

Civil Engineering and Business Administration

M.E.T. at a Glance: One program, two Bachelor of Science (B.S.) degrees.

The Civil Engineering and Business Administration simultaneous degree is part of the Management, Entrepreneurship, & Technology Program. The M.E.T. Program aims to educate leaders with a seamless understanding of technology innovation, from idea to real-world impact.

M.E.T. students earn two Bachelor of Science degrees in one program that combines the best of the top-ranked College of Engineering and Haas School of Business. The integrated curriculum is completed in four years. Internships, career coaching and other enrichment activities provide ample opportunity for hands-on experience with innovation and entrepreneurship. Each M.E.T. cohort is small, allowing for close mentoring and a tight-knit community.

Admission to the M.E.T. Program

The M.E.T. Program seeks inquisitive, self-motivated students with a passion for finding and solving big problems. It is highly competitive and is open to freshmen during the UC application period (November 1 - 30). Freshman admission is limited to a maximum of 50 students. Current UC Berkeley sophomores in the College of Engineering majoring in one of the M.E.T. tracks may apply to M.E.T. via the Continuing Student Admissions process.

For further information, please see the M.E.T. website (<https://guide.berkeley.edu/about/blank>).

Accreditation

The B.S. program in Civil Engineering is accredited by the Engineering Accreditation Commission of ABET. The Undergraduate Business Degree Program is accredited by The Association to Advance Collegiate Schools of Business (AACSB).

In addition to the University, campus, and M.E.T. Program requirements, listed on the College Requirements tab, students must fulfill the below requirements.

General Guidelines

- A minimum of 38 upper division business units are required.
- Students must complete the College Requirements (<https://guide.berkeley.edu/archive/2024-25/undergraduate/degree-programs/civil-engineering-business-administration/#collegerequirementstext>) and the Major Requirements.
- Students must complete the degree program in eight semesters, not including Summer Session.
- All Haas business courses must be taken for a letter grade, including core substitutions, with the exception of UGBA 194 (<http://guide.berkeley.edu/search/?P=UGBA%20194>), UGBA 198 (<http://guide.berkeley.edu/search/?P=UGBA%20198>) and UGBA 199 (<http://guide.berkeley.edu/search/?P=UGBA%20199>) (only offered Pass/No Pass).
- All technical courses that can be used to fulfill a requirement must be taken for a letter grade.
- Students who receive a grade of D+ or lower in a core UGBA course must repeat the course until they achieve a grade of C- or better.
- Students must complete their business prerequisite courses (including R&C) by the spring semester of their sophomore (2nd) year.
- Two M.E.T. Special Topics courses are required. M.E.T. Special Topics courses will count as upper division business elective units. A letter grade of C- or higher is required for passing.
- Students in this program must adhere to all policies and procedures of the College of Engineering and the Haas School of Business.

For information regarding University and campus requirements, Reading and Composition, breadth, class schedule, minimum academic progress, and unit requirements, please see the College Requirements (<https://guide.berkeley.edu/archive/2024-25/undergraduate/degree-programs/civil-engineering-business-administration/#collegerequirementstext>).

Lower Division Requirements

UGBA 10X	Foundations of Business	3
ECON 1	Introduction to Economics	4
MATH 51/1A	Calculus I (MATH 51 as of Fall 2025)	4
MATH 52/1B	Calculus II (MATH 52 as of Fall 2025)	4
MATH 53	Multivariable Calculus	4
MATH 54	Linear Algebra and Differential Equations	4
CHEM 1A	General Chemistry	3
COMPSCI C8 & STAT C88S	Foundations of Data Science and Probability and Mathematical Statistics in Data Science	7
PHYSICS 7A	Physics for Scientists and Engineers	4
PHYSICS 7B	Physics for Scientists and Engineers	4
ENGIN 7	Introduction to Computer Programming and Numerical Methods	4
CIV ENG 11	Engineered Systems and Sustainability	3
CIV ENG C30/ MEC ENG C85	Introduction to Solid Mechanics	3
CIV ENG 60	Structure and Properties of Civil Engineering Materials	3
CIV ENG 93	Engineering Data Analysis	3
Basic Science Elective Complete one of the following: ¹		3-4
CIV ENG 70	Engineering Geology	3-4
or CHEM 1B	General Chemistry	
or BIOLOGY 1B	General Biology Lecture and Laboratory	
Reading & Composition R1A and R1B		4-4

Subject Matter Requirements

Students with a specific interest within civil engineering may choose to emphasize one of the following areas in their choice of electives: engineering and project management, environmental engineering, geosystems (geoengineering), structural engineering, or transportation engineering. See the suggested courses (<http://www.ce.berkeley.edu/undergrad/curriculum/>) for each area of interest.

Fundamentals

CIV ENG 100	Elementary Fluid Mechanics	3-4
or CIV ENG 13	Applied Structural Mechanics	

Engineering Fundamentals Elective - Complete one of the following:

COMPSCI/ DATA/STAT C100	Principles & Techniques of Data Science [4]	
CIV ENG 126	Engineering Dynamics and Vibrations [3] ²	
EECS 127	Optimization Models in Engineering [4]	
ENGIN 40	Engineering Thermodynamics [4]	
MEC ENG 40	Thermodynamics [3]	
MEC ENG 104	Engineering Mechanics II [3] ²	
CEE Applications - Complete three of the following (9 units):		
CIV ENG C103N/ ESPM C130/ GEOG C136	Terrestrial Hydrology	4
CIV ENG 111	Environmental Engineering	3
CIV ENG 120	Structural Engineering	3
CIV ENG 155	Transportation Systems Engineering	3
CIV ENG 175	Geotechnical and Geoenvironmental Engineering	3
CIV ENG 191	Civil and Environmental Engineering Systems Analysis	3
CEE Practice		
CIV ENG 167	Engineering Project Management	3
Capstone Design - Complete one of the following:		
CIV ENG 105	Design for Global Transformation [3]	
CIV ENG 112	Water & Wastewater Systems Design and Operation [3]	
CIV ENG 153	Transportation Facility Design [3]	
CIV ENG 122	Design of Steel Structures [3]	
CIV ENG 123	Design of Reinforced Concrete Structures [3]	
CIV ENG 179	Geosystems Engineering Design [3]	
CIV ENG 180	Life-Cycle Design and Construction [4]	
CIV ENG 186	Design of Internet-of-Things for Smart Cities [3]	
CEE Extensions: Complete nine units of additional CIV ENG courses ³		

¹ The Basic Science Elective cannot be fulfilled with an exam score.

² Students cannot receive credit for both CIV ENG 126 and MEC ENG 104.

³ CEE Extensions-Nine letter-graded units chosen from upper division CIV ENG courses not being counted toward other major requirements. Students may use up to three units of CIV ENG graduate courses numbered 200-295, taken Fall 2017 or later, toward their CEE Extensions units. Students must have a technical GPA of 3.0 or higher to obtain permission to enroll in CIV ENG graduate courses. Students may receive up to three units of credit toward their CEE Extensions units for work on a research project in CIV ENG H194 (Honors Undergraduate Research).

Upper Division Business Administration Requirements

UGBA 100	Business Communication	2
UGBA 101A	Microeconomic Analysis for Business Decisions	3
UGBA 101B	Macroeconomic Analysis for Business Decisions	3
UGBA 102A	Financial Accounting	3
UGBA 102B	Managerial Accounting	3
UGBA 103	Introduction to Finance	4
UGBA 104	Introduction to Business Analytics	3
UGBA 105	Leading People	3

UGBA 106	Marketing	3
UGBA 107	The Social, Political, and Ethical Environment of Business	3

M.E.T. Special Topics

Two courses are required. ¹ 2-2

Upper Division Business Administration Elective Courses

Select a minimum of 4-6 units of upper division UGBA elective courses in order to complete a minimum of 38 units of upper division Business Administration courses. 4-6

UGBA 117	Special Topics in Economic Analysis and Policy [1-4]	
UGBA 118	International Trade [3]	
UGBA 120AA	Intermediate Financial Accounting 1 [4]	
UGBA 120AB	Intermediate Financial Accounting 2 [4]	
UGBA 120B	Advanced Financial Accounting [4]	
UGBA 121	Federal Income Tax Accounting [4]	
UGBA 122	Financial Information Analysis [4]	
UGBA 123	Operating and Financial Reporting Issues in the Financial Services Industry [3]	
UGBA 125	Ethics in Accounting [3]	
UGBA 126	Auditing [4]	
UGBA 127	Special Topics in Accounting [1-4]	
UGBA 128	Strategic Cost Management [3]	
UGBA 131	Corporate Finance and Financial Statement Analysis [3]	
UGBA 132	Financial Institutions and Markets [3]	
UGBA 133	Investments [3]	
UGBA 136F	Behavioral Finance [3]	
UGBA 137	Special Topics in Finance [1-4]	
UGBA 141	Production and Operations Management [2-3]	
UGBA 143	Game Theory and Business Decisions [3]	
UGBA 147	Special Topics in Operations and Information Technology Management [1-4]	
UGBA 151	Management of Human Resources [3]	
UGBA 152	Negotiation and Conflict Resolution [3]	
UGBA 154	Power and Politics in Organizations [2,3]	
UGBA 155	Leadership [3]	
UGBA 157	Special Topics in the Management of Organizations [1-4]	
UGBA 160	Customer Insights [3]	
UGBA 161	Market Research: Tools and Techniques for Data Collection and Analysis [3]	
UGBA 162	Brand Management and Strategy [3]	
UGBA 162A	Product Branding and Branded Entertainment [2]	
UGBA 165	Advertising Strategy [3]	
UGBA 167	Special Topics in Marketing [1-4]	
UGBA 169	Pricing [3]	
UGBA C172	History of American Business [3]	
UGBA 173	Competitive Strategy [3]	
UGBA 174	Leading Strategy Implementation [3]	
UGBA 175	Legal Aspects of Management [3]	
UGBA 176	Innovations in Communications and Public Relations [2]	
UGBA 177	Special Topics in Business and Public Policy [1-4]	

UGBA 178	Introduction to International Business [3]
UGBA 179	International Consulting for Small and Medium-Sized Enterprises [3]
UGBA 180	Introduction to Real Estate and Urban Land Economics [3]
UGBA 183	Introduction to Real Estate Finance [3]
UGBA 184	Urban and Real Estate Economics [3]
UGBA 187	Special Topics in Real Estate Economics and Finance [1-4]
UGBA 190S	Strategy for the Information Technology Firm [3]
UGBA 190T	Special Topics in Innovation and Design [1-4]
UGBA 191C	Communication for Leaders [2]
UGBA 191I	Improvisational Leadership [3]
UGBA 191P	Leadership and Personal Development [3]
UGBA 192A	Leading Nonprofit and Social Enterprises [3]
UGBA 192B	Strategic Philanthropy [2]
UGBA 192L	Applied Impact Evaluation [2]
UGBA 192N	Topics in Social Sector Leadership [1-5]
UGBA 192P	Sustainable Business Consulting Projects [3]
UGBA 192T	Topics in Responsible Business [1-4]
UGBA 193B	Energy & Civilization [4]
UGBA 193C	Practical Training [0.0]
UGBA 193I	Business Abroad [1-4]
UGBA 194	Undergraduate Colloquium on Business Topics [1]
UGBA 195A	Entrepreneurship [3]
UGBA 195P	Entrepreneurship: How to Successfully start a New Business [3]
UGBA 195S	Entrepreneurship To Address Global Poverty [3]
UGBA 195T	Topics in Entrepreneurship [1-3]
UGBA 196	Special Topics in Business Administration [1-4]
UGBA 198	Directed Study [1-4]
UGBA 199	Supervised Independent Study and Research [1-4]

¹ M.E.T. Special Topics courses will count as upper division business units.

M.E.T. Program Requirements

Reading and Composition

Two Reading and Composition (R&C) courses must be taken for a letter grade (C- or better required), and must be completed by no later than the end of the sophomore year (4th semester of enrollment). The first half of R&C, the "A" course, must be completed by the end of the freshman year; the second half of R&C, the "B" course, by no later than the end of the sophomore year or a student's registration will be blocked. View a detailed list of courses (<http://guide.berkeley.edu/undergraduate/colleges-schools/engineering/reading-composition-requirement/>) that fulfill Reading and Composition requirements.

Breadth Requirement

The undergraduate breadth requirement provides Berkeley students with a rich and varied educational experience outside of their major program. As the foundation of a liberal arts education, breadth courses give students a view into the intellectual life of the University while introducing them to a multitude of perspectives and approaches to research and scholarship. Engaging students in new disciplines and with peers from

other majors, the breadth experience strengthens interdisciplinary connections and context that prepare Berkeley graduates to understand and solve the complex issues of their day.

Students in the M.E.T. Program must successfully complete six breadth courses, one in each of the following categories:

Arts and Literature

Historical Studies

International Studies

Philosophy and Values (will be satisfied with UGBA 107)

Physical Science (will be satisfied with Physics 7B)

Social and Behavioral Sciences (will be satisfied with Econ 1)

- With the exception of UGBA 107, UGBA courses cannot be used to fulfill breadth requirements.
- With the exception of Econ 1 or Econ 2, microeconomics and macroeconomics at any level (Econ 3, Econ 100A/B, Econ 101A/B, IAS 106/107) cannot be used to fulfill breadth requirements.
- No more than two courses from any one department may be used to satisfy the breadth requirement (L&S Discovery courses (<http://lsdiscovery.berkeley.edu>) are exempt).
- Advanced Placement, International Baccalaureate and A-Level exams cannot be used to fulfill the breadth requirement.
- Courses numbered 97, 98, 99, or above 196 may not be used to complete any breadth requirement.
- Breadth courses must be a minimum of 3 semester units.
- Reading & Composition courses cannot be used to fulfill breadth requirements.

Class Schedule Requirements

- Minimum units per semester: 13
- Maximum units per semester: 20.5
- Students in the M.E.T. Program must enroll each semester in no fewer than two letter graded technical courses (of at least 3 units each, with the exception of Engineering 25, 26, and 27). Every semester they are expected to make satisfactory progress in their declared major; satisfactory progress in the student's declared major is determined by their ESS advisor.

Minimum Academic (Grade) Requirements

- A minimum overall and semester grade point average of 2.000 (C average) is required. Students will be subject to dismissal from the University if during any fall or spring semester their overall U.C. GPA falls below a 2.000, or their semester GPA is less than 2.000.
- Students must achieve a minimum GPA of 2.000 (C average) in upper division technical courses each semester. Students will be subject to dismissal from the University if their upper division technical GPA falls below 2.000.
- A minimum overall GPA of 2.000, and a minimum 2.000 GPA in upper division technical course work required of the major are required to graduate.

Unit Requirements

- A minimum of 120 units are required to graduate.
- A maximum of 16 units of Special Studies coursework (courses numbered 97, 98, 99, 197, 198, or 199) will count towards the 120 units; a maximum of four are allowed in a given semester.
- A maximum of four units of Physical Education from any school attended will count towards the 120 units.
- Passed grades may account for no more than one-third of the total units completed at UC Berkeley, Fall Program for Freshmen (FPF), UC Education Abroad Program (UCEAP), or UC Berkeley Washington Program (UCDC) toward the 120 overall minimum unit requirement. Transfer credit is not factored into the limit. This includes transfer units from outside of the UC system, other UC campuses, credit-bearing exams, as well as UC Berkeley Extension XB units.

University of California Requirements

Entry Level Writing (<https://guide.berkeley.edu/archive/2024-25/undergraduate/education/#earningyourdegreertext>)

All students who will enter the University of California as freshmen must demonstrate their command of the English language by satisfying the Entry Level Writing Requirement (ELWR). The UC Entry Level Writing Requirement website (<https://admission.universityofcalifornia.edu/elwr/>) provides information on how to satisfy the requirement.

American History and American Institutions (<https://guide.berkeley.edu/archive/2024-25/undergraduate/education/#earningyourdegreertext>)

The American History and Institutions (AH&I) requirements are based on the principle that a US resident graduated from an American university should have an understanding of the history and governmental institutions of the United States.

