placement on probation, removal from probation, recommendations for dismissal after a probationary period, and recommendations for immediate dismissal due to extreme under-performance. The Graduate Studies Committee consists of the director of graduate studies and three to four additional Department of History faculty members appointed by the chair of the department at the beginning of each academic year.

Otherwise, there are no additional requirements beyond those of the Graduate School.

These guidelines will remain posted on our website (http://history.artsci.wustl.edu/graduate), and hard copies will be distributed at the annual department orientation for new PhD students in August.

**Jewish, Islamic and Near Eastern Languages and Cultures**

Jewish, Islamic and Near Eastern Languages and Cultures (JINELC) is an academic department, unique in North America, in which Jewish Studies and Islamic Studies are integrated. It is an interdisciplinary department whose purpose is to explore the historical experience; literary, religious, and cultural expression; and political and material life of the Jewish, Islamic and Near Eastern civilizations. Whether students favor the study of language, literature, religion, history or politics, they will find in our courses a way to deepen their appreciation of these complex and diverse societies and cultures. Students will also be encouraged to explore the interaction of Jews and Muslims with neighboring societies and cultures in the Middle East, Europe, North Africa, and other parts of the world.

The department offers both a **Master of Arts in Jewish Studies** and a **Master of Arts in Islamic and Near Eastern Studies**.

The department does not currently offer a home-based PhD program. Students who would like to pursue a PhD in one of the fields of Jewish Studies or Islamic and Near Eastern Studies may do so under the auspices of a PhD-granting department or program (such as History, Anthropology, or Comparative Literature) in cooperation with participating faculty from Jewish, Islamic and Near Eastern Languages and Cultures. In such instances, the prospective student should apply directly to the appropriate disciplinary department or program at Washington University.

**Email:** jinelm@wustl.edu

**Website:** http://jinelm.wustl.edu

**Faculty**

**Chair**

Nancy E. Berg (http://jinelm.wustl.edu/people/berg_nancy)

Professor of Hebrew Language and Literature

PhD, University of Pennsylvania
Endowed Professor

Hillel J. Kieval
Gloria M. Goldstein Professor of Jewish History and Thought
PhD, Harvard University

Professor

Martin Jacobs
Professor of Rabbinic Studies
PhD and Habilitation, Free University of Berlin

Associate Professors

Pamela Barmash
Associate Professor of Hebrew Bible and Biblical Hebrew
PhD, Harvard University

Erin McGlothlin
Associate Professor of Jewish Studies
PhD, University of Virginia

Nancy Reynolds
Associate Professor of Jewish, Islamic and Near Eastern Studies
PhD, Stanford University

Hayrettin Yücesoy
Associate Professor of Arabic and Islamic Studies
PhD, University of Chicago

Assistant Professors

Anne-Marie McManus
Assistant Professor of Modern Arabic Literature
PhD, Yale University

Aria Nakissa
Assistant Professor of Islamic Studies
PhD, Harvard University

Senior Lecturers

Housni Bennis
Senior Lecturer in Arabic
PhD Candidate, Washington University

Rami Pinsberg
Senior Lecturer in Modern Hebrew
MEd, University of Missouri-St. Louis

Younasse Tarbouni
Senior Lecturer in Arabic
PhD Candidate, L’École des Hautes Études en Sciences Sociales (EHESS)

Mohammad J. Warsi
Senior Lecturer in South Asian Languages and Cultures
PhD, Aligarh Muslim University

Lecturer

Madhavi Verma
Lecturer in Hindi Languages and Cultures
MA, Patna University

Endowed Professor - Affiliated

John R. Bowen
Dunbar-Van Cleve Professor in Arts & Sciences
PhD, University of Chicago
(Anthropology)

Professors - Affiliated

Lois Beck
Professor of Sociocultural Anthropology
PhD, University of Pennsylvania

Robert Canfield
Professor Emeritus of Sociocultural Anthropology
PhD, University of Michigan

Joseph Schraibman
Professor of Romance Languages
PhD, University of Illinois at Urbana-Champaign

Associate Professors - Affiliated

Michael Frachetti
Associate Professor of Anthropology
PhD, University of Pennsylvania

Seth Graebner
Associate Professor of French and International and Area Studies
PhD, Harvard University

Tabea Alexa Linhard
Associate Professor of Spanish and Comparative Literature
PhD, Duke University

Assistant Professor - Affiliated

Denise Gill
Assistant Professor of Ethnomusicology
PhD, University of California, Santa Barbara

Degree Requirements

Master's Degrees

The Department of Jewish, Islamic and Near Eastern Languages and Cultures (JINELC) at Washington University in St. Louis offers two terminal master's degrees: a Master of Arts in Jewish Studies (p. 92), and a Master of Arts in Islamic and Near Eastern Studies. While both programs have their own curricula, the department's integrated nature provides students a unique opportunity to explore the shared experiences and interactions...
of Jews and Muslims in their various cultural and historical contexts. Both AM programs are two-year full-time programs that foster breadth and depth of study and include a graduation requirement of advanced language proficiency. Close mentoring relations allow for tailoring a program of study to a student's specific interests and goals. Thanks to the excellence of our AM programs, many of our graduates have been subsequently accepted into highly prestigious PhD programs.

Master of Arts in Jewish Studies
The AM program in Jewish Studies offers students an opportunity for dedicated, interdisciplinary study of the history, literatures and cultures of the Jewish people from biblical to modern times. It is designed for students who have some college-level preparation in the field and who wish to deepen their expertise in preparation for a PhD program. It is also well-suited for those planning on professional careers in education, law, publishing, business, government, and private agencies whose work touches upon some aspect of Islamic and Jewish relations. Both AM programs allow for tailoring a program of study to a student's expertise in preparation for a PhD program. It is also well-suited for those planning on professional careers in education, law, publishing, business, government, and private agencies whose work touches upon some aspect of Islamic and Jewish relations. Both AM programs offer graduate-level instruction in the history, literatures and cultures of the Jewish people from biblical to modern times, and idealize have some college-level preparation in the field and who wish to deepen their expertise in preparation for a PhD program. It is also well-suited for those planning on professional careers in education, law, publishing, business, government, and private agencies whose work touches upon some aspect of Islamic and Jewish relations. Both AM programs are two-year full-time programs that foster breadth and depth of study and include a graduation requirement of advanced language proficiency. Close mentoring relations allow for tailoring a program of study to a student's specific interests and goals. Thanks to the excellence of our AM programs, many of our graduates have been subsequently accepted into highly prestigious PhD programs.

Degree Requirements
- A minimum of 36 credits from graduate-level courses, which may include up to 6 units transferred from another institution. (Note: First- and second-year language classes do not count toward these 30 credits.)
- Successful completion of third-year Arabic
- Ability to use Arabic source material and scholarly articles, to be demonstrated in at least one major seminar paper
- A second major research paper to be written either in a second seminar or in an independent study to be supervised by one of the faculty associated with the program
- Students have the option of writing a master's thesis in place of the two major research papers (please refer to Policies and Timelines (p. 92) below).
- At the end of their program of study, degree candidates are required to complete successfully an oral examination, lasting no more than one hour, based on either the two research papers submitted (and revised) for this purpose or the master's thesis.
- Please note the departmental Policies and Timelines (p. 92) below.

Master of Arts in Islamic and Near Eastern Studies
The AM program in Islamic and Near Eastern Studies offers students an opportunity for dedicated, interdisciplinary study of the history, literatures and cultures of the Middle East from the Middle Ages to the present. It is designed for students who ideally have some college-level preparation in the field and who wish to deepen their expertise in preparation for a PhD program. It is also well-suited for those planning on professional careers in education, law, publishing, business, government, and private agencies whose work touches upon some aspect of Islamic and Near Eastern Studies. Our faculty offer graduate-level instruction in Islamic and Near Eastern history; Islam in world history; Islamic religion and law; anthropology of Islam; premodern Muslim political theory and practice; Near Eastern urban studies; and both classical and modern Arabic literatures. Admission to the AM program normally requires proficiency in the Arabic language equivalent to one year of college-level study. After a typical two years of courses, students will be expected to have completed third-year Arabic successfully before receiving the AM degree.

Degree Requirements
- A minimum of 36 credits from graduate-level courses, which may include up to 6 units transferred from another institution. (Note: First- or second-year language classes do not count toward these 30 credits.)
- Successful completion of third-year Arabic
- Ability to use Arabic source material and scholarly articles, to be demonstrated in at least one major seminar paper
- A second major research paper to be written either in a second seminar or in an independent study to be supervised by one of the faculty associated with the program
- Students have the option of writing a master's thesis in place of the two major research papers (please refer to Policies and Timelines (p. 92) below).
- At the end of their program of study, degree candidates are required to complete successfully an oral examination, lasting no more than one hour, based on either the two research papers submitted (and revised) for this purpose or the master's thesis.
- Please note the departmental Policies and Timelines (p. 92) below.

Policies and Timelines Applying to Both AM Programs
To complete our AM programs, including the third-year language requirement, within the typical course of two years, students need to be highly self-motivated and should develop close working relationships with their academic advisers. Students may elect to graduate with or without writing a master's
thesis. The master's thesis (usually about 80-100 pages long) represents original work of highly polished quality and is significantly more substantive than a research paper. (For guidelines, please refer to the Master's Thesis Guide (http://graduateschool.wustl.edu/policies-and-guides) issued by the Graduate School). Instead of the thesis, students may decide to (re-)submit and defend two significantly revised research papers written in the program, each of which should be at least 30 pages long.

**Master's students planning to graduate without thesis:**

**Second Year**

First week of fall semester: Meet with adviser to discuss graduation plans.

First week of spring semester: Meet with adviser to determine the two research papers, select the three members of the defense committee, agree on submission deadlines, and schedule the defense.

End of March to Early April: Oral defense.

**Master's students planning to graduate with thesis:**

**First Year**

End of spring semester: Approach a primary thesis adviser (who may but does not have to be identical with student's academic adviser).

**Second Year**

Fall and spring semesters: Enroll in L75 JINE 591 Directed Writing: Thesis.

First week of spring semester: Confirm a thesis committee of three readers, in conversation with student's adviser, and schedule the oral defense.

Friday before spring break: Final draft of the thesis is due to the thesis adviser.

End of March to early April: Oral defense.

**Latin American Studies**

The [Graduate Certificate in Latin American Studies](http://lasprogram.wustl.edu) offers Washington University students the opportunity to pursue a multidisciplinary specialization on this region of the world while completing their PhD degree. The Certificate combines discipline-based learning with cultural studies, thus allowing for a rigorous approach to Latin America's social, economic, and political history. At the same time, students are exposed to new theories and current debates on the topics of nation formation, governance, colonialism, development, regionalism, public health, modernization, globalization, neoliberalism, etc.

At the national level, programs of Latin American Studies date back to the late 1940s, when the Area Studies paradigm became central in the internationalization of academic focus in the context of the Cold War. Today, as globalization has made internationalization an even more pressing concern, Latin American Studies is part of a new need for better understanding of other world regions. In fact, Latin American countries consistently play an important role within the intellectual and political spheres of the United States. Latin America is the single largest source of immigrants to the United States today. It has the third trade partner of the U.S. (Mexico), one of the most vibrant emergent economies in the world (Brazil), countries that have been at the core of U.S. foreign policy for decades (Colombia, Venezuela, Cuba, and the Andean region, for instance) and a vibrant population and culture that is growingly the focus of U.S. students.

**Application**

Students will be required to apply to be considered for the certificate program and will be evaluated by the graduate certificate committee on a rotating basis. This application is submitted at the beginning of the student's doctoral courses in Arts & Sciences and requires a support letter from the director of graduate studies (DGS) of their PhD home department or program. The chair of the Graduate Certificate Committee will forward recommendations for admission to the dean of the Graduate School for final approval. All applicants to the certificate program are expected to be in good academic standing as defined by the Graduate School.

**Contact:**

Professor Ignacio Sánchez Prado  
**Phone:** 314-935-5175  
**Email:** isanchez@wustl.edu  
**Website:** [http://lasprogram.wustl.edu](http://lasprogram.wustl.edu)

**Faculty**

**Core Faculty**

Mabel Moraña ([http://rll.wustl.edu/people/morana](http://rll.wustl.edu/people/morana))  
William H. Gass Professor in Arts & Sciences  
PhD, University of Minnesota  
(Romance Languages and Literatures)

Ignacio Sánchez Prado ([http://rll.wustl.edu/people/sanchez-prado](http://rll.wustl.edu/people/sanchez-prado))  
Professor  
PhD, University of Pittsburgh  
(Romance Languages and Literatures)

**Faculty Specialized in Latin America**

William Acree ([http://rll.wustl.edu/people/acree](http://rll.wustl.edu/people/acree))  
Associate Professor  
PhD, University of North Carolina at Chapel Hill  
(Romance Languages and Literatures)
Sarah Baitzel (https://anthropology.artsci.wustl.edu/baitzel_sarah)
Assistant Professor
PhD, University of California, San Diego
(Anthropology)

Peter Benson (http://anthropology.artsci.wustl.edu/benson_peter)
Associate Professor
PhD, Harvard University
(Anthropology)

David L. Browman (http://anthropology.artsci.wustl.edu/browman_david)
Professor
PhD, Harvard University
(Anthropology)

J. Andrew Brown (http://rll.wustl.edu/people/brown)
Professor
PhD, University of Virginia
(Romance Languages and Literatures)

Rebecca Clouser (http://ias.wustl.edu/people/rebecca-clouser)
Postdoctoral Fellow
PhD, Indiana University
(International and Area Studies)

Brian Crisp (http://polisci.wustl.edu/pages.wustl.edu/crisp)
Professor
PhD, University of Michigan
(Political Science)

David Freidel (http://anthropology.artsci.wustl.edu/freidel_david)
Professor
PhD, Harvard University
(Anthropology)

Javier García-Liendo (http://rll.wustl.edu/people/javier-garcia-liendo)
Assistant Professor
PhD, Princeton University
(Romance Languages and Literatures)

Bret Gustafson (http://anthropology.artsci.wustl.edu/gustafson_bret)
Associate Professor
PhD, Harvard University
(Anthropology)

Steven Hirsch (http://ias.wustl.edu/people/steven-hirsch)
Professor of Practice
PhD, George Washington University
(International and Area Studies)

Stephanie Kirk (http://rll.wustl.edu/people/kirk)
Associate Professor
PhD, New York University
(Romance Languages and Literatures)

Tabea Linhard (http://rll.wustl.edu/people/linhard)
Professor
PhD, Duke University
(Romance Languages and Literatures)

Diana Montañó (http://history.artsci.wustl.edu/diana-montano)
Assistant Professor
PhD, University of Arizona
(History)

Christina Ramos (https://history.artsci.wustl.edu/christina-ramos)
Assistant Professor
PhD, Harvard University
(History)

Guillermo Rosas (https://polisci.wustl.edu/guillermo_rosas)
Associate Professor
PhD, Duke University
(Political Science)

Joseph Schraibman (http://rll.wustl.edu/people/schraibman)
Professor
PhD, University of Illinois
(Romance Languages and Literatures)

Ila Sheren (http://arthistory.artsci.wustl.edu/people/ila-sheren)
Assistant Professor
PhD, Massachusetts Institute of Technology
(Art History and Archaeology)

Elżbieta Sklodowska (http://rll.wustl.edu/people/sklodowska)
Randolph Family Professor in Arts & Sciences
PhD, Washington University
(Romance Languages and Literatures)

Kedron Thomas (http://anthropology.artsci.wustl.edu/thomas_kedron)
Assistant Professor
PhD, Harvard University
(Anthropology)

Professors Emeriti

Pedro C. Cavalcanti
PhD, University of Warsaw
(Anthropology)

John F. Garganigo (http://rll.wustl.edu/people/garganigo)
PhD, University of Illinois
(Romance Languages and Literatures)

Richard J. Walter (http://history.artsci.wustl.edu/walter)
PhD, Stanford University
(History)
Degree Requirements

Graduate Certificate in Latin American Studies

Students interested in earning the Graduate Certificate in Latin American Studies must complete 15 graduate units. Six of those units may also count toward the PhD requirements with the prior approval of the PhD home department director of graduate studies. The Graduate Certificate is awarded concurrently with the PhD degree. Students in the LASP Graduate Certificate program must fulfill all requirements of the PhD required by their respective home departments and the Graduate School, and the following LASP certificate requirements:

Complete a total of 15 graduate credits:

• 3 credits from one (1) LASP core course
• 3 credits from one (1) 400-level course from the LASP core program
• 9 credits from three (3) LASP-related courses in at least two departments or schools outside the student's major department
• Have proven proficiency in Spanish or Portuguese, following the guidelines established by the Department of Romance Languages and Literatures
• Spend at least one summer abroad, conducting research in Latin American Studies
• Participate actively in the Latin American Colloquium for at least one semester, including the presentation of a research paper. The presentation should ideally result from the summer research mentioned above.

Mathematics

The Department of Mathematics offers two master's degrees, one in Mathematics and the other in Statistics, and two doctoral degrees, one in Mathematics and one in Statistics. Areas of study for Mathematics include: algebra, algebraic geometry, real and complex analysis, differential geometry, and topology. The areas of study for Statistics are: mathematical statistics, survival analysis, modeling, statistical computing for massive data, Bayesian regulation, bioinformatics, longitudinal and functional data analysis, statistical computation, asymptotic theory, objective Bayes, bootstrap, post-selection inference, and application of statistics to medicine. Because it is difficult to make up coherent programs for students entering in the middle of the year, students are ordinarily admitted only in the fall.

Graduate students have an opportunity when they first arrive to share common concerns and to become acquainted. One of the most attractive features of our program is the friendly and supportive atmosphere among the graduate students. Advanced courses in the Washington University math department can build on the common background shared by all students. As a result, these courses are richer and nearer to the level of PhD work than typical advanced courses.

Students typically complete the PhD program in five years. A student who comes here with advanced preparation may finish in less time. On the other hand, some students find that it is advisable for them to take preparatory work before attempting the qualifying courses. In special cases, the time schedule may be lengthened accordingly. Students should plan to develop a close relationship with their thesis advisers so that they may have a realistic idea of their progress.

Graduate study in mathematics is not for everyone. Entering students usually find that the time and effort required to succeed goes well beyond anything they encountered as undergraduates. Success requires both ample mathematical ability and the determination to grapple with a subject for many days or weeks until the light of understanding shines through. The experience can be daunting. Those who continue in their studies are largely those for whom the pleasure in attaining that understanding more than compensates for the required effort. For such persons, the life of a mathematician can be richly rewarding.

Email: bwick@wustl.edu or stenner@wustl.edu
Phone: 314-935-6760
Website: http://wumath.wustl.edu/graduate

Faculty

Chair

John E. McCarthy (http://wumath.wustl.edu/people/faculty/professors/mccarthy_john-e)
Spencer T. Olin Professor of Mathematics
PhD, University of California, Berkeley
Analysis; operator theory; one and several complex variables

Directors

Brett Wick (http://wumath.wustl.edu/people/brett-wick)
Director of Graduate Studies; Professor of Mathematics
PhD, Brown University
Complex analysis, harmonic analysis, operator theory, and several complex variables

John Shareshian (http://wumath.wustl.edu/people/shareshian_john)
Director of Undergraduate Studies; Professor of Mathematics
PhD, Rutgers University
Algebraic and topological combinatorics

Endowed Professor

John E. McCarthy (http://wumath.wustl.edu/people/faculty/professors/mccarthy_john-e)
Spencer T. Olin Professor of Mathematics
PhD, University of California, Berkeley
Analysis; operator theory; one and several complex variables
### Professors

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Education</th>
<th>Fields</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quo-Shin Chi</td>
<td></td>
<td>PhD, Stanford University</td>
<td>Differential geometry</td>
</tr>
<tr>
<td>Renato Feres</td>
<td></td>
<td>PhD, California Institute of Technology</td>
<td>Differential geometry; dynamical systems</td>
</tr>
<tr>
<td>José Figueroa-López</td>
<td></td>
<td>PhD, Georgia Institute of Technology</td>
<td>Statistics; probability and stochastic processes; mathematical finance</td>
</tr>
<tr>
<td>Steven G. Krantz</td>
<td></td>
<td>PhD, Princeton University</td>
<td>Several complex variables; geometric analysis</td>
</tr>
<tr>
<td>Rachel Roberts</td>
<td></td>
<td>PhD, Cornell University</td>
<td>Low-dimensional topology</td>
</tr>
<tr>
<td>John Shareshian</td>
<td></td>
<td>PhD, Rutgers University</td>
<td>Algebraic and topological combinatorics</td>
</tr>
<tr>
<td>Edward Spitznagel</td>
<td></td>
<td>PhD, University of Chicago</td>
<td>Statistics; statistical computation; application of statistics to medicine</td>
</tr>
<tr>
<td>Xiang Tang</td>
<td></td>
<td>PhD, University of California, Berkeley</td>
<td>Symplectic geometry; noncommutative geometry; mathematical physics</td>
</tr>
<tr>
<td>Brett Wick</td>
<td></td>
<td>PhD, Brown University</td>
<td>Analysis of several complex variables; harmonic analysis and operatory theory</td>
</tr>
<tr>
<td>Mladen Victor Wickerhauser</td>
<td></td>
<td>PhD, Yale University</td>
<td>Harmonic analysis; wavelets; numerical algorithms for data compression</td>
</tr>
<tr>
<td>David Wright</td>
<td></td>
<td>PhD, Columbia University</td>
<td>Affine algebraic geometry; polynomial automorphisms</td>
</tr>
</tbody>
</table>

### Associate Professors

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Education</th>
<th>Fields</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roya Beheshti Zavareh</td>
<td></td>
<td>PhD, Massachusetts Institute of Technology</td>
<td>Algebraic geometry</td>
</tr>
<tr>
<td>Brian E. Blank</td>
<td></td>
<td>PhD, Cornell University</td>
<td>Representations of Lie groups; harmonic analysis</td>
</tr>
<tr>
<td>Jimin Ding</td>
<td></td>
<td>PhD, University of California, Davis</td>
<td>Statistics</td>
</tr>
<tr>
<td>Matthew Kerr</td>
<td></td>
<td>PhD, Princeton University</td>
<td>Algebraic geometry; Hodge theory</td>
</tr>
<tr>
<td>Gregory Knese</td>
<td></td>
<td>PhD, Washington University</td>
<td>Complex function theory, operators; harmonic analysis</td>
</tr>
<tr>
<td>Nan Lin</td>
<td></td>
<td>PhD, University of Illinois at Urbana-Champaign</td>
<td>Statistics</td>
</tr>
<tr>
<td>Jack Shapiro</td>
<td></td>
<td>PhD, City University of New York</td>
<td>Algebra K-theory</td>
</tr>
</tbody>
</table>

### Assistant Professors

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Education</th>
<th>Fields</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steven Frankel</td>
<td></td>
<td>PhD, University of Cambridge</td>
<td>Assistant Professor of Mathematics</td>
</tr>
<tr>
<td>Todd Kuffner</td>
<td></td>
<td>PhD, Imperial College London</td>
<td>Assistant Professor of Mathematics</td>
</tr>
<tr>
<td>Yanli Song</td>
<td></td>
<td>PhD, Pennsylvania State University</td>
<td>Assistant Professor of Mathematics</td>
</tr>
<tr>
<td>Ari Stern</td>
<td></td>
<td>PhD, California Institute of Technology</td>
<td>Assistant Professor of Mathematics</td>
</tr>
<tr>
<td>Michael Wendl</td>
<td></td>
<td>PhD, Washington University</td>
<td>Assistant Professor of Genetics, The Genome Institute; courtesy appointment, Mathematics Department</td>
</tr>
</tbody>
</table>


Professors Emeriti

William M. Boothby (http://wumath.wustl.edu/people/boothby_william-m)
PhD, University of Michigan
Differential geometry

Lawrence Conlon (http://wumath.wustl.edu/people/conlon_lawrence)
PhD, Harvard University
Differential topology

Ron Freiwald (http://wumath.wustl.edu/people/freiwald_ron)
PhD, University of Rochester
General topology

Gary R. Jensen (http://wumath.wustl.edu/people/jensen_gary-r)
PhD, University of California, Berkeley
Differential geometry

Robert McDowell (http://wumath.wustl.edu/people/mcdowell_robert)
PhD, Purdue University
General topology

Richard Rochberg
PhD, Harvard University
Complex analysis, interpolation theory

Guido L. Weiss (http://wumath.wustl.edu/people/weiss_guido-l)
PhD, University of Chicago
Interpolation of operators; harmonic analysis, Lie groups

Edward N. Wilson (http://wumath.wustl.edu/people/wilson_edward-n)
PhD, Washington University
Harmonic analysis, differential geometry

William Chauvenet Postdoctoral Lecturers

Patricio Gallardo (http://wumath.wustl.edu/people/patricio-gallardo)
PhD, Stony Brook University

Michael Hartz (http://wumath.wustl.edu/people/michael-hartz)
PhD, University of Waterloo

Yakov Berchenko-Kogan (http://wumath.wustl.edu/people/yakov-yasha-berchenko-kogan)
PhD, Massachusetts Institute of Technology

James Pascoe (http://wumath.wustl.edu/people/james-pascoe)
NSF Postdoctoral Fellow
PhD, University of California, San Diego
Several complex variables

Associate Director of Undergraduate Studies

Blake Thornton (http://wumath.wustl.edu/people/thornton_blake)
PhD, University of Utah

Program Coordinator

Lisa M. Kuehne (http://wumath.wustl.edu/people/kuehne_lisa)
Program Coordinator, University College & Center for Advanced Learning
AM Mathematics, Washington University
Undergraduate Mathematics Education

Degree Requirements

AM in Mathematics

General requirements: 36 units of courses and an optional thesis. 3 units may be for thesis research. The minimum residence requirement is one full academic year of graduate study. A grade point average of B or better must be maintained in graduate courses.

