

Bachelor of Science in Business and Computer Science

The Bachelor of Science in Business and Computer Science degree program provides an integrated educational experience that involves both the Olin Business School and the McKelvey School of Engineering. The objectives of this program are to provide students with the fundamental knowledge and perspectives of computer science and business and to expose them to the unique opportunities created by combining these disciplines. As one of the only such joint programs in the country, the Bachelor of Science in Business and Computer Science features unique curricular and cocurricular elements that help to create a distinctive program.

General Degree Requirements

- Complete at least 120 applicable units
- Earn at least a C (2.0 cumulative grade-point average) in all applicable courses taken at Washington University
- Earn at least a C (2.0 GPA) in each separate school of study
- Complete a minimum of 60 units at Washington University (at least 30 units must be "B" courses and at least 30 units must be "E" courses taken at Washington University)
- Complete the last 30 units at Washington University

Foundation Course Requirements (31 units)

Code	Title	Units
Math 131	Calculus I (AP credit may satisfy this requirement)	3
Math 132	Calculus II (AP credit may satisfy this requirement)	3
Math 233	Calculus III	3
Math 309	Matrix Algebra (Prerequisite: Math 132)	3
DAT 120	Managerial Statistics I	3
or ESE 326	Probability and Statistics for Engineering	
or SDS 3200	Elementary to Intermediate Statistics and Data Analysis	
DAT 121	Managerial Statistics II	3
MGT 201	Management Communication	4
Engr 310	Technical Writing	3
One College Writing Program course (themed writing course)		3
One Natural Sciences course designated NSM (Natural Sciences and Mathematics)		3
Total Units		31

Upon completing a course in the calculus sequence (Math 131-Math 132-Math 233) with a grade of C+ or better, the student may apply to receive credit for the preceding courses in the calculus sequence by following the mathematics department's back credit policy.

The Natural Sciences requirement is for 3 units designated NSM (Natural Sciences and Mathematics) from any of the following departments: Anthropology, Biology, Chemistry, Earth and Planetary Sciences, Environmental Studies or Physics. These courses must be completed with a grade of C- or better.

The school's English proficiency requirement is satisfied only by a grade of C- or better in one of the themed college writing courses developed by the College Writing Program.

Breadth/Free Elective Course Requirements (24 units)

- Humanities and Social Sciences (15 units): Any course with A&S attributes of Humanities (HUM), Language and Cultural Diversity (LCD), or Social and Behavioral Sciences (SSC). These courses must be taken with the credit grade option only (not pass/fail). At least one course must be an ethics course from the list of approved ethics courses (PDF).
- Free Electives (9 units): Any course from any day-school division, including prematriculation credit (e.g., AP credit). The free elective courses may be taken with the Pass/Fail grade option. A student may take a maximum of one course per semester as Pass/Fail. If a course is only offered as Pass/Fail, a student may choose another course to audit or take as Pass/Fail.

Capstone/Integrated Learning Experience Requirements (6 units)

- 6 units of course work jointly approved by the faculty curriculum oversight committees of both Business and Engineering
- Junior Year Capstone: MGT 401C CEL Entrepreneurial Consulting Team
- Senior Year Capstone: CSE 437S Software Engineering Workshop, CSE 439S Mobile Application Development II, or CSE 451A Video Game Programming II

Major Course Requirements (60 units)

- Business Course Requirements (30 units) as listed in the section below
- Computer Science Course Requirements (30 units) as listed in the section below

Business Course Requirements (30 total units)

Choose one of the two clusters below:

Business Analytics Cluster

Business Core Course Requirements (18 units):

Code	Title	Units
ACCT 2610	Principles of Financial Accounting (Prerequisites: Second-semester first-year standing)	3
DAT 220	Analytics and Modeling for Business Decisions (Prerequisites: DAT 120 and completion or concurrent enrollment in DAT 121)	3
FIN 340	Capital Markets and Financial Management (Prerequisites: Math 132, ACCT 2610, MEC 290 or ECON 1011, and completion or concurrent enrollment in DAT 121)	3
MEC 290	Microeconomics (Prerequisites: Math 131 or concurrent enrollment in Math 132 or Math 233)	3
MKT 370	Principles of Marketing (Prerequisites: Sophomore standing and MEC 290 or ECON 1011 or MGT 100)	3
SCOT 356	Operations and Manufacturing Management (formerly OSCM 356)	3
Total Units		18