Campus Requirement

American Cultures (<https://guide.berkeley.edu/archive/2024-25/undergraduate/education/#earningyourdegreertext>)

The American Cultures requirement is a Berkeley campus requirement, one that all undergraduate students at Berkeley need to pass in order to graduate. You satisfy the requirement by passing, with a grade not lower than C- or P, an American Cultures course. You may take an American Cultures course any time during your undergraduate career at Berkeley. The requirement was instituted in 1991 to introduce students to the diverse cultures of the United States through a comparative framework. Courses are offered in more than fifty departments in many different disciplines at both the lower and upper division level.

Freshman		
Fall Units	Spring Units	
MATH 1A ¹	4 MATH 1B ⁶	
CHEM 1A ²	3 PHYSICS 7A ⁷	4
COMPSCI C8 & UGBA 88 ¹²	6 UGBA 10X	3
Reading & Composition Part A Course ⁵	4 CIV ENG 93	3
M.E.T. Introductory Topics Course (UGBA 196) ¹³	2 Breadth - International Studies ³	4
19		14
Sophomore		
Fall Units	Spring Units	
MATH 53	4 MATH 54	4

PHYSICS 7B (Breadth - Physical Science) ³	4 CIV ENG C30 (Cross-listed with MECH ENG C85)	3
Basic Science Elective ⁸	3 ENGIN 7	4
Reading & Composition Part B Course ⁵	4 ECON 1 or 2 (Breadth - Social and Behavioral Sciences) ^{3,4}	4
Breadth - Historical Studies/AC ³	4 CIV ENG 60	3
19		18
Junior		
Fall Units	Spring Units	
CIV ENG 100 or 132	3-4 CIV ENG 11	3
UGBA 101A	3 UGBA 101B	3
UGBA 105	3 UGBA 107 (Breadth - Philosophy & Values) ³	3
CEE Applications Elective ⁹	3 UGBA 102A	3
Engineering Fundamentals Elective ¹⁵	3-4 CEE Applications Elective ⁹	3
M.E.T. Capstone Course (UGBA 196) ¹³	2 CEE Applications Elective ⁹	3
	UGBA 100	2
17-19		20
Senior		
Fall Units	Spring Units	
CIV ENG 167	3 UGBA 102B	3
UGBA 103	4 UGBA 106	3
UGBA 104	3 CEE Extensions Electives ¹⁰	3
CEE Extensions Electives ¹⁰	3 CEE Extensions Electives ¹⁰	3
Breadth - Arts and Literature/AC (Upper Div) ³	4 Capstone Design ¹¹	4
UGBA Elective ¹³	2 UGBA Elective ¹⁴	2
19		18
Total Units: 144-146		

¹ MATH 1A may be fulfilled with a score of 3, 4 or 5 on the AP Calculus AB or BC exam, a score of 5, 6 or 7 on the IB Higher Level Math exam, or a grade of A, B or C on the A-Level Math H1, H2, H3, Pure Math or Further Math exam.

² CHEM 1A may be fulfilled with a score of 3, 4 or 5 on the AP Chemistry exam, a score of 5, 6 or 7 on the IB Higher Level Chemistry exam, or a grade of A, B or C on the A-Level Chemistry exam.

³ ECON 1 or ECON 2 and UGBA 107 will be accepted for the Social and Behavioral Sciences and Philosophy and Values breadth requirements, respectively, as exceptions for students in the M.E.T. Program. The Biological Science breadth requirement is waived for students in the M.E.T. Program. Some American Cultures courses will also fulfill the Arts & Literature or Historical Studies breadth requirement; use Requirements filters to search the Class Schedule (<http://classes.berkeley.edu/>) for courses that apply. See College Requirements (<https://guide.berkeley.edu/archive/2024-25/undergraduate/degree-programs/civil-engineering-business-administration/#collegerequirementstext>) for further restrictions on breadth courses.

- ⁴ Econ 1 may be fulfilled with scores of 4 or 5 on both the AP Microeconomics exam and AP Macroeconomics exam. However, the Social and Behavioral Sciences Breadth requirement cannot be fulfilled with AP exam scores.
- ⁵ Reading & Composition part A may be fulfilled with a score of 4 or 5 on the AP English Language and Composition exam or the AP English Literature and Composition exam, or a score of 5, 6 or 7 on the IB Higher Level English Literature exam or the IB Higher Level English Language and Literature exam. A 5 on the AP English Literature and Composition exam, or a score of 5 or higher on the IB Higher Level English Language and Literature exam will fulfill Reading & Composition part A and part B.
- ⁶ MATH 1B may be fulfilled with a score of 4 or 5 on the AP Calculus BC exam, a score of 7 on the IB Higher Level Math exam, or a grade of A, B or C on the A-Level Math, Math H2, or Further Math exam.
- ⁷ PHYSICS 7A may be fulfilled with a score of 5 on the AP Physics C Mechanics exam.
- ⁸ Basic Science Elective - Choose one course from the following: BIOLOGY 1B, CHEM 1B, or CIV ENG 70. The Basic Science Elective cannot be fulfilled with an exam score.
- ⁹ CEE Applications - Choose three courses (9 units) from the following: CIV ENG C103N/ESPM C130/GEOG C136, CIV ENG 111, CIV ENG 120, CIV ENG 155, CIV ENG 175, CIV ENG 191.
- ¹⁰ CEE Extensions - Complete nine (9) letter-graded units chosen from upper division CIV ENG courses not being counted toward other engineering major requirements. Students may use up to three units of CIV ENG graduate courses numbered 200-295, taken Fall 2017 or later, toward their CEE Extensions units. Students must have a technical GPA of 3.0 or higher to obtain permission to enroll in CEE graduate courses. Students may receive up to three units of credit toward their CEE Extensions units for work on a research project in CIV ENG H194 (Honors Undergraduate Research).
- ¹¹ Capstone Design - Choose one course from the following: CIV ENG 105, CIV ENG 112, CIV ENG 122, CIV ENG 123, CIV ENG 153, CIV ENG 179, CIV ENG 180, CIV ENG 186.
- ¹² Students must take STAT C8, COMPSCI C8, DATA C8 or INFO C8 plus STAT C88S or UGBA 88 - Data Decisions to fulfill the statistics prerequisite for business and the data science requirement for CE. Both courses must be taken to satisfy the requirement, although they do not need to be taken in the same semester.
- ¹³ M.E.T. Special Topics courses are required and will count as upper division business units.
- ¹⁴ Students must complete a minimum of 38 units of upper division business coursework. See UGBA Elective course list under "Major Requirements" tab.
- ¹⁵ Engineering Fundamentals Elective - choose one course from the following: CIV ENG 126, ENGIN 40, MEC ENG 40, MEC ENG 104, EECS 127, or COMPSCI C100/DATA C100/STAT C100. Students cannot receive credit for both MEC ENG 104 and CIV ENG 126.

Major maps are experience maps that help undergraduates plan their Berkeley journey based on intended major or field of interest. Featuring student opportunities and resources from your college and department as well as across campus, each map includes curated suggestions for planning your studies, engaging outside the classroom, and pursuing your career goals in a timeline format.

Use the major map below to explore potential paths and design your own unique undergraduate experience:

View the Management, Entrepreneurship, & Technology (M.E.T.) Major Map. (<https://discovery.berkeley.edu/getting-started/major-maps/civil-engineering-business-administration/>)

CIV ENG 11 Engineered Systems and Sustainability 3 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

An introduction to key engineered systems (e.g., energy, water supply, buildings, transportation) and their environmental impacts. Basic principles of environmental science needed to understand natural processes as they are influenced by human activities. Overview of concepts and methods of sustainability analysis. Critical evaluation of engineering approaches to address sustainability.

Rules & Requirements

Prerequisites: CHEM 1A and MATH 51

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 8 weeks - 6 hours of lecture per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructors: Harley, Horvath, Nelson

CIV ENG 24 Freshman Seminars 1 Unit

Terms offered: Fall 2025, Spring 2020, Fall 2019

The Berkeley Seminar Program has been designed to provide new students with the opportunity to explore an intellectual topic with a faculty member in a small-seminar setting. Berkeley seminars are offered in all campus departments, and topics vary from department to department and semester to semester.

Rules & Requirements

Repeat rules: Course may be repeated for credit when topic changes.

Hours & Format

Fall and/or spring: 15 weeks - 1 hour of seminar per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: The grading option will be decided by the instructor when the class is offered. Final Exam To be decided by the instructor when the class is offered.

CIV ENG C30 Introduction to Solid Mechanics 3 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

A review of equilibrium for particles and rigid bodies. Application to truss structures. The concepts of deformation, strain, and stress. Equilibrium equations for a continuum. Elements of the theory of linear elasticity. The states of plane stress and plane strain. Solution of elementary elasticity problems (beam bending, torsion of circular bars). Euler buckling in elastic beams.

Rules & Requirements

Prerequisites: Mathematics 53 and 54 (may be taken concurrently); Physics 7A

Credit Restrictions: Students will receive no credit for Mechanical Engineering C85/Civil and Environmental Engineering C30 after completing Mechanical Engineering W85. A deficient grade in Mechanical Engineering W85 may be removed by taking Mechanical Engineering C85/Civil and Environmental Engineering C30.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Summer:

6 weeks - 7.5 hours of lecture and 2.5 hours of discussion per week
10 weeks - 4.5 hours of lecture and 1.5 hours of discussion per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructors: Armero, Papadopoulos, Zohdi, Johnson

Also listed as: MEC ENG C85

CIV ENG W30 Introduction to Solid Mechanics 3 Units

Terms offered: Summer 2021 8 Week Session, Summer 2020 8 Week Session, Summer 2019 8 Week Session

A review of equilibrium for particles and rigid bodies. Application to truss structures. The concepts of deformation, strain, and stress. Equilibrium equations for a continuum. Elements of the theory of linear elasticity. The states of plane stress and plane strain. Solution of elementary elasticity problems (beam bending, torsion of circular bars). Euler buckling in elastic beams.

Objectives & Outcomes

Course Objectives: To learn statics and mechanics of materials

Student Learning Outcomes: -

Correctly draw free-body

-

Apply the equations of equilibrium to two and three-dimensional solids

-

Understand the concepts of stress and strain

-

Ability to calculate deflections in engineered systems

-

Solve simple boundary value problems in linear elastostatics (tension, torsion, beam bending)

Rules & Requirements

Prerequisites: MATH 53 and MATH 54 (may be taken concurrently); PHYSICS 7A

Credit Restrictions: Students will receive no credit for MEC ENG W85 after completing MEC ENG C85. A deficient grade in MEC ENG W85 may be removed by taking MEC ENG C85.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of web-based lecture and 1 hour of web-based discussion per week

Summer:

6 weeks - 7.5 hours of web-based lecture and 2.5 hours of web-based discussion per week

8 weeks - 6 hours of web-based lecture and 2 hours of web-based discussion per week

10 weeks - 4.5 hours of web-based lecture and 1.5 hours of web-based discussion per week

Online: This is an online course.

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Govindjee

Also listed as: MEC ENG W85

CIV ENG 60 Structure and Properties of Civil Engineering Materials 3 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

Introduction to structure and properties of civil engineering materials such as asphalt, cements, concrete, geological materials (e.g. soil and rocks), steel, polymers, and wood. The properties range from elastic, plastic and fracture properties to porosity and thermal and environmental responses. Laboratory tests include evaluation of behavior of these materials under a wide range of conditions.

Rules & Requirements

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture and 3 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructors: Monteiro, Ostertag

CIV ENG 70 Engineering Geology 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Principles of physical and structural geology; the influence of geological factors on engineering works and the environment. Field trip.

Rules & Requirements

Prerequisites: CHEM 1A (may be taken concurrently)

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 2 hours of laboratory per week

Summer: 8 weeks - 6 hours of lecture and 4 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructors: Glaser, Sitar

CIV ENG 88B Time Series Analysis: Sea Level Rise and Coastal Flooding 2 Units

Terms offered: Spring 2017

In this course, we will pursue analysis of long-term records of coastal water levels in the context of sea level rise. We will cover the collection, evaluation, visualization and analysis of time series data using long-term records of sea levels from coastal sites around the world. Specific topics will include extreme events and distributions, frequency-based descriptions, averaging, filtering, harmonic analysis, trend identification, extrapolations, and decision-making under uncertainty.

Rules & Requirements

Prerequisites: MATH 51; and COMPSCI C8 / INFO C8 / STAT C8 (may be enrolled concurrently)

Hours & Format

Fall and/or spring: 15 weeks - 1 hour of lecture and 1 hour of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

Instructor: Stacey

CIV ENG C88 Data Science for Smart Cities 2 Units

Terms offered: Spring 2024, Spring 2023, Spring 2022

Cities become more dependent on the data flows that connect infrastructures between themselves, and users to infrastructures. Design and operation of smart, efficient, and resilient cities nowadays require data science skills. This course provides an introduction to working with data generated within transportation systems, power grids, communication networks, as well as collected via crowd-sensing and remote sensing technologies, to build demand- and supply-side urban services based on data analytics.

Objectives & Outcomes

Course Objectives: Become familiar with urban big data and sensor data collection techniques.

Develop intuition in various machine learning classification algorithms, as well as regression modelling.

Develop intuition in various machine learning classification algorithms, as well as regression modelling.

Foster critical thinking about real-world actionability from analytics.

Learn how to use data science techniques in urban decision-making and scenario generation.

Student Learning Outcomes: Develop capabilities in a range of data science techniques.

Gain the ability to solve problems in smart city research and practice. Think critically about how to assess analytics for cities. Use data analytics in the smart city domain.

Rules & Requirements

Prerequisites: This course is a Data Science connector course and is meant to be taken concurrent with or after Foundations of Data Science COMPSCI C8/INFO C8/STAT C8. Students may take more than one Data Science connector course if they wish, concurrently or after taking the C8 course

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

Instructor: Gonzalez

Formerly known as: Civil and Environmental Engineering 88

Also listed as: CY PLAN C88

CIV ENG 92 Introduction to Civil and Environmental Engineering 1 Unit

Terms offered: Fall 2019, Fall 2018, Fall 2017

A course designed to familiarize the entering student with the nature and scope of civil and environmental engineering and its component specialty areas.

Hours & Format

Fall and/or spring: 15 weeks - 1 hour of lecture per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Offered for pass/not pass grade only. Final exam not required.

CIV ENG 92A Design for Future Infrastructure Systems 2 Units

Terms offered: Spring 2022, Fall 2020

Hands-on engineering design experience for creating future infrastructure systems. Intelligent infrastructure systems leverage data and computational to enhance sustainability and resilience for smart cities of the future. Student teams identify a challenge with current transportation, energy, water, waste, and/or the built infrastructure. Student teams design and prototype an innovation that solves this problem using maker resources, e.g. 3D printing, laser cutters, and open-source electronics. The project will be executing via the "Design Sprint" process, which is popular in agile development and Silicon Valley. Students present projects to guest judges from industry. Course is an introductory design experience for first-year students.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Offered for pass/not pass grade only. Alternative to final exam.

Instructor: Moura

CIV ENG 92B Cornerstone Structural Design 2 Units

Terms offered: Fall 2024, Fall 2023, Spring 2023

This course introduces students to conceptual structural design, fabrication, and testing. The course aims to provide a hands-on structural engineering design experience and to inspire creativity. Students will learn the design process as well as fundamental principles of structural analysis. Student teams will be given a design challenge with performance objectives and practical constraints that emphasize sustainable design practices. Student teams will use maker space resources (e.g. 3D printing, laser cutting, CNC router, woodshop) to fabricate their structures, which will be tested to failure in the Structural Engineering Lab in Davis Hall.

Objectives & Outcomes

Student Learning Outcomes: -

Explain basic concepts of statics and equilibrium.

Hours & Format

Fall and/or spring: 15 weeks - 1 hour of lecture and 3 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/
Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

Instructor: DeJong

CIV ENG 93 Engineering Data Analysis 3 Units

Terms offered: Fall 2025, Summer 2025 First 6 Week Session, Spring 2025

Application of the concepts and methods of probability theory and statistical inference to CEE problems and data; graphical data analysis and sampling; elements of set theory; elements of probability theory; random variables and expectation; simulation; statistical inference. Use of computer programming languages for analysis of CEE-related data and problems. The course also introduces the student to various domains of uncertainty analysis in CEE.