Optional thesis requirements: To be eligible for the thesis option, a student must maintain a cumulative grade point average of 3.5 or higher in the first 18 units of courses satisfying the program requirements.

Course requirements: There are four basic graduate sequences in pure mathematics:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math 5021</td>
<td>Complex Analysis I</td>
<td>6</td>
</tr>
<tr>
<td>&amp; Math 5022</td>
<td>and Complex Analysis II</td>
<td></td>
</tr>
<tr>
<td>Math 5031</td>
<td>Algebra I</td>
<td>6</td>
</tr>
<tr>
<td>&amp; Math 5032</td>
<td>and Algebra II</td>
<td></td>
</tr>
<tr>
<td>Math 5041</td>
<td>Geometry I</td>
<td>6</td>
</tr>
<tr>
<td>&amp; Math 5042</td>
<td>and Geometry II</td>
<td></td>
</tr>
<tr>
<td>Math 5051</td>
<td>Measure Theory and Functional Analysis I</td>
<td>6</td>
</tr>
<tr>
<td>&amp; Math 5052</td>
<td>and Measure Theory and Functional Analysis II</td>
<td></td>
</tr>
</tbody>
</table>

A candidate for the AM in Mathematics must include two of these sequences (12 units) in the required 36 units. The student, in consultation with their adviser, selects the remaining 24 units according to the student's interests and needs.

The AM examination: Candidates for the AM degree must pass at least two of the four PhD qualifying exams. Under exceptional circumstances, the graduate committee may allow the student to substitute the PhD qualifying exams mentioned above with a comprehensive examination on the contents of Math 4111 Introduction to Analysis–Math 4121 Introduction to Lebesgue Integration, Math 4171 Topology I–Math 4181 Topology II, and Math 429 Linear Algebra–Math 430 Modern Algebra.
AM in Statistics

**General requirements:** 36 units of courses and a thesis. 3 units may be for thesis research. The minimum residence requirement is one full academic year of graduate study. A grade point average of B or better must be maintained in graduate courses.

**Course requirements:** The student must take (or have taken) the following six required courses in mathematics or their equivalents:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math 493</td>
<td>Probability &amp; Mathematical Statistics</td>
<td>6</td>
</tr>
<tr>
<td>Math 494</td>
<td>Theory of Statistics I</td>
<td>3</td>
</tr>
<tr>
<td>Math 5061</td>
<td>Theory of Statistics II</td>
<td>3</td>
</tr>
<tr>
<td>Math 439</td>
<td>Linear Statistical Models</td>
<td>3</td>
</tr>
<tr>
<td>Math 4392</td>
<td>Advanced Linear Statistical Models</td>
<td>3</td>
</tr>
<tr>
<td>Math 459</td>
<td>Bayesian Statistics</td>
<td>3</td>
</tr>
<tr>
<td>Math 475</td>
<td>Statistical Computation</td>
<td>3</td>
</tr>
</tbody>
</table>

or a suitable substitute elective approved by the department

In the case that an equivalent course has been taken and also proficiency in the course material has been demonstrated, other 400-level and above electives may be substituted in consultation with the adviser. Additional 400-level or higher electives will be chosen by the student in consultation with their adviser to make up the 36 units.

**PhD in Mathematics**

**General requirements:** Completion of the PhD requires four full years of graduate study, with at least 48 units spent in residence at Washington University. The student must spend at least one academic year as a full-time student; this requirement cannot be met wholly by summer sessions or part-time study. The student may, with departmental permission, transfer part of the graduate units from other universities. A grade point average of B or better is required in graduate courses. Graduate students in mathematics may ordinarily expect up to five years of support. Continuation of support each year is dependent upon normal progress toward the degree and satisfactory performance of duties. Students must also complete the Teaching Seminar course (Math 597), which prepares them for the mentored teaching experience, which is an integral part of scholarly activity. The course spans three semesters usually starting in the second semester.

**Specific course requirements:** Courses must include four basic graduate sequences:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math 5021</td>
<td>Complex Analysis I</td>
<td>6</td>
</tr>
<tr>
<td>Math 5022</td>
<td>and Complex Analysis II</td>
<td></td>
</tr>
</tbody>
</table>

**Continuation of support each year:** The student must pass the three-hour combined exam. To pass the qualifying exam in one of the four areas, the student is required to pass the second half of the sequence. Doctoral candidates take an additional one-hour exam which covers the entire sequence. To pass the qualifying exam in one of the four areas, the student must pass the three-hour combined exam.

**Qualifying examinations:** The qualifying exam is in two parts; one is a series of four written tests covering a range of topics, and one is an oral exam on two selected topics. The written tests cover the material in the four basic course sequences. Each spring, at the end of each sequence, all students enrolled in the course take a two-hour final exam; this exam usually covers the second half of the sequence. Doctoral candidates take an additional one-hour exam which covers the entire sequence. To pass the qualifying exam in one of the four areas, the student must pass the three-hour combined exam.

**The dissertation and final oral exam:** The student's dissertation is the single most important requirement for the PhD degree. It must be an original contribution to mathematical knowledge and the student's opportunity to conduct significant independent research. Once the department has accepted the dissertation (on the advice of the thesis adviser), the student is required to pass a final oral examination. Part of this procedure is a question/answer period in which the student is expected to "defend" the thesis. For information about preparing the thesis and its abstract, and about the deadlines involved, please consult the following items from the Graduate School: the Forms (http://graduateschool.wustl.edu/forms) webpage and the Policies and Guides (http://graduateschool.wustl.edu/policies-and-guides) webpage (which includes the Doctoral Dissertation Guide). For a sample thesis TeX file and style file, visit the Department of Mathematics (http://wumath.wustl.edu/links) website.
PhD in Statistics

Degree Requirements Summary

Required graduate units, consisting of:

- 24 required units (excludes research units) total in fundamental topics and exam fields
- 12 elective units (excludes research units)
- 6 course units for staffing a walk-in statistical consulting center to be setup by the department
- 4 qualifying exams: 2 in statistics, 2 in mathematics
- Graduate School Teaching Requirement for PhD Students
- Major and minor oral presentation
- Dissertation research, thesis preparation, and defense (30 course units)

General requirements: The PhD in Statistics general requirements mirror the PhD in Mathematics. For a more detailed explanation, please visit the PhD in Statistics (http://wumath.wustl.edu/graduate-new/placement-graduate-students/degree-programs-and-requirements/phd-statistics) webpage.

Specific course requirements: Courses must include two basic graduate statistics sequences:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math 439 &amp; 4392</td>
<td>Linear Statistical Models and Advanced Linear Statistical Models</td>
<td>6</td>
</tr>
</tbody>
</table>

and any two of the following pure math sequences:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math 5021 &amp; Math 5022</td>
<td>Complex Analysis I and Complex Analysis II</td>
<td>6</td>
</tr>
<tr>
<td>Math 5031 &amp; Math 5032</td>
<td>Algebra I and Algebra II</td>
<td>6</td>
</tr>
<tr>
<td>Math 5041 &amp; Math 5042</td>
<td>Geometry I and Geometry II</td>
<td>6</td>
</tr>
<tr>
<td>Math 5051 &amp; Math 5052</td>
<td>Measure Theory and Functional Analysis I and Measure Theory and Functional Analysis II</td>
<td>6</td>
</tr>
</tbody>
</table>

Prerequisites, if needed, are Math 429 Linear Algebra (0 units toward the degree) and Math 233 Calculus III (0 units toward the degree).

Language requirement: A student whose native language is not English must demonstrate proficiency in English. The student also is expected to become fluent in spoken English. In particular, any student who expects to gain teaching experience while pursuing a degree will need to do this as soon as possible.

All students are expected to fulfill the language requirement during their first two years of graduate study.

Qualifying examinations: The qualifying exam is in two parts. One is a series of four written tests covering a range of topics, and one is an oral exam on two selected topics. The written tests cover the material in the four basic course sequences. Each spring, at the end of each sequence, all students enrolled in the course take a two-hour final exam; this exam usually covers the second half of the sequence. Doctoral candidates take an additional one-hour exam which covers the entire sequence. To pass the qualifying exam in one of the four areas, the student must pass the three-hour combined exam.

The dissertation and final oral exam: The student's dissertation is the single most important requirement for the PhD degree. It must be an original contribution to mathematical knowledge and the student's opportunity to conduct significant independent research. The student is required to pass a final oral examination, and part of this procedure is a question/answer period in which the student is expected to "defend" the dissertation. For information about preparing the thesis and its abstract, and about the deadlines involved, please consult the Graduate School's academic information section of this Bulletin.

Movement Science

The PhD in Movement Science is an interdisciplinary program designed to prepare students for productive research careers in academia and industry. The program offers training to investigators who seek to answer questions about human movement, its functions and dysfunctions. The program is organized around three core content areas: biocontrol (neuroscience), bioenergetics (exercise physiology) and biomechanics. Our students are trained to investigate and improve movement impairments in people with chronic diseases such as obesity, stroke, diabetes, neuropathy, Parkinson's disease, and low back pain.

The Movement Science Program is administered through the Program in Physical Therapy. Applicants come from a variety of academic backgrounds: physical therapy, exercise science, kinesiology, biomedical engineering, neuroscience, and occupational therapy. Students learn from, and collaborate with, scientists from multiple departments, such as medicine, psychiatry, orthopedics, biomedical engineering, psychology and biology.

Accepted students receive full tuition remission, a stipend, and health insurance. The Movement Science Program is supported by NIH training grant T32HD007434.
Contact: Jennifer Brown
Phone: 314-273-6067
Email: jennifer.brown@wustl.edu
Website: https://pt.wustl.edu/education/phd-in-movement-science

Faculty

Chair
Gammon M. Earhart (https://pt.wustl.edu/faculty-staff/faculty/gammon-m-earhart-pt-phd)
Professor
PhD, Washington University
Neural control of locomotion in people with Parkinson's disease

Professors

PhD, Saint Louis University
Promotion of nutrition and exercise in urban residents

Assistant Director, Movement Science Program
PhD, Washington University
Stroke recovery and rehabilitation; neurorehabilitation

PhD, Washington University
Metabolic and movement factors in people with diabetes mellitus (DM)

Susan B. Racette (https://pt.wustl.edu/faculty-staff/faculty/susan-b-racette-phd)
PhD, University of Chicago
Dietary and exercise interventions for health promotion and disease prevention

David R. Sinacore (https://pt.wustl.edu/faculty-staff/faculty/david-r-sinacore-pt-phd-fapta)
PhD, West Virginia University
Diabetic foot disease, contributors to physical frailty in older adults

PhD, Washington University
Musculoskeletal pain problems in the low back, hip and neck

Dequan Zou (https://pt.wustl.edu/faculty-staff/faculty/dequan-zou-dsc)
DSc, Washington University
Biomechanics modeling and computer simulation

Associate Professors

W. Todd Cade (https://pt.wustl.edu/faculty-staff/faculty/w-todd-cade-pt-phd)
PhD, University of Maryland, Baltimore
Mechanisms and treatments of metabolic diseases

Michael Harris (https://pt.wustl.edu/faculty-staff/faculty/mike-harris-phd)
PhD, University of Utah
Whole body & joint-level orthopaedic biomechanics

Joseph W. Klaesner (https://pt.wustl.edu/faculty-staff/faculty/joseph-w-klaesner-phd)
PhD, Vanderbilt University
Rehabilitation engineering

Assistant Professors

Gretchen A. Meyer (https://pt.wustl.edu/faculty-staff/faculty/gretchen-a-meyer-phd)
PhD, University of California, San Diego
Mechanical and cellular contributors to skeletal muscle disease

Diana C. Parra Perez (https://pt.wustl.edu/faculty-staff/faculty/diana-c-parra-perez-mpt-phd)
PhD, Washington University
Physical activity and healthy diets and their role in preventing chronic disease and obesity

Degree Requirements

PhD in Movement Science

Students will complete the required courses and electives during the first two years. In addition to courses, the requirements to complete the PhD degree include:

- **Qualifying examination:** Part one of the qualifying exam is a written test to assess the knowledge about the three curriculum cores (biocontrol, bioenergetics and biomechanics). Part two requires the student to develop a research proposal pertinent to their projected area of dissertation research.

- **Laboratory research:** Students will develop, implement and complete original laboratory research appropriate for a doctoral dissertation.

- **Doctoral dissertation:** Students will successfully defend an oral defense of their dissertation proposal, complete a written doctoral dissertation, and defend an oral presentation of the doctoral dissertation.

On average, students complete the degree in 4.5 years.

Music

The Department of Music offers programs of study leading to the Doctor of Philosophy in Music and the Master of Arts in Music, with emphasis in either musicology or music theory. Each graduate program combines a course of advanced studies in one
area of music studies with supporting studies in related fields of music. The number of graduate students admitted each year is small, so each student is assured individual attention. There is traditionally close rapport and mutually supportive interaction among graduate students in all areas of study.

The AM and PhD programs in musicology offer concentrations in historical musicology and ethnomusicology. Department faculty interests cover all eras of European art music, American popular musics, film and theatre music, jazz, and Turkish and other Middle Eastern musics. Methodological approaches cover a range of critical perspectives, placing music within its cultural and historical contexts and developing the student's ability to think and write about music and music-making. Intensive study in music theory is a required component of the program. Diverse opportunities for performance are offered as well.

The AM and PhD programs in music theory focus on creative analysis and critical examination of assumptions about music and musical discourse. The graduate program prepares students to undertake research in musical analysis and in the language and methodology of music theory. Preparation includes guiding each student in developing their own modes of thought and expression. Faculty interests include improvisation and intermedia, texture and form, music cognition and computational modeling, composition, Schenker, and the interplay of text and music in German artsong.

Contact:  
Kim Daniels  
Phone: 314-935-5566  
Email: daniels@wustl.edu  
Website: http://music.wustl.edu/graduate

Faculty  
Chair  
Todd Decker (http://music.wustl.edu/people/decker)  
PhD, University of Michigan  

Endowed Professor  
Dolores Pesce (http://music.wustl.edu/people/pesce)  
Avis Blewett Professor of Music  
PhD, University of Maryland  

Professors  
Todd Decker (http://music.wustl.edu/people/decker)  
PhD, University of Michigan  

Jeffrey Kurtzman (http://music.wustl.edu/people/kurtzman)  
PhD, University of Illinois  

Associate Professors  
Patrick Burke (http://music.wustl.edu/people/burke)  
PhD, University of Wisconsin

Robert Snarrenberg (http://music.wustl.edu/people/snarrenberg)  
PhD, University of Michigan

Assistant Professors  
Clare Bokulich (http://music.wustl.edu/people/bokulich)  
PhD, Stanford University  

Ben Duane (http://music.wustl.edu/people/duane)  
PhD, Northwestern University  

Denise Elif Gill (http://music.wustl.edu/people/gill)  
PhD, University of California, Santa Barbara  

Christopher Stark (http://music.wustl.edu/people/stark)  
DMA, Cornell University  

Alexander Stefaniak (http://music.wustl.edu/people/stefaniak)  
PhD, Eastman School of Music  

Paul Steinbeck (http://music.wustl.edu/people/steinbeck)  
PhD, Columbia University  

Professor of the Practice  
William Lenihan (http://music.wustl.edu/people/lenihan)  
BMus, University of Missouri-Columbia  

Senior Lecturer  
Christine Armistead (http://music.wustl.edu/people/armistead)  
MM, Washington University  

Lecturers  
Nicole Aldrich (http://music.wustl.edu/people/aldrich)  
DMA, University of Maryland  

Amanda Kirkpatrick (http://music.wustl.edu/people/kirkpatrick)  
MM, University of Missouri-Columbia  

L.J. White  
PhD, Northwestern University  

Postdoctoral Research Associate  
Richard Deja  
PhD, University of Illinois at Urbana-Champaign  

Professors Emeriti  
Hugh Macdonald  
PhD, Cambridge University  

Craig Monson  
PhD, University of California, Berkeley  

Robert Wykes  
DMA, University of Illinois
Degree Requirements

Master of Arts in Music (musicology)

The Master of Arts in musicology requires 36 units of graduate study, including 12 units of music history and bibliography, 6 units of music theory, 18 units of electives, keyboard proficiency, reading knowledge of one foreign language, and a thesis.

PhD in Music (musicology)

The PhD degree in musicology requires a total of 72 units of graduate study: 33 units of music history and bibliography, 12 units of music theory, 1 unit of pedagogy, 6 units outside music, and 20 units of electives and dissertation research. Also required are keyboard proficiency, reading knowledge of two foreign languages (German and either French, Italian, Latin, or a substitute, according to the student's needs), written and oral qualifying examinations (which occur after the completion of 60 units), the dissertation and the final oral defense of the dissertation. Students who have completed a master's degree at another institution may receive up to 24 units of transfer credit toward the PhD.

Master of Arts in Music (music theory)

The Master of Arts in music theory requires 36 units of graduate study, including 15 units of music theory, 9 units of music history and bibliography, 12 units of electives, keyboard proficiency, reading knowledge of one foreign language, and a thesis.

PhD in Music (music theory)

The PhD degree in music theory requires a total of 72 units of graduate study, including 24 units of music theory, 15 units of music history and bibliography, 6 units of composition, 1 unit of pedagogy, 6 units outside music, and 20 units of electives or dissertation research. Also required are keyboard proficiency, reading knowledge of two foreign languages (German and either French or Italian; a computer language may be substituted for the second language according to the student's need), written and oral qualifying examinations, and a dissertation with a final oral defense of the dissertation. Students who have completed a master's degree at another institution may receive up to 24 units of transfer credit toward the PhD.

Philosophy

The Department of Philosophy houses two doctoral programs: a PhD in Philosophy and an interdisciplinary PhD in Philosophy-Neuroscience-Psychology (PNP). The Philosophy program covers a broad array of philosophy, with particular strengths in ethics, moral psychology, and political philosophy; philosophy of mind, philosophy of language, and metaphysics; and the history of philosophy. The PNP program draws on a core faculty in philosophy and on Washington University's exceptional psychology and neuroscience faculty.

The department accepts about 10 percent of the applicants to these programs and maintains about 25 students in both programs. We are especially open to interdisciplinary and are committed to providing methodologically and substantively broad development. Applicants from a wide range of backgrounds are welcome; the most successful applicants have evidence of philosophical talent and promise.

Both programs take at most six years, during which all PhD students are fully supported. The first six or seven semesters are dedicated primarily to courses, which may include independent studies and courses in other programs, such as classics, law, political science, and women's studies. Students in their first seven semesters must also complete two or three qualifying papers that bridge the gap between seminar papers and professional publications. In addition, the department houses two dissertation workshops, one required for Philosophy students in their third year and beyond and the other for PNP students in all years. Students in their fourth year finish their third qualifying paper, devise a dissertation prospectus, and defend the prospectus in an oral exam. Then, the fifth year typically offers fellowship support to draft the full dissertation, before a sixth year is given over to revisions, a required colloquium, and job applications.

The department also works hard to prepare its students as teachers and as potential academic job applicants. Students typically participate in mentored teaching experiences for four of their six years in residence, and serve as instructor of record for at least one of their own courses in University College or Summer School. Placement efforts begin during the first-years' orientation and intensify in the spring of the student's fifth year.