Electives (choose 12 units):

Code	Title	Units
DAT 301E	Data Analytics in Python (Prerequisite: Sophomore standing)	3
FIN 448	Advanced Financial Management (Prerequisites: FIN 340 and DAT 121)	3
FIN 451	Options, Futures and Derivative Securities (Prerequisite: FIN 340)	3
MEC 471	Empirical Techniques for Industry Analysis (Prerequisites: MEC 290, DAT 120, and DAT 121)	3
MKT 378	Marketing Research (Prerequisites: MKT 370, DAT 120, and DAT 121 or concurrent enrollment in DAT 121)	3
MKT 400G	Digital Marketing and Analytics (Prerequisites: MKT 370 and either DAT 120, Math 2200, Math 3200, or ESE 326)	3
SCOT 430E	Operations Fun: Data-Driven Optimization (Prerequisites: DAT 220, DAT 301E or CS 131 strongly recommended)	3
SCOT 458	Operations Analytics (Formerly OSCM 458; Prerequisite: SCOT 356 or OSCM 356)	3

Strategy & Leadership Cluster

Business Core Course Requirements (15 units):

Code	Title	Units
ACCT 2610	Principles of Financial Accounting (Prerequisite: Second-semester first-year standing)	3
FIN 340	Capital Markets and Financial Management (Prerequisites: Math 132, ACCT 2610, MEC 290, and completion or concurrent enrollment in DAT 121)	3
MEC 290	Microeconomics (Prerequisites: Math 131 or concurrent enrollment in Math 132 or Math 233)	3
MGT 100	Individual in a Managerial Environment	3
OB 360	Organization Behavior Within the Firm (Prerequisite: MGT 100 or sophomore standing)	3
Total Units		15

Electives (choose 15 units):

Code	Title	Units
MGT 380	Business Strategy (Prerequisite: MEC 290 or approved substitution.)	3
MGT 402	Ethical Issues in Managerial Decision Making (Prerequisite: senior standing.)	1.5
MGT 421	Introduction to Entrepreneurship (Prerequisite: sophomore, junior, or senior standing in any school or college.)	3
or MGT 460L	Introduction to Social Entrepreneurship	
MGT 460H	Corporate and Global Strategy	3
MEC 470	Industrial Economics (Prerequisite: MEC 370)	3
MEC 370	Game Theory for Business (Prerequisite: MEC 290)	3
OB 431E	Thinking Creatively and Leading Creative Teams (Prerequisite: OB 360)	1.5
OB 434E	Talent Analytics (Prerequisites: OB 360 and DAT 220.)	1.5
OB 435E	People Metrics (Prerequisites: OB 360 and DAT 220.)	1.5
OB 461	Negotiation (Prerequisite: OB 360.)	3
OB 462	Leadership in Organizations (Prerequisite: Sophomore standing)	3
OB 468E	Mindfulness and Performance in the Workplace	1.5
OB 472	Defining Moments: Lessons in Leadership and Character from the Top	1.5

Computer Science Course Requirements (30 total units)

Computer Science Core Course Requirements (9 units, C- grade required):

Code	Title	Units
CSE 131	Introduction to Computer Science	3
CSE 247	Data Structures and Algorithms (Prerequisites: CSE 131 and fluency with summations, derivatives, and proofs by induction)	3
CSE 332S	Object-Oriented Software Development Laboratory (Prerequisite: CSE 247)	3
Total Units		9

Electives (choose 21 units):

Code	Title	Units
Choose seven courses from any CSE courses with an S, M, T, or A suffix. CSE 132, CSE 240, and CSE 347 will count as electives in this category. Note that ESE 417 will be accepted as a CSE elective as well.		

Notes:

- Students earning this degree will not be eligible to earn a second undergraduate degree or a second major in computer science, computer science + math, computer science + economics, data science, or a minor in computer science.
- Students earning this degree will not be eligible to earn a second undergraduate degree or second major in business. Students are eligible to earn a business minor.
- Students earning this degree will not be eligible to earn a second major in financial engineering.