Rules & Requirements

Prerequisites: ENGIN 7 or COMPSCI C8 / INFO C8 / STAT C8. Student should consult instructor prior to enrolling

Credit Restrictions: Students will receive no credit after taking Statistics 25.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 2 hours of laboratory per week

Summer: 6 weeks - 7.5 hours of lecture and 5 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructors: Hansen, Rubin, Walker

CIV ENG 98 Supervised Group Study and Research 1 - 3 Units

Terms offered: Spring 2025, Fall 2024, Spring 2024

Supervised group study and research by lower division students.

Rules & Requirements

Prerequisites: Consent of instructor

Credit Restrictions: Enrollment is restricted; see the Introduction to Courses and Curricula section of this catalog.

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 1-3 hours of directed group study per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/
Undergraduate

Grading/Final exam status: Offered for pass/not pass grade only. Final exam not required.

CIV ENG 99 Supervised Independent Study and Research 1 - 4 Units

Terms offered: Spring 2024, Spring 2023, Fall 2022

Supervised independent study by lower division students.

Rules & Requirements

Prerequisites: Freshman or sophomore standing and consent of instructor. Minimum grade point average of 3.3 required

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 1-4 hours of independent study per week

Summer: 8 weeks - 2-7.5 hours of independent study per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Offered for pass/not pass grade only. Final exam not required.

CIV ENG 100 Elementary Fluid Mechanics 4 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Fluid statics and dynamics, including laboratory experiments with technical reports. Fundamentals: integral and differential formulations of the conservation laws are solved in special cases such as boundary layers and pipe flow. Flow visualization and computation techniques are introduced using Matlab. Empirical equations are used for turbulent flows, drag, pumps, and open channels. Principles of empirical equations are also discussed: dimensional analysis, regression, and uncertainty.

Rules & Requirements

Prerequisites: PHYSICS 7A, MATH 53, and ENGIN 7 (may be taken concurrently); and CIV ENG C30 / MEC ENG C85 recommended

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of laboratory per week

Summer: 8 weeks - 6 hours of lecture and 3 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructors: Chow, Stacey, Variano

CIV ENG C103N Terrestrial Hydrology 4 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

A quantitative introduction to the hydrology of the terrestrial environment including lower atmosphere, watersheds, lakes, and streams. All aspects of the hydrologic cycle, including precipitation, infiltration, evapotranspiration, overland flow, streamflow, and groundwater flow. Chemistry and dating of groundwater and surface water. Development of quantitative insights through problem solving and use of simple models. This course requires one field experiment and several group computer lab assignments.

Rules & Requirements

Prerequisites: CHEM 1A, MATH 1A, MATH 1B, and PHYSICS 7A; or consent of instructor

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

Instructor: Larsen

Also listed as: ESPM C130/GEOG C136

CIV ENG 104 Planetary Boundaries and the Anthropocene 1 Unit

Terms offered: Fall 2022, Fall 2021, Spring 1998

This course aims to introduce students to the debates and discussions about the impact of increasing human resource consumption, increasing population, and increasing human prosperity on the planet's environmental systems that support human societies.

Objectives & Outcomes

Course Objectives: Explain the major arguments on the sides of "planetary boundaries" and "cornucopia"

Understand the basic system dynamics view of planetary systems
Understand the main features of several of planetary boundaries that have scientific consensus

Rules & Requirements

Prerequisites: Upper division undergraduate standing

Credit Restrictions: Students will receive no credit for CIV ENG 104 after completing CIV ENG 104. A deficient grade in CIV ENG 104 may be removed by taking CIV ENG 104.

Hours & Format

Fall and/or spring: 15 weeks - 1 hour of seminar per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

Instructors: Chow , Gadgil

CIV ENG 105 Design for Global Transformation 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2022

Student teams will design strategies to address critical global challenges, such as climate change, biodiversity loss, pollution, and related issues, with the potential for transformational change. Project topics will vary. Students will explore global to local scales using principles and practices from design science, systems thinking, regenerative design, circular economy, environmental justice, science communication, data visualization, and numerical modeling, among other disciplines.

Objectives & Outcomes

Course Objectives: Create a multi-media exhibit to clearly communicate your findings and strategy

Iteratively design a comprehensive strategy to address your team's global challenge

To gain familiarity with relevant design and engineering tools, including data visualization and simulation and modeling

Work strategically and collaboratively with fellow students in a design team

Rules & Requirements

Prerequisites: At least one of the following courses: CIV ENG C103N / ESPM C130 / GEOG C136, CIV ENG 111, CIV ENG 120, CIV ENG 155, CIV ENG 175, or CIV ENG 191; or instructor's permission

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture and 3 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

Instructor: Chow

CIV ENG C106 Air Pollution 3 Units

Terms offered: Spring 2024, Spring 2023, Spring 2022

This course is an introduction to air pollution and the chemistry of earth's atmosphere. We will focus on the fundamental natural processes controlling trace gas and aerosol concentrations in the atmosphere, and how anthropogenic activity has affected those processes at the local, regional, and global scales. Specific topics include stratospheric ozone depletion, increasing concentrations of green house gasses, smog, and changes in the oxidation capacity of the troposphere.

Rules & Requirements

Prerequisites: CHEM 1A, CHEM 1B, and PHYSICS 8A or consent of instructor

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Goldstein

Also listed as: EPS C180/ESPM C180

CIV ENG 107 Climate Change Mitigation 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

Assessment of technological options for responding to climate change. Overview of climate-change science; sources, sinks, and atmospheric dynamics of greenhouse gases. Current systems for energy supply and use. Renewable energy resources, transport, storage, and transformation technologies. Technological opportunities for improving end-use energy efficiency. Recovery, sequestration, and disposal of greenhouse gases. Societal context for implementing engineered responses.

Rules & Requirements

Prerequisites: Upper division or graduate standing in engineering or physical science, or consent of instructor

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

CIV ENG 108 Climate Change Adaptation 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

In this course, we will examine the local manifestation of global climate change and consider interventions and responses that anticipate long-term change in communities. The course will integrate environmental sciences, civil and environmental engineering, and the social sciences to both understand the impacts of global change and to quantitatively evaluate possible adaptation interventions. Upon completing the course, you will have a holistic perspective on the challenges associated with climate change adaptation, an understanding of the wide range of potential solutions and interventions that may be possible, and an awareness of the strengths and weaknesses of those solutions.

Rules & Requirements

Prerequisites: CIV ENG 11 or introductory climate science course, or consent of instructor

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

Instructor: Stacey

CIV ENG 110 Water Systems of the Future 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This course will familiarize students with the complex infrastructure used to meet human water demands; competing uses and demands; water and wastewater infrastructure; technologies to enable recovery of water, energy, and other resources from wastewater; supply planning; trends and forecasting; costs, pricing and financing; environmental justice; methods to assess sustainability; regulatory, policy and institutional challenges; and water's contribution to other sectors (e.g., energy, food, buildings). Innovation, both barriers and opportunities, will be highlighted. California and the U.S. will be emphasized but global challenges will be discussed. Students will study, critique, and recommend improvements for a real-world system.

Objectives & Outcomes

Course Objectives: Consider costs and tradeoffs in water supply planning under uncertainty for real-world water systems
Critically evaluate water planning and innovation potential for real-world utilities given future uncertainties and competing priorities.
Explore the innovation ecosystem in the water sector, its opportunities and challenges, and analyze case studies
Introduce the technologies that are currently in use for treating and managing water and wastewater, as well as innovations that have the potential to dramatically change water infrastructure.
Provide overview and examples of concepts and methods for analyzing the sustainability of water systems
Provide overview of the complex infrastructure systems that supply and manage water and wastewater.

Student Learning Outcomes: Ability to apply knowledge of mathematics, science, and engineering. MODERATE
Ability to communicate effectively. EXTENSIVE
Ability to design a system, component, or process to meet desired needs. MODERATE
Ability to function on multi-disciplinary teams. EXTENSIVE
Ability to identify, formulate and solve engineering problems. MODERATE
Ability to use the techniques, skills, and modern engineering tools necessary for engineering practice. MODERATE
Knowledge of contemporary issues. EXTENSIVE
Recognition of the need for, and an ability to engage in life-long learning. EXTENSIVE
Understand the impact of engineering solutions in a global and societal context. EXTENSIVE
Understanding of professional and ethical responsibility. EXTENSIVE

Rules & Requirements

Prerequisites: Upper division status or consent of the instructor

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Nelson

CIV ENG 111 Environmental Engineering 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Quantitative overview of air and water contaminants and their engineering control. Elementary environmental chemistry and transport. Reactor models. Applications of fundamentals to selected current issues in water quality engineering, air quality engineering, air quality engineering, and hazardous waste management.

Rules & Requirements

Prerequisites: Upper division standing in engineering or physical sciences, or consent of instructor

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructors: Alvarez-Cohen, Nelson, Sedlak

CIV ENG 111L Water and Air Quality Laboratory 1 Unit

Terms offered: Fall 2025, Fall 2024, Fall 2023

This laboratory course is designed to accompany the lecture topics in Civil Engineering 111. Each laboratory activity will provide an opportunity to understand key concepts in water and air quality through hands-on experimentation. Laboratory topics include phase partitioning, acid/base reactions, redox reactions, biochemical oxygen demand, absorption, gas transfer, reactor hydraulics, particle destabilization, disinfection, and combustion emissions.

Rules & Requirements

Prerequisites: CIV ENG 111 (may be taken concurrently)

Hours & Format

Fall and/or spring: 15 weeks - 1 hour of lecture and 3 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructors: Alvarez-Cohen, Nelson, Sedlak

CIV ENG 112 Water & Wastewater Systems Design and Operation 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Water and wastewater systems serving communities are complex, large, and were built and expanded over many decades. The infrastructure includes a network of reservoirs, pipelines, pump stations, treatment plants, and other facilities that are connected to natural systems such as watersheds, rivers, groundwater basins, and bay and ocean environments. The planning, design, operation, and maintenance of urban water and wastewater systems require balancing many factors including aging infrastructure, changing regulations, climate change, costs, and community impacts.

One of the greatest challenges facing civil engineers in the 21st century is the stewardship of the infrastructure to protect public health and the environment. Existing systems r

Rules & Requirements

Prerequisites: Upper division standing in engineering or physical sciences, or consent of instructor

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture and 3 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

Instructor: Soga

CIV ENG 113 Ecological Engineering for Water Quality Improvement 3 Units

Terms offered: Spring 2021, Spring 2019, Spring 2017

Ecological engineering approaches for treating contaminated water using natural processes to improve water quality. Emphasis on combining basic science and engineering approaches to understand the fundamental processes that govern the effectiveness of complex natural treatment systems. Applications include constructed wetlands, waste stabilization ponds, stormwater bioretention, decentralized wastewater management, ecological sanitation. Laboratory sessions will consist of design and monitoring of laboratory and full-scale natural treatment systems, including a range of water quality measurements.

Objectives & Outcomes

Course Objectives: Become familiar with common applications of natural treatment systems through lectures, reading materials, laboratory activities, and field trips

Develop a solid understanding of the fundamental processes in ecological engineering approaches to natural treatment systems that govern the removal or transformation of contaminants in water

Learn common design approaches for waste stabilization ponds and wetlands, as well as their necessary operation and maintenance activities

Measure key water quality parameters and evaluate the performance of mesocosm ponds and wetlands based on the data collected throughout the semester

Understand and appreciate the complexity of these systems compared to mechanical treatment systems

Student Learning Outcomes: Ability to apply knowledge of mathematics, science, and engineering. EXTENSIVE

Ability to communicate effectively. MODERATE

Ability to design a system, component, or process to meet desired needs. EXTENSIVE

Ability to design and conduct experiments, as well as to analyze and interpret data. EXTENSIVE

Ability to function on multi-disciplinary teams. MODERATE

Ability to identify, formulate and solve engineering problems. EXTENSIVE

Ability to use the techniques, skills, and modern engineering tools necessary for engineering practice. EXTENSIVE

Knowledge of contemporary issues. MODERATE

Recognition of the need for, and an ability to engage in life-long learning. MODERATE

Understand the impact of engineering solutions in a global and societal context. MODERATE

Understanding of professional and ethical responsibility. MODERATE

Rules & Requirements

Prerequisites: CIV ENG 111 or consent of instructor

Credit Restrictions: Civ Eng 113N

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture and 3 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

CIV ENG 114 Environmental Microbiology 3 Units

Terms offered: Spring 2016, Spring 2015, Fall 2014

The scope of modern environmental engineering requires a fundamental knowledge of microbial processes with specific application to water, wastewater and the environmental fate of pollutants. This course will cover basic microbial physiology, biochemistry, metabolism, growth energetics and kinetics, ecology, pathogenicity, and genetics for application to both engineered and natural environmental systems.

Rules & Requirements

Prerequisites: CHEM 1A and CHEM 1B

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Alvarez-Cohen

CIV ENG 115 Water Chemistry 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

The application of principles of inorganic, physical, and dilute solution equilibrium chemistry to aquatic systems, both in the aquatic environment and in water and wastewater treatment processes.

Rules & Requirements

Prerequisites: Upper division or graduate standing in engineering or physical science, or consent of instructor

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Sedlak

CIV ENG C116 Chemistry of Soils 3 Units

Terms offered: Fall 2021, Fall 2020, Spring 2018

Chemical mechanisms of reactions controlling the fate and mobility of nutrients and pollutants in soils. Role of soil minerals and humus in geochemical pathways of nutrient bioavailability and pollutant detoxification. Chemical modeling of nutrient and pollutant soil chemistry. Applications to soil acidity and salinity.

Rules & Requirements

Prerequisites: CIV ENG 111

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Also listed as: ESPM C128

CIV ENG 119 Data and Equity in Environmental Engineering 3 Units

Terms offered: Not yet offered

Python analysis of datasets that are relevant to today's grand challenges in environmental engineering. Topics include, but are not limited to, human exposures, water resources, solid waste, water quality, energy equity, and coastline resilience. Discussion of datasets through the lens of socioeconomic equity and historical unintended consequences of environmental engineering decisions.

Rules & Requirements

Prerequisites: ENGIN 7 and DATA C8 and CIV ENG 111; or consent of instructor

Credit Restrictions: Students will receive no credit for CIV ENG 119 after completing CIV ENG 119. A deficient grade in CIV ENG 119 may be removed by taking CIV ENG 119.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1.5 hours of discussion per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

Instructor: Ivey

CIV ENG 120 Structural Engineering 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

Introduction to design and analysis of structural systems. Loads and load placement. Proportioning of structural members in steel, reinforced concrete, and timber. Structural analysis theory. Hand and computer analysis methods, validation of results from computer analysis. Applications, including bridges, building frames, and long-span cable structures.

Rules & Requirements

Prerequisites: CIV ENG C30 / MEC ENG C85 and CIV ENG 60 (may be taken concurrently)

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Moehle

CIV ENG 122 Design of Steel Structures 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

A first course in steel design focusing on basic principles. Introduction to materials and methods of steel construction; behavior and design of tension members, compression members, flexural members and beam-columns; design of welds, bolts, shear connections, and moment connections. Includes laboratory sessions to illustrate member behavior. By the end of the course students should be able to design simple steel structures subjected to static gravity and lateral loads. Design teams will conceive, determine design loads, and conduct a preliminary and final design of a structural system and its foundation. Teams will prepare a report containing project description, design criteria, structural drawings, and supporting calculations.

Rules & Requirements

Prerequisites: CIV ENG 120

Credit Restrictions: Students will receive no credit for CIV ENG 122 after completing CIV ENG 122N, or CIV ENG 122. A deficient grade in CIV ENG 122 may be removed by taking CIV ENG 122N, or CIV ENG 122.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture and 3 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Becker

CIV ENG 123 Design of Reinforced Concrete Structures 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

Introduction to materials and methods of reinforced concrete design and construction; behavior and design of reinforced concrete beams and one-way slabs considering deflections, moment, shear, and reinforcement development requirements; behavior and design of columns; design of spread footings; design of earthquake-resistant structures; laboratory sessions to illustrate member behavior, to solve problem sets, and to develop and present the preliminary designs for a design project.