Phone: 314-935-6670
Email: mckinneysusan@wustl.edu
Website: http://philosophy.artsci.wustl.edu/graduate

Faculty

Chair
Ron Mallon (http://philosophy.artsci.wustl.edu/people/ron-mallon)
Chair, Department of Philosophy; Director of Philosophy-Neuroscience-Psychology Program
PhD, Rutgers University

Professors
Carl Craver (http://philosophy.artsci.wustl.edu/people/Carl_Craver)
PhD, University of Pittsburgh
Dennis DesChene (http://philosophy.artsci.wustl.edu/people/Dennis_DesChene)
PhD, Stanford University

John Doris (http://philosophy.artsci.wustl.edu/people/John_Doris)
PhD, University of Michigan

Julia Driver (http://philosophy.artsci.wustl.edu/people/Julia_Driver)
PhD, Johns Hopkins University

J. Claude Evans (http://philosophy.artsci.wustl.edu/people/Claude_Evans)
PhD, State University of New York--Stony Brook

John Heil (http://philosophy.artsci.wustl.edu/people/John_Heil)
PhD, Vanderbilt University

Jonathan Kvanvig (http://philosophy.artsci.wustl.edu/people/jonathan-kvanvig-0)
PhD, University of Notre Dame

Casey O’Callaghan (http://philosophy.artsci.wustl.edu/people/ocallaghan-casey)
PhD, Princeton University

Mark Rollins (http://philosophy.artsci.wustl.edu/people/mark-rollins)
PhD, Columbia University

Roy Sorensen (http://philosophy.artsci.wustl.edu/people/roy-sorensen)
PhD, Michigan State University

Kit Wellman (http://philosophy.artsci.wustl.edu/people/kit-wellman)
PhD, University of Arizona

Derek Parfit (http://philosophy.artsci.wustl.edu/people/derek-parfit)
PhD, University of Oxford

Lindsey Platt (http://philosophy.artsci.wustl.edu/people/lindsey-platt)
PhD, University of Arizona

Assistant Professors

Allan Hazlett (http://philosophy.artsci.wustl.edu/people/allan-hazlett)
PhD, Brown University

Charlie Kurth (http://philosophy.artsci.wustl.edu/people/charlie-kurth)
PhD, University of California, San Diego

Elizabeth Schechter (http://philosophy.artsci.wustl.edu/people/elizabeth-schechter)
PhD, University of Maryland

Julia Staffel (http://philosophy.artsci.wustl.edu/people/julia-staffel)
PhD, University of Southern California

Postdoctoral Fellows

Lindsay Brainard (http://philosophy.artsci.wustl.edu/people/lindsay-brainard)
PhD, University of North Carolina at Chapel Hill

Joseph McCaffrey (http://philosophy.artsci.wustl.edu/people/joseph-mccaffrey)
PhD, University of Pittsburgh

David Rose (http://philosophy.artsci.wustl.edu/people/david-rose)
PhD, University of Pittsburgh

Lecturers

Anne Baril (http://philosophy.artsci.wustl.edu/people/anne-baril-0)
PhD, University of Arizona

Jason Gardner (http://philosophy.artsci.wustl.edu/people/jason-gardner-0)
PhD, Washington University

Tyke Nunez (http://philosophy.artsci.wustl.edu/people/tyke-nunez)
PhD, University of Pittsburgh

Mark Povich (http://philosophy.artsci.wustl.edu/people/mark-povich-0)
PhD, Washington University

Cynthia Schossberger (http://philosophy.artsci.wustl.edu/people/cynthia-schossberger)
PhD, University of Pennsylvania

Brian Talbot (http://philosophy.artsci.wustl.edu/people/brian-talbot)
PNP Study Abroad Advisor
PhD, University of Southern California
Adjunct Professors

John Bruer (http://philosophy.artsci.wustl.edu/people/John_Bruer)
PhD, Rockefeller University

Linda Nicholson (http://history.artsci.wustl.edu/linda_nicholson)
Susan E. and William P. Stiritz Distinguished Professor of Women's Studies
PhD, Brandeis University

Professors Emeriti

William H. Gass (http://philosophy.artsci.wustl.edu/people/william-gass)
David May Distinguished University Professor Emeritus in the Humanities
PhD, Cornell University

Lucian W. Krukowski (http://philosophy.artsci.wustl.edu/people/lucian-krukowski)
PhD, Washington University

Jerome P. Schiller (http://philosophy.artsci.wustl.edu/people/jerome-schiller)
PhD, Harvard University

Joseph S. Ullian (http://philosophy.artsci.wustl.edu/people/joe-ullian)
PhD, Harvard University

Richard A. Watson (http://philosophy.artsci.wustl.edu/people/richard-watson)
PhD, University of Iowa

Carl P. Wellman (http://philosophy.artsci.wustl.edu/people/carl-wellman)
Hortense and Tobias Lewin Distinguished Professor Emeritus in the Humanities
PhD, Harvard University

Degree Requirements

PhD in Philosophy-Neuroscience-Psychology (PNP)

Successful completion of 72 units of courses and seminars at the 400 level or above (with the exception of Phil 301G Symbolic Logic) in a way that meets both the detailed course requirements and the following minima:

1. 33 units of Philosophy courses
2. 18 units of empirical courses/laboratory experience
3. Participation in the PNP Dissertation Seminar (PNP 501) in semesters when it is offered.
4. Regular attendance at Philosophy PNP Colloquia, except with the permission of the director of PNP.
5. Successful completion of two qualifying papers
6. Completion of teaching experiences
7. Satisfaction of any colloquium requirement imposed by the department
8. Completion and defense of a dissertation prospectus (typically during the fourth year)
9. Completion and defense of a dissertation

Additional Information

For additional information, visit our Graduate Program (http://pnp.artsci.wustl.edu/graduate) webpage. Please contact the department for further requirements.

PhD in Philosophy

1. Every student must complete the logic requirement, either by passing the exam given during orientation or by receiving at least a B in Phil 301G Symbolic Logic or Phil 405 Philosophical Logic.
2. Every student must complete at least 42 units of graduate-level (400-level or above) philosophy courses, each with at least a B-. No units can be transferred from other institutions. These units must include the following distribution requirements:
   a. Phil 502 Proseminar in Philosophy, taken in the first semester
   b. at least two additional 500-level seminars
   c. at least two core surveys in theoretical philosophy (Phil 4141 Advanced Epistemology, Phil 4142 Advanced Metaphysics, Phil 4065 Advanced Philosophy of Language, Phil 4210 Topics in Advanced Philosophy of Science)
   d. at least two core surveys in practical philosophy (Phil 4315 Normative Ethical Theory, Phil 4310 20th-Century Metaethics, Phil 4320 British Moralists, Phil 4400 Advanced Social and Political Philosophy)
   e. at least one core survey in ancient philosophy (Phil 451 Plato, Phil 452 Aristotle, Phil 4530 Hellenistic Philosophy)
   f. at least one core survey in modern philosophy (Phil 4550 Continental Rationalism, Phil 4560 Empiricism, Phil 4575 Kant's Moral Theory, Phil 4570 Kant's Critique of Pure Reason)
3. Additional courses or directed research to 72 hours (at the 400 or 500 level; may consist of directed research Phil 591 or additional, germane courses)
4. Completion of teaching experiences
5. Successful completion of two qualifying papers
6. Completion of dissertation requirements
7. Completion of colloquium requirements
Additional Information

For additional information, visit our Graduate Program (http://philosophy.artsci.wustl.edu/graduate) webpage. Please contact the department for further requirements.

Physics

The Department of Physics offers AM and PhD programs in Physics. Research covers a wide area of experimental and theoretical physics, and benefits from close contacts with nuclear and inorganic chemists in the chemistry department, planetary scientists in the earth and planetary sciences department, applied scientists in the School of Engineering & Applied Science, and biological scientists both on the Danforth Campus and at the School of Medicine. The department is a major participant in the McDonnell Center for the Space Sciences and the Institute of Materials Science & Engineering.

Experimental research areas include:

- astrophysics (observations of cosmic rays, gamma rays, X-rays, dark matter detection, high-precision tests of gravity)
- space sciences (laboratory analysis of meteorites, stardust, interplanetary dust particles)
- condensed matter and materials physics (graphene and other two-dimensional atomic crystals, quantum information and atomic physics with condensed matter devices, nanostructures, metallic glasses, magnetism and superconductivity, high-pressure physics, nuclear magnetic resonance)
- biological and biomedical physics (biophysics of the brain, hyperpolarized magnetic resonance imaging, ultrasound, echocardiography).

Theoretical research areas include:

- biophysics (nonequilibrium dynamics in biological cells)
- condensed matter physics (strongly correlated electron systems, topological phases, excited states of many-electron systems, density functional theory)
- elementary particle physics (astroparticle physics, dark matter, theoretical cosmology, strong interactions, non-Hermitian Hamiltonians, quark matter)
- nuclear theory (nuclear matter, correlations in nuclei).

Students are usually admitted to the PhD program rather than to the AM. They spend their first two years taking graduate courses, finding a dissertation adviser, and starting research. During that time they receive a stipend and complete two semesters of mentored teaching experiences. After achieving the required course grades and passing an oral examination at the end of their second year, students are normally paid from research funds while working on their research and writing a dissertation. The PhD program typically takes between five and six years to complete.

Website: http://physics.wustl.edu

Faculty

Chair

Mark Alford (http://physics.wustl.edu/people/alford_mark-g)
Professor
PhD, Harvard University
Nuclear/particle physics

Endowed Professors

Carl M. Bender (http://physics.wustl.edu/people/bender_carl)
Wilfred R. and Ann Lee Konneker Professor of Physics
PhD, Harvard University
Elementary particles

Ramanath Cowsik (http://www.physics.wustl.edu/people/cowsik_ramanath)
James S. McDonnell Professor of Space Sciences
PhD, University of Bombay
Astrophysics and space sciences

Kenneth F. Kelton (http://www.physics.wustl.edu/people/kelton_kenneth-f)
Arthur Holly Compton Professor of Physics
PhD, Harvard University
Condensed matter and materials physics

James G. Miller (http://www.physics.wustl.edu/people/miller_james-g)
Albert Gordon Hill Professor of Physics
PhD, Washington University
Physics applications in biology and medicine

Professors

James H. Buckley (http://physics.wustl.edu/people/buckley_james-h)
PhD, University of Chicago
Astrophysics and space sciences

Anders E. Carlsson (http://physics.wustl.edu/people/carlsson_anders-e)
PhD, Harvard University
Biophysics

Mark S. Conradi (http://www.physics.wustl.edu/people/conradi_mark-s)
PhD, Washington University
Condensed matter and materials physics

Willem H. Dickhoff (http://www.physics.wustl.edu/people/dickhoff_willem-h)
PhD, Free University, Amsterdam
Many-body theory
Martin H. Israel (http://www.physics.wustl.edu/people/israel_martin-h)
PhD, California Institute of Technology
Astrophysics and space sciences

Jonathan I. Katz (http://www.physics.wustl.edu/people/katz_jonathan-i)
PhD, Cornell University
Astrophysics

Henric Krawczynski (http://www.physics.wustl.edu/people/krawczynski_henric)
PhD, University of Hamburg
Astrophysics and space sciences

Michael C. Ogilvie (http://www.physics.wustl.edu/people/ogilvie_michael-c)
PhD, Brown University
Elementary particles

James S. Schilling (http://www.physics.wustl.edu/people/schilling_james-s)
PhD, University of Wisconsin-Madison
Condensed matter and materials physics

Ralf Wessel (http://www.physics.wustl.edu/people/wessel_ralf)
PhD, University of Cambridge
Physics applications in biology and medicine

Joint Professors

Shankar M.L. Sastry (http://www.physics.wustl.edu/people/sastry_shankar)
PhD, University of Toronto
(Mechanical Engineering)

Lee G. Sobotka (http://www.physics.wustl.edu/people/sobotka_lee-g)
PhD, University of California, Berkeley
(Chemistry)

Assistant Professors

Bhupal Dev (http://physics.wustl.edu/people/dev_bhupal)
PhD, University of Maryland, College Park
Elementary particle physics, particle astrophysics, cosmology and theoretical physics

Erik Henriksen (http://www.physics.wustl.edu/people/henriksen_ekir)
PhD, Columbia University
Condensed matter and materials science

Shankar Mukherji (http://www.physics.wustl.edu/people/mukherji_shankar)
PhD, Massachusetts Institute of Technology/Harvard Medical School
Systems cell biology

Kater Murch (http://www.physics.wustl.edu/people/murch_kater)
PhD, University of California, Berkeley
Quantum information and materials

Ryan Ogliore (http://physics.wustl.edu/people/ogliore_ryan)
PhD, California Institute of Technology
Cosmochemistry, planetary science

Lecturers

Vikram Duvvuri (http://www.physics.wustl.edu/people/duvvuri_vikram)
PhD, University of Chicago

Mairin Hynes (http://www.physics.wustl.edu/people/hynes_kathryn-mairin)
PhD, Washington University

Research Professors

Sachiko Amari (http://www.physics.wustl.edu/people/amari_sachiko)
PhD, Kobe University

Robert Binns (http://www.physics.wustl.edu/people/binns_w-robert)
PhD, Colorado State University

Christine Floss (http://www.physics.wustl.edu/people/floss_christine)
PhD, Washington University

Alexander Meshik (http://www.physics.wustl.edu/people/meshik_alex)
PhD, Vernadsky Institute of Cosmochemistry

Research Assistant Professors

Viatcheslav Bugaev (http://www.physics.wustl.edu/people/bugaev_viatcheslav)
PhD, Altai State University

Fabian Kislat (http://physics.wustl.edu/people/kislat_fabian)
PhD, Humboldt University
Degree Requirements

PhD and AM in Physics

This document summarizes the physics department's degree requirements. These are in addition to the requirements established by the Graduate School. For more information regarding requirements for doctoral degrees (p. 14) or master's degrees (p. 20) in the Graduate School, please visit the appropriate sections of this Bulletin.

Students are normally accepted for graduate work toward the PhD, and students are occasionally accepted to work toward the AM. For more information about degree requirements (http://physics.wustl.edu/graduate/about-the-program/handbook/degree-requirements), please visit the physics department website.

Requirements for AM

1. 36 semester hours of course credits, of which at least 30 semester hours must be in classroom or seminar courses at the 400 level or higher.
2. The student must get permission from their adviser and the director of graduate studies to take courses outside the physics department.
3. The student must maintain an overall grade average of B (GPA 3.0) or better.
4. Among the student's courses there must be at least 12 semester-hours of the "core" courses required for PhD qualification (detailed below), passed with an average grade of B (GPA 3.0) or better.

Requirements for PhD

1. Outline of requirements
   • Complete 36 units of academic credit (detailed below), maintaining an average grade of at least B (GPA 3.0).
   • Pass the PhD qualification procedure. This must be done before a student can formally join a research group, and is normally completed before the start of the third year.
   • Teaching requirements.
   • Write a thesis ("doctoral dissertation").
   • Pass an oral dissertation defense examination.
2. 36 unit academic credit course requirement

Courses that count toward academic credit:
• Any regular 400- or 500-level lecture courses in the physics department, including Physics 597/Physics 598 Supervised Teaching of Physics and Physics 582 Research Seminar
Courses outside the physics department, if approved by the student’s adviser and the director of graduate studies

- Reading courses, for which students should register for Physics 589/Physics 590 Selected Topics in Physics
- Supervised research, for which students should register for Physics 593/Physics 594 Introduction to Methods in Physics. This can be used for a maximum of 6 units of academic credit.

Students can take up to four 400-level physics classes toward their academic credit without special permission from the graduate studies committee. However, they should discuss the merits of doing so with their adviser.

3. PhD qualification: course requirements

For qualification, students must pass six core 500-level physics courses. In those courses the student must maintain an average of a B (GPA 3.0) with no more than one grade lower than B-. A given core course may be taken only once.

Must take:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics 501</td>
<td>Theoretical Physics</td>
<td>3</td>
</tr>
<tr>
<td>Physics 505</td>
<td>Classical Electrodynamics I</td>
<td>3</td>
</tr>
<tr>
<td>Physics 523</td>
<td>Quantum Mechanics I</td>
<td>3</td>
</tr>
<tr>
<td>Physics 529</td>
<td>Statistical Mechanics</td>
<td>3</td>
</tr>
</tbody>
</table>

plus at least two of:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics 502</td>
<td>Methods of Theoretical Physics II</td>
<td>3</td>
</tr>
<tr>
<td>Physics 506</td>
<td>Classical Electrodynamics II</td>
<td>3</td>
</tr>
<tr>
<td>Physics 507</td>
<td>Classical Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>or Physics 509</td>
<td>Nonlinear Dynamics</td>
<td></td>
</tr>
<tr>
<td>Physics 524</td>
<td>Quantum Mechanics II</td>
<td>3</td>
</tr>
</tbody>
</table>

These requirements can be modified or waived for students with previous graduate experience, e.g., a master’s degree in physics.

4. PhD qualification: oral examination requirement

After completing courses, the student must give a presentation to a committee of three physics faculty members (the prospective research adviser and two others), to qualify for admittance to the PhD program. A written summary is also required.

5. Teaching requirements

These requirements must be completed before the student submits their doctoral dissertation to the Graduate School.

a. Take L31 Physics 597

Graduate students are required to take Physics 597 Supervised Teaching of Physics prior to serving as an assistant to the instructor. Students typically take Physics 597 in their first fall semester.

b. At least two semesters of mentored teaching experiences

c. Four hours of oral presentations

Graduate students must give a total of 4 hours of “specialized oral presentation.” For example, teaching a class (e.g., when substituting for a professor); giving seminars, such as the weekly graduate seminar; or giving oral presentations at conferences, journal clubs, etc.

6. For dissertation requirements, including the oral defense of the dissertation:


Political Science

The doctoral program in political science at Washington University is one of the top programs in the country. Graduate students take classes and engage in research with a faculty recognized nationally and internationally as among the most expert, active, and productive in the country.

Our graduate program is relatively small. We admit around eight to 10 students into the PhD program each year, and most of these complete the doctorate, generally in five to six years. There are approximately 40 graduate students currently in residence.

Washington University’s PhD program in Political Science is designed to prepare students for academic careers in research and teaching at major institutions across the country. While our program stresses the importance of political methodology (applied statistics) and formal theory (game theory and mathematical modeling), our program is designed to teach all students in these methods, regardless of their mathematical background.

We have active research groups in American politics and institutions, comparative politics, international political economy, positive and normative theory, and political methodology. It is important to emphasize that we do not regard these subfields as separate entities. Many of our faculty have research and teaching interests that transcend political science subfields, as well as traditional disciplinary boundaries. We have strong connections with other departments at Washington University, including economics, anthropology, the law school, and with various interdisciplinary research centers on campus.

Contact: Colleen Skaggs
Phone: 314-935-7455
Email: cskaggs@wustl.edu
Website: http://polisci.wustl.edu/graduate
Faculty

Chair
James Spriggs II
Sidney W. Souers Professor of Government
PhD, Washington University

Associate Department Chair
Matthew Gabel
Professor
PhD, University of Rochester

Director of Undergraduate Studies
Justin Fox
Associate Professor
PhD, University of Rochester

Director of Graduate Studies
Andrew Reeves
Associate Professor
PhD, Harvard University

Endowed Professors
Randall Calvert
Thomas F. Eagleton University Professor of Public Affairs and Political Science
PhD, California Institute of Technology
Lee Epstein
Ethan A.H. Shepley Distinguished University Professor
PhD, Emory University
James L. Gibson
Sidney W. Souers Professor of Government
PhD, University of Iowa
Norman J. Schofield
William Taussig Professor of Political Economy
PhD, Essex University
Steven S. Smith
Kate M. Gregg Professor of Social Sciences; Director of the Weidenbaum Center on the Economy, Government, and Public Policy
PhD, University of Minnesota

Professors
Brian F. Crisp
PhD, University of Michigan
William R. Lowry
PhD, Stanford University
Itai Sened
PhD, University of Rochester

Associate Professors
Michael Bechtel
PhD, University of Konstanz
David Carter
PhD, University of Rochester
Justin Fox
PhD, University of Rochester
Clarissa Hayward
PhD, Yale University
Francis Lovett
PhD, Columbia University
Ian MacMullen
PhD, Duke University
Sunita Parikh
PhD, University of Chicago
Andrew Reeves
PhD, Harvard University
Andrew Rehfield
PhD, University of Chicago
Betsy Sinclair
PhD, California Institute of Technology

Assistant Professors
Deniz Aksoy
PhD, University of Rochester
Sarah Brierley
PhD, University of California, Los Angeles
Jacob Montgomery
PhD, Duke University
Keith Schnakenberg
PhD, Washington University

Professors Emeriti
Gary Miller
PhD, University of Texas at Austin
John Sprague
Sidney W. Souers Professor Emeritus of Government
PhD, Stanford University
Degree Requirements
PhD in Political Science

For more information regarding our doctoral program and the curriculum, please visit our Graduate Program webpage (http://polisci.wustl.edu/graduate).

Psychological & Brain Sciences

The Department of Psychological & Brain Sciences teaches graduate students who are interested in becoming the next generation of academic researchers and educators in psychological and brain sciences. Graduate study may be undertaken in the following general areas: Behavior, Brain, & Cognition; Clinical Psychology; Aging & Development; and Social & Personality Psychology. The traditions of Washington University and the department encourage interdisciplinary graduate study, both between the subfields of psychological and brain sciences and across other disciplines. Therefore, whereas students must affiliate with at least one of the areas within psychological and brain sciences, they are frequently affiliated with multiple areas within psychological and brain sciences.

Further, many graduate students in Psychological & Brain Sciences also engage in interdisciplinary learning, scholarship and research. For example, cross-disciplinary opportunities and research are available in the Division of Biology and Biomedical Sciences (e.g., neuroscience and genetics); in the programs of Linguistics and of Cognitive, Computational, and Systems Neuroscience; in African-American Studies; and in Philosophy-Neuroscience-Psychology, as well as in several departments in the schools of Medicine and Engineering.

The Department of Psychological & Brain Sciences admits students for full-time study toward the PhD and does not offer a terminal master's degree. However, students are required to complete a master's degree with a thesis as part of the requirements for a PhD. In addition, the PhD includes required courses (including statistics, methods, ethics, and several core content areas), a subject matter exam, at least two semesters of a teaching experience that fulfills the doctoral teaching requirement, and consistently high-quality research productivity that results in publishable findings.

The Department of Psychological & Brain Sciences now offers the Graduate Certificate in Quantitative Data Analysis, open to graduate students of various disciplines. Advanced skills and knowledge in quantitative analysis, methods and interpretation are critical assets for scholars in a wide range of disciplines within the social sciences. Further, many of the important practical, analytical and conceptual skills are shared across disciplines. Many of the graduate programs in the social sciences include basic quantitative analysis skills within the core required curriculum of their department, but many students would benefit from advanced preparation in this domain. The certificate program will provide an organized means for students to achieve an advanced level of knowledge and skill in quantitative social science data analysis, interpretation and visualization that can be applied and shared in a variety of occupational domains.

The Graduate Certificate in Quantitative Data Analysis will require students to master both an introductory level and a more advanced level of quantitative skills and knowledge. Some of the introductory-level courses might overlap with courses that are already required within a student's individual PhD program curriculum, but the advanced level will require students to go beyond the basic expectations of their graduate program in order to achieve greater depth and breadth of knowledge and abilities.