Rules & Requirements

Prerequisites: CIV ENG 120

Credit Restrictions: Students will receive no credit for CIV ENG 123 after completing CIV ENG 123N, or CIV ENG 123. A deficient grade in CIV ENG 123 may be removed by taking CIV ENG 123N, or CIV ENG 123.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture and 3 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Moehle

CIV ENG 124 Structural Design in Timber 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Characteristics and properties of wood as a structural material; design and detailing of structural elements and entire structures of wood. Topics include allowable stresses, design and detailing of solid sawn and glulam beams and columns, nailed and bolted connections, plywood diaphragms and shear walls. Case studies.

Rules & Requirements

Prerequisites: CIV ENG 120

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

CIV ENG 126 Engineering Dynamics and Vibrations 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Introduction to the dynamics of particles, rigid bodies, and deformable solids in civil engineering. Newtonian and Lagrangian formulations. Vibration of particles and rigid body systems: natural frequencies and mode shapes, free and forced vibration. Vibration of continuous systems: bars, strings, beams. Modeling and numerical simulation methods..

Rules & Requirements

Prerequisites: CIV ENG C30 / MEC ENG C85 and ENGIN 7; or consent of instructor

Credit Restrictions: Students will receive no credit for CIV ENG 126 after completing MEC ENG 104. A deficient grade in CIV ENG 126 may be removed by taking MEC ENG 104, or MEC ENG 104.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructors: Konstantinidis, DeJong

CIV ENG 132 Applied Structural Mechanics 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

Concepts of theory of solid mechanics: three dimensional stress, strain, and material response; elastic and inelastic boundary value problems; fracture, fatigue, and geometric instability. Problems in advanced strength of materials; thin plate and axis-symmetric shell theory.

Rules & Requirements

Prerequisites: CIV ENG C30 / MEC ENG C85, MATH 53 and MATH 54

Credit Restrictions: Students will receive no credit for CivEng 132 after CivEng 130N.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Summer: 8 weeks - 6 hours of lecture and 2 hours of discussion per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructors: Govindjee, Li, Konstantinidis

CIV ENG C133 Engineering Analysis Using the Finite Element Method 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This is an introductory course on the finite element method and is intended for seniors in engineering and applied science disciplines. The course covers the basic topics of finite element technology, including domain discretization, polynomial interpolation, application of boundary conditions, assembly of global arrays, and solution of the resulting algebraic systems. Finite element formulations for several important field equations are introduced using both direct and integral approaches. Particular emphasis is placed on computer simulation and analysis of realistic engineering problems from solid and fluid mechanics, heat transfer, and electromagnetism. The course uses FEMLAB, a multiphysics MATLAB-based finite element program that possesses a wide array of modeling capabilities and is ideally suited for instruction. Assignments will involve both paper- and computer-based exercises. Computer-based assignments will emphasize the practical aspects of finite element model construction and analysis.

Rules & Requirements

Prerequisites: Engineering 7 or 77 or Computer Science 61A; Mathematics 53 and 54; senior status in engineering or applied science

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 2 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Also listed as: MEC ENG C180

CIV ENG C138 Flight Vehicle Structures and Aeroelasticity 3 Units

Terms offered: Spring 2025

This course introduces engineering students to the analysis and design of load-bearing components of flight structures, ranging from subsonic aircraft to rockets. Emphasis is placed on the quasi-static and dynamic analysis of structural components which are prevalent in aerospace engineering. Attention is also devoted to a comprehensive design roadmap of flight vehicle structures from the full system- to the individual component-level

Objectives & Outcomes

Course Objectives: 1. Familiarize students with the different load-bearing components and loads encountered in flight vehicles.

2. Sharpen the students' skills in the statics and dynamics of thin-walled structures.

3. Enhance the students' aerospace engineering design skills by leveraging the use of the finite element method as a tool for both global and local analysis.

Student Learning Outcomes: Ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.

(g) A knowledge of contemporary issues.

Ability to apply knowledge of mathematics, science, and engineering.

Ability to design and conduct experiments, as well as to analyze and interpret data

Ability to identify, formulate, and solve engineering problems.

Ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.

Understanding of professional and ethical responsibility.

Rules & Requirements

Prerequisites: CIV ENG C30 / MEC ENG C85, and MEC ENG 104 or CIV ENG 126

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Papadopoulos

CIV ENG 140 Failure Mechanisms in Civil Engineering Materials 3 Units

Terms offered: Spring 2013, Spring 2010, Spring 2009

The failure mechanisms in civil engineering materials (cement-based materials, metallic- and polymer-based materials) are associated with processing, microstructure, stress states, and environmental changes. Fracture mechanics of brittle, quasi-brittle, and ductile materials; cracking processes in monolithic, particulate, and fiber reinforced materials; examples of ductile/brittle failure transitions in civil engineering structures; retrofitting of existing structures; non-destructive techniques for damage detection.

Rules & Requirements

Prerequisites: CIV ENG 60

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Ostertag

CIV ENG 153 Transportation Facility Design 3 Units

Terms offered: Fall 2024, Fall 2023, Fall 2022

A capstone class with the objective to design transportation facilities based on operational capacity, site constraints, and environmental design considerations. Emphasis on airports, including landside and airside elements, and environmental assessment and mitigation techniques.

Rules & Requirements

Prerequisites: CIV ENG 155

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture and 3 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Hansen

CIV ENG 155 Transportation Systems Engineering 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Operation, management, control, design, and evaluation of passenger and freight transportation systems. Their economic role. Demand analysis. Overall logistical structure. Performance models and modeling techniques: time-space diagrams, queuing theory, network analysis, and simulation. Design of control strategies for simple systems. Feedback effects. Paradoxes. Transportation impact modeling; noise; air pollution. Multi-criteria evaluation and decision making. Financing and politics.

Rules & Requirements

Prerequisites: Sophomore standing in engineering or consent of instructor

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture and 3 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructors: Cassidy, Daganzo, Hansen, Kanafani, Madanat

CIV ENG 157 Sustainable Aviation and Infrastructure 3 Units

Terms offered: Spring 2025

The course overviews principles of “green” and “sustainable” aviation and provides analysis methods for evaluating aviation sustainability metrics and measurements. Aircraft operations and airport systems are studied in the context of global warming, aviation noise, local air quality, global emissions, third-party risk, environmental economics and resilience. Models of carbon reduction, and technology and operations alternatives are studied. Future sustainable aviation concepts, such as urban and regional air mobility are introduced and analyzed. Case studies.

Objectives & Outcomes

Course Objectives: To become aware of sustainable aviation development, and its global and local societal importance.

To learn about major concepts of carbon reduction in aviation, including new technologies and operations alternatives.

To be able to think critically about the role of sustainable aviation and infrastructure in society.

To learn how to critically study action plans and policies related to aviation environmental issues, developed by the UN, ICAO, FAA, EPA, IPCC, and local and regional policy-makers.

To develop skills for planning and assessment of the green and sustainable aviation sector's future in the context of real-world developments and practice, equity and justice. To develop analytical skills for quantifying the benefits and disadvantages of electric aircraft and their use.

To learn about sustainable aviation by evaluating case studies and the relationship among aircraft, airspace, airport/vertiport/spaceport facilities and policy.

Rules & Requirements

Prerequisites: ENGIN 7 or consent of instructor

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

CIV ENG 160D Data Science in Aviation 3 Units

Terms offered: Spring 2023

The course will be centered around analyses of a set of aviation data sets and will enable the students to become familiar with data science applications to aviation. Aviation topics to be covered include fundamentals of air traffic control, models of aviation operations, aircraft trajectory prediction and optimization, data sources in aviation, overview of data science methods, role of data science in solving problems in aviation operations such as conflict detection and resolution, traffic flow management, arrivals management and surface operations, airline operations, fuel efficiency, global aviation.

Rules & Requirements

Prerequisites: DATA C8 and CIV ENG 93

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 2 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

CIV ENG 165 Concrete Materials, Construction, and Sustainability 3 Units

Terms offered: Spring 2023, Spring 2021, Spring 2020

Concrete materials: cements, supplementary cementitious materials, water, and admixtures. Sustainability analysis of concrete materials and mixtures. Development of special concretes: self-leveling concrete, high-performance concrete, and mass concrete. Consideration of sustainability of concrete construction methods used for buildings, highways, airfields, bridges, dams and other hydraulic structures. Non-destructive methods. Discussion of long-term durability. Comprehensive group projects.

Rules & Requirements

Prerequisites: CIV ENG 60

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Monteiro

CIV ENG 166 Construction Engineering 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

Introduction to construction engineering and field operations. The construction industry, construction methods and practice, productivity improvement, equipment selection, site layout formwork, erection of steel and concrete structures. Labs demonstrate the concepts covered. Field trips to local construction projects.

Rules & Requirements

Prerequisites: Upper division standing; CIV ENG 167 recommended

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture and 3 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Horvath

CIV ENG 167 Engineering Project Management 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Principles of economics, decision making, and law applied to company and project management. Business ownership, liability and insurance, cash flow analysis, and financial management. Project life-cycle, design-construction interface, contracts, estimating, scheduling, cost control.

Rules & Requirements

Prerequisites: CIV ENG 93 (can be taken concurrently)

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructors: Ibbs, Tommelein

CIV ENG 170A Infrastructure Sensing and Modeling 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Introduction to sensing and modeling of infrastructure system; Imagery analysis (point clouds, lidar, structure for motion, satellite); Geophysics (Synthetic-aperture radar analysis, time histories analyses); Sensor systems (distributed fiber optics, wireless sensor network, MEMS, conventional); Structural health monitoring and analysis; Infrastructure network analysis (graph theory, GIS, simulations); entrepreneurship in infrastructure and smart cities industry.

Rules & Requirements

Prerequisites: ENGIN 7, CIV ENG C30, and CIV ENG 93 or equivalents

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

Instructors: Soga, Zekkos, Kayen

CIV ENG 171 Rock Mechanics 3 Units

Terms offered: Spring 2024, Spring 2022, Spring 2020

Geological and geophysical exploration for structures in rock; properties and behavior of rock masses; rock slope stability; geological engineering of underground openings; evaluation of rock foundations, including dams.

Rules & Requirements

Prerequisites: CIV ENG 70 or an introductory course in physical geology; and upper division standing in engineering

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Glaser

CIV ENG C172 Remote Sensing of the Environment 4 Units

Terms offered: Fall 2025, Fall 2022, Fall 2021

The course will introduce junior/senior undergraduate students to the basic physical concepts of remote sensing as they relate to different earth surface processes. It will introduce students to a variety of recently developed ground, airborne, and satellite instruments and their applications to monitor and analyze environmental processes. These include active (e.g., Lidar), and passive (radiometers) sensors, optical (e.g., Landsat, MODIS), microwave (e.g., SMAP), and gravitational (e.g., GRACE) satellites.

Rules & Requirements

Credit Restrictions: Students will receive no credit for ESPM C172 after completing CIV ENG 172, or ESPM 172. A deficient grade in ESPM C172 may be removed by taking CIV ENG 172, or ESPM 172.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture and 3 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Girotto

Also listed as: ESPM C172

CIV ENG 173 Groundwater and Seepage 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Introduction to principles of groundwater flow, including steady and transient flow through porous media, numerical analysis, pumping tests, groundwater geology, contaminant transport, and design of waste containment systems.

Rules & Requirements

Prerequisites: Senior standing in engineering or science; CIV ENG 100 recommended

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructors: Rubin, Sitar

CIV ENG 174 Engineering Geomatics 3 Units

Terms offered: Summer 2015 First 6 Week Session, Summer 2014 10 Week Session, Summer 2014 First 6 Week Session

Engineering Geomatics is a field that integrates collections, processing, and analysis of digital geospatial data. This new field is anchored in the established field of geodetics that describes the complex shape of the Earth, elements and usage of topographic data and maps. Basic and advanced GPS satellite mapping. Digital globe technology. Advanced laser-LIDAR mapping. Quantitative terrain modeling, change detection, and analysis. Hydrogeomatics-seafloor mapping.

Hours & Format

Summer: 6 weeks - 6 hours of lecture and 5 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

CIV ENG 175 Geotechnical and Geoenvironmental Engineering 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

Soil formation and identification. Engineering properties of soils. Fundamental aspects of soil characterization and response, including soil mineralogy, soil-water movement, effective stress, consolidation, soil strength, and soil compaction. Use of soils and geosynthetic materials in geotechnical and geoenvironmental applications. Introduction to site investigation techniques. Laboratory testing and evaluation of soil composition and properties.

Rules & Requirements

Prerequisites: CIV ENG C30 / MEC ENG C85 (may be taken concurrently); CIV ENG 100 recommended

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 2 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructors: Bray, Sitar, Soga

CIV ENG 176 Environmental Geotechnics 3 Units

Terms offered: Spring 2021, Spring 2016, Spring 2015

Principles of environmental geotechnics applied to waste encapsulation and remediation of contaminated sites. Characterization of soils and wastes, engineering properties of soils and geosynthetics and their use in typical applications. Fate and transport of contaminants. Fundamental principles and practices in groundwater remediation. Application of environmental geotechnics in the design and construction of waste containment systems. Discussion of soil remediation and emerging technologies.

Rules & Requirements

Prerequisites: CIV ENG 175 or consent of instructor; CIV ENG 111 and CIV ENG 173 recommended

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Sitar

CIV ENG C178 Applied Geophysics 3 Units

Terms offered: Fall 2024, Fall 2022, Fall 2021

The theory and practice of geophysical methods for determining the subsurface distribution of physical rock and soil properties. Measurements of gravity and magnetic fields, electrical and electromagnetic fields, and seismic velocity are interpreted to map the subsurface distribution of density, magnetic susceptibility, electrical conductivity, and mechanical properties.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Rector

Also listed as: EPS C178

CIV ENG 179 Geosystems Engineering Design 3 Units

Terms offered: Fall 2022, Fall 2021, Fall 2020

Geosystem engineering design principles and concepts. Fundamental aspects of the geomechanical and geoenvironmental responses of soil are applied to analyze and design civil systems, such as earth dams and levees, earth retention systems, building and bridge foundations, solid-waste fills, and tailings dams. Students form teams to design geotechnical aspects of a civil project and prepare/present a design document. Field trip to a project site.

Rules & Requirements

Prerequisites: CIV ENG 175

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructors: Bray, Sitar, Soga

CIV ENG 180 Life-Cycle Design and Construction 4 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

Course encompasses two design aspects of a civil and environmental engineering system: 1) Design of whole system, component, or life-cycle phase, subject to engineering standards and constraints, and 2) production system design (e.g., cost estimation and control, scheduling, commercial and legal terms, site layout design). Students form teams to address real-life projects and prepare project documentation and a final presentation.

Rules & Requirements

Prerequisites: CIV ENG 167

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam not required.

CIV ENG 186 Design of Internet-of-Things for Smart Cities 3 Units

Terms offered: Spring 2025, Spring 2023, Spring 2022

Hands-on engineering design experience for creating cyber-physical systems, or more colloquially, "internet-of-things (IoT) systems" for smart cities. Projects overlay a software layer onto physical infrastructure to produce one integrated system. Student teams will identify a challenge with current urban systems, e.g. mobility, energy & environment, water, waste, health, security, and the built environment. Student teams design and prototype an innovation that addresses this challenge using maker resources, e.g. 3D printing, laser cutters, and open-source electronics. The project will be executing via the "Design Sprint" process, which is popular in agile development and Silicon Valley. Students present projects to industry judges.

Rules & Requirements

Prerequisites: CIV ENG 191

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture and 2 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Alternate method of final assessment during regularly scheduled final exam group (e.g., presentation, final project, etc.).

Instructors: Moura, Sengupta

CIV ENG 187 Emerging Technologies for Public Health 3 Units

Terms offered: Fall 2025

In this course, students will learn how to leverage and harness technology for better and more equitable public health outcomes. This entails learning and understanding the business and policy models that can put technology into practice, overcome community-specific barriers to technology uptake, and create outcomes. The course has a case study format with each case covering an important technology advancing public health. The technologies span medical devices, environmental health infrastructure, lifestyle wellness devices, AI, and mental health. Students will become capable of advancing the health of the public by innovating with technology.

Rules & Requirements

Prerequisites: DATA C8 or equivalent; CIV ENG 93 or equivalent; or consent of instructor

Credit Restrictions: Students will receive no credit for CIV ENG 187 after completing CIV ENG 190S, or CIV ENG 187. A deficient grade in CIV ENG 187 may be removed by taking CIV ENG 190S, or CIV ENG 187.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture and 2 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

CIV ENG 188 Carbon Capture and Storage 3 Units

Terms offered: Spring 2025, Spring 2024

Carbon capture and storage and its role in reducing carbon emissions, Fossil fuels and concentrated emissions sources. Chemistry, physics, and engineering principles of pre and post combustion carbon capture technologies. Principles of underground sequestration. Geology of storage zones, physical and chemical properties of pore fluids. Principles of subsurface CO₂ flow. Drilling, wellbore construction, and characterization of deep injection boreholes. Injection and monitoring. Political and socio-economic drivers and constraints for carbon capture and storage.

Rules & Requirements

Prerequisites: Upper division standing or consent of instructor

Credit Restrictions: Students will receive no credit for CIV ENG 188 after completing CIV ENG 188. A deficient grade in CIV ENG 188 may be removed by taking CIV ENG 188.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

Instructor: Rector

CIV ENG 190 Special Topics in Civil and Environmental Engineering 1 - 4 Units

Terms offered: Fall 2025, Fall 2024, Spring 2024

This course covers current topics of interest in civil and environmental engineering. The course content may vary from semester to semester depending upon the instructor

Rules & Requirements

Repeat rules: Course may be repeated for credit without restriction. Students may enroll in multiple sections of this course within the same semester.

Hours & Format

Fall and/or spring: 15 weeks - 1-4 hours of lecture per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

Instructor: Variano

CIV ENG 190S Special Topics in Civil and Environmental Engineering 3 Units

Terms offered: Spring 2025, Fall 2024, Spring 2024

This course covers current topics of interest in civil and environmental engineering. The course content may vary from semester to semester depending upon the instructor.

Rules & Requirements

Prerequisites: CIV ENG 93 (or equivalent) and DATA 8 (or equivalent)

Repeat rules: Course may be repeated for credit with instructor consent.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture and 2 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Sengupta

CIV ENG 191 Civil and Environmental Engineering Systems Analysis 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This course is organized around five real-world large-scale CEE systems problems. The problems provide the motivation for the study of quantitative tools that are used for planning or managing these systems. The problems include design of a public transportation system for an urban area, resource allocation for the maintenance of a water supply system, development of repair and replacement policies for reinforced concrete bridge decks, traffic signal control for an arterial street, scheduling in a large-scale construction project.

Rules & Requirements

Prerequisites: CIV ENG 93 and ENGIN 7

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture and 3 hours of laboratory per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructors: Bayen, Madanat, Sengupta

Formerly known as: 152

CIV ENG 192 The Art and Science of Civil and Environmental Engineering Practice 1 Unit

Terms offered: Fall 2017, Fall 2016, Fall 2015

A series of lectures by distinguished professionals designed to provide an appreciation of the role of science, technology, and the needs of society in conceiving projects, balancing the interplay of conflicting demands, and utilizing a variety of disciplines to produce unified and efficient systems.

Rules & Requirements

Prerequisites: Senior standing in Civil Engineering

Hours & Format

Fall and/or spring: 15 weeks - 1 hour of lecture per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam not required.

CIV ENG 193 Engineering Risk Analysis 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Applications of probability theory and statistics in planning, analysis, and design of civil engineering systems. Development of probabilistic models for risk and reliability evaluation. Occurrence models; extreme value distributions. Analysis of uncertainties. Introduction to Bayesian statistical decision theory and its application in engineering decision-making.

Rules & Requirements

Prerequisites: Upper division standing

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Li

CIV ENG H194 Honors Undergraduate Research 3 - 4 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

Supervised research. Students who have completed 3 or more upper division courses may pursue original research under the direction of one of the members of the staff. A final report or presentation is required. A maximum of 4 units of H194 may be used to fulfill the technical elective requirement.

Rules & Requirements

Prerequisites: Upper division technical GPA 3.3, consent of instructor and faculty advisor

Repeat rules: Course may be repeated for credit up to a total of 8 units.

Hours & Format

Fall and/or spring: 15 weeks - 3-4 hours of independent study per week

Summer:

6 weeks - 7.5-10 hours of independent study per week

8 weeks - 6-7.5 hours of independent study per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

CIV ENG 197 Field Studies in Civil Engineering 1 - 4 Units

Terms offered: Summer 2025 10 Week Session, Spring 2025, Fall 2024
Supervised experience in off-campus companies or tutoring/mentoring relevant to specific aspects and applications of civil engineering on or off campus. Written report required at the end of the semester.

Rules & Requirements

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 1-4 hours of fieldwork per week

Summer:

6 weeks - 2.5-10 hours of fieldwork per week

8 weeks - 1.5-7.5 hours of fieldwork per week

10 weeks - 1.5-6 hours of fieldwork per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Offered for pass/not pass grade only. Final exam not required.

CIV ENG 198 Directed Group Study for Advanced Undergraduates 1 - 4 Units

Terms offered: Spring 2025, Fall 2024, Spring 2024

Group study of a selected topic or topics in civil engineering.

Rules & Requirements

Prerequisites: Senior standing in engineering

Credit Restrictions: Enrollment is restricted; see the Introduction to Courses and Curricula section of this catalog.

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 1-4 hours of directed group study per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Offered for pass/not pass grade only. Final exam not required.

CIV ENG 199 Supervised Independent Study 1 - 4 Units

Terms offered: Spring 2025, Fall 2024, Spring 2024

Supervised independent study.

Rules & Requirements

Prerequisites: Consent of instructor and major adviser. Enrollment is restricted; see the Course Number Guide for details

Credit Restrictions: Course may be repeated for a maximum of four units per semester.

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 1-4 hours of independent study per week

Summer:

6 weeks - 1-5 hours of independent study per week

8 weeks - 1-4 hours of independent study per week

10 weeks - 1-4 hours of independent study per week

Additional Details

Subject/Course Level: Civil and Environmental Engineering/ Undergraduate

Grading/Final exam status: Offered for pass/not pass grade only. Final exam not required.

UGBA C5 Introduction to Entrepreneurship 2 Units

Terms offered: Fall 2022, Fall 2021, Fall 2020

This course offers students a taste of what it's really like to start a business. In addition to learning key foundational entrepreneurial concepts such as idea generation & evaluation, customer & product development, creating a business model, fundraising, marketing, and scaling & exiting a business, students will also hear from successful entrepreneurs who share their perspectives and best practices. Students will apply core concepts by working in teams to evaluate and select a venture idea that they will then develop throughout the semester.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam not required.

Also listed as: L & S C5

UGBA 10X Foundations of Business 3 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

This team-taught introductory course to the four-year Spieker Undergraduate Business Program is grounded in the Haas Defining Leadership Principles. Covering business fundamentals, teamwork, and critical thinking, the course explores contemporary business topics along with their historical and conceptual foundations, and their social and psychological implications. The course includes two weekly lectures and one small section meeting, featuring hands-on individual and group exercises for practical application of the concepts. Regular guest speakers connect students to real-world business problems.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of laboratory per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

UGBA C12 The Berkeley Changemaker 2 - 3 Units

Terms offered: Fall 2025, Summer 2025 Second 6 Week Session, Spring 2025, Spring 2024, Fall 2023, Summer 2023 Second 6 Week Session
Berkeley Changemaker impact occurs across many fronts: scientific, artistic, social, and entrepreneurial. This course helps students identify as a Berkeley Changemaker and learn the critical thinking, communication, and collaboration skills to become one. Combining disciplines across UC Berkeley, the course also helps launch the Berkeley Discovery arc. Students develop their own leadership styles and discover how they can create and lead diverse teams to act upon the world. Values in Berkeley's DNA like Questioning the Status Quo and going Beyond Yourself support students in leading from whatever position they occupy, preparing them to leave their mark on campus, in their communities, or beyond. More at: <http://changemaker.berkeley.edu>.

Hours & Format

Fall and/or spring: 15 weeks - 2-2 hours of lecture and 0-1.5 hours of discussion per week

Summer:

6 weeks - 6-6 hours of lecture and 0-0 hours of discussion per week

8 weeks - 4-4 hours of lecture and 0-3 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: The grading option will be decided by the instructor when the class is offered. Alternative to final exam.

Also listed as: L & S C12

UGBA 13 Berkeley Changemaker: Human Health 2 Units

Terms offered: Spring 2024, Fall 2022

Do you wonder how you might play a part in changing human health and improving the lives of others? Find your path with Berkeley Changemaker: Human Health. In this course you will apply the core principles of the Berkeley Changemaker curriculum by Critically exploring a full understanding of an important human health issue, Collaborating with diverse colleagues on a project team to investigate solutions using gold-standard discovery techniques, and Communicating what you've learned and providing thoughtful feedback to your classmates. Each week you will also research and then have a curated conversation with a changemaking expert on a range of human health topics, from startup solutions, to healthcare economics, to health equity issues.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternate method of final assessment during regularly scheduled final exam group (e.g., presentation, final project, etc.).

UGBA 24 Freshman Seminars 1 Unit

Terms offered: Spring 2025, Spring 2024, Spring 2023

The Berkeley Seminar Program has been designed to provide new students with the opportunity to explore an intellectual topic with a faculty member in a small-seminar setting. Berkeley Seminars are offered in all campus departments, and topics vary from department to department and semester to semester.

Rules & Requirements

Repeat rules: Course may be repeated for credit when topic changes.

Hours & Format

Fall and/or spring: 15 weeks - 1 hour of seminar per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: The grading option will be decided by the instructor when the class is offered. Final exam required.

UGBA 39AC Philanthropy: A Cross-Cultural Perspective 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This class will compare and contrast the variety of gift giving and sharing traditions that make up American philanthropy. Both the cultural antecedents and their expression in this country will be explored from five ethnic and racial groups: Native American, European American, African American, Hispanic American, and Asian American. The goal is to gain a greater understanding of the many dimensions of philanthropy as it is practiced in the United States today.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Formerly known as: Business Administration 39AC

UGBA 39E Freshman/Sophomore Seminar 2 - 4 Units

Terms offered: Fall 2025, Fall 2024, Spring 2024

Freshman and sophomore seminars offer lower division students the opportunity to explore an intellectual topic with a faculty member and a group of peers in a small-seminar setting. These seminars are offered in all campus departments; topics vary from department to department and from semester to semester.

Rules & Requirements

Prerequisites: Priority given to freshmen and sophomores

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 2-4 hours of seminar per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: The grading option will be decided by the instructor when the class is offered. Final exam required.

Formerly known as: Business Administration 39

UGBA 78G Developing Global Leadership Expertise 2 Units

Terms offered: Prior to 2007

This course is required for all freshmen in the Global Management Program at the Haas School of Business and limited to those students as well. The objective of this course is to provide students with an introduction to the type of leadership skills required to be a successful cross-cultural leader in today's increasingly complex global marketplace. The goal is for each student to begin developing a personalized global leadership "toolkit" that will continue to evolve over the next few years in the Global Management Program and ultimately as a business decision-maker with fiduciary responsibilities.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternate method of final assessment during regularly scheduled final exam group (e.g., presentation, final project, etc.).

UGBA 84 Sophomore Seminar 1 or 2 Units

Terms offered: Prior to 2007

Sophomore seminars are small interactive courses offered by faculty members in departments all across the campus. Sophomore seminars offer opportunity for close, regular intellectual contact between faculty members and students in the crucial second year. The topics vary from department to department and semester to semester. Enrollment limited to 15 sophomores.

Rules & Requirements

Prerequisites: At discretion of instructor

Repeat rules: Course may be repeated for credit when topic changes.

Hours & Format

Fall and/or spring:

5 weeks - 3-6 hours of seminar per week

10 weeks - 1.5-3 hours of seminar per week

15 weeks - 1-2 hours of seminar per week

Summer:

6 weeks - 2.5-5 hours of seminar per week

8 weeks - 1.5-3.5 hours of seminar per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: The grading option will be decided by the instructor when the class is offered. Final exam required.

UGBA 88 Data and Decisions 2 Units

Terms offered: Fall 2025, Summer 2025 Second 6 Week Session, Spring 2025

The goal of this connector course is to provide an understanding of how data and statistical analysis can improve managerial decision-making. We will explore statistical methods for gleaning insights from economic and social data, with an emphasis on approaches to identifying causal relationships. We will discuss how to design and analyze randomized experiments and introduce econometric methods for estimating causal effects in non-experimental data. The course draws on a variety of business and social science applications, including advertising, management, online marketplaces, labor markets, and education. This course, in combination with the Data 8 Foundations course, satisfies the statistics prerequisite for admission to Haas.

Rules & Requirements

Prerequisites: One semester of Calculus (Math 16A or Math 51). Also, this is a Data Science connector course and may only be taken concurrently with or after completing Computer Science C8/Statistics C8/Information C8

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Summer:

6 weeks - 5 hours of lecture per week

8 weeks - 4 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Miller

UGBA C95B Introduction to the Biotechnology Field and Industry 2 Units

Terms offered: Spring 2019

This course offers an introduction to the field of biotechnology and will cover the history of the field, its impact on medicine and society, key methodologies, important therapeutic areas, and the range of career options available in the biopharmaceutical industry. In addition to lectures on innovation and entrepreneurship, students will hear from lecturers with expertise ranging from molecular biology to clinical trial design and interpretation. Several case studies of historically impactful scientists, entrepreneurs, and biotherapeutic companies will be presented. Students will work in teams to create and develop novel biotechnology company ideas to present in class. Intended for students interested in the Biology +Business program.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/Undergraduate

Grading/Final exam status: Offered for pass/not pass grade only. Alternative to final exam.

Instructors: Kirn, Lasky

Formerly known as: Molecular and Cell Biology C95B/Undergrad. Business Administration C95B

Also listed as: MCELLBI C75

UGBA 96 Lower Division Special Topics in Business Administration 1 - 4 Units

Terms offered: Fall 2025, Summer 2025 Second 6 Week Session, Fall 2024

Study in various fields of business administration for lower division students. Topics will vary from year to year and will be announced at the beginning of each semester.

Rules & Requirements

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 1-4 hours of lecture per week

Summer: 6 weeks - 2.5-10 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 98 Directed Group Study 1 - 4 Units

Terms offered: Spring 2015, Fall 2014, Spring 2014

Organized group study on topics selected by lower division students under the sponsorship and direction of a member of the Haas School of Business faculty.

Rules & Requirements

Credit Restrictions: Enrollment is restricted; see the Introduction to Courses and Curricula section of this catalog.

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 1-4 hours of directed group study per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Offered for pass/not pass grade only. Final exam not required.

Formerly known as: Business Administration 98

UGBA 100 Business Communication 2 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

Theory and practice of effective communication in a business environment. Students practice what they learn with oral presentations and written assignments that model real-life business situations.

Rules & Requirements

Prerequisites: Restricted to Undergraduate Business Administration Majors Only

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Summer:

6 weeks - 5 hours of lecture per week

8 weeks - 4 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 101A Microeconomic Analysis for Business Decisions 3 Units

Terms offered: Fall 2025, Summer 2025 Second 6 Week Session, Spring 2025

Economic analysis applicable to the problems of business enterprises with emphasis on the determination of the level of prices, outputs, and inputs; effects of the state of the competitive environment on business and government policies.