Students interested in the Graduate Certificate in Quantitative Data Analysis should first apply for admission to the Washington University department in which they wish to obtain a graduate degree. After being admitted, students should notify their department adviser and the Graduate Certificate in Quantitative Data Analysis program director (Deanna Barch; dbarch@wustl.edu) of their plans to obtain the certificate. In addition, students should submit an "Application for Admission to Certificate Program" form to the Graduate School office, and send a copy to the Graduate Certificate in Quantitative Data Analysis office.

Phone: 314-935-6520
Website: https://psychweb.wustl.edu/graduate

Faculty

Chair
Deanna M. Barch (http://psychweb.wustl.edu/people/deanna-barch)
Gregory B. Couch Professor of Psychiatry
PhD, University of Illinois at Urbana-Champaign

Associate Chair
Jeffrey M. Zacks (http://dci.wustl.edu/~jeffzacks)
Professor
PhD, Stanford University

Endowed Professors
John Baugh (http://psychweb.wustl.edu/people/john-baugh)
Margaret Bush Wilson Professor in Arts & Sciences
PhD, University of Pennsylvania
(African and African-American Studies; Anthropology; Education; English)

Pascal R. Boyer (https://psychweb.wustl.edu/people/pascal-boyer)
Luce Professor of Collective and Individual Memory
PhD, University of Paris
(Anthropology)
Randy J. Larsen (http://psychweb.wustl.edu/larsen)
William R. Stuckenber Professor of Human Values and Moral Development
PhD, University of Illinois at Urbana-Champaign

Thomas F. Oltmanns (http://psychweb.wustl.edu/oltmanns)
Edgar James Swift Professor of Arts & Sciences
PhD, State University of New York--Stony Brook

Steven E. Petersen (https://neuro.wustl.edu/biographies/steven-petersen-phd)
James S. McDonnell Professor of Cognitive Neuroscience
PhD, California Institute of Technology
(Neurology and Neurological Surgery)

Henry L. Roediger III (http://psychweb.wustl.edu/roediger)
James S. McDonnell Distinguished University Professor
PhD, Yale University

Rebecca A. Treiman (https://psychweb.wustl.edu/treiman)
Burke and Elizabeth High Baker Professor of Child Developmental Psychology
PhD, University of Pennsylvania

Denise E. Wilfley (https://psychweb.wustl.edu/wilfley)
Scott Rudolph University Professor of Psychiatry
PhD, University of Missouri

Professors
Richard A. Abrams (http://psychweb.wustl.edu/people/richard-abrams)
PhD, University of Michigan

David A. Balota (http://psychweb.wustl.edu/people/david-balota)
PhD, University of South Carolina

Todd Braver (http://psychweb.wustl.edu/people/todd-braver)
PhD, Carnegie Mellon University

Brian D. Carpenter (http://psychweb.wustl.edu/people/brian-carpenter)
PhD, Case Western Reserve University

Ian G. Dobbins (https://psychweb.wustl.edu/people/ian-dobbins)
PhD, University of California, Davis

Leonard Green (http://psychweb.wustl.edu/green)
PhD, State University of New York--Stony Brook

Sandra S. Hale (https://psychweb.wustl.edu/hale)
PhD, University of Wisconsin--Milwaukee

Mark A. McDaniel (http://psychweb.wustl.edu/mcdaniel)
PhD, University of Colorado

Kathleen B. McDermott (https://psychweb.wustl.edu/mcdermott)
PhD, Rice University

Mitchell Sommers (http://www.psych.wustl.edu/sommers)
PhD, University of Michigan

Michael J. Strube (http://psychweb.wustl.edu/people/michael-strube)
PhD, University of Utah

Desirée A. White (http://psychweb.wustl.edu/white)
PhD, Washington University

Endowed Associate Professor
Joshua Jackson (http://psychweb.wustl.edu/jackson)
Saul and Louise Rosenzweig Associate Professor of Personality Science
PhD, University of Illinois at Urbana-Champaign

Associate Professors
Julie M. Bugg (http://psychweb.wustl.edu/people/julie-ugg)
PhD, Colorado State University

Janet M. Duchek (https://psychweb.wustl.edu/people/janet-duchek)
PhD, University of South Carolina

Denise P. Head (http://psychweb.wustl.edu/people/denise-head)
PhD, University of Memphis

Alan J. Lambert (http://psychweb.wustl.edu/lambert)
PhD, University of Illinois at Urbana-Champaign

Lori Markson (http://psychweb.wustl.edu/markson)
PhD, University of Arizona

Thomas L. Rodebaugh (http://psychweb.wustl.edu/rodebaugh)
PhD, University of North Carolina at Chapel Hill

Assistant Professors
Ryan Bogdan (http://psychweb.wustl.edu/people/ryan-bogdan)
PhD, Harvard University

Tammy English (http://psychweb.wustl.edu/english)
PhD, University of California, Berkeley

Patrick Hill (https://psychweb.wustl.edu/hill-0)
PhD, University of Notre Dame

Calvin Lai
PhD, University of Virginia

Renee J. Thompson (http://psychweb.wustl.edu/thompson)
PhD, University of Illinois at Urbana-Champaign

Kristin Van Engen (https://psychweb.wustl.edu/van-engren)
PhD, Northwestern University

Heike Winterheld (https://psychweb.wustl.edu/winterheld)
PhD, University of Minnesota

Affiliated Faculty
Arpana Agrawal (http://psychweb.wustl.edu/agrawal)
PhD, Virginia Commonwealth University
(Psychiatry)
Joe Barcroft (http://pages.wustl.edu/barcroft)  
PhD, University of Illinois at Urbana-Champaign  
(Romance Languages and Literatures)

Cindy Brantmeier (http://education.wustl.edu/people/cindy-brantmeier)  
PhD, Indiana University  
(Education & Applied Linguistics)

Robert Carney (http://www.psychiatry.wustl.edu/c/Faculty/  
FacultyDetails.aspx?ID=508)  
PhD, Washington University  
(Psychiatry)

Robert Cloninger (https://psychobiology.wustl.edu/people/  
cloninger.htm)  
PhD, University of Gothenburg  
MD, University of Umea  
(Psychiatry)

Maurizio Corbetta (http://www.nil.wustl.edu/labs/corbetta/  
about.html)  
MD, University of Pavia  
(Neurology)

James DuBois (https://publichealth.wustl.edu/scholars/james-m-dubois)  
PhD, International Academy of Philosophy, Liechtenstein  
(Medicine)

Hillary Elfenbein (http://www.olin.wustl.edu/EN-US/  
Faculty-Research/Faculty/Pages/FacultyDetail.aspx?  
username=helfenbein)  
PhD, Harvard University  
(Business)

Kenneth Freedland (http://www.psychiatry.wustl.edu/c/Faculty/  
FacultyDetails.aspx?ID=1730)  
PhD, University of Hawaii  
(Psychiatry)

Robert Fucetola (http://wuphysicians.wustl.edu/  
physician2.aspx?Physnum=2526)  
PhD, Washington University  
(Neurology)

Jason Hassenstab (https://neuro.wustl.edu/biographies/jason-  
hassenstab-phd)  
PhD, Fordham University  
(Neurology)

Andrew Heath (http://www.psychiatry.wustl.edu/Faculty/  
FacultyDetails?ID=56)  
DPhil, Oxford University  
(Psychiatry)

Tamara Hershey (http://www.psychiatry.wustl.edu/Faculty/  
FacultyDetails?ID=568)  
PhD, Washington University  
(Psychiatry)

Barry Hong (http://psychiatry.wustl.edu/c/faculty/  
FacultyDetails.aspx?ID=81)  
PhD, Saint Louis University  
(Psychiatry)

Brett Hyde (http://pages.wustl.edu/bhyde)  
PhD, Rutgers University  
(Philosophy)

Brenda Kirchhoff (https://psychweb.wustl.edu/kirchhoff)  
Research Scientist  
PhD, Boston University  
(Psychological & Brain Sciences)

Patrick Lustman (http://psychiatry.wustl.edu/c/faculty/  
FacultyDetails.aspx?ID=472)  
PhD, Michigan State University  
(Psychiatry)

Alvitta Ottley (https://cse.wustl.edu/faculty/Pages/faculty.aspx?  
bio=109)  
PhD, Tufts University  
(Computer Science and Engineering)

Jonathan Peelle (http://jonathanpeelle.net)  
PhD, Brandeis University  
(Otolaryngology)

John Pruett (http://psychiatry.wustl.edu/Faculty/FacultyDetails?  
ID=1151)  
PhD, Washington University  
(Psychiatry)

Marcus E. Raichle (http://www.nil.wustl.edu/labs/raichle)  
MD, University of Washington  
(Radiology)

Eugene Rubin (http://psychiatry.wustl.edu/c/faculty/  
FacultyDetails.aspx?ID=200)  
MD, PhD, Washington University School of Medicine  
(Psychiatry)

Lawrence Snyder (http://dbbs.wustl.edu/faculty/Pages/  
faculty_bio.aspx?SID=3164)  
MD, PhD, University of Rochester  
(Neurobiology)

David Van Essen (http://brainvis.wustl.edu/wiki/index.php/  
Main_Page)  
PhD, Harvard University  
(Anatomy and Neurobiology)

James V. Wertsch (http://anthropology.artsci.wustl.edu/  
wertsch_james)  
Marshall S. Snow Professor in Arts & Sciences  
PhD, University of Chicago  
(Anthropology; International and Area Studies; Education)
Degree Requirements

PhD in Psychological & Brain Sciences

The following is a brief listing of the requirements for the PhD in Psychological & Brain Sciences. A more detailed description of these requirements may be found in our Guide to Graduate Training (available on our website (http://psychweb.wustl.edu/graduate)). Of note, students in the clinical science training program have somewhat different requirements; please refer to the Clinical Program Handbook as well (available on the clinical program website (http://psychweb.wustl.edu/graduate/clinical-psychology)). All students must:

- Complete required graduate-level courses (courses must be completed for a student to be considered ABD). A typical semester course load for the first two years is 12-13 credit hours, unless teaching or research responsibilities suggest a 9-10 credit hour load.
- Obtain teaching experience commensurate with preparation for an academic career. There is a teaching requirement that all students must meet, the details of which are outlined in our Guide to Graduate Training.
- Attend a 1-credit (one hour per week) seminar on research ethics. This typically happens during the fall semester of a student's first or second year in the program.
- Attend at least five (5) professional development workshops over the entire course of the program.
- Complete a qualifying research project during the first two years of graduate study. This is often referred to as the master's thesis.
- Pass a subject matter examination. This examination must be passed before work on the dissertation can begin.
- Complete a dissertation project and defend it in an oral examination. The research requirements for the PhD are described in more detail in our Guide to Graduate Training.

Graduate Certificate in Quantitative Data Analysis

The goal of the certificate is to ensure that students have both a solid basis in probability and statistics as well as inference and quantitative research design, and some depth of experience in a more advanced topic area. As such, students completing the certificate are required to take at least five courses. Consult the required course listings below. Of note, some courses appear in more than one area, but a course can only be used to fill one of the requirements. In consultation with the certificate adviser, students may substitute equivalent courses or more demanding mathematical treatments of the same course material. For programming prerequisites, visit our website (http://psychweb.wustl.edu/Graduate_Certificate_in_Quantitative_Data_Analysis).
Core Area Courses (at least one from each area)

**Probability and Statistics**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psych 5066</td>
<td>Quantitative Methods I</td>
<td>3</td>
</tr>
<tr>
<td>Psych 5067</td>
<td>Quantitative Methods II</td>
<td>3</td>
</tr>
<tr>
<td>S50 SWSA 5230</td>
<td>Applied Linear Modeling</td>
<td></td>
</tr>
<tr>
<td>L32 Pol Sci 572</td>
<td>Quantitative Methods in Pol Analysis II: Linear Models (Generalized Linear Models)</td>
<td>3</td>
</tr>
<tr>
<td>Pol Sci 581</td>
<td>Quantitative Political Methodology I</td>
<td>3</td>
</tr>
<tr>
<td>Pol Sci 582</td>
<td>Quantitative Political Methodology II</td>
<td>3</td>
</tr>
<tr>
<td>L48 Anthro 5365</td>
<td>Problems in Applied Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Econ 508</td>
<td>Mathematics for Economics (Probability and Statistics Review)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Inference and Quantitative Research Design**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pol Sci 5024</td>
<td>Causal Inference</td>
<td>3</td>
</tr>
<tr>
<td>Psych 5011</td>
<td>Research Designs and Methods</td>
<td>3</td>
</tr>
<tr>
<td>Educ 503</td>
<td>Foundations of Educational Research</td>
<td>3</td>
</tr>
<tr>
<td>Math 420</td>
<td>Experimental Design (with graduate extension)</td>
<td>3</td>
</tr>
</tbody>
</table>

Focus Area Courses (at least two from one of these three areas)

**Longitudinal and Time-Series Data Analysis**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWDT 6600</td>
<td>Multilevel and Longitudinal Modeling</td>
<td>3</td>
</tr>
<tr>
<td>SWDT 6905</td>
<td>Propensity Score Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Psych 5068</td>
<td>Hierarchical Linear Models</td>
<td>3</td>
</tr>
<tr>
<td>Psych 5165</td>
<td>Applied Longitudinal Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>B54 MEC 661</td>
<td>Analysis of Time Series Data</td>
<td>3</td>
</tr>
<tr>
<td>Pol Sci 584</td>
<td>Multilevel Models in Quantitative Research</td>
<td>3</td>
</tr>
<tr>
<td>MSB 618</td>
<td>Survival Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

**Multivariate and Machine Learning Analysis**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psych 5012</td>
<td>Selected Topics in Design and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>Psych 516</td>
<td>Applied Multivariate Analysis</td>
<td>3</td>
</tr>
<tr>
<td>CSE 514A</td>
<td>Data Mining</td>
<td>3</td>
</tr>
<tr>
<td>CSE 517A</td>
<td>Machine Learning</td>
<td>3</td>
</tr>
<tr>
<td>Math 470</td>
<td>Graph Theory (with graduate extension)</td>
<td>3</td>
</tr>
<tr>
<td>Math 535</td>
<td>Topics in Combinatorics</td>
<td>3</td>
</tr>
</tbody>
</table>

Data Mining and Specialized Research Tools

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWCD 5082</td>
<td>Foundations of Geographic Information Systems (GIS) for the Applied Social Sciences</td>
<td>3</td>
</tr>
<tr>
<td>CSE 514A</td>
<td>Data Mining</td>
<td>3</td>
</tr>
<tr>
<td>CSE 517A</td>
<td>Machine Learning</td>
<td>3</td>
</tr>
<tr>
<td>MSB 550</td>
<td>Introduction to Bioinformatics</td>
<td></td>
</tr>
<tr>
<td>Math 459</td>
<td>Bayesian Statistics (with graduate extension)</td>
<td>3</td>
</tr>
<tr>
<td>CSE 316A</td>
<td>Social Network Analysis (with graduate extension)</td>
<td>3</td>
</tr>
<tr>
<td>Econ 5161</td>
<td>Applied Econometrics</td>
<td>3</td>
</tr>
</tbody>
</table>

The fifth course can be from any of the three focus areas or can be a second course from the Probability and Statistics group.

**Public Health Sciences**

The Brown School's PhD program in Public Health Sciences prepares students to think critically as public health scientists, succeed as independent investigators, and understand and address public health challenges for the nation and the world. It provides hands-on research experiences and mentoring from day one in the program; a curriculum that builds methodological and analytical skills, and deep knowledge of the field's theoretical and conceptual underpinnings, philosophy and history; and professional acculturation and network building.

Our doctoral program involves intense study in population health and social science research methods and personalized mentoring by some of the leading scholars in the field. Our faculty are on the forefront of research in health disparities, chronic disease prevention, epidemiology and biostatistics, global health, health policy, systems science, urban design and the built environment, dissemination and implementation science, and mental health. Our curriculum prepares students for leadership in research in a rapidly changing society. We provide a diversity of experience and faculty with a cross-section of interests that enhance transdisciplinary learning. We have created a collaborative and entrepreneurial community with a strong commitment to conducting research that will have social impact.

A completed master's degree in public health, social work, or related social or health science is required of all applicants for admission. The deadline for applications to the PhD in Public Health Sciences is December 1 of the year preceding enrollment.

For additional information, please refer to our PhD Viewbook (PDF) [here](https://brownschool.wustl.edu/)
academics/PhD-in-social-work/documents/
brownschool_PhD_viewbook_2016_interactive.pdf).

Contact: Elizabeth Hahn
Phone: 314-935-3599
Email: euhahn@wustl.edu
Website: https://brownschool.wustl.edu/
academics/PhD-in-public-health-sciences

Faculty

Dean
Mary McKernan McKay (https://brownschool.wustl.edu/faculty-and-research/pages/mary-mckay.aspx)
Professor; Neidorff Family and Centene Corporation Dean of the Brown School
PhD, University of Illinois at Chicago
Child mental health services; HIV prevention and care; poverty

Associate Dean for Doctoral Education
Renee M. Cunningham-Williams (https://brownschool.wustl.edu/faculty-and-research/pages/renee-cunningham-williams.aspx)
Associate Professor; Director, NIDA T32 (TranSTAR) Pre- and Postdoctoral Training Program; Director, PhD Program in Social Work
PhD, Washington University
Epidemiological, prevention, and intervention research; health and mental health disparities; pathological gambling and comorbidity; risk taking, substance use and antisocial behaviors; crisis intervention

Director, PhD Program in Public Health Sciences
Professor
PhD, University of Illinois
Systems science; evaluation of public health programs; tobacco control policy

Endowed Professors
Ross Brownson (https://brownschool.wustl.edu/faculty-and-research/pages/ross-brownson.aspx)
Bernard Becker Professor
PhD, Colorado State University
Evidence-based public health; dissemination and implementation research; chronic disease prevention

Joyce Wood Professor
PhD, Saint Louis University
Obesity prevention; diabetes prevention; health policy

Matthew Kreuter (https://brownschool.wustl.edu/faculty-and-research/pages/matthew-kreuter.aspx)
Kahn Family Professor of Public Health
PhD, University of North Carolina at Chapel Hill
Health communication; health disparities

Professors
Timothy McBride (https://brownschool.wustl.edu/faculty-and-research/pages/timothy-mcbride.aspx)
PhD, University of Wisconsin-Madison
Health policy; health economics; rural health care

Rodrigo Reis (https://brownschool.wustl.edu/Faculty-and-Research/Pages/Rodrigo-Reis.aspx)
PhD, Federal University of Santa Catarina, Florianopolis, Brazil
Physical activity; international health; urban design and health; transportation and health

Vetta Sanders Thompson (https://brownschool.wustl.edu/faculty-and-research/pages/vetta-sanders-thompson.aspx)
PhD, Duke University
Health and mental health disparities; cultural competency; race, identity and health

Associate Professors
Derek Brown (https://brownschool.wustl.edu/faculty-and-research/pages/derek-brown.aspx)
PhD, Duke University
Health economics; health policy

Alexis Duncan (https://brownschool.wustl.edu/faculty-and-research/pages/alexis-duncan.aspx)
PhD, Saint Louis University
Psychiatric and genetic epidemiology; obesity and eating disorders

Amy Eyler (https://brownschool.wustl.edu/faculty-and-research/pages/amy-eyler.aspx)
PhD, Oregon State University
Physical activity; childhood obesity; prevention policy

Jenine Harris (https://brownschool.wustl.edu/faculty-and-research/pages/jenine-harris.aspx)
PhD, Saint Louis University
Social network analysis; social media in public health

Darrell Hudson (https://brownschool.wustl.edu/faculty-and-research/pages/darrell-hudson.aspx)
PhD, University of Michigan
Social determinants of health; health disparities
Lora Iannotti (https://brownschool.wustl.edu/faculty-and-research/pages/lora-iannotti.aspx)
PhD, Johns Hopkins University
Child nutrition; infectious diseases; poverty pathways
Kimberly Johnson (https://brownschool.wustl.edu/faculty-and-research/pages/kimberly-johnson.aspx)
PhD, University of Minnesota
Human genetics and cancer; epidemiology
Jason Purnell (https://brownschool.wustl.edu/faculty-and-research/pages/jason-purnell.aspx)
PhD, Ohio State University
Health disparities; economic determinants of health
Jean-Francois Trani (https://brownschool.wustl.edu/faculty-and-research/pages/jean-francois-trani.aspx)
PhD, Institut d'Etudes Politiques de Paris, France
Global health; human rights; disabilities

Degree Requirements
PhD in Public Health Sciences

• 72 credit hours; 21 credits transferable from a relevant master's program
• Two years enrolled in full-time courses
• Complete and defend a dissertation
• Three teaching practicums for course credit
• Three research practicums for course credit

Rehabilitation and Participation Science

The Rehabilitation and Participation Science (RAPS) PhD program aims to develop rehabilitation scientists whose research questions are chosen based explicitly on their potential to generate fundamental knowledge that will enhance health, improve quality of life, and reduce illness and disability. Our doctoral model is that of mentored research, wherein students devote the majority of their time to research activities beginning in the first semester and become increasingly independent. Students may choose their area of study to be in rehabilitation neuroscience, pediatric rehabilitation, outcome science, community health, and productive aging.

This program is designed to be completed in four to five years of full-time study. The maximum time allowed for completion is seven years, and there is no provision for part-time study. A tuition stipend and fellowship is provided for up to five years.

Graduates of the RAPS PhD program will be prepared for careers as independent scientists and academicians in research universities, research institutes, or industry settings.

Contact: Abby King
Phone: 314-286-1619
Website: http://ot.wustl.edu/education/phd-in-rehabilitation-and-participation-science

Faculty

Chair
Carolyn Baum (http://www.ot.wustl.edu/about/our-people/faculty/carolyn-m-baum-254)
Elias Michael Director and Professor of Occupational Therapy, Neurology, and Social Work
PhD, Washington University
OTR/L, University of Kansas

Associate Professor
Allison King (http://www.ot.wustl.edu/about/our-people/faculty/allison-king-265)
Associate Professor of Occupational Therapy, Medicine, Pediatrics, Surgery (Prevention and Medicine) and Education
MD, University of Missouri
MPH, Saint Louis University
PhD, Saint Louis University

Assistant Professor
Kerri Morgan (http://www.ot.wustl.edu/about/our-people/faculty/kerri-morgan-268)
Assistant Professor of Occupational Therapy and Neurology
PhD, Washington University School of Medicine, Program in Physical Therapy
OTR/L, Washington University School of Medicine, Program in Occupational Therapy
ATP

Bobbi Pineda (http://www.ot.wustl.edu/about/our-people/faculty/bobbi-pineda-270)
Assistant Professor of Occupational Therapy and Pediatrics
PhD, University of Florida
OTR/L, University of Florida

Susan Stark (http://www.ot.wustl.edu/about/our-people/faculty/susy-stark-271)
Assistant Professor of Occupational Therapy, Neurology, and Social Work
PhD, University of Missouri
OTR/L, Washington University School of Medicine Program in Occupational Therapy

Alex Wong (http://www.ot.wustl.edu/about/our-people/faculty/alex-wong-399)
Assistant Professor of Occupational Therapy and Neurology
PhD, Hong Kong Polytechnic University
DPhil, University of Illinois at Urbana-Champaign
Instructor
Benjamin Philip (http://www.ot.wustl.edu/about/our-people/faculty/benjamin-philip-478)
Instructor in Occupational Therapy and Neurology
PhD, Brown University

Degree Requirements
PhD in Rehabilitation and Participation Science (RAPS)

Applicant Background
RAPS PhD students may enter the program from a variety of clinical backgrounds. All students chose to pursue the RAPS PhD degree because of their desire to generate knowledge to improve rehabilitation practices and thus people’s lives through participation. Prior research experience is strongly encouraged.