Rules & Requirements

Prerequisites: Economics 1, Mathematics 1A (through Summer 2025) or 51 (as of Fall 2025) or 16A, Statistics W21, or equivalents

Credit Restrictions: Students will receive no credit for UGBA 101A after completing ECON 100A, ECON 101A, BUS ADM 110, ENVECON 100, BUS ADM S110, IAS 106, or POLECON 106. A deficient grade in UGBA 101A may be removed by taking POLECON 106, ECON 100A, ECON 101A, ENVECON 100, IAS 106, or POLECON 106.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1.5 hours of discussion per week

Summer: 6 weeks - 7.5 hours of lecture and 2.5 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 101B Macroeconomic Analysis for Business Decisions 3 Units

Terms offered: Fall 2025, Summer 2025 First 6 Week Session, Spring 2025

Analysis of the operation of the market system with emphasis on the factors responsible for economic instability; analysis of public and business policies which are necessary as a result of business fluctuations.

Rules & Requirements

Prerequisites: Economics 1, Mathematics 1A or 16A, Statistics W21, or equivalents

Credit Restrictions: Students will receive no credit for UGBA 101B after completing ECON 100B, ECON 101B, BUS ADM 111, IAS 107, or POLECON 107. A deficient grade in UGBA 101B may be removed by taking ECON 100B, ECON 101B, IAS 107, or POLECON 107.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture and 1 hour of discussion per week

Summer: 6 weeks - 7.5 hours of lecture and 2.5 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required, with common exam group.

Formerly known as: Business Administration 111

UGBA 102A Financial Accounting 3 Units

Terms offered: Fall 2025, Summer 2025 First 6 Week Session, Spring 2025

The identification, measurement, and reporting of financial effects of events on enterprises, with a particular emphasis on business organization. Preparation and interpretation of balance sheets, income statements, and statements of cash flows.

Rules & Requirements

Credit Restrictions: Course not open for credit for students who are taking or have completed Undergraduate Business Administration W102A.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Summer: 6 weeks - 7.5 hours of lecture and 2.5 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 102B Managerial Accounting 3 Units

Terms offered: Fall 2025, Summer 2025 First 6 Week Session, Spring 2025

The uses of accounting systems and their outputs in the process of management of an enterprise. Classification of costs and revenue on several bases for various uses; budgeting and standard cost accounting; analyses of relevant costs and other data for decision making.

Rules & Requirements

Prerequisites: 102A

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Summer: 6 weeks - 7.5 hours of lecture and 2.5 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 103 Introduction to Finance 4 Units

Terms offered: Fall 2025, Summer 2025 First 6 Week Session, Summer 2025 Second 6 Week Session

Analysis and management of the flow of funds through an enterprise. Cash management, source and application of funds, term loans, types and sources of long-term capital. Capital budgeting, cost of capital, and financial structure. Introduction to capital markets.

Rules & Requirements

Prerequisites: 101A

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1.5 hours of discussion per week

Summer:
6 weeks - 7.5 hours of lecture and 2.5 hours of discussion per week
8 weeks - 6 hours of lecture and 2 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 104 Introduction to Business Analytics 3 Units

Terms offered: Fall 2025, Summer 2025 Second 6 Week Session, Spring 2025

This course provides an introduction to several quantitative methods used to facilitate complex decision-making in business, with applications in many different industries, at different levels in the organization, and with different scopes of decisions. The power of the methods covered in this class is further enhanced by implementing them in spreadsheet software, which allows complex problems to be approached and solved in a straightforward and understandable manner.

Rules & Requirements

Prerequisites: Mathematics 1B or 16B, Statistics W21, or equivalents

Hours & Format

Fall and/or spring: 15 weeks - 1.5 hours of lecture and 1.5 hours of laboratory per week

Summer: 6 weeks - 2.5-7.5 hours of lecture and 2.5-0 hours of laboratory per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 105 Leading People 3 Units

Terms offered: Fall 2025, Summer 2025 First 6 Week Session, Spring 2025

A general descriptive and analytical study of organizations from the behavioral science point of view. Problems of motivation, leadership, morale, social structure, groups, communications, hierarchy, and control in complex organizations are addressed. The interaction among technology, environment, and human behavior are considered. Alternate theoretical models are discussed.

Rules & Requirements

Credit Restrictions: Students will receive no credit for Undergrad. Business Administration 105 after completing Business Administration 150 or S150.

Hours & Format

Fall and/or spring: 15 weeks - 1.5-3 hours of lecture and 1.5-0 hours of discussion per week

Summer:

6 weeks - 4-8 hours of lecture and 4-0 hours of discussion per week

8 weeks - 3-6 hours of lecture and 3-0 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 106 Marketing 3 Units

Terms offered: Fall 2025, Summer 2025 First 6 Week Session, Summer 2025 Second 6 Week Session

The evolution of markets and marketing; market structure; marketing cost and efficiency; public and private regulation; the development of marketing programs including decisions involving products, price, promotional distribution.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer:

6 weeks - 7.5 hours of lecture per week

8 weeks - 6 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 107 The Social, Political, and Ethical Environment of Business 3 Units

Terms offered: Fall 2025, Summer 2025 First 6 Week Session, Spring 2025

Study and analysis of American business in a changing social and political environment. Interaction between business and other institutions. Role of business in the development of social values, goals, and national priorities. The expanding role of the corporation in dealing with social problems and issues.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Summer: 6 weeks - 5-7.5 hours of lecture and 2.5-0 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 117 Special Topics in Economic Analysis and Policy 1 - 4 Units

Terms offered: Summer 2025 Second 6 Week Session, Spring 2025, Fall 2018

A variety of topics in economic analysis and policy with emphasis on current problems and research.

Rules & Requirements

Prerequisites: 101A-101B or equivalents

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 1-4 hours of lecture per week

Summer: 6 weeks - 2.5-10 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Formerly known as: Business Administration 119

UGBA 118 International Trade 3 Units

Terms offered: Fall 2024, Fall 2023, Fall 2022

This course will develop models for understanding the economic causes and effects of international trade, will investigate the effects of economic policies that inhibit trade, and will examine the political economy of trade. By integrating the findings of the latest theoretical and empirical research in international economics, this course help students learn how to explore the current political debates in the U.S. and elsewhere regarding the benefits and costs of international trade.

Rules & Requirements

Prerequisites: Undergraduate Business Administration 101A or equivalent

Credit Restrictions: Students will receive no credit for Undergraduate Business Administration 118 after taking Economics 181 or Economics C181/Environmental Economics and Policy C181.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Summer: 6 weeks - 7.5 hours of lecture and 2.5 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 120AA Intermediate Financial Accounting 1 4 Units

Terms offered: Fall 2025, Summer 2025 Second 6 Week Session, Fall 2024

This Course introduces the student to concepts, theory and applications of financial accounting. The topics covered include accrual accounting concepts, financial statement analysis, inventory valuations, capital assets and their corresponding depreciation and impairment. Attention is given to examples on current reporting practices and to the study of reporting requirements promulgated by the Financial Accounting Standards Board ("FASB") with comparison to the International Accounting Standards Board ("IASB").

Rules & Requirements

Prerequisites: 102A

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1.5 hours of discussion per week

Summer: 6 weeks - 7.5 hours of lecture and 5 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 120AB Intermediate Financial Accounting 2 4 Units

Terms offered: Summer 2025 First 6 Week Session, Spring 2025, Summer 2024 First 6 Week Session

This course expands students' knowledge of the concepts, theory, and application of financial accounting. It continues the technical accounting sequence, which also includes UGBA 120AA, Intermediate Accounting 1 and UGBA 120B, Advanced Financial Accounting. Topics include an in-depth treatment of the financing elements of the balance sheet and the income statement, as well as a detailed examination of the statement of cash flows.

Rules & Requirements

Prerequisites: UGBA 102A is required. UGBA 120AA is recommended

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1.5 hours of discussion per week

Summer: 6 weeks - 7.5 hours of lecture and 5 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 120B Advanced Financial Accounting 4 Units

Terms offered: Summer 2025 Second 6 Week Session, Fall 2024, Summer 2024 Second 6 Week Session

Continuation of 120A. Sources of long term capital; funds statements, financial analysis, accounting for partnerships, consolidated financial statements, adjustments of accounting data using price indexes; accounting for the financial effects of pension plans; other advanced accounting problems.

Rules & Requirements

Prerequisites: UGBA 120AA and 120AB are recommended

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1.5 hours of discussion per week

Summer: 6 weeks - 7.5 hours of lecture and 5 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 121 Federal Income Tax Accounting 4 Units

Terms offered: Summer 2025 Second 6 Week Session, Spring 2025, Summer 2024 Second 6 Week Session

Determination of individual and corporation tax liability; influence of federal taxation on economic activity; tax considerations in business and investment decisions.

Rules & Requirements

Prerequisites: 102A (120AA recommended)

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1.5 hours of discussion per week

Summer: 6 weeks - 7.5 hours of lecture and 2 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 122 Financial Information Analysis 4 Units

Terms offered: Fall 2025, Summer 2025 First 6 Week Session, Summer 2025 Second 6 Week Session

This course is designed to: 1) develop basic skills in financial statement analysis; 2) teach students to identify the relevant financial data used in a variety of decision contexts, such as equity valuation, forecasting firm-level economic variables, distress prediction and credit analysis; 3) help students appreciate the factors that influence the outcome of the financial reporting process, such as the incentives of reporting parties, regulatory rules, and a firm's competitive environment.

Rules & Requirements

Prerequisites: 120AA

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1.5 hours of discussion per week

Summer: 6 weeks - 7.5 hours of lecture and 5 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 123 Operating and Financial Reporting Issues in the Financial Services Industry 3 Units

Terms offered: Fall 2023, Fall 2022, Fall 2021

This course examines how accounting in the financial services industry – banking, insurance, investment industry, and real estate – actually operates. Students learn about underwriting and pricing in each sector, investment processes and controls, incentive-based profit sharing, risk management, and the factors that contribute to profitability. Students learn what financial statements reveal about estimates companies make regarding liabilities and, more generally, what they reveal about how companies deal with uncertainty associated with predicting and measuring financial results. Students examine the controversy over employing Fair Value Accounting across sectors and learn about other sector-specific accounting requirements.

Rules & Requirements

Prerequisites: Students are encouraged to complete UGBA 102A or to possess a basic understanding about how financial statements are prepared

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 6 weeks - 7.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 125 Ethics in Accounting 3 Units

Terms offered: Fall 2024, Fall 2023, Fall 2022

This course focuses on ethics related to the accounting for and reporting of financial statements and related financial information, and touches on the ethics of tax preparers. It is taught within the context of the American Institute of Certified Public Accountants (AICPA), as well as broader ethical concepts. This course fulfills the accounting ethics education requirement of the California Board of Accountancy, needed for a California CPA license. The course covers (i) theories and rules and (ii) the application of these theories and rules to case studies drawn from real life. Students are taught not only to identify the risks of fraud, but also how an organization's culture and structure might be altered to reduce the risks.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 126 Auditing 4 Units

Terms offered: Summer 2025 First 6 Week Session, Fall 2024, Summer 2024 First 6 Week Session

Concepts and problems in the field of professional verification of financial and related information, including ethical, legal and other professional issues, historical developments, and current concerns.

Rules & Requirements

Prerequisites: 120AA (120AB and 120B recommended)

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1.5 hours of discussion per week

Summer: 6 weeks - 7.5 hours of lecture and 2 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 127 Special Topics in Accounting 1 - 4 Units

Terms offered: Fall 2024, Spring 2023, Spring 2022

A variety of topics in accounting with emphasis on current problems and research.

Rules & Requirements

Prerequisites: At the discretion of the instructor

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 1-4 hours of lecture and 0-1 hours of discussion per week

Summer: 6 weeks - 2.5-10 hours of lecture and 0-2.5 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 128 Strategic Cost Management 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

Managerial accounting is a company's internal language and is used for decision-making, production management, product design and pricing, performance evaluation and motivation of employees. The objective of the course is to develop the skills and analytical ability of effectively and efficiently use managerial accounting information in order to help a company achieve its strategic and financial goals.

Rules & Requirements

Prerequisites: 102B

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 131 Corporate Finance and Financial Statement Analysis 3 Units

Terms offered: Fall 2025, Summer 2025 Second 6 Week Session, Spring 2025

This course will cover the principles and practice of business finance. It will focus on project evaluation, capital structure, and corporate governance. Firms' policies toward debt, equity, and dividends are explored. The incentives and conflicts facing managers and owners are also discussed.

Rules & Requirements

Prerequisites: 103

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Summer: 6 weeks - 7.5 hours of lecture and 2 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Formerly known as: Business Administration 134

UGBA 131A Corporate Strategy and Valuation 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

The course is designed to cover advanced corporate finance issues. Its purpose is two-fold. First, it will help students develop a tool-box, both conceptual and quantitative, to address real-world corporate financial issues that they will likely use immediately in any finance-related career. Second, the course is designed to give the "the big picture," i.e., sharpen understanding of how corporate financial strategy helps increase a firm's value in a dynamic environment. The course examines qualitative factors that help determine financial strategy, including the costs of financial distress and the value of financial flexibility, as well as quantitative techniques, such as option pricing, that will be helpful in various analyses.

Rules & Requirements

Prerequisites: Undergraduate Business Administration 103

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 132 Financial Institutions and Markets 3 Units

Terms offered: Summer 2020 First 6 Week Session, Summer 2019 First 6 Week Session, Summer 2018 First 6 Week Session

Organization, behavior, and management of financial institutions. Markets for financial assets and the structure of yields, influence of Federal Reserve System and monetary policy on financial assets and institutions.

Rules & Requirements

Prerequisites: 101A-101B, and 103

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Summer: 6 weeks - 8 hours of lecture and 2.5 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Formerly known as: Business Administration 132

UGBA 133 Investments 3 Units

Terms offered: Fall 2025, Summer 2025 First 6 Week Session, Fall 2024 Sources of and demand for investment capital, operations of security markets, determination of investment policy, and procedures for analysis of securities.

Rules & Requirements

Prerequisites: 103

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Summer: 6 weeks - 7.5 hours of lecture and 2.5 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 134 Introduction to Financial Engineering 3 Units

Terms offered: Spring 2019

This course provides students with an introduction to the application of mathematics and statistics in the field of finance. It consists of three integrated modules: 1) an introduction to the quantitative foundations of finance, using calculus, linear algebra, statistics and probability; 2) extension into financial theory as it relates to asset pricing, fixed income, derivatives, structured finance and risk management; and 3) application and implementation of these foundational tools and theory through software like Excel to build basic quantitative financial models (touching on programming). The goal is to use financial models that can guide business and financial decisions.

Rules & Requirements

Prerequisites: UGBA 103

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 135 Personal Financial Management 2 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

Survey of major life financial decisions (e.g., career choice, consumption versus saving, investments, mortgages, insurance) and how decision-making biases (e.g., overconfidence, present bias, limited attention) can lead to suboptimal choice. The course draws on research from economics, psychology, and sociology.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructors: Odean, Selinger

UGBA 136F Behavioral Finance 3 Units

Terms offered: Summer 2025 Second 6 Week Session, Summer 2024 Second 6 Week Session, Summer 2023 Second 6 Week Session

This course explores why markets are sometimes inefficient. We consider the role that investors' heuristics and biases play in generating mispricing in financial markets. We also explore how various trading frictions limit the ability of arbitrageurs to reduce mispricing. Finally, we look at the influence of market inefficiencies on corporate decisions.

Rules & Requirements

Prerequisites: 103

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 6 weeks - 7.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 137 Special Topics in Finance 1 - 4 Units

Terms offered: Fall 2025, Summer 2025 Second 6 Week Session, Spring 2025

A variety of topics in finance with emphasis on current problems and research.

Rules & Requirements

Prerequisites: 103

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 1-4 hours of lecture per week

Summer: 6 weeks - 2.5-10 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Formerly known as: Business Administration 139

UGBA 141 Production and Operations Management 2 - 3 Units

Terms offered: Fall 2024, Fall 2022, Spring 2022

A survey of the concepts and methodologies for management control of production and operations systems. Topics include inventory control, material requirements planning for multistage production systems, aggregate planning, scheduling, and production distribution.