Curriculum
Students must complete core courses, electives to enhance their learning, research in their mentor's laboratory and a dissertation. Prior graduate courses that explicitly meet the program requirements may be considered (syllabus must be submitted for review and approval of the RAPS PhD Chair).

All RAPS PhD students will join faculty in a biweekly seminar where faculty and student research is presented and discussed. Presentations will also be made by Washington University faculty and visiting professors who will be invited to spend time with faculty and students.

Core Courses
- Theories, Models and Classifications of Rehabilitation and Participation Science (RAPS, 3 units)
- Biopsychosocial Factors Affecting Performance (RAPS, 3 units)
- Environmental Factors and Participation (RAPS, 3 units)
- Measurement Theory and Development (RAPS, 3 units)
- RAPS Seminar (RAPS, 1 unit)

Additional courses will be required in research design methods and graduate statistics.

Research Units
It is expected that all students will be involved in research beginning in their first semester and continuing through completion of the degree. Prior to completion of courses and the qualifying exam, each student is expected to spend at least 15-20 hours per week actively engaged in research. After passing the qualifying exam, students are expected to focus full-time on their dissertation and other research projects. It is anticipated that these efforts will lead to refereed publications.

It is possible that a student may find that their interests lie in an area different from that originally selected. In this case, the student may switch laboratories and mentors with the approval of the new mentor and the RAPS PhD Chair and necessary adjustments in course and laboratory experiences.

Romance Languages and Literatures
The Department of Romance Languages and Literatures offers PhD programs in French Language and Literature and in Hispanic Languages and Literatures, preparing students for careers in university teaching and research. With our faculty's wide-ranging expertise, graduate students have opportunities to specialize in many areas of French, Francophone, Latin American, and Iberian cultures. We offer a broad range of study from medieval through contemporary, with opportunities to concentrate in a variety of different areas that reflect the areas of expertise of our faculty, including migrations and communities; popular literacy and cultural memory; early modern and modern cultural production; the intersections of literature, art, and the sciences; modernities and postmodernities; visual cultures and performance; and linguistics and language learning. The department also offers the Graduate Certificate in Language Instruction, which is open to PhD students in other disciplines as well as to those in the department's own graduate programs.

In both programs, students receive six years of funding (five if admitted with a master's degree) in the form of fellowships.

Contact Information
For information on the combined degrees, PhD in French & Comparative Literature and PhD in Spanish & Comparative Literature, consult the Comparative Literature program (p. 46).

PhD program in French Language and Literature website: http://rll.wustl.edu/french/grad
PhD program in Hispanic Languages and Literatures website: http://rll.wustl.edu/spanish/grad

Phone: 314-935-5175
Email: rll@wustl.edu

Faculty
Chair
Michael Sherberg (http://rll.wustl.edu/people/sherberg)
Professor of Italian
PhD, University of California, Los Angeles
Endowed Professors
Mabel Moraña (http://rll.wustl.edu/people/morana)
William H. Gass Professor in Arts & Sciences; Director of Latin American Studies Program
PhD, University of Minnesota

Elżbieta Skłodowska (http://rll.wustl.edu/people/sklodowska)
Randolph Professor in Arts & Sciences
PhD, Washington University

Professors
Joe Barcroft (http://rll.wustl.edu/people/barcroft)
Professor of Spanish and Applied Linguistics
PhD, University of Illinois at Urbana-Champaign

J. Andrew Brown (http://rll.wustl.edu/people/brown)
Professor of Spanish
PhD, University of Virginia

Pascal Ifri (http://rll.wustl.edu/people/ifri)
Professor of French
PhD, Brown University

Tabea Linhard (http://rll.wustl.edu/people/linhard)
Professor of Spanish
PhD, Duke University

Rebecca Messbarger (http://rll.wustl.edu/people/messbarger)
Professor of Italian
PhD, University of Chicago

Stamos Metzidakis (http://rll.wustl.edu/people/metzidakis)
Professor of French and Comparative Literature
PhD, Columbia University

Joseph Schraibman (http://rll.wustl.edu/people/schraibman)
Professor of Romance Languages and Literatures
PhD, University of Illinois at Urbana-Champaign

Harriet A. Stone (http://rll.wustl.edu/people/stone)
Professor of French and Comparative Literature
PhD, Brown University

Akiko Tsuchiya (http://rll.wustl.edu/people/tsuchiya)
Professor of Spanish
PhD, Cornell University

Colette H. Winn (http://rll.wustl.edu/people/winn)
Professor of French
PhD, University of Missouri-Columbia

Associate Professors
William Acree (http://rll.wustl.edu/people/acree)
Associate Professor of Spanish
PhD, University of North Carolina at Chapel Hill

Tili Boon Cuillé (http://rll.wustl.edu/people/tilli-cuille)
Associate Professor of French
PhD, University of Pennsylvania

Nina Cox Davis (http://rll.wustl.edu/people/davis)
Associate Professor of Spanish
PhD, Johns Hopkins University

Seth Graebner (http://rll.wustl.edu/people/graebner)
Associate Professor of French
PhD, Harvard University

Stephanie Kirk (http://rll.wustl.edu/people/kirk)
Associate Professor of Spanish
PhD, New York University

Eloïsa Palafox (http://rll.wustl.edu/people/palafox)
Associate Professor of Spanish
PhD, Michigan State University

Ignacio Sánchez-Prado (http://rll.wustl.edu/people/sanchez-prado)
Associate of Spanish
PhD, University of Pittsburgh

Julie Singer (http://rll.wustl.edu/people/singer)
Associate Professor of French
PhD, Duke University

Assistant Professors
Javier García-Liendo (http://rll.wustl.edu/people/javier-garcia-liendo)
Assistant Professor of Spanish
PhD, Princeton University

Ignacio Infante (http://rll.wustl.edu/people/infante)
Assistant Professor of Comparative Literature and Spanish
PhD, Rutgers University

Professor Emerita
Elyane Dezon-Jones
Professor of French
Doctorat de 3e Cycle, University of Paris

Professor Emeritus
Michel Rybalka
Professor of French
PhD, University of California, Los Angeles

Degree Requirements
Students in both programs take a required seminar in language teaching methodology, in addition to the requirements specified below. Optional pedagogical or interdisciplinary study can be acquired by means of one of the Graduate School's certificate programs.

PhD in French Language and Literature
For the PhD in French Language and Literature, students take courses in all areas of French and Francophone studies, and may take up to two courses outside French, for a total
of 60 credits at the graduate level. In their fourth semester, students take the AM exam. In the semester after they finish their courses, students take their PhD exams, consisting of three written examinations and one oral examination by the full faculty, followed by a dissertation prospectus defense before their thesis committee of three faculty members. Students then have approximately two years to complete research and writing of their dissertations, which they defend in the last semester of their programs.

**PhD in Hispanic Languages and Literatures**

For the PhD in Hispanic Languages and Literatures, students take courses in all areas of Latin American and Iberian studies and may take up to two courses outside Spanish. In the third semester, students take a comprehensive exam that tests their knowledge of some 60 texts from all periods of Spanish and Latin American Literature. Having passed their comprehensive exams, students proceed to a qualifying exam in their sixth semester based on lists that students develop with their faculty advisers. In their eighth semester, students submit an extended prospectus and a draft of a chapter. The student will then defend the prospectus and the chapter to a committee of four faculty members in a one-hour oral exam. Students then research, write, defend, and submit their doctoral dissertation in the course of the next two years.

**Graduate Certificate in Language Instruction**

In order to provide our graduate students with additional qualifications and formal development that will make them strongly prepared for a range of demanding academic positions, the Department of Romance Languages and Literatures offers the Graduate Certificate in Language Instruction for students enrolled in PhD programs at Washington University.

The Graduate Certificate in Language Instruction is an interdisciplinary certificate related to the fields of applied linguistics, second language acquisition, psychology, neuroscience, and other disciplines that have important implications for the way we teach foreign languages. Study within these different fields provides a fascinating examination of how second languages are learned and how second language is generated by learners. An understanding of second language acquisition processes both enriches our knowledge of how the mind works and serves to better inform the ways that foreign language teachers design and implement curricular approaches for different levels and skills.

PhD students must apply to be considered for the certificate program at the beginning of their doctoral courses; AM students are not eligible for consideration. Applications will be evaluated by a faculty committee twice a year, in October and March. The certificate consists of five courses: three required courses and two electives.

The goal of the five-course sequence is to provide certificate students with a solid base in the theoretical and instructional implications of research on language acquisition across different linguistic subsystems (phonology, lexis, syntax, pragmatics) and different linguistic modalities (spoken and written). This formation will also prepare students to be involved in language program design and curricular development.

**Website:** [http://rll.wustl.edu/cert/langinstruction](http://rll.wustl.edu/cert/langinstruction)

**Email:** barcroft@wustl.edu

**Phone:** 314-935-7951

**Social Work**

The objective of the PhD in Social Work is to educate scholars for research careers in the social and behavioral sciences. The program is highly interdisciplinary, mentoring students with interests in such areas as social and economic development, child welfare, gerontology, addictions, health, mental health, and public health. Our PhD program in Social Work involves intensive study in social science research methods and personalized mentoring by some of the leading scholars in the field. In addition, our curriculum focuses on research methodology, theory, and data analysis.

We have a very high completion rate, and nearly all of those graduates go on to teaching and research positions in social science institutions throughout the world. An academic career in most large universities requires faculty who can maintain a rigorous research agenda, while teaching and providing service and leadership to the school and the profession. Thus, we teach doctoral students to excel in such areas as conducting individual and collaborative research projects, writing and publishing research findings, sharing knowledge with academic colleagues at professional conferences, and bringing the latest knowledge into the classroom for the benefit of future students, practitioners and educators.

**Contact:**

Doctoral Education Program Office

**Phone:** 314-935-6605

**Email:** phdsw@wustl.edu

**Website:** [http://brownschool.wustl.edu/Admissions/PHDProgram/Pages/PhD-in-Social-Work-Overview.aspx](http://brownschool.wustl.edu/Admissions/PHDProgram/Pages/PhD-in-Social-Work-Overview.aspx)
Faculty

Dean

Mary McKernan McKay (https://brownschool.wustl.edu/faculty-and-research/pages/mary-mckay.aspx)
Professor; Neidorff Family and Centene Corporation Dean of the Brown School
PhD, University of Illinois at Chicago
Child mental health services; HIV prevention and care; poverty

Associate Dean for Doctoral Education

Renee M. Cunningham-Williams (https://brownschool.wustl.edu/faculty-and-research/pages/renee-cunningham-williams.aspx)
Associate Professor; Director, NIDA T32 (TRANSTAR) Pre- and Postdoctoral Training Program; Director, PhD Program in Social Work
PhD, Washington University
Epidemiological, prevention, and intervention research; health and mental health disparities; pathological gambling and comorbidity; risk taking, substance use and antisocial behaviors; crisis intervention

Endowed Professors

Wendy Auslander (https://brownschool.wustl.edu/faculty-and-research/pages/wendy-auslander.aspx)
Barbara A. Bailey Professor of Social Work
PhD, Washington University
Health behavior and health promotion; childhood abuse and adolescent risk behaviors; trauma treatment for adolescent girls; family, psychosocial, and behavioral issues in diabetes; HIV prevention; community participatory research; cultural and ethnic factors related to health; intervention research and evaluation

Ross C. Brownson (https://brownschool.wustl.edu/faculty-and-research/pages/ross-brownson.aspx)
Bernard Becker Professor; Director, Prevention Research Center
PhD, Colorado State University
Chronic disease prevention through environmental and policy change; evidence-based public health; policy effects on physical activity and obesity; dissemination research

Shenyang Guo (https://brownschool.wustl.edu/faculty-and-research/pages/shenyang-guo.aspx)
Frank J. Bruno Distinguished Professor of Social Work Research; Assistant Vice Chancellor for International Affairs - Greater China
PhD, University of Michigan
Quantitative research methodology; program and practice evaluations; child welfare; child mental health

Joyce Wood Professor; Director, Center for Diabetes Translation Research; Director, Center for Obesity Prevention and Policy Research; Faculty Director, Envolve Center for Health Behavior Change
PhD, Saint Louis University
Health policy; preventing obesity and diabetes in underserved populations; transdisciplinary approaches to biomedical, behavioral, and public health research

Sean Joe (https://brownschool.wustl.edu/faculty-and-research/pages/sean-joe.aspx)
Benjamin E. Youngdahl Professor of Social Development; Associate Dean for Faculty and Research
PhD, University of Illinois at Urbana-Champaign
Role of religion in black suicidal behavior; salivary biomarker discovery for adolescent suicidal behavior; father-focused family-based interventions; preventing self-destructive behaviors in African-American adolescent males; racial inequality in adolescent development

Melissa Jonson-Reid (https://brownschool.wustl.edu/faculty-and-research/pages/melissa-jonson-reid.aspx)
Ralph and Muriel Pumphrey Professor of Social Work; Director, Center for Violence and Injury Prevention
PhD, University of California, Berkeley
Education and child welfare services policy; child abuse and neglect; interagency service delivery systems; school social work

Matthew W. Kreuter (https://brownschool.wustl.edu/faculty-and-research/pages/matthew-kreuter.aspx)
Kahn Family Professor of Public Health; Senior Scientist, Health Communication Research Laboratory; Faculty Director, Envolve Center for Health Behavior Change
PhD, University of North Carolina at Chapel Hill
Health communication; cancer prevention and control; integrating health and social services; health disparities

Bettie Bofinger Brown Distinguished Professor of Social Policy; Director, Harvey A. Friedman Center for Aging
PhD, University of California, Berkeley
Productive and civic engagement in later life; social engagement in later life

Enola K. Proctor (https://brownschool.wustl.edu/faculty-and-research/pages/enola-proctor.aspx)
Shanti K. Khinduka Distinguished Professor; Director, Center for Mental Health Services Research
PhD, Washington University
Mental health services delivery; post-acute health and mental health community care; outcomes of clinical practice; evaluation of clinical social work
Mark Rank (https://brownschool.wustl.edu/faculty-and-research/pages/mark-rank.aspx)
Herbert S. Hadley Professor of Social Welfare
PhD, University of Wisconsin
Poverty and economic inequality; social welfare; family; social policy; demography; life course

Michael Sherraden (https://brownschool.wustl.edu/faculty-and-research/pages/michael-sherraden.aspx)
George Warren Brown Distinguished University Professor; Director, Center for Social Development
PhD, University of Michigan
Asset building; civic engagement and civic service; productive aging; social policy; community development; youth development

Professors

F. Brett Drake (https://brownschool.wustl.edu/faculty-and-research/pages/brett-drake.aspx)
PhD, University of California, Los Angeles
Children born prenatally exposed to drugs; child protection and child protective practice

Michal Grinstein-Weiss (https://brownschool.wustl.edu/faculty-and-research/pages/michal-grinstein-weiss.aspx)
Director, Envolve Center for Health Behavior Change; Associate Director, Center for Social Development
PhD, Brown School at Washington University
Public policy; economic & social mobility; asset building

Carolyn Lesorogol (https://brownschool.wustl.edu/faculty-and-research/pages/carolyn-lesorogol.aspx)
Associate Dean for Global Strategy and Programs
PhD, Washington University
International social development; capacity building and participatory development; institutional change; political economy; ethnographic research

Director, PhD Program in Public Health Sciences; Director, Center for Public Health Systems Science
PhD, University of Illinois
Evaluations of public health programs; tobacco control and prevention policy; community health interventions

Timothy McBride (https://brownschool.wustl.edu/faculty-and-research/pages/timothy-mcbride.aspx)
PhD, University of Wisconsin-Madison
Health policy; health economics; health insurance; Medicare and Medicaid policy; rural health care; health reform; Social Security and pensions; state health policy

Rodrigo S. Reis (https://brownschool.wustl.edu/faculty-and-research/pages/rodrigo-reis.aspx)
PhD, Federal University of Santa Catarina, Florianopolis, Brazil
Physical activity and public health, with particular interest in community interventions for promoting physical activity; effect of the built environment and community on health; active transportation and health

Fred Ssewamala (https://brownschool.wustl.edu/faculty-and-research/pages/fred-ssewamala.aspx)
PhD, Brown School at Washington University
Microfinance; Asset-based social programs; disadvantaged children; social and economic development policy; children and adolescent health

Vetta L. Sanders Thompson (https://brownschool.wustl.edu/faculty-and-research/pages/vetta-sanders-thompson.aspx)
PhD, Duke University
Cultural competence; racial identity; disparities in health and mental health services; psychosocial implications of race and ethnicity in health communications; access to health services

Associate Professors

Derek Brown (https://brownschool.wustl.edu/faculty-and-research/pages/derek-brown.aspx)
PhD, Duke University
Health economics; stated preference methods & health-related quality of life; child abuse and neglect; Medicaid

PhD, Brown School at Washington University
Racial/ethnic disparities in health and mental health care; implementation science; integration of physical and mental health services; mental health services

Alexis Duncan (https://brownschool.wustl.edu/faculty-and-research/pages/alexis-duncan.aspx)
PhD, Saint Louis University
Psychiatric epidemiology; obesity and eating disorders; substance use and related disorders; comorbidity; child abuse and neglect; behavior genetics

Tonya Edmond (https://brownschool.wustl.edu/faculty-and-research/pages/tonya-edmond.aspx)
Associate Dean for Diversity and Inclusion
PhD, University of Texas at Austin
Violence against women; trauma-focused intervention research; evidence-based practice

Amy A. Eyler (https://brownschool.wustl.edu/faculty-and-research/pages/amy-eyler.aspx)
PhD, Oregon State University
Physical activity; childhood obesity; policies and preventative health
Patrick J. Fowler (https://brownschool.wustl.edu/faculty-and-research/pages/patrick-fowler.aspx)
PhD, Wayne State University
Housing and homelessness; child maltreatment and child welfare system; developmental psychopathology; policy and program evaluation; prevention science; violence exposure

Jenine Harris (https://brownschool.wustl.edu/faculty-and-research/pages/jenine-harris.aspx)
PhD, Saint Louis University
Dissemination research; social network analysis; social media; public health systems

Darrell Hudson (https://brownschool.wustl.edu/faculty-and-research/pages/darrell-hudson.aspx)
PhD, University of Michigan
Health disparities; mental health; health behavior; health education; violence and injury prevention

Lora Iannotti (https://brownschool.wustl.edu/faculty-and-research/pages/lora-iannotti.aspx)
Associate Dean for Public Health
PhD, Johns Hopkins University
Young child nutrition; micronutrient deficiencies; infectious diseases and poverty pathways; evaluation research

Kimberly Johnson (https://brownschool.wustl.edu/faculty-and-research/pages/kimberly-johnson.aspx)
PhD, University of Minnesota
Epidemiology; human genetics; cancer

MSW, Syracuse University
International & national community economic development; urban issues; international, state, and regional planning; international social development; multicultural education

Patricia Kohl (https://brownschool.wustl.edu/faculty-and-research/pages/patricia-kohl.aspx)
Associate Dean for Social Work
PhD, University of North Carolina at Chapel Hill
Child welfare; evidence-based practice; engaging hard to reach populations in treatment; parent training

Von Nebbitt (https://brownschool.wustl.edu/faculty-and-research/pages/von-nebbitt.aspx)
PhD, Brown School at Washington University
Urban African-American children and youth, with a primary research agenda of increasing empirical and theoretical knowledge of the effects of living in urban public housing

David A. Patterson (https://brownschool.wustl.edu/faculty-and-research/pages/david-patterson.aspx)
PhD, University of Louisville
Alcohol and other drug treatment retention and effectiveness; implementation of evidence-based practices; Native American and Indigenous People’s health and wellness; underrepresented minority college success

Jason Purnell (https://brownschool.wustl.edu/faculty-and-research/pages/jason-purnell.aspx)
PhD, Ohio State University
Health behavior; information and communication technologies; health disparities

Jean-François Trani (https://brownschool.wustl.edu/faculty-and-research/pages/jean-francois-trani.aspx)
PhD, Institut d'Etudes Politiques de Paris, France
Mental health; disabilities; international social work

Assistant Professors

PhD, Wayne State University
Positive youth development; African Americans; academic achievement; mental health; religiosity

Christine Ekenga (https://brownschool.wustl.edu/faculty-and-research/pages/christine-ekenga.aspx)
PhD, New York University
Chronic disease epidemiology; cumulative risk assessment; environmental health; occupational health; disaster epidemiology and public health preparedness

Vanessa Fabbre (https://brownschool.wustl.edu/faculty-and-research/pages/vanessa-fabbre.aspx)
PhD, University of Chicago
Aging and the life course; health and mental health; gender and sexuality; interpretive methodology

Molly W. Metzger (https://brownschool.wustl.edu/faculty-and-research/pages/molly-metzger.aspx)
PhD, Northwestern University
Affordable housing; social policy; poverty and inequality

Sojung Park (https://brownschool.wustl.edu/faculty-and-research/pages/sojung-park.aspx)
PhD, University of Michigan
Health and well-being of older adults; environmental gerontology; community-based long-term care; cross-national/cross-cultural studies

Carrie Pettus-Davis (https://brownschool.wustl.edu/faculty-and-research/pages/carrie-pettus-davis.aspx)
Director, Institute for Advancing Justice Research and Innovation
PhD, University of North Carolina at Chapel Hill
Intervention research; criminal justice; substance abuse; mental health; social support
Degree Requirements
PhD in Social Work

A completed master's degree in social work, public health, or related social science is required of all applicants for admission; a minimum of two years of post-master's practice and/or research experience is strongly recommended. The deadline for applications to the PhD in Social Work is December 1 of the year preceding enrollment.

Students need a minimum of 72 graduate credit hours for a PhD from the Brown School. These can include 21 master's-level credits. While in the program, the student takes a variety of theory and research methods courses, plus 15 units of elective credits outside the traditional social work curriculum. Electives may include classes in psychology, psychiatry, public health, anthropology, education, law, economics, or political science. Teaching practicums, research assistantships, and the writing of an "area statement" round out the required credits. Competence is assessed through a qualifying examination and the defense of the dissertation. We are unable to offer distance learning or part-time study.