Rules & Requirements

Prerequisites: 104 or equivalent, or consent of instructor

Hours & Format

Fall and/or spring: 15 weeks - 2-3 hours of lecture and 0-1 hours of discussion per week

Summer: 6 weeks - 5-7.5 hours of lecture and 0-2.5 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Formerly known as: Business Administration 142

UGBA 142 Advanced Business Analytics 3 Units

Terms offered: Fall 2025, Summer 2025 Second 6 Week Session, Spring 2024

Successful business analysts, managers, and executives are increasingly required to make data-driven decisions to run their businesses, rather than rely on experience and intuition alone. This course teaches the latest data analytic methods and decision methods now used by leading-edge business practitioners, going deep to understand their technical inner workings and going broad to realize their practical business applications. Topics include: data analysis/business decision methodology; data analytic methods, including machine learning and other approaches; introduction to R software for data analysis; real-world/real-data business practicum across a variety of industries.

Rules & Requirements

Prerequisites: Undergraduate Business Administration 104, Data Science C100, or equivalent

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 6 weeks - 7.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 143 Game Theory and Business Decisions 3 Units

Terms offered: Fall 2014, Fall 2013, Spring 2010

This course provides an introduction to game theory and decision analysis. Game theory is concerned with strategic interactions among players (multi-player games), and decision analysis is concerned with making choices under uncertainty (single-player games). Emphasis is placed on applications.

Rules & Requirements

Prerequisites: Mathematics 1B or 16B, Statistics 21, or equivalent

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 146 Project Management 2 Units

Terms offered: Summer 2025 First 6 Week Session, Summer 2024 First 6 Week Session, Summer 2023 First 6 Week Session

The primary objective of this course is to develop the critical skills and knowledge needed to successfully pitch and lead projects, and to deliver those projects on time and within budget. The course delves into formal planning and scheduling techniques including: project definition, project selection, Work Breakdown Structure (WBS), Resource Estimation, Critical Path Method (CPM), Pert, Gantt Charts, Resource Constrained Scheduling, Project Monitoring and Project Closing.

Hours & Format

Summer: 6 weeks - 5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 147 Special Topics in Operations and Information Technology Management 1 - 4 Units

Terms offered: Summer 2023 First 6 Week Session, Summer 2022 First 6 Week Session, Spring 2022

A variety of topics in manufacturing and information technology with emphasis on current problems and research.

Rules & Requirements

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 1-4 hours of lecture per week

Summer: 6 weeks - 2.5-10 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 150 Leading High Impact Teams 3 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

This course helps students hone and develop the leadership skills needed to lead dynamic, complex, global teams. Globalization, rapid technological change, and a shift towards an innovation-based economy have resulted in more dynamic, distributed, cross-functional, as well as demographically and culturally diverse teams. Students will learn to create team developmental plans and accountability, coach teams through challenges, encourage teams to recognize and avoid bias and misattributions, and lead from a distance and across boundaries.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternate method of final assessment during regularly scheduled final exam group (e.g., presentation, final project, etc.).

UGBA 151 Management of Human Resources 3 Units

Terms offered: Spring 2022, Spring 2021, Spring 2020

The designs of systems of rewards, assessment, and manpower development. The interaction of selection, placement, training, personnel evaluation, and career ladders within an on-going organization. Role of the staff manager. Introduction of change. Implications of behavioral research for management problems and policies.

Rules & Requirements

Prerequisites: 105

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 6 weeks - 7.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Formerly known as: Business Administration 151

UGBA 151A People Analytics 2 Units

Terms offered: Prior to 2007

This course focuses on measuring and analyzing the costs and benefits of human capital investments by providing students with the ability to develop, analyze and use information to assess and measure employee and organizational performance. The course will show participants how to develop and make critical recommendations on such information to senior management, as well as helping to increase their presence and credibility with key decision makers. On successful completion, students will have the skills necessary to formulate both qualitative and quantitative recommendations for key management decisions affecting employees.

Hours & Format

Fall and/or spring: 8 weeks - 4 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

UGBA 152 Negotiation and Conflict Resolution 3 Units

Terms offered: Fall 2025, Summer 2025 First 6 Week Session, Summer 2025 Second 6 Week Session

The purpose of this course is to understand the theory and processes of negotiation as practiced in a variety of settings. It is designed to be relevant to the broad spectrum of negotiation problems faced by managers and professionals. By focusing on the behavior of individuals, groups, and organizations in the context of competitive situations, the course will allow students the opportunity to develop negotiation skills experientially in useful analytical frameworks (e.g.- simulations, cases).

Rules & Requirements

Prerequisites: 105

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 6 weeks - 7.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Formerly known as: Business Administration 152

UGBA 154 Power and Politics in Organizations 3 Units

Terms offered: Summer 2025 Second 6 Week Session, Summer 2024 Second 6 Week Session, Fall 2023

This course will provide students with a sense of "political intelligence." After taking this course, students will be able to: (1) diagnose the true distribution of power in organizations, (2) identify strategies for building sources of power, (3) develop techniques for influencing others, (4) understand the role of power in building cooperation and leading change in organizations, and (5) make sense of others' attempts to influence them. These skills are essential for effective and satisfying career building.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 6 weeks - 7.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 155 Leadership 3 Units

Terms offered: Summer 2023 First 6 Week Session, Summer 2022 First 6 Week Session, Summer 2021 First 6 Week Session

The purpose of this course is for the students to develop understanding of the theory and practice of leadership in various organizational settings. It is designed to allow students the opportunity to develop leadership skills through experiential exercises, behavioral and self-assessments, case studies, class discussions, and lectures.

Rules & Requirements

Credit Restrictions: Students will receive no credit for UGBA 155 after completing UGBA W155. A deficient grade in UGBA 155 may be removed by taking UGBA W155.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 6 weeks - 7.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 155N The Nature of Leadership 6 Units

Terms offered: Not yet offered

In today's fast-changing world, leadership requires adaptability, creativity, and resilience. "The Nature of Leadership" immerses students in the intersection of leadership, nature, and art. This experiential course explores emotional intelligence, systems thinking, and innovation inspired by the natural world. Through virtual sessions and in-country experiences across rural Spain, students engage in hands-on art practice, creative workshops, and community interactions. Site visits explore how rural communities have rebuilt economies through creativity, art, and sustainability. The course culminates in an artistic leadership project, preparing students to lead with empathy and a connection to the environment.

Hours & Format

Summer: 6 weeks - 18 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

UGBA C155 Leadership: Purpose, Authority, and Empowerment 3 Units

Terms offered: Summer 2023 10 Week Session, Summer 2022 10 Week Session, Summer 2021 10 Week Session

The purpose of this course is for the students to develop understanding of the theory and practice of leadership in various organizational settings. It is designed to allow students the opportunity to develop leadership skills through experiential exercises, behavioral and self-assessments, case studies, class discussions, and lectures.

Rules & Requirements

Credit Restrictions: Students will receive no credit for UGBA C155 after completing UGBA W155. A deficient grade in UGBA C155 may be removed by taking UGBA W155.

Hours & Format

Summer: 10 weeks - 4.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

Also listed as: UGIS C151

UGBA 156 Berkeley Changemaker: Living with Agency 2 Units

Terms offered: Spring 2025, Spring 2024

What does it mean to "live with agency"? This course emphasizes the Berkeley Changemaker pillars of critical thinking, effective communication, and productive collaboration. You will combine critical examination of evidence-based, multi-disciplinary research and theories with personal self-reflection. These are interwoven with implementable strategies, directly applicable to the business context, to help you develop a sharper sense of who you want to be along with tools to make that happen. Frequent guest speakers, simulations, and discussions allow you to learn from others as you expand your network. L&S/UGBA C12/ C196C is not a prerequisite but is highly recommended since this course complements and builds on that class.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Alternate method of final assessment during regularly scheduled final exam group (e.g., presentation, final project, etc.).

UGBA 157 Special Topics in the Management of Organizations 1 - 4 Units

Terms offered: Spring 2025, Spring 2024, Fall 2023

A variety of topics in organizational behavior and industrial relations with emphasis on current problems and research.

Rules & Requirements

Prerequisites: 105

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 1-4 hours of lecture per week

Summer: 6 weeks - 2.5-10 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Formerly known as: Business Administration 159

UGBA 159 Becoming a Changemaker 2 Units

Terms offered: Fall 2025, Spring 2025, Spring 2024

This course inspires, trains and equips participants to convert raw energy and enthusiasm for creating a better world into real leadership skills and mindsets which will empower you to create positive change at an individual, organizational and societal level. Anchored in change leadership and bringing together the fields of entrepreneurship, innovation, leadership & social impact, the course is focused on moving from ideas to action; gaining inspiration from diverse changemakers across roles and sectors; learning how to navigate, shape and lead change to thrive amidst uncertainty; and helping you become the kind of leader our companies, our communities and our world need right now.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 160 Customer Insights 3 Units

Terms offered: Fall 2025, Fall 2024, Spring 2024

Consumer behavior is the study of how consumers process information, form attitudes and judgments, and make decisions. Its study is critical to understand how consumers think and behave, which is critical for a company wishing to develop a customer focus. Given how different people are, it is amazing how similarly their minds work. Consumer psychology is the systematic study of how consumers perceive information, how they encode it in memory, integrate it with other sources of information, retrieve it from memory, and utilize it to make decisions. It is one of the building blocks of the study of marketing and provides the student with a set of tools with diverse applications.

Rules & Requirements

Prerequisites: 106

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 6 weeks - 7.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 161 Market Research: Tools and Techniques for Data Collection and Analysis 3 Units

Terms offered: Spring 2020, Spring 2019, Spring 2017

Information technology has allowed firms to gather and process large quantities of information about consumers' choices and reactions to marketing campaigns. However, few firms have the expertise to intelligently act on such information. This course addresses this shortcoming by teaching students how to use customer information to better market to consumers. In addition, the course addresses how information technology affects marketing strategy.

Rules & Requirements

Prerequisites: 106

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 162 Brand Management and Strategy 3 Units

Terms offered: Summer 2024 Second 6 Week Session, Spring 2022, Fall 2020

This course is an introduction to product management in marketing consumer and industrial goods and services. The course will cover analysis of market information, development of product strategy, programming strategy, and implementation.

Rules & Requirements

Prerequisites: 106

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 6 weeks - 7.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Formerly known as: Business Administration 162

UGBA 162A Product Branding and Branded Entertainment 2 Units

Terms offered: Fall 2022, Fall 2021, Fall 2020

As consumers demand information and products tailored specifically to their individual needs, brands strive to create alternative advertising methods to build lasting relationships and retain "top of mind" status. Smart consumers, especially those in niche markets, have dismissed traditional avenues of sponsorship and product placement. Course explores how and why brand executives across multiple industries are leveraging entertainment to connect with niche markets. It educates students about how marketers develop creative and entertaining ways to connect with multi-hyphenate customers. Course culminates in a Creative Pitch, based on a case study, and a Client Presentation where students present marketing campaigns to industry executives.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Summer: 6 weeks - 5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 164 Marketing Strategy 3 Units

Terms offered: Spring 2020, Fall 2019, Spring 2019

This course specifically addresses how to deal with competition. Additionally, marketing managers usually have to make decisions with incomplete or unreliable information. In "Marketing Strategy" students learn how firms develop plans that can be updated in light of changing circumstances. The course covers the following topics: Market size estimation; Competitor identification and analysis; Internal analysis; Alternative business models; Risk identification, assessment and management using scenario planning; Handling unknown futures using sensitivity analysis; Price setting dynamics; Competitive tactics. The course utilizes a combination of lectures and cases. There are group presentations (self-selected teams) and some group projects.

Rules & Requirements

Prerequisites: 106

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 6 weeks - 7.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

UGBA 165 Advertising Strategy 3 Units

Terms offered: Summer 2022 First 6 Week Session, Summer 2021 First 6 Week Session, Summer 2020 First 6 Week Session

Basic concepts and functions of advertising in the economy; consumer motivation; problems in utilizing advertising and measuring its effectiveness.

Rules & Requirements

Prerequisites: 106

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 6 weeks - 7.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Formerly known as: Business Administration 165

UGBA 167 Special Topics in Marketing 1 - 4 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

A variety of topics in marketing with emphasis on current problems and research.

Rules & Requirements

Prerequisites: 106

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 1-4 hours of lecture per week

Summer:

6 weeks - 2.5-10 hours of lecture per week

8 weeks - 4-6 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Formerly known as: Business Administration 169

UGBA 168B International Marketing 3 Units

Terms offered: Fall 2025, Spring 2025, Spring 2015

Provides frameworks, knowledge, and sensitivities to formulate and implement marketing strategies for competing in the international arena. Regions and countries covered include the Americas, Europe, Japan, China, India, Russia, Africa, and Asia-Pacific. Issues covered include global versus local advertising, international pricing strategies, selecting and managing strategic international alliances and distribution channels, managing international brands and product lines through product life cycle, international retailing, and international marketing organization and control.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 8 weeks - 6 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 169 Pricing 3 Units

Terms offered: Fall 2024, Summer 2024 Second 6 Week Session, Spring 2024

This three-module course aims to equip students with proven concepts, techniques, and frameworks for assessing and formulating pricing strategies. The first module develops the economics and behavioral foundations of pricing. The second module discusses several innovative pricing concepts including price customization, nonlinear pricing, price matching, and product line pricing. The third module analyzes the strengths and weaknesses of several Internet-based, buyer-determined pricing models.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 6 weeks - 7.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 171 Tech and the City: How to Get Urban Innovation Right 3 Units

Terms offered: Spring 2024, Spring 2022

This course critically examines how new technologies and business models impact cities, and identifies the approaches that produce not only the best business outcomes, but also the most equitable and sustainable outcomes. To begin, we explore what makes cities such compelling laboratories for technology innovation, learn from past attempts at "smart city" interventions, and discuss how technologists can identify more effective solutions to today's urban challenges. We'll then hear from a variety of cutting edge practitioners, including venture investors, startup founders, government officials, tech journalists and community organizers about the unique opportunities and challenges of building an urban tech startup today.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

UGBA C172 History of American Business 3 Units

Terms offered: Spring 2022, Spring 2021, Spring 2019

This course will examine selected aspects of the history of American business. Included will be discussions of the evolution of the large corporation, the development of modern managerial techniques, and the changing relationship of business, government, and labor.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Rosen

Formerly known as: American Studies C172, Business Administration C172

Also listed as: AMERSTD C172

UGBA 173 Competitive Strategy 2 - 3 Units

Terms offered: Fall 2025, Summer 2025, Fall 2024

This course takes the perspective of the executive responsible for developing a firm's strategy, and focuses on forms of competitive advantage at the firm level. Topics include industry and competitive analysis; business scope (horizontal and vertical scope); make vs buy decision-making and related tradeoffs; network effects and complementors; disruption and response; non-market factors such as regulatory barriers to entry; and risks to sustaining returns. This course will build on concepts covered in various UGBA Core classes.

Rules & Requirements

Prerequisites: 101A or equivalent

Hours & Format

Fall and/or spring: 15 weeks - 2-2 hours of lecture per week

Summer:

3 weeks - 10-15 hours of lecture per week

6 weeks - 5-7.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

Instructor: Metzler

Formerly known as: Undergrad. Business Administration 115

UGBA 174 Leading Strategy Implementation 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

Class format consists of lectures, experiential exercises, student presentations, and case discussions. This course will cover the concepts and techniques required for successful implementation of business strategies with a particular focus on the role of effective leadership in leading strategic change.

Rules & Requirements

Credit Restrictions: Students will receive no credit for UGBA 174 after completing BUS ADM 190.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 10 weeks - 4.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam not required.

Formerly known as: Undergrad. Business Administration 119

UGBA 175 Legal Aspects of Management 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

An analysis of the law and the legal process, emphasizing the nature and functions of law within the U.S. federal system, followed by a discussion of the legal problems pertaining to contracts and related topics, business association, and the impact of law on economic enterprise.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 6 weeks - 7.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Formerly known as: Business Administration 175

UGBA 176 Innovations in Communications and Public Relations 2 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This course introduces students to public relations and how it is used by companies, non-profits and individuals to build and support their brands through innovative communication techniques. Students will hear from and have direct access to entrepreneurs and established executives who share insights on how they've used creative public relations campaigns and communications skills to create attention and value for their brand or avoid it in a crisis. They also learn to work in teams crafting effective media responses for an existing company needing real help now (not a case study). The semester ends with each student applying this technique to create their own personal brand that they can refine as they prepare to move into the workforce.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Summer: 6 weeks - 5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 177 Special Topics in Business and Public Policy 1 - 4 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

A variety of topics in business and public policy with emphasis on current problems and research.

Rules & Requirements

Prerequisites: 107

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 1-4 hours of lecture per week

Summer: 6 weeks - 2.5-10 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Formerly known as: Business Administration 179

UGBA 178 Introduction to International Business 3 Units

Terms offered: Fall 2025, Summer 2025 Second 6 Week Session, Fall 2024

A survey involving environmental, economic, political, and social constraints on doing business abroad; effects of overseas business investments on domestic and foreign economies; foreign market analysis and operational strategy of a firm; management problems and development potential of international operations.

Rules & Requirements

Prerequisites: Undergraduate Business Administration 101A-101B or equivalents

Credit Restrictions: Students will receive no credit for Undergraduate Business Administration 178 after completing Business Administration 188. A deficient grade in Business Administration 188 may be removed by taking Undergraduate Business Administration 178.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 6 weeks - 7.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 179 International Consulting for Small and Medium-Sized Enterprises 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2022

By exploring the intersection of global business, entrepreneurship, and consulting, this course provides an understanding of how decision-makers in small and medium sized enterprises (SMEs) can develop the frameworks necessary for making decisions about how to venture across borders in pursuit of economic opportunities in today's hypercompetitive global business environment. In addition to the technical analysis of cases, there is a strong emphasis on how to create a new service company, market and sell to potential clients, manage client relationships, and leverage financial and human resources in a service setting.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 6 weeks - 7.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 179G GMP Capstone: International Team Project 3 Units

Terms offered: Prior to 2007

This course is required for all juniors in the Global Management Program at the Haas School of Business and limited to those students as well.

This is an experiential learning course where students will work on a live project with a company, covering both the revenue and cost sides of the business model. The course will provide students insider access to company executives and information while also giving them the opportunity to contribute meaningfully to the company's bottom-line performance. In the process, students will acquire skills and knowledge across the following three key categories: Cross-Cultural Competence, International Sales & Marketing, International Finance & Supply Chain Management.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

UGBA 180 Introduction to Real Estate and Urban Land Economics 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

The nature of real property; market analysis; construction cycles; mortgage lending; equity investment; metropolitan growth; urban land use; real property valuation; public policies.

Rules & Requirements

Prerequisites: Economics 1, Mathematics 16A or 1A, or equivalents

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Summer: 6 weeks - 7.5 hours of lecture and 2 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Formerly known as: Business Administration 180

UGBA 183 Introduction to Real Estate Finance 3 Units

Terms offered: Spring 2020, Spring 2019, Spring 2018

Real estate debt and equity financing; mortgage market structure; effects of credit on demand; equity investment criteria; public policies in real estate finance and urban development.

Rules & Requirements

Prerequisites: 180

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Formerly known as: Business Administration 183

UGBA 184 Urban and Real Estate Economics 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2016

This course examines how market forces influence the development of cities and the development and pricing of real estate assets. Topics include city formation; city size; land rent and land use; the operation of residential, commercial and industrial property markets; and the impacts of government policies, including the provision of public services, the imposition property taxes and fees, transportation pricing and investment, and land use regulations.

Rules & Requirements

Prerequisites: A background in microeconomics and basic calculus is preferable. Please contact the instructor if you are unsure about your preparation for this course

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 187 Special Topics in Real Estate Economics and Finance 1 - 4 Units

Terms offered: Fall 2010, Fall 2009

A variety of topics in real estate economics and finance with emphasis on current problems and research.

Rules & Requirements

Repeat rules: Course may be repeated for credit when topic changes.

Hours & Format

Fall and/or spring: 15 weeks - 1-4 hours of lecture per week

Summer: 6 weeks - 2.5-10 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 190C Collaborative Innovation 4 Units

Terms offered: Spring 2022, Spring 2020

This is a project-based course in collaborative innovation where students experience group creativity and team-based design by using techniques from across the disciplines of business, theater, design, and art practice. Students will leverage problem framing and solving techniques derived from critical thinking, systems thinking, and creative problem solving (popularly known today as design thinking). The course is grounded in a brief weekly lecture that sets out the theoretical, historical, and cultural contexts for particular innovation practices, but the majority of the class involves hands-on studio-based learning guided by an interdisciplinary team of teachers leading small group collaborative projects.

Rules & Requirements

Credit Restrictions: Students will receive no credit for UGBA 190C after completing ART 100, or THEATER 100. A deficient grade in UGBA 190C may be removed by taking ART 100, or THEATER 100.

Hours & Format

Fall and/or spring: 15 weeks - 6 hours of studio per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

Instructor: Beckman

UGBA 190D Innovation and Design Thinking in Business 2 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

The goal of this course is to equip students with innovation skills and practices. This is a learn-by-doing lab. Students learn research methods, ethnography, analysis and synthesis, reflective thinking, scenario creation, ideation processes, rapid prototyping cycles and designing experiments, iterative design and how to tell the story of "Never Before Seen" ideas. Class time is spent using hands-on innovation and human-centered design practices. Teams present work for critique and iterative development. The course features short lectures, guest talks, campus-based fieldwork, site visits, research and readings. Projects will be launched in the sessions and each team will be coached and mentored.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

UGBA 190S Strategy for the Information Technology Firm 2 - 3 Units

Terms offered: Prior to 2007

This course is a strategy and general management course for students interested in pursuing careers in the global information technology industry. Students are taught to view the IT industry through the eyes of the general manager/CEO (whether at a start-up or an industry giant). They learn how to evaluate strategic options and their consequences, how to understand the perspectives of various industry players, and how to anticipate how they are likely to behave under various circumstances. These include the changing economics of production, the role network effects and standards have on adoption of new products and services, the tradeoffs among potential pricing strategies, and the regulatory and public policy context.

Hours & Format

Fall and/or spring: 15 weeks - 2-3 hours of lecture per week

Summer: 8 weeks - 4-6 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 190T Special Topics in Innovation and Design 1 - 4 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

Advanced study in the fields of innovation and design that will address current and emerging issues. Topics will vary with each offering and will be announced at the beginning of each term.

Rules & Requirements

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 1-4 hours of lecture per week

Summer:

6 weeks - 2.5-10 hours of lecture per week

8 weeks - 2-7.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 191C Communication for Leaders 2 Units

Terms offered: Fall 2016, Summer 2016 10 Week Session, Summer 2016 Second 6 Week Session

This course is a workshop in the fundamentals of public speaking skills in today's business environment. Each student will give speeches, coach, and debate each other, and take part in a variety of listening and other communication exercises. The course focuses on authenticity, persuasion, and advocacy.

Hours & Format

Fall and/or spring: 15 weeks - 1 hour of lecture and 2 hours of discussion per week

Summer:

6 weeks - 2.5 hours of lecture and 5 hours of discussion per week

8 weeks - 1.5 hours of lecture and 3.5 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam not required.

UGBA 191I Improvisational Leadership 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This class explores the broad principles of improvisation, a performing art form that has developed pedagogical methods to enhance individual spontaneity, listening and awareness, expressive skills, risk-taking, and one's ability to make authentic social and emotional connections. The ultimate aim of the course is to help students develop an innovative and improvisational leadership mindset, sharpening in-the-moment decision making and the ability to quickly recognize and act upon opportunities when presented. In practical terms, this course strives to enhance students' business communication skills and increase both interpersonal intuition and confidence.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 6 weeks - 7.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 191L Leadership Communication 1 - 3 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

Leadership Communication is a workshop in the fundamentals of public speaking in today's business environment. Through prepared and impromptu speeches aimed at moving others to action, peer coaching, and lectures, students will sharpen their authentic and persuasive communication skills, develop critical listening skills, improve abilities to give, receive, and apply feedback, and gain confidence as public speakers.

Hours & Format

Fall and/or spring: 15 weeks - 1-3 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: The grading option will be decided by the instructor when the class is offered. Alternative to final exam.

UGBA 191P Leadership and Personal Development 3 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

This course is highly interactive and challenges you to explore questions central to your own leadership journey. The ultimate aim of the class is to help you develop a lifelong leadership development practice, where continuous personal growth is valued and actively pursued.

Hours & Format

Fall and/or spring: 15 weeks - 1.5 hours of lecture and 1.5 hours of laboratory per week

Summer: 6 weeks - 4 hours of lecture and 4 hours of laboratory per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 192A Leading Nonprofit and Social Enterprises 3 Units

Terms offered: Fall 2025, Fall 2023, Spring 2022

This course prepares students conceptually and practically to found, lead, and manage organizations in the nonprofit sector. The course focuses on mission and theory of change (strategy), role of the board in governance, managing and marketing to multiple constituencies, role of advocacy in meeting mission, leadership styles and managing organizational culture, resource development (philanthropy), nonprofit financial management, managing for impact, HR management (volunteering), and cross-sector alliances.

Rules & Requirements

Prerequisites: 101A or equivalent

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 6 weeks - 7 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam not required.

Formerly known as: Business Administration 115

UGBA 192AC Social Movements and Social Media 3 Units

Terms offered: Spring 2020, Spring 2019, Fall 2017

This course provides a survey of innovative social movements and their complex relationships to social media technologies. It will examine the evolution from pre-social-media to present-day mobilizing strategies and the interplay between explicitly policy- and advocacy-focused approaches and related efforts rooted in music, visual arts, popular culture and celebrities. The course will place into comparative relief the discourses of explicitly racially- or ethnically-defined movements and movements that mobilize based on other, sometimes overlapping categories of marginalization including class, immigration status, gender identity and occupational category.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam not required.

Instructor: David Harris

UGBA 192B Strategic Philanthropy 2 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This course teaches students the concepts and practices of effective philanthropy. It offers students the experience of studying relevant theories and frameworks for assessing potential grant recipients and a real-world grant making experience in which they complete a series of nonprofit organizational assessments and then make actual grants totaling \$10,000 to a limited number of organizations. Students learn about the evolution of the philanthropic sector from traditional entities, such as private, corporate and community foundations, to an array of new funding intermediaries, technology-driven philanthropies, open source platforms, “impact” investors, and venture philanthropy partnerships.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

UGBA 192E Social Entrepreneurship 2 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This course is designed to provide broad exposure to the theories and activities of social entrepreneurship. The inquiry is grounded in real-world examples that illustrate the topics and stimulate thinking, discussion, and learning. Working in groups, students develop a business plan or pitch deck for a social enterprise that addresses an issue that is of interest/concern to the student team. Students with preexisting social enterprise ideas or plans that they would like to further develop and refine are welcomed and encouraged to use this class project as an opportunity to do so.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

UGBA 192F Edible Education 3 Units

Terms offered: Prior to 2007

This course is a lecture series that explores the food system and its critical role in our culture, well-being and survival. Students will develop food-systems intelligence—a personal understanding of how the diverse facets of the food system relate to one another, especially one's own role as a participant in the food system and how individual and collective choices, actions, policies and public and private interests affect it. The course explores personal ethics, complex systems, entrepreneurial agency, and ways to develop a multi-sector perspective to food-systems change making. Students will develop plans at an individual, local, national, or global scale to improve, and possibly transform our food system.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

UGBA 192G Strategic Approaches for Global Social Impact 2 Units

Terms offered: Prior to 2007

The main objective of this course is to help students become effective practitioners in global development and understand career options in the global social sector. The course aims to (i) analyze the historical, sociological and statistical underpinnings of the major issues in global development (conflict, food security, human rights, poverty, health and education), (ii) understand what various organizations can contribute to each issue (government agencies, multilateral institutions, private foundations, NGOs, and private sector companies and entrepreneurs), and (iii) design and analyze approaches to addressing these issues.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 192H Managing Human Rights in Business 2 Units

Terms offered: Spring 2023, Spring 2021

This course, one of the first of its kind offered at a business school, will prepare students for the growing field of practice at the intersection of business and human rights. Students will gain an overview of the international human rights framework and global business and human rights standards and guidelines; analyze the ways in which companies can impact human rights, and to assess the degree to which companies are and should be responsible for human rights impacts; learn to manage a company's human rights impacts as corporate human rights managers, external consultants, or civil society advocates; and practice the communication skills necessary to successfully address human rights issues within a complex multinational corporation.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 192ID Impact Startup Disco 1 Unit

Terms offered: Spring 2025, Spring 2024, Spring 2023

This is a high-octane, single weekend course (plus one intro day) for students interested in meeting other innovators and getting hands-on experience developing a new impact startup concept. All "social and environmental" impact themes are welcome. The course is inspired by other "hackathon" and startup weekend formats. A structured roadmap helps guide students through a sprint formation and ideation process. All students will be asked to submit an idea during the week prior to the class. After a peer vote selects the top ideas, teams are organically formed during the first session. At the end of the course, each team will present their validated concept and their next steps plan to a panel of impact venture experts.

Hours & Format

Fall and/or spring: 1 weeks - 15 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

UGBA 192L Applied Impact Evaluation 2 Units

Terms offered: Prior to 2007

This course covers the methods and applications of impact evaluations, which is the science of measuring the causal impact of a program or policy on outcomes of interest. At its essence, impact evaluation is about generating evidence on which policies work, and which don't. This subject matter should appeal to three main audiences: (1) those in decision-making positions, such as policy makers and business leaders, and need to consume the information generated from impact evaluations to make informed evidence-based decisions, (2) project managers, development practitioners and business managers who commission impact evaluations and (3) researchers who actually design and implement impact evaluations.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

UGBA 192MC Management Consulting Skills for Social Impact 2 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This course provides a basic understanding of what consultants do and how they do it, and how consulting skills can be applied to thorny problems of social impact. Students will: 1) gain a broad understanding of the management consulting industry, the various consulting models, and how consultants can generate value for their clients in the social sector; 2) learn and practice structured approaches to problem solving used by leading management consultancies; and 3) understand other skills required in management consulting for social impact – such as communicating persuasively and managing projects and client relationships – as well as some of the ethical issues that consultants often face working in the social sector.

Hours & Format

Fall and/or spring:

12 weeks - 2.5 hours of lecture per week

15 weeks - 2 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternate method of final assessment during regularly scheduled final exam group (e.g., presentation, final project, etc.).

UGBA 192N Topics in Social Sector Leadership 1 - 5 Units

Terms offered: Spring 2022, Fall 2019, Spring 2019

Advanced study in the field of social sector leadership that will address current and emerging issues. Topics will vary with each offering and will be announced at the beginning of each term.

Rules & Requirements

Repeat rules: Course may be repeated for credit when topic changes.

Hours & Format

Fall and/or spring: 15 weeks - 1-5 hours of lecture per week

Summer: 6 weeks - 2.5-12.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 192P Sustainable Business Consulting Projects 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Discuss the field of strategic corporate social responsibility (CSR) through a series of lectures, guest speakers, and projects. The course will examine best practices used by companies to engage in socially responsible business practices. It will provide students with a flavor of the complex dilemmas one can face in business in trying to do both "good for society" and "well for shareholders." It looks at CSR from a corporation perspective, and how this supports core business objectives, core competencies, and bottom-line profits.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam not required.

UGBA 192PF Plant Futures: Introduction to Plant-Centric Food Systems 3 Units

Terms offered: Spring 2025

Available to students across all UCs, Plant Futures: Introduction to Plant-Centric Food Systems fosters interdisciplinary connection while providing a systems-view exploration of both the challenges and emergent solutions and opportunities within our current food system. Through a mix of synchronous and asynchronous modular content, covering Climate & Environment, Health & Nutrition, Animal Welfare, Social Impacts, Innovation, Policy & Law, Behavioral Change, Media, and Plant-Forward Cooking, you'll engage with esteemed experts, express your unique perspective through written assignments and guided discussions, and apply your learnings and ideas by working with your peers on innovative projects aimed at advancing plant-centric food systems.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

UGBA 192S Business and Sustainability 2 Units

Terms offered: Summer 2024 First 6 Week Session, Summer 2023 First 6 Week Session, Summer 2022 First 6 Week Session

This course—a mixture of lectures, readings, business cases and corporate speakers—uses theory, frameworks, tools and business cases to teach students how to systematically