The curriculum at the Brown School emphasizes substantive, theoretical and methodological preparation. Courses include:

- Introduction to Advanced Research
- Conceptual Foundations of Social Science Research
- The Role and Use of Theory in Applied Social Research
- Foundations of Data Analysis
- Applied Linear Regression Analysis
- Structural Equation Modeling

The first year of study includes basic principles in research, statistics, measurement, as well as theoretical orientations and content underlying the knowledge base of social work and social welfare.

The second year turns to a more individualized program of study. A curriculum plan is developed by each student and the adviser, focusing on an area of specialization within the field of social work.

The orientation of the PhD program is interdisciplinary, requiring 15 credits of course work in the social sciences. Social science courses are selected that are related to the student's developing area of specialization. Courses in research methodology, research and teaching practica, and specialized courses also help to build the student's expertise as a social work scholar.

Speech and Hearing Sciences

The PhD in Speech and Hearing Sciences prepares students for academic and research careers in the field. Established in 1947, the program is dedicated to fostering scientific inquiry in speech and hearing sciences and related disciplines. The program is administered jointly between the Graduate School and the Program in Audiology and Communication Sciences in the Washington University School of Medicine.

Phone: 314-747-0104
Email: pacs@wustl.edu
Website: http://pacs.wustl.edu

Faculty

Chair
William W. Clark (http://pacs.wustl.edu/our-faculty/william-w-clark-phd)
Program Director and Professor
PhD, University of Michigan

Faculty List
To view our full faculty list, please visit our faculty webpage (http://pacs.wustl.edu/our-faculty).

Degree Requirements
PhD in Speech and Hearing Sciences

Curriculum

The curriculum combines interdisciplinary academic courses, teaching experiences and research and culminates in a dissertation. Each student's experience can be tailored to their individual interests.

Generally, 24 hours of graduate credit can be transferred toward the PhD from another institution; graduates of our AuD and MSDE programs are provided with advanced standing and may transfer up to 48 or 36 credits respectively.

Teaching Experiences

Teaching experiences prepare students to become effective teachers and communicators of their discipline and their own research. All PhD students receive instruction in pedagogy and complete teaching experiences at the introductory and advanced levels under the guidance of a faculty mentor.

Research

Students immerse themselves in the world-class research environment of Washington University. As they conduct their own original work, which culminates in a dissertation, they participate in colloquia, Grand Rounds, brown bag seminars, research seminars, journal clubs, and similar opportunities. The program fosters opportunities to publish and participate in professional conferences. In the final year, students present and defend their dissertation.

The Program in Audiology and Communication Sciences (PACS) is affiliated with the Department of Otolaryngology,
which operates one of the nation’s largest hearing and deafness research programs. Topics include adult aural rehabilitation, biology of hearing and deafness, childhood deafness, cochlear implants, dizziness and balance, and hearing aids.

**Theater and Performance Studies**

The *master's program in Theater and Performance Studies* introduces students to cutting-edge scholarship in the dynamic field of theater and performance studies, preparing them to pursue academic careers as scholar-practitioners. Offering a broad-based approach to the study of performance, this two-year program expands a traditional focus on aesthetic practice to include cultural performances such as historical and contemporary Civil Rights activism, early modern scientific demonstrations, and performances of gender and racial identities. Under this broad umbrella, students are invited to explore the mutual engagement of aesthetic and cultural performance practices across history, around the globe, and between disciplines, drawing on a variety of theoretical approaches to illuminate the complex meanings generated by and through performance.

Because theater offers an occasion to reflect upon those meanings, stage performance is at the core of this program’s course of study. Accordingly, students are offered a broad range of courses in theater history, ranging from the classical theater of Ancient Greece and Rome to contemporary multimedia performance, with attention to the performance practices of cultures beyond the borders of the United States. Building on this foundation, students may design a personalized course of study in a specific historical, cultural, or theoretical field, according to their interests. We boast an expert faculty both from within the Performing Arts Department, including Dance, and from other units across campus, such as Anthropology; Classics; English and non-Anglophone languages and literatures; Music; Film and Media Studies; Women, Gender, and Sexuality Studies; and the Sam Fox School of Design & Visual Arts. The annual endowed Helen Clanton Morrin lecture allows us to host leading scholars and artists in performance research.

**Contact:**

Pannill Camp  
Phone: 314-935-3348  
Email: pcamp@wustl.edu  
Website: [http://pad.artsci.wustl.edu/graduate](http://pad.artsci.wustl.edu/graduate)

**Faculty**

**Professors**

- **Robert Henke** ([http://pad.artsci.wustl.edu/robert_henke](http://pad.artsci.wustl.edu/robert_henke))  
  PhD, University of California, Berkeley  
  Ancient and Renaissance Theater and Performance, Comparative Literature, Dramatic Theory

- **Henry I. Schvey** ([http://pad.artsci.wustl.edu/henry-i-schvey](http://pad.artsci.wustl.edu/henry-i-schvey))  
  PhD, Indiana University  
  Modern American and European Drama, Shakespeare in Production, Expressionism and the Arts, Tennessee Williams

**Associate Professors**

- **Pannill Camp** ([http://pad.artsci.wustl.edu/pannill_camp](http://pad.artsci.wustl.edu/pannill_camp))  
  PhD, Brown University  
  18th-Century French Theater, Dramatic Theory, Theater Architecture

- **Mary-Jean Cowell** ([http://pad.artsci.wustl.edu/maryjean_cowell](http://pad.artsci.wustl.edu/maryjean_cowell))  
  PhD, Columbia University  
  Modern Dance Technique, Theory and Composition, Dance History and Ethnology

- **Julia Walker** ([http://pad.artsci.wustl.edu/julia-walker](http://pad.artsci.wustl.edu/julia-walker))  
  PhD, Duke University  
  Theatrical Modernism, Performance Theory, History of Acting

**Assistant Professors**

- **Joanna Dee Das** ([http://pad.artsci.wustl.edu/joanna-dee-das](http://pad.artsci.wustl.edu/joanna-dee-das))  
  PhD, Columbia University  
  Global Dance History & Theory, Politics of Performance, African Diasporic Dance, Musical Theater, Cultural Policy

- **Paige McGinley** ([http://pad.artsci.wustl.edu/paige-mcginley](http://pad.artsci.wustl.edu/paige-mcginley))  
  PhD, Brown University  
  20th-Century Theater and Performance; Race, Ethnicity and Performance; American Studies

**Professors of the Practice**

- **Christine Knoblauch-O’Neal** ([http://pad.artsci.wustl.edu/christine-knoblauch-oneal](http://pad.artsci.wustl.edu/christine-knoblauch-oneal))  
  PhD, Texas Women's University  
  Ballet, Applied Anatomy, Musical Theater, Performance Studies

- **David Marchant** ([http://pad.artsci.wustl.edu/david-marchant](http://pad.artsci.wustl.edu/david-marchant))  
  MFA, University of Iowa  
  Modern Dance, Composition, Improvisation, Alexander Technique, Somatic Studies

- **Jeffery Matthews** ([http://pad.artsci.wustl.edu/jeffery-matthews](http://pad.artsci.wustl.edu/jeffery-matthews))  
  MFA, Virginia Commonwealth University  
  Acting, Directing, Voice and Speech

- **Annamaria Pileggi** ([http://pad.artsci.wustl.edu/annamaria-pileggi](http://pad.artsci.wustl.edu/annamaria-pileggi))  
  MFA, Brandeis University  
  Acting, Movement, Musical Theater, Robotics and Expressive Simulation, Theatre for Social Change

- **Cecil Slaughter** ([http://pad.artsci.wustl.edu/cecil-slaughter](http://pad.artsci.wustl.edu/cecil-slaughter))  
  MFA, University of Iowa  
  Dance
William Whitaker (http://pad.artsci.wustl.edu/william-whitaker)  
MFA, Florida Atlantic University  
Acting, Directing

**Artist-in-Residence**

Ron Himes (http://pad.artsci.wustl.edu/ron-himes)  
Henry E. Hampton, Jr. Artist-in-Residence  
BA, Washington University  
African-American Theater

**Senior Lecturers**

Robert Mark Morgan (http://pad.artsci.wustl.edu/robert-mark-morgan)  
MFA, San Diego State University  
Scenic Design

Sean Savoie (http://pad.artsci.wustl.edu/sean-savoie)  
MFA, University of Cincinnati - College Conservatory of Music  
Lighting Design, Production Management

Andrea Urice (http://pad.artsci.wustl.edu/andrea-urice)  
MFA, University of Virginia  
Directing, Acting, Creative Studies

**Playwright-in-Residence**

Carter W. Lewis (http://pad.artsci.wustl.edu/carter-w-lewis)  
MA, University of Oklahoma  
Playwriting, Dramaturgy, A.E. Hotchner Playwriting Festival

**Degree Requirements**

**AM in Theater and Performance Studies**

**Degree Requirements:** 36 units (12 courses)

I. Required courses: 15 units (5 courses)

1. **L15 Drama 5101, Introduction to Graduate Study.** A general introduction to advanced scholarship in theater and performance studies, this course is designed to familiarize first-year graduate students with expectations for advanced research and professional writing. It is also intended to provide an overview of theater and performances studies, focusing on the relationship between these two scholarly domains, major works of scholarship that have defined the field, and current debates redrawing its contours.

2. **L15 Drama 449, Seminar in Dramatic Theory.** An in-depth exploration of core works of dramatic theory from the ancient world to the present, this course focuses on texts that enunciate what theater is, has been, and should be. Readings address theater’s role in society, the anti-theatrical prejudice, the aesthetic pleasures of drama and theater, theater as a means of educating the citizen, and the relationship between dramatic form and social and political revolution.

3. **L15 Drama 497, Performance Theory.** This course introduces students to contemporary theories of performance, with “performance” understood as both metaphor and event. From a multidisciplinary perspective, students will consider how cultures produce meanings — and, indeed, perform those meanings — to create and/or disrupt their own social coherence. Theorists studied include J.L. Austin, Victor Turner, Erving Goffman, and Judith Butler.

4. **Theater/Performance History.** One 400- or 500-level historically-based seminar from a list of approved courses taught within the Performing Arts Department. (Topics vary by semester.) Students are encouraged to meet this requirement with L15 Drama 507 Problems in Contemporary Theoretical Research.

5. **Theater Practice.** At least one (but no more than three) 400- or 500-level course(s) in theater practice: dramaturgy, directing, playwriting or design. Students are encouraged to meet this requirement with L15 Drama 506 Problems in Contemporary Arts Practice Research.

II. Electives: 21 units (7 courses)

Students are invited to develop a broad-based or a specialized curriculum in theater and performance studies, choosing courses from within the Performing Arts Department, including Dance, or as many as four courses (12 units) from without. The program works closely with Faculty Affiliates in other departments, including Anthropology; Classics; English and non-Anglophone languages and literatures; Film and Media Studies; Music; Women, Gender, and Sexuality Studies; and the Sam Fox School of Design & Visual Art.

III. AM Exam

The AM exam is based on a seminar paper written during the student’s first three semesters in the program, which, under the guidance of a faculty adviser, is extensively revised and expanded into an essay of publishable length (typically 25 double-spaced pages) and publishable quality. After the revised seminar paper has been submitted to and approved by the DGS, the student will meet with a committee of three faculty members (the adviser, the DGS, and a third faculty member, one of whom may be from another department) for an oral exam.

**Urban Studies**

Why is the study of urban life, of living in cities, an important area of study? The answer is simple. Because of increasing urbanization — that is, the dynamics resulting from people moving into densely populated areas — worldwide projections show the increase in urban populations everywhere. Not only are world cities growing by one million people per week, but demographers suggest that by 2050, more than two-thirds of the planet’s population will be urban dwellers. The issues impacting
our densely populated cities and those who inhabit them will be the focus of substantive research and policy debates in the 21st century. Because we seek to prepare our students to be leaders on the world stage, in-depth study in urbanism and urbanization on both a national and international scale is in keeping with that preparation.

The Graduate Certificate Program in Urban Studies is administered by the Urban Studies program and the Graduate School. The Urban Studies program director, Professor Carol Camp Yeakey, is responsible for the Graduate Certificate Program.

Contact: Carol Camp-Yeakey  
Phone: 314-935-6241  
Email: cyeakey@wustl.edu  
Website: http://urbanstudies.wustl.edu/programs/graduate-certificate-program

Faculty

Founding Director

Carol Camp Yeakey (http://education.wustl.edu/people/yeakey_carol-camp)  
Marshall S. Snow Professor of Arts & Sciences  
Professor  
Director, Center on Urban Research & Public Policy (CURPP)  
PhD, Northwestern University  
(Education)

Professors

John G. Baugh Jr. (http://anthropology.artsci.wustl.edu/baugh_john)  
Margaret Bush Wilson Professor in Arts & Sciences  
PhD, University of Pennsylvania  
(Linguistics)

John R. Bowen (http://anthropology.artsci.wustl.edu/bowen_john)  
Dunbar–Van Cleve Professor in Arts & Sciences  
PhD, University of Chicago  
(Anthropology)

Adrienne D. Davis (http://law.wustl.edu/faculty/pages.aspx?id=5758)  
William M. Van Cleve Professor of Law  
JD, Yale University  
(Law)

Gerald L. Early (http://english.artsci.wustl.edu/gerald_early)  
Merle Kling Professor of Modern Letters  
PhD, Cornell University  
(English)

Steven Fazzari (http://economics.wustl.edu/people/steve_fazzari)  
Bert A. and Jeanette L. Lynch Distinguished Professor of Economics  
PhD, Stanford University  
(Economics)

Margaret C. Garb (http://history.artsci.wustl.edu/margaret_garb)  
PhD, Columbia University  
(History)

James L. Gibson (http://polisci.wustl.edu/James_Gibson)  
Sidney W. Souers Professor of Government  
PhD, University of Iowa  
(Political Science)

John Hoal (http://samfoxschool.wustl.edu/directory/60)  
PhD, Washington University  
(Architecture)

Bruce Lindsey (http://www.arch.wustl.edu/directory/39)  
E. Desmond Lee Professor for Community Collaboration, Sam Fox School of Design & Visual Arts  
MArch, Yale University  
(Architecture)

William R. Lowry (http://polisci.wustl.edu/William_Lowry)  
PhD, Stanford University  
(Political Science)

Eric Mumford (http://samfoxschool.wustl.edu/directory/487)  
Rebecca & John Voyles Professor of Architecture  
PhD, Princeton University  
(Architecture)

Kimberly Jade Norwood (http://law.wustl.edu/faculty_profiles/profiles.aspx?id=303)  
Henry H. Oberschelp Professor of Law  
JD, University of Missouri  
(Law)

Timothy H. Parsons (http://history.artsci.wustl.edu/tim_parsons)  
PhD, Johns Hopkins University  
(History)

Will R. Ross (https://renal.wustl.edu/bio/will-ross-md-mph)  
Professor of Medicine  
MD, Washington University  
(Medicine)

Vetta L. Sanders Thompson (https://brownschool.wustl.edu/Faculty-and-Research/Pages/Vetta-Sanders-Thompson.aspx)  
PhD, Duke University  
(Social Work)
Karen L. Tokarz ([link](http://law.wustl.edu/faculty/pages.aspx?id=448))
Charles Nagel Professor of Public Interest Law & Public Service
JD, Saint Louis University
LLM, University of California, Berkeley
(Law)

James V. Wertsch ([link](http://anthropology.artsci.wustl.edu/wertsch_james))
David R. Francis Distinguished Professor
Vice Chancellor of International Affairs
PhD, University of Chicago
(Anthropology)

Rafia Zafar ([link](http://english.artsci.wustl.edu/Rafia-Zafar))
PhD, Harvard University
(English)

**Associate Professors**

Lingchei Letty Chen ([link](http://ealc.wustl.edu/people/chen_lingchei-letty))
PhD, Columbia University
(East Asian Languages and Cultures)

Garrett Albert Duncan ([link](http://education.wustl.edu/Duncan))
PhD, The Claremont Graduate School
(Education)

Michelle M. Duguid ([link](http://www.olin.wustl.edu/EN-US/Faculty-Research/Faculty/Pages/FacultyDetail.aspx?username=duguid))
PhD, Cornell University
(Business)

Mary Ann Dzuback ([link](http://education.wustl.edu/people/dzuback_mary-ann))
PhD, Columbia University
(Education)

Rowhea Elmesky ([link](http://education.wustl.edu/people/elmesky_rowhea))
PhD, Florida State University
(Education)

Robert G. Hansman ([link](http://www.samfoxschool.wustl.edu/directory/58))
BFA, University of Kansas
(Architecture)

Clarissa Hayward ([link](http://polisci.wustl.edu/ClarissaRile_Hayward))
PhD, Yale University
(Political Science)

Shanti A. Parikh ([link](http://anthropology.artsci.wustl.edu/parikh_shanti))
PhD, Yale University
(Anthropology)

Sunita A. Parikh ([link](http://polisci.wustl.edu/Sunita_Parikh))
PhD, University of Chicago
(Political Science)

Nancy Y. Reynolds ([link](http://history.artsci.wustl.edu/nancy_reynolds))
PhD, Stanford University
(History)

Denise Ward-Brown ([link](http://samfoxschool.wustl.edu/directory/549))
MFA, Howard University
(Art)

**Assistant Professors**

Sheretta Tekise Butler-Barnes ([link](http://urbanstudies.wustl.edu/people/sheretta-butler-barnes))
PhD, Wayne State University
(Social Work)

Ebony Duncan ([link](http://education.wustl.edu/people/ebyony-duncan))
PhD, Vanderbilt University
(Sociology; Education)

Michelle A. Purdy ([link](http://education.wustl.edu/people/michelle-purdy))
PhD, Emory University
(Education)

**Senior Lecturer**

Gay Goldman Lorberbaum ([link](http://www.samfoxschool.wustl.edu/directory/475))
MArch, Washington University
(Architecture)

**Adjunct Assistant Professor**

Sheri Notaro ([link](http://urbanstudies.wustl.edu/people/sheri-r-notaro))
PhD, University of Michigan
(Psychological & Brain Sciences; Public Health)

**Professor Emeritus**

David Konig
PhD, Harvard University
(History; Law)

**Degree Requirements**

**Graduate Certificate Program in Urban Studies**

The Graduate Certificate Program in Urban Studies is open to PhD students in any discipline. It is administered by the Center on Urban Research and Public Policy according to the Graduate School's general requirements for graduate certificates.
Specifically, the graduate certificate requires successful completion of five courses for a total of 15 graduate units: two core courses and three electives. Up to two of these five courses may also be counted for the PhD.

Women, Gender, and Sexuality Studies

Washington University offers a Graduate Certificate in Women, Gender, and Sexuality Studies (WGSS) for students in AM or PhD programs who wish to enhance their disciplinary studies with an interdisciplinary concentration in gender and sexuality studies. The certificate offers students opportunities to meet and work with faculty and graduate students in departments throughout Arts & Sciences and the professional schools who do research on women, gender and sexuality. The certificate prepares students for job opportunities within women, gender, and sexuality studies programs as well as within their home disciplines. Graduate certificate students are invited to participate in a variety of events, including special guest lectures and workshops, conferences, the WGSS Colloquium Series, faculty searches, the WGSS newsletter Gender Spectrum, and informal gatherings. The department sponsors a graduate certificate workshop providing both professional development and a place where graduate students share their research and writing with others interested in feminist, gender, and sexuality-oriented scholarship.

The WGSS department also offers certificate students the opportunity to observe and then design and teach sections of introductory courses in WGSS and to participate in this joint mentored teaching experience (MTE). The MTE in WGSS takes place over two semesters. During the first, students undergo a mentored teaching preparation semester in which they observe the class they will teach and are mentored by the instructor. They also attend instructor meetings devoted to examining content and pedagogy. They develop a syllabus, often in consultation with their WGSS teaching mentor and their department adviser, that is reviewed carefully by WGSS faculty. These students may also be undergoing a mentored teaching experience in their own departments during this first semester. The next semester, they teach the WGSS course, are observed by WGSS faculty and, in some cases, by faculty in their own departments. These faculty use a rubric for the assessment, which is made available to the student, and receive a written assessment, which they then discuss with the observing WGSS faculty member. Sometimes students are observed and assessed more than once. Students who undergo the MTE are equipped to offer both disciplinary and interdisciplinary scholarly and teaching expertise to hiring institutions. The Graduate Certificate in WGSS provides students with a rich repertoire of pedagogical skills, scholarly opportunities, professional development, and collaborative experiences.

Phone: 314-935-5102
Email: wgss@wustl.edu
Website: http://wgss.artsci.wustl.edu

Faculty

Chair

Mary Ann Dzuback (http://education.wustl.edu/people/dzuback_mary-ann)
Director of Women, Gender, and Sexuality Studies; Associate Professor of Women, Gender, and Sexuality Studies, Education, and History (courtesy)
PhD, Columbia University
(Women, Gender, and Sexuality Studies; Education; History)

Core Faculty

Barbara Baumgartner (http://wgss.artsci.wustl.edu/people/baumgartner_barbara)
Director of Undergraduate Studies and Senior Lecturer
PhD, Northwestern University
(Women, Gender, and Sexuality Studies; English)

Rachel Brown (http://wgss.artsci.wustl.edu/people/rachel-brown)
Assistant Professor
PhD, The Graduate Center, City University of New York
(Women, Gender, and Sexuality Studies; Political Science)

Amy Cislo (https://wgss.artsci.wustl.edu/people/cislo_amy)
Senior Lecturer
PhD, Washington University
(Women, Gender, and Sexuality Studies; German)

Andrea Friedman (http://history.artsci.wustl.edu/andrea_friedman)
Professor
PhD, University of Wisconsin-Madison
(Women, Gender, and Sexuality Studies; History)

Jeffrey Q. McCune Jr. (http://wgss.artsci.wustl.edu/people/jeffrey-mccune)
Associate Professor
PhD, Northwestern University
(Women, Gender, and Sexuality Studies; Performing Arts)

Bahia Munem (https://wgss.artsci.wustl.edu/people/bahia-munem)
Postdoctoral Fellow
PhD, Rutgers University
(Women, Gender, and Sexuality Studies)

Amber Jamilla Musser (https://wgss.artsci.wustl.edu/people/amber-musser)
Assistant Professor
PhD, Harvard University
(Women, Gender, and Sexuality Studies)
Linda Nicholson (http://history.artsci.wustl.edu/linda_nicholson)
Susan E. and William P. Stiritz Distinguished Professor of
Women's Studies
PhD, Brandeis University
(Women, Gender, and Sexuality Studies; History)

Rebecca Wanzo (https://wgss.artsci.wustl.edu/Wanzo)
Associate Professor, Women, Gender, and Sexuality Studies;
Associate Director, Center for Humanities
PhD, Duke University
(Women, Gender, and Sexuality Studies)

Additional Program Faculty
Jami Ake (http://wgss.artsci.wustl.edu/people/ake_jami)
Assistant Dean and Academic Coordinator, College of Arts &
Sciences
PhD, Indiana University Bloomington
(English; Women, Gender, and Sexuality Studies)

Margaret Baum (http://wgss.artsci.wustl.edu/people/margaret-
baum-md)
MD, Johns Hopkins University School of Medicine
(Obstetrics and Gynecology; Women, Gender, and Sexuality
Studies)

Lynnea Brumbaugh (http://wgss.artsci.wustl.edu/people/brumbaugh_lynnnea)
PhD, Washington University
(Obstetrics and Gynecology; Women, Gender, and Sexuality
Studies)

MD, Saint Louis University
(Obstetrics and Gynecology; Women, Gender, and Sexuality
Studies)

Andrea Nichols (http://wgss.artsci.wustl.edu/people/andrea-
nichols)
PhD, University of Missouri-St. Louis
(Obstetrics and Gynecology; Women, Gender, and Sexuality
Studies; Criminology)

Trevor Sangrey (http://wgss.artsci.wustl.edu/people/trevor-
sangrey)
PhD, University of California, Santa Cruz
(Women, Gender, and Sexuality Studies; History of
Consciousness)

Affiliate Faculty
Jean Allman (http://history.artsci.wustl.edu/allman)
J.H. Hexter Professor in the Humanities
PhD, Northwestern University
(History)

Susan Frelich Appleton (http://law.wustl.edu/Faculty/
pages.aspx?id=195)
Lemma Barkeloo and Phoebe Couzins Professor of Law
JD, University of California, Berkeley
(Law)

Miriam Bailin (http://english.artsci.wustl.edu/people/miriam-
bailin)
Associate Professor
PhD, University of California, Berkeley
(English)

Nancy Berg (https://jinelc.wustl.edu/people/berg_nancy)
Professor
PhD, University of Pennsylvania
(Modern Hebrew Languages and Literatures)

Shefali Chandra (http://history.artsci.wustl.edu/chandra)
Associate Professor
PhD, University of Pennsylvania
(History)

Elizabeth Childs (http://arthistory.artsci.wustl.edu/people/
elizabeth-c-childs)
Etta and Mark Steinberg Professor of Art History
PhD, Columbia University
(Art History)

Caitlyn Collins (http://sociology.wustl.edu/people/caitlyn-collins)
Assistant Professor
PhD, University of Texas at Austin
(Sociology)

Rebecca Copeland (http://ealc.wustl.edu/people/rebecca-
copeland)
Professor
PhD, Columbia University
(Japanese)

Marion Crain (http://law.wustl.edu/faculty_profiles/profiles.aspx?
id=6613)
Wiley Rutledge Professor of Law
JD, University of California, Los Angeles
(Law)

Adrienne Davis (http://law.wustl.edu/faculty_profiles/
profiles.aspx?id=5768)
William M. Van Cleve Professor of Law
JD, Yale University
(Law)

Tonya Edmond (http://gwbweb.wustl.edu/FACULTY/FULLTIME/
Pages/TonyaEdmond.aspx)
Associate Professor
PhD, University of Texas at Austin
(Social Work)

Vanessa Fabbre (http://brownschool.wustl.edu/Faculty/FullTime/
Pages/Vanessa-Fabbre.aspx)
Assistant Professor
PhD, University of Chicago
(Social Work)
Denise Elf Gill (http://music.wustl.edu/people/gill)
Assistant Professor
PhD, University of California, Santa Barbara
(Ethnomusicology; Feminist Studies)

Beata Grant (https://religiousstudies.artsci.wustl.edu/beata_grant)
Professor
PhD, Stanford University
(Chinese; East Asian Languages and Cultures; Religious Studies)

R. Marie Griffith (https://religiousstudies.artsci.wustl.edu/marie_griffith)
John C. Danforth Distinguished Professor
PhD, Harvard University
(Director, John C. Danforth Center on Religion and Politics)

Christine Johnson (http://history.artsci.wustl.edu/christine_johns)
Associate Professor
PhD, Johns Hopkins University
(History)

Stephanie Kirk (http://rll.wustl.edu/people/kirk)
Associate Professor
PhD, New York University
(Romance Languages and Literatures)

Rebecca Lester (http://anthropology.artsci.wustl.edu/lester_rebecca)
Associate Professor
PhD, University of California, San Diego
(Anthropology)

Erin McGlothlin (http://german.wustl.edu/people/mcglotlin_erin)
Associate Professor
PhD, University of Virginia
(Germanic Languages and Literatures)

Rebecca Messbarger (http://rll.wustl.edu/people/messbarger)
Professor
PhD, University of Chicago
(Romance Languages and Literatures)

Melanie Micir (http://english.artsci.wustl.edu/people/melanie-micir)
Assistant Professor
PhD, University of Pennsylvania
(English)

Angela Miller (https://arthistory.artsci.wustl.edu/people/angela-miller)
Professor
PhD, Yale University
(Art History)

Patricia Olynyk (http://samfoxschool.wustl.edu/portfolios/faculty/patricia_olynyk)
Florence and Frank Bush Professor of Design and Visual Arts
MFA, California College of the Arts
(Art)

Shanti Parikh (http://anthropology.artsci.wustl.edu/parikh_shanti)
Associate Professor
PhD, Yale University
(Anthropology; African and African-American Studies)

Anca Parvulescu (http://english.artsci.wustl.edu/Anca_Parvulescu)
Professor
PhD, University of Minnesota
(English)

Vivian Pollak (http://english.artsci.wustl.edu/Vivian_Pollak)
Professor
PhD, Brandeis University
(English)

Nancy Reynolds (http://history.artsci.wustl.edu/nancy_reynolds)
Associate Professor
PhD, Stanford University
(History)

Jessica Rosenfeld (http://english.artsci.wustl.edu/Jessica_Rosenfeld)
Associate Professor
PhD, University of Pennsylvania
(English)

Carolyn Sargent (http://anthropology.artsci.wustl.edu/sargent_carolyn)
Professor
PhD, Michigan State University
(Anthropology)

Elizabeth Sepper (http://law.wustl.edu/faculty_profiles/profiles.aspx?id=9367)
Associate Professor
JD, LLM, New York University School of Law
(Law)

Julie Singer (http://rll.wustl.edu/people/singer)
Associate Professor
PhD, Duke University
(Romance Languages and Literatures)

Peggie Smith (http://law.wustl.edu/faculty_profiles/profiles.aspx?id=7971)
Charles F. Nagel Professor of Employment and Labor Law
JD, Yale University
(Law)
Gaylyn Studlar (http://fms.artsci.wustl.edu/people/gaylyn-studlar)
David May Distinguished University Professor in the Humanities
PhD, University of Southern California
(Film and Media Studies)

Lynne Tatlock (http://complit.artsci.wustl.edu/people/lynne-tatlock)
Hortense and Tobias Lewin Distinguished Professor in the Humanities
PhD, Indiana University
(Germanic Languages and Literatures)

Kedron Thomas (http://anthropology.artsci.wustl.edu/thomas_kedron)
Assistant Professor
PhD, Harvard University
(Anthropology)

Karen Tokarz (http://law.wustl.edu/faculty_profiles/profiles.aspx?id=448)
Charles Nagel Professor of Public Interest and Public Service Law
JD, Saint Louis University
LLM, University of California, Berkeley
(Law)

Corinna Treitel (http://history.artsci.wustl.edu/corinna_treitel)
Associate Professor
PhD, Harvard University
(History)

Akiko Tsuchiya (http://rll.wustl.edu/people/tsuchiya)
Professor
PhD, Cornell University
(Romance Languages and Literatures)

Anika Walke (http://history.artsci.wustl.edu/anika-walke)
Assistant Professor
PhD, University of California
(History)

Gerhild Scholz Williams (http://provost.wustl.edu/people/gerhild-scholz-williams)
Barbara Schaps Thomas and David M. Thomas Professor in the Humanities
PhD, University of Washington
(Germanic Languages and Literatures)

Adia Harvey Wingfield (https://sociology.wustl.edu/people/adia-harvey-wingfield)
Professor
PhD, Johns Hopkins University
(Sociology)

Colette Winn (http://rll.wustl.edu/people/winn)
Professor
PhD, University of Missouri-Columbia
(Romance Languages and Literatures)

Degree Requirements
Graduate Certificate in Women, Gender, and Sexuality Studies

Graduate students interested in the certificate should apply for it after consulting both their departmental director of graduate studies and the Women, Gender, and Sexuality Studies certificate chair. The certificate requires the completion of five graduate-level courses, at least two of which must be drawn from home-based Women, Gender, and Sexuality Studies course offerings.

Writing

The Writing program offers a Master of Fine Arts in Writing (MFA) in three genres — creative nonfiction, fiction and poetry. Applicants must apply to each genre separately and will be enrolled in only one. However, through themed craft courses, MFA students may take courses with faculty and students in other genres. The MFA in Writing is a two-year program.

The Writing program, ranked ninth in the country by Poets & Writers, is highly selective — we enroll 10 to 15 students each year. There is a low faculty to student ratio — writing courses are generally capped at 12. Students are generously funded, with all incoming students receiving full tuition scholarships plus University Fellowships. Our faculty includes Guggenheim Fellows, National Book Award finalists, and winners of the National Book Critics Circle Award. Graduates of our program have won the PEN/Hemingway Award and the Drue Heinz Literature Prize among other honors.

Each year our reading series brings a diverse group of poets, fiction writers, and nonfiction writers to the department. In addition, the Hurst Professor program brings in six distinguished visitors each year to present their newest work, lecture on the craft of writing, and work one-on-one with our MFA students. Edward P. Jones, Frank Bidart, Joy Williams, Jorie Graham, Aleksandar Hemon, Lucie Brock Broido, George Saunders, Louise Glück, Kelly Link, C.D. Wright, Richard Powers, Claudia Rankine, Deborah Eisenberg, Paul Muldoon, Charles Baxter, Timothy Donnelly, and Lydia Davis are just some of our recent visiting Hurst Professors.

Contact: Shannon Rabong
Phone: 314-935-8389
Email: scrabong@wustl.edu
Website: http://english.artsci.wustl.edu/graduate/writing_program

Faculty

Professors

Mary Jo Bang (http://english.artsci.wustl.edu/mary_jo_bang)
MFA, Columbia University
Carl Phillips (http://english.artsci.wustl.edu/Carl_Phillips)
MA, Boston University

Assistant Professors
Danielle Dutton (http://english.artsci.wustl.edu/danielle-dutton)
PhD, University of Denver
Edward McPherson (http://english.artsci.wustl.edu/Edward_Mcpherson)
MFA, University of Minnesota–Twin Cities

Writers-in-Residence
Kathryn Davis (http://english.artsci.wustl.edu/kathryn_davis)
BA, Goddard University
Kathleen Finneran (http://english.artsci.wustl.edu/kathleen_finneran)
BA, Washington University
MFA, Bowling Green State University

Director of Creative Writing Program
David Schuman (http://english.artsci.wustl.edu/David_Schuman)
MFA, Washington University

Degree Requirements

Master of Fine Arts in Writing

The Writing program leads to the Master of Fine Arts in Writing (MFA). It is a two-year program, requiring satisfactory completion of 42 semester hours, a thesis, and an oral examination dealing principally with the thesis.

Courses

Of the 42 credit units required, 24 consist of the graduate nonfiction, fiction, or poetry workshop taken every semester. The remainder are primarily literature and craft courses from the English department; however, in consultation with the director of the program, graduate-level courses from any department are acceptable as long as the student has the appropriate preparation and the permission of the instructor, and the course will enrich the student's writing.

In the first year, students enroll for 24 units: the graduate workshop in their genre (6 units) plus two additional 3-unit courses each semester. In the second year, while teaching, students typically take a total of 18 units: the workshop each semester again (12 units), thesis hours (3 units), and an additional course.

Thesis

The required work for the MFA culminates in a thesis, which may take different forms but is usually a volume (or most of a volume) of poems, stories or essays, or a novel (or most of a novel), or a memoir or other long-form CNF work (or most of one).

Oral Examination

Near the end of the second year, after the thesis has been submitted in final form, the department will schedule an oral examination, dealing principally with the thesis.

University College

Graduate Study

University College administers the Doctor of Liberal Arts, Master of Liberal Arts, Master of Arts, and Master of Science, in coordination with the Graduate School. University College administers the Master of Science in Clinical Research Management in coordination with Washington University School of Medicine. University College also offers a range of graduate-level certificate programs (http://ucollege.wustl.edu/programs/certificates).

To earn the Doctor of Liberal Arts degree (http://ucollege.wustl.edu/programs/graduate/doctor-liberal-arts) at Washington University, a student must complete 45 credit hours after earning a relevant master's degree, pass a written and oral comprehensive examination, and write and defend a thesis.

Master's degree programs (http://ucollege.wustl.edu/programs/graduate) in University College consist of 30-36 units of graduate-level course work including, in some cases, a 6-unit master's thesis or a 3-unit directed research project. Normally, up to 6 units of related graduate-level study, with a grade of B or higher, may be transferred to a graduate program. All other course work must be taken at Washington University. Only courses taken for a letter grade may be applied to a graduate program of study. Courses taken as pass/fail or audit will not count toward a graduate program of study. Grades below C- will not count toward a graduate degree program of study. Students must maintain a cumulative grade point average of 3.0 to be eligible to receive a graduate degree.

Admission

Admission to the Doctor of Liberal Arts program is extremely competitive. Candidates must already hold a master's degree in a relevant subject from an accredited institution of higher learning. The application deadline is April 1. Please visit the University College website (http://ucollege.wustl.edu) or call 314-935-6700 for more detailed information, requirements and policies concerning specific graduate degree programs.
earned a baccalaureate degree. University College and the Graduate School review completed applications and make admissions decisions on a rolling basis for master's degree programs. The process typically takes four to six weeks. Accordingly, master's degree applicants should submit materials according to the following schedule in order to ensure a timely decision: mid-November for spring; mid-April for summer; mid-July for fall. Please visit the University College website (http://ucollege.wustl.edu) for additional program-specific admission requirements.

**Graduate Degrees in University College**

- Doctor of Liberal Arts (DLA) (http://ucollege.wustl.edu/programs/graduate/doctor-liberal-arts)
- Master of Arts in American Culture Studies (AM) (https://ucollege.wustl.edu/programs/graduate/masters-american-culture-studies)
- Master of Arts in Biology (AM) (https://ucollege.wustl.edu/programs/graduate/masters-biology)
- Master of Arts in Education (MAEd) (https://ucollege.wustl.edu/areas/education/masters)
- Master of Arts in Human Resources Management (AM) (https://ucollege.wustl.edu/programs/graduate/masters-human-resources-management)
- Master of Arts in International Affairs (AM) (https://ucollege.wustl.edu/programs/graduate/masters-international-affairs)
- Master of Arts in Nonprofit Management (AM) (https://ucollege.wustl.edu/programs/graduate/masters-nonprofit-management)
- Master of Arts in Statistics (AM) (https://ucollege.wustl.edu/programs/graduate/masters-statistics)
- Master of Liberal Arts (AM) (https://ucollege.wustl.edu/programs/graduate/masters-liberal-arts)
- Master of Science in Biology (MS) (https://ucollege.wustl.edu/node/1278)
- Master of Science in Clinical Research Management (MS) (https://ucollege.wustl.edu/programs/graduate/masters-clinical-research-management)

AM, MAEd, and MS in Biology degrees conferred by the Graduate School. MS in Clinical Research Management conferred by University College.

*Note: University College students may apply a maximum of 6 units of P/F credit from graduate-level course work in the Olin Business School to a master's degree program in University College. The course work must be authorized by University College and the Graduate School, and the student must have received Pass or High Pass in the Olin School course. Courses with grades of Low Pass are not eligible. This policy applies only to courses completed on a P/F basis in the Olin Business School prior to a student's admission to a University College graduate program of study administered by University College and conferred by the Graduate School. Once admitted to a University College program of study, students who are authorized to take courses in the Olin School and apply them toward their program of study are required to convert P/F to letter grades at the time of registration.

Website: http://ucollege.wustl.edu

**UCollege - American Culture Studies**

**Master of Arts in American Culture Studies**

The Master of Arts in American Culture Studies addresses the intellectual and moral questions of American identity and belonging that no single disciplinary perspective can comprehensively and satisfyingly resolve. What does it mean to live and work in an American culture devoted to individual success and autonomy and at the same time be a citizen of a nation devoted to collective needs and well-being?

The Master of Arts in American Culture Studies provides the instruction, both in specific disciplines and in cross-disciplinary conversations, to help students answer important questions about American society. It also introduces some of the social, political, and cultural issues that have shaped American culture and identity. Most fundamentally, it provides a critical skill set that fosters analysis of an array of cultural objects — a place, an event, a work of art, a political institution — from a rich and diverse foundation of knowledge and perspectives.

Students' studies culminate in a self-directed project that allows them to explore an area of personal interest while participating in a multidisciplinary scholarly community. Part of the excitement of this kind of learning is the opportunity to engage in creative, rigorous exchange with the faculty in the humanities and social sciences at Washington University in St. Louis, and with leading practitioners in the St. Louis professional and policy world.

Contact: Michael Allen
Phone: 314-935-6086
Email: allen.m@wustl.edu
Website: http://ucollege.wustl.edu/programs/graduate/masters-american-culture-studies

**UCollege - Biology**

University College offers both a Master of Arts and a Master of Science in Biology.
Master of Arts in Biology

The Master of Arts in Biology program helps students update and deepen their knowledge of the biomedical sciences, prepare for employment in related fields, and advance their professional standing — while obtaining a graduate science degree on a part-time basis through evening, weekend, and online courses.

Designed to be adaptable to each individual’s unique background and goals, the program provides a flexible curriculum and close individual advising for each student. Students include science and health professionals, teachers, technicians, and individuals in biology-related businesses.

Students in this program have the option of choosing a concentration in neurobiology or plant biology for deeper, more focused study.

Master of Science in Biology

The MS in Biology is a two-year program designed to fit the schedules of working teachers. It includes two summer institutes, three weeks each, in residence at Washington University, along with online course work during the academic years following each summer. Students seeking the MS in Biology must satisfactorily complete 30 units of prescribed course work covering a wide range of scientific topics and methods for teaching them. The program admits new students in alternate years.

Contact:
Ian Duncan
Phone: 314-935-6719
Email: duncan@wustl.edu
Website: http://ucollege.wustl.edu/programs/graduate/masters-biology

UCollege - Education

University College offers both a Master of Arts in Education–Instructional Process, and Post-Baccalaureate Teacher Certification.

Master of Arts in Education–Instructional Process

Washington University’s Department of Education offers a part-time Master of Arts degree focused on an Analysis of Practice for practicing educators in a variety of settings. This Analysis of Practice allows educators to consider multiple and enhanced approaches for data collection, analysis, and reflection on educational issues involving educational assessment data, video microanalysis, learning sciences research, and educational foundation concepts. We offer three strands of study, which each work to enhance the educator’s professional development in the particular focus area.

Post-Baccalaureate Certification

The Post-Baccalaureate Certification program provides students who have completed a bachelor’s degree with the course work necessary to obtain a Missouri teaching certificate. All course work is available through University College during afternoon and evening hours with the exception of student teaching, which is available during the fall (elementary) or spring (middle school, secondary, and K-12) semester. Required course work is taken for undergraduate credit. Certification through this program is available in the following teaching areas:

- Secondary Education (grades 9-12): biology, chemistry, earth science, English, mathematics, physics, or social studies
- Middle School (grades 5-9): English, mathematics, science, or social studies
- K-12: art, dance, classics (Latin), or modern foreign languages (Chinese, French, German, Japanese, Russian, Spanish)
- Elementary Education (grades 1-6)

Contact: Roshonda Ludy
Phone: 314-935-6791
Email: rludy@wustl.edu
Website: http://ucollege.wustl.edu/areas/education/masters

UCollege - Human Resources Management

Master of Arts in Human Resources Management

Human resources managers are an integral part of the leadership team 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 Master of Arts in Human Resources Management provides the student 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. Additionally, the program teaches professionals how to contribute to organizational development, change, risk management, and strategic planning.
UCollege - Liberal Arts

We live today in a rich and varied culture. Every moral, social, political, and cultural question we face demands the broadest consideration we can give it, drawing from the multiplicity of methods and perspectives nurtured and cultivated in the many disciplines of a great university.

Master of Liberal Arts (MLA)

The Master of Liberal Arts provides the chance to practice the methods of interdisciplinary inquiry that are the hallmark of a rigorous liberal arts education. As a student in the program, one can explore questions of identity through art, literature, and religion; analyze the politics of race in fiction, historical documents, the visual arts, and music; debate ethical choices presented by fiction writers, jurists, philosophers, and scientists from antiquity through the present.

Students examine literary, artistic, and cinematic masterpieces; historic moments of discovery and change; traditions of thought; cultural differences; and civic responsibilities. They sharpen their thinking about contemporary values and choices through courses that ask them to reflect on an individual's relation to society; on technology and the spread of ideas; on challenges to freedom; and on inspiration and creativity.

Doctor of Liberal Arts (DLA)

The Doctor of Liberal Arts (DLA) is designed for the experienced adult learner who wishes to pursue rigorous interdisciplinary study along with independent, scholarly reading and research. The degree is designed to cultivate interdisciplinary skills, intellectual habits, analytical and critical reasoning, effective writing, and broad-based decision making. The DLA is primarily for working professionals who have already earned a master's degree and who seek further intellectual enrichment while pursuing advanced graduate study on an evening, part-time basis. This degree neither constitutes a professional credential nor provides training for an academic career.

Contact: Harriet Stone
Phone: 314-935-5175
Email: hastone@wustl.edu
Website: http://ucollege.wustl.edu/programs/graduate

UCollege - Nonprofit Management

Master of Arts in 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 experienced practitioners in the St. Louis area.

The Master of Arts in Nonprofit Management provides students with the skills and resources for leading mission-driven organizations as productive examples of social entrepreneurship. Grounded in the historical context of nonprofit management and philanthropy, 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, marketing communications, and the skills of social entrepreneurship.

Contact: Amy Buehler
Email: abuehler@wustl.edu
Website: http://ucollege.wustl.edu/programs/graduate/masters-nonprofit-management

UCollege - Statistics
Master of Arts in Statistics

The Master of Arts in Statistics prepares students to be part of the information-rich, data-driven workforce that requires both general and specialized skills in statistical analysis.

In this 36-unit program, students will learn essential elements of statistical studies with courses in probability, statistical computation and model building, experimental design, survival analysis, Bayesian statistics, and stochastic processes. These courses, along with a required thesis practicum, provide a foundation for further doctoral-level study in mathematics and statistics, or in other academic disciplines such as anthropology, biology, economics, political science, and psychology. In addition to establishing a solid theoretical foundation, students also gain applied value with tools, strategies, and technical skills in areas such as predictive analytics and big data. They will be prepared to help organizations analyze large volumes of data, make reliable and productive business decisions, and use technology efficiently.

Contact: Lisa Kuehne
Phone: 314-935-4226
Email: lmkuehne@wustl.edu
Website: http://ucollege.wustl.edu/programs/graduate/masters-statistics

Degrees Offered
Aerospace Engineering (PhD) (p. 77)
American Culture Studies (Certificate) (p. 25)
American Culture Studies (University College: AM) (p. 133)
Anthropology (PhD) (p. 26)
Art History (MA) (p. 127)
Art History and Archaeology (AM, PhD) (p. 29)
Biochemistry (PhD) (p. 31)
Biology (University College: AM, MS) (p. 133)
Biomedical Engineering (PhD) (p. 61)
Business Administration (PhD) (p. 34)
Chemistry (PhD) (p. 41)
Chinese (AM) (p. 53)
Chinese & Comparative Literature (PhD) (p. 53)
Chinese Language and Literature (PhD) (p. 53)
Classics (AM, PhD) (p. 43)
Comparative Literature (PhD) (p. 46)
Computational & Molecular Biophysics (PhD) (p. 31)
Computational & Systems Biology (PhD) (p. 31)

Computer Engineering (PhD) (p. 63)
Computer Science (PhD) (p. 63)

Contact: Lisa Kuehne
Phone: 314-935-4226
Email: lmkuehne@wustl.edu
Website: http://ucollege.wustl.edu/programs/graduate/masters-statistics

Degrees Offered
Aerospace Engineering (PhD) (p. 77)
American Culture Studies (Certificate) (p. 25)
Hispanic Languages and Literatures (PhD) (p. 117)
History (PhD) (p. 87)
Human & Statistical Genetics (PhD) (p. 31)
Human Resources Management (University College: AM) (p. 134)
Immunology (PhD) (p. 31)
International Affairs (University College: AM) (p. 135)
Islamic and Near Eastern Studies (AM) (p. 90)
Japanese (AM) (p. 53)
Japanese & Comparative Literature (PhD) (p. 53)
Japanese Language and Literature (PhD) (p. 53)
Jewish Studies (AM) (p. 90)
Language Instruction (Certificate) (p. 117)
Latin American Studies (Certificate) (p. 93)
Liberal Arts (University College: MLA, DLA) (p. 135)
Materials Science & Engineering (PhD) (p. 71)
Mathematics (AM, PhD) (p. 95)
Mechanical Engineering (PhD) (p. 77)
Molecular Cell Biology (PhD) (p. 31)
Molecular Genetics & Genomics (PhD) (p. 31)
Molecular Microbiology & Microbial Pathogenesis (PhD) (p. 31)
Movement Science (PhD) (p. 99)
Music (AM, PhD) (p. 100)
Neurosciences (PhD) (p. 31)
Nonprofit Management (University College: AM) (p. 135)
Philosophy (PhD) (p. 102)
Philosophy-Neuroscience-Psychology (PhD) (p. 102)
Physics (PhD) (p. 105)
Plant & Microbial Biosciences (PhD) (p. 31)
Political Science (PhD) (p. 108)
Psychological & Brain Sciences (PhD) (p. 110)
Public Health Sciences (PhD) (p. 114)
Quantitative Data Analysis (Certificate) (p. 110)
Rehabilitation and Participation Science (PhD) (p. 116)
Social Work (PhD) (p. 119)
Spanish & Comparative Literature (PhD) (p. 46)
Speech and Hearing Sciences (PhD) (p. 123)
Statistics (AM, PhD) (p. 95)
Statistics (University College: AM) (p. 136)
Systems Science & Mathematics (PhD) (p. 66)
Theater and Performance Studies (AM) (p. 124)
Translation Studies (Certificate) (p. 46)
Urban Studies (Certificate) (p. 125)
Women, Gender, and Sexuality Studies (Certificate) (p. 128)
Writing (MFA) (p. 131)

Administration

The staff members of the Graduate School are here to help students complete graduate degrees successfully. They are committed to being of service to students, and they can be of inestimable assistance in navigating a program of graduate study.

Nevertheless, students should always ask questions first of their degree program's administrative faculty and staff. Many of the Graduate School's general policies are carried out by discipline-specific implementation plans, and much of the paperwork that enables a student to proceed must come to the Graduate School from the faculty and staff of the program rather than from the student.

For a listing of the administrative staff of the Graduate School, please refer to the “Administrators” section of this page.

Website: http://graduateschool.wustl.edu/welcome/administration

Administrators

Dean and Vice Provost for Graduate Education

William F. Tate (http://graduateschool.wustl.edu/welcome/administration/dean_tate)
Edward Mallinckrodt Distinguished University Professor in Arts & Sciences

Staff of the Graduate School

Bridget Coleman (http://graduateschool.wustl.edu/welcome/administration/bridget-coleman)
Director of Admissions & Recruiting

Patti Curtis (http://graduateschool.wustl.edu/welcome/administration/patti-curtis)
Administrative Assistant to Dean Tate; Student Funding Coordinator

Amy Gassel (http://graduateschool.wustl.edu/welcome/administration/amy-gassel)
Assistant Director of Graduate Student Financial Services; Coordinator of Diversity Programs
Washington University in St. Louis encourages and gives full consideration to all applicants for admission and financial aid without regard to race, color, age, religion, sex, sexual orientation, gender identity or expression, national origin, veteran status, disability, or genetic information.

Evidence considered by each admissions committee includes not only the quality of previous course work but also its relevance to the applicant’s prospective program. Research experience in the discipline is always viewed favorably.

The Graduate School is strongly interested in recruiting, enrolling, retaining, and graduating students from diverse backgrounds. Applications for admission by students from diverse backgrounds to any of the Graduate School’s degree programs are encouraged and welcomed. To the greatest extent possible, students with disabilities are integrated into the student population as equal members.

Application Process

Degree programs set their own application deadlines, which must be no later than January 15. Many deadlines are much earlier; applicants should check with their prospective programs. It is generally advantageous to the applicant to complete the application well in advance of the deadline.

Admissions and financial aid awards are for a specific academic year; students who do not matriculate that year must normally reapply. Admitted students can request a deferral of admission for up to one year, but such special requests require approval both of the admitting program and of the Graduate School. Applicants to whom admission is not offered may reapply after gaining additional evidence of qualification.

Degree programs in Arts & Sciences rarely admit applicants for the spring semester. Students interested in beginning graduate study in the spring should consult their prospective program’s faculty and staff.

The application is available online through the Graduate School website (http://graduateschool.wustl.edu/prospective_students). Applications are ready for final consideration after the following items have been submitted:

1. The application.
2. Transcripts of all undergraduate and graduate courses taken by the applicant. The application review process will be greatly expedited by uploading unofficial copies of transcripts. Official transcripts will be required before an offer of admission will be made.
3. Official TOEFL scores (for international applicants whose native language is not English).
4. Three reference forms and letters of recommendation completed by persons closely acquainted with the applicant, preferably those who have recently taught the student in relevant subjects.
5. Application fee or fee waiver.
6. Any additional material or interview required by the degree program.

Admissions recommendations are made by the faculty of each degree-granting program. Disciplines naturally require different preparation and various aptitudes in their applicants, so the admissions process is necessarily decentralized.
Students may be admitted to study for the PhD degree directly from baccalaureate study or after undertaking other graduate or professional education, whether at Washington University or at another accredited institution.

**Admission of International Students**

International students considering application to Washington University for graduate study should have a general familiarity with academic practices and university customs in the United States. All international students are required to present evidence of their ability to support themselves financially during graduate study. International students whose native language is not English must submit score reports from the Test of English as a Foreign Language (TOEFL). The test should be taken in time for results to reach Washington University directly from ETS before the application deadline.

To be eligible for a TOEFL waiver the applicant must have completed a full-time bachelor's or master's degree from a regionally accredited university located in the United States. Please note that the entire program of study must have been completed at the institution.

**Categories of Admission**

Students are admitted to the Graduate School as full-time candidates for a specific degree program. There are also two ways to take graduate courses without admission to candidacy for a degree: as a Student Not Candidate for a Degree (SNCD) or as an Unclassified Graduate Student.

**Student Not Candidate for a Degree (SNCD)**

SNCD admission may be granted to qualified students who hold a bachelor's degree or its equivalent, who wish to enroll in graduate courses on a non-degree basis, and who receive approval from a degree program. Examples include international exchange students who are studying at the university for a limited duration, students in good standing at other graduate schools, and students who wish to test their capabilities in a graduate setting. Students in this category are assigned faculty advisers and are accorded the same privileges as degree candidates. Applicants for SNCD study in the Graduate School should follow all application procedures outlined in the section headed “Application Process.” Continuation as a Student Not Candidate for a Degree is subject to the same academic and other standards that apply to degree candidates. In special cases, SNCD students might be eligible for financial aid.

**Unclassified Graduate Student**

A student who wishes to enroll for selected graduate-level courses without admission to the Graduate School is generally permitted to do so by registering as an Unclassified Graduate Student with the registrar of the Graduate School. Application for admission is not required for such registration, and permission to register as an Unclassified Graduate Student does not constitute admission. Permission to take more than 6 hours of graduate credit in any one program requires the approval of that program's director of graduate studies. Unclassified students are not eligible for student services, including financial aid.

**Acceptance of Admission and Award Offers**

Washington University, along with most other graduate schools in the United States, subscribes to the following resolution of the Council of Graduate Schools:

Acceptance of an offer of financial support (such as a graduate scholarship, fellowship, traineeship, or assistantship) for the next academic year by a prospective or enrolled graduate student completes an agreement that both student and graduate school expect to honor. In that context, the conditions affecting such offers and their acceptance must be defined carefully and understood by all parties.

Students are under no obligation to respond to offers of financial support prior to April 15; earlier deadlines for acceptance of such offers violate the intent of this Resolution. In those instances in which a student accepts an offer before April 15, and subsequently desires to withdraw that acceptance, the student may submit in writing a resignation of the appointment at any time through April 15. However, an acceptance given or left in force after April 15 commits the student not to accept another offer without first obtaining a written release from the institution to which a commitment has been made. Similarly, an offer by an institution after April 15 is conditional on presentation by the student of the written release from any previously accepted offer. It is further agreed by the institutions and organizations subscribing to the above Resolution that a copy of this Resolution or a link to the URL should accompany every scholarship, fellowship, traineeship, and assistantship offer.

Students to whom admission and financial awards are offered in March are requested to give notice in writing of the acceptance or rejection of their offers no later than April 15. Students to whom offers are made after April 1 are asked to reply within two weeks of receipt of the notice. Offers can be withdrawn if the deadline passes without any response from the student. Requests to extend deadlines or to reinstate withdrawn offers should be addressed to the degree program, which must endorse them before forwarding them to the Graduate School dean for final approval.

**Policies**

Graduate students are governed by policies established by the university, the Graduate School, and the student's department, division or program. Therefore, the policies identified here, and elsewhere in this Bulletin, cannot be a complete list. However,
every attempt has been made to identify the location of those policies which affect most or all students in the Graduate School.

In this Bulletin, the page University Policies (p. 8) covers many of the policies that apply to both graduate and undergraduate students, under the headings of nondiscrimination, student health, student conduct, statement of intent to graduate, and student academic records and transcripts. In addition, it refers to the university's Compliance and Policies (https://wustl.edu/about/compliance-policies) page. Graduate students should follow that page's links to Information Technology, Computers and Internet Policies; and to Intellectual Property and Research Policies. Most of the former, and many of the latter, will apply to all graduate students.

The Graduate School website includes a Policies and Guides (http://graduateschool.wustl.edu/policies-and-guides) page with links to the full texts of the following policies:

- Academic and Professional Integrity Policy for Graduate Students
- Alcohol Service at Events Sponsored by Graduate Student Organizations
- Dissenting Vote(s) at a Dissertation Defense
- Involuntary Leave Policy
- New Child Leave Policy
- Part-time Employment Policy
- Policy on Probation and Dismissal for Academic Reasons
- Student Grievance Procedures
- Time Off Policy
- Transfer of Credit Policy
- Washington University Policy on Consensual Faculty-Student Relationships

Please note that the majority of these policies cover the same topics as quite different versions, found elsewhere in the Bulletin and/or on the university's website, but applicable only to undergraduate students. Accessing these documents through the Graduate School website is the best way to guarantee finding the relevant policy for graduate students.
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 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. 141).
- The Skandalaris Center (p. 142) offers co-curricular 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 and the University of Missouri-St. Louis 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; however, 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, University College and the Summer School. The Washington University schools that are open to participation in the Inter-University Exchange program may have specific limitations or requirements on participation; details are available in those offices.

The following provisions apply to all course work taken by Washington University students attending Saint Louis University or the University of Missouri-St. Louis through the Inter-University Exchange program:

- Such courses can be used in the fulfillment of degree or major requirements. (Students should consult with their dean's office for information about how IE course work will count toward GPA, 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 adviser, 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 course work on another campus. However, students are responsible for any/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 in order 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 Inter-University Exchange application form. Forms are available from the Office of the University Registrar and on its website (link below).
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 department chair) at SLU or UMSL, preferably in person.
4. The student also must obtain approval signatures of their major adviser 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 course work will see these courses on their class schedule and academic record at WebSTAC under departments I97 (SLU) and I98 (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 course work at Washington University.
Skandalaris Center for Interdisciplinary Innovation and Entrepreneurship

The Skandalaris Center for Interdisciplinary Innovation and Entrepreneurship (http://skandalaris.wustl.edu) is the place on campus Where Creative Minds Connect.

Mission

At the Skandalaris Center, we provide entrepreneurial resources to those who think differently at Washington University, within St. Louis, and beyond.

Who We Serve

Our initiatives serve all students, alumni, faculty, staff and the community. We call this the SC Network.

Our Pursuits

Our initiatives are divided into three parts:

1. Get Connected (p. 142)
2. Get Trained (p. 142)
3. Get Funded (p. 143)

Get Connected

We are building the largest online community of Washington University talent, called ConNEXT (http://skandalaris.wustl.edu/connext). ConNEXT is a networking tool for sharing ideas, exchanging skills, and finding mentors and mentees.

ConNEXT is a resource for those who:

• Need someone else’s help
• Have a skill to offer
• Want to be a mentor
• Want to find a mentor

Join the community via our website (http://skandalaris.wustl.edu/connext) or fill out our connection form (https://skandalaris.wustl.edu/stay-connected-with-skandalaris) to join the newsletter and learn about ways to get involved.

Get Trained

The Skandalaris Center offers co-curricular programs to serve students, alumni, faculty, staff and the community in their entrepreneurial needs. These programs provide real-world, practical training opportunities.

1. InSITE Fellowship (http://skandalaris.wustl.edu/training/inSITE-fellowship)
   The InSITE Fellowship is a prestigious fellowship available to graduate students who demonstrate a passion and drive for innovation, entrepreneurship and/or venture capital. A nationally recognized fellowship, this is an opportunity for graduate students in all schools to work with local entrepreneurs and venture capitalists (VCs) on consulting projects. In addition to connecting with local startups and VCs, fellows will have the opportunity to attend national conferences, including SXSW, and host networking events on campus.
   Washington University is among peer schools such as Stanford, MIT, Harvard, NYU, Columbia and University of Pennsylvania, as it is one of the first schools in the Midwest, along with University of Chicago, to launch the InSITE Fellowship.

2. Workshops (http://skandalaris.wustl.edu/training/workshops)
   We offer free, noncredit workshops designed to encourage ideation, develop skills and advance ideas. Workshops are held on both campuses, targeted toward various audiences. We recommend, but do not require, that participants attend all sessions, and have found that the workshops help competitors improve their deliverables.

   Evidence-Based Entrepreneurship is designed to transform students and faculty from any school into capable innovators and entrepreneurs through seven contiguous sessions.

   Washington University Startup Training Lab (WU-STL) is a free, year-long series that serves as a comprehensive introduction to innovation and entrepreneurship. Open to the community.

3. Hatchery (http://skandalaris.wustl.edu/training/hatchery)
   Various schools at Washington University offer entrepreneurial training for credit. One such course is The Hatchery (Business Planning for New Enterprises). It is offered by the Olin Business School in both the fall and spring semesters and is open to all students at the university.
   Students form teams around a commercial or social venture idea proposed by a student or community entrepreneur.
   The deliverables for the course include two presentations to a panel of judges and a complete business plan. The deliverables in the course are similar to the deliverables in the Skandalaris Center’s business plan competitions and can be a valuable first step toward competitions and funding for a new venture.
**Get Funded**

We host several competitions each year that provide funding to social and commercial ventures. Each of these is an annual competition, with the exception of the Bear Cub, which awards funding three times a year.

**Bear Cub Challenge** ([source.wustl.edu/2016/06/bear-cub-challenge-awards-225000-five-research-teams](source.wustl.edu/2016/06/bear-cub-challenge-awards-225000-five-research-teams))

- This challenge provides funding for translational research with the goal of advancing the university’s intellectual property toward commercialization.
- **Who Can Apply:** Washington University faculty, postdocs and graduate students
- **Award:** Award amounts vary

**The Skandalaris Center Cup (SC Cup)** ([skandalaris.wustl.edu/funding/sc-cup](skandalaris.wustl.edu/funding/sc-cup))

- The SC Cup awards student-funded, for-profit ventures.
- **Who Can Apply:** Washington University students and postdocs
- **Award:** Up to $5K, six months of mentorship

**Social Enterprise and Innovation Competition (SEIC)** ([seic.wustl.edu](seic.wustl.edu))

- SEIC awards socially focused for-profit and nonprofit ventures. Teams are funded by community donors and foundations.
- **Who Can Apply:** Anyone (no Washington University affiliation required)
- **Award:** Award amounts vary

**Washington University Patent Challenge -** ([skandalaris.wustl.edu/funding/washu-patent-challenge](skandalaris.wustl.edu/funding/washu-patent-challenge)) **New!**

- Translate real, high-level Washington University patents into everyday English, and then apply the technology to an innovative, commercializable use (no licensing options available, strictly educational).
- **Who Can Apply:** Washington University students and postdocs
- **Award:** $10K in awards ($5K to undergraduate teams, $5K to graduate and postdoc teams)

**Suren G. Dutia and Jas K. Grewal Global Impact Award (GIA)** ([skandalaris.wustl.edu/funding/global-impact-award](skandalaris.wustl.edu/funding/global-impact-award))

- This awards scalable, impactful, quick-to-market Washington University startups.
- **Who Can Apply:** Washington University students and recent alumni
- **Award:** Up to $50K

---

**Student Groups**

IDEA Labs ([ideas.wustl.edu](ideas.wustl.edu)), The BALSA Group ([www.thebalsagroup.org](www.thebalsagroup.org)), and The Entrepreneurship and Venture Capital Association ([olinwustl.campusgroups.com/evca/about](olinwustl.campusgroups.com/evca/about)) provide additional opportunities to train and even launch a venture.

**Learn More**

Please contact the Skandalaris Center ([skandalaris.wustl.edu/contact-us](skandalaris.wustl.edu/contact-us)) for additional information about all programs. We’re excited to hear from you!

**Contact:** Jessica Stanko  
**Phone:** 314-935-9134  
**Email:** sc@wustl.edu  
**Website:** [http://skandalaris.wustl.edu](http://skandalaris.wustl.edu)
Index

A
About This Bulletin .............................................. 4
About Washington University in St. Louis ............... 5
Academic Calendar ............................................... 5
Academic Information, Graduate School, Doctoral Degrees .... 14
Academic Information, Graduate School, Master's Degrees ... 20
Administration, Graduate School .............................. 137
Admissions, Graduate School .................................. 138
American Culture Studies, Graduate School .............. 25
Anthropology, Graduate School ............................... 26
Art History and Archaeology, Graduate School .......... 29

B
Biology & Biomedical Sciences, Graduate School ........ 31
Biomedical Engineering, Graduate School ................. 61
Business Administration, Graduate School .............. 34

C
Campus Resources ............................................... 6
Chemistry, Graduate School ................................... 41
Classics, Graduate School ..................................... 43
Comparative Literature, Graduate School .................. 46
Computer Science & Engineering, Graduate School ...... 63

D
Dance, Graduate School ......................................... 48
Data Science in the Humanities ............................... 50
Degrees Offered, Graduate School ............................ 136
Doctoral Degrees, Graduate School ......................... 14

E
Earth and Planetary Sciences, Graduate School .......... 52
East Asian Languages and Cultures, Graduate School .... 53
East Asian Studies, Graduate School ....................... 55
Economics, Graduate School .................................. 57
Education, Graduate School ................................... 59
Electrical & Systems Engineering, Graduate School .... 66
Energy, Environmental & Chemical Engineering, Graduate School ......................... 69
Engineering & Applied Science, School of, Graduate School ... 61

English, Graduate School ....................................... 80

F
Fields of Study, Graduate School ............................. 24
Film and Media Studies, Graduate School ................. 82
Financial Information, Graduate School, Doctoral Degrees .... 19
Financial Information, Graduate School, Master's Degrees ..... 23

G
Germanic Languages and Literatures, Graduate School ... 84
Graduate School, The ........................................... 14

H
History, Graduate School ....................................... 87

I
Inter-University Exchange Program, Graduate .......... 141
Interdisciplinary Opportunities, Graduate ................ 141

J
Jewish, Islamic and Near Eastern Languages and Cultures, Graduate School .... 90

L
Latin American Studies, Graduate School ................ 93

M
Master's Degrees, Graduate School ......................... 20
Materials Science & Engineering, Graduate School .... 71
Mathematics, Graduate School ............................... 95
Mechanical Engineering & Materials Sciences, Graduate School ................. 77
Movement Science, Graduate School ...................... 99
Music, Graduate School ...................................... 100

P
Philosophy, Graduate School ................................ 102
Physics, Graduate School ..................................... 105
Policies, Graduate School .................................... 139
Policies, Washington University ........................... 8
Political Science, Graduate School ......................... 108
Psychological & Brain Sciences, Graduate School ...... 110
Public Health Sciences, Graduate School ................ 114

R
Rehabilitation and Participation Science, Graduate School ... 116
Romance Languages and Literatures, Graduate School ... 117
S
Skandalaris Center, Graduate ..............................................142
Social Work, Graduate School ............................................119
Speech and Hearing Sciences, Graduate School ..................123
T
Theater and Performance Studies, Graduate School ..........124
Trustees & Administration .................................................5
U
UCollege - American Culture Studies, Graduate School ......133
UCollege - Biology, Graduate School .................................133
UCollege - Education, Graduate School ............................134
UCollege - Human Resources Management, Graduate School .134
UCollege - International Affairs, Graduate School ...............135
UCollege - Liberal Arts, Graduate School ...........................135
UCollege - Nonprofit Management, Graduate School ..........135
UCollege - Statistics, Graduate School ..............................136
University Affiliations ......................................................13
University College, Graduate School .................................132
Urban Studies, Graduate School .......................................125
W
Women, Gender, and Sexuality Studies, Graduate School ....128
Writing, Graduate School .................................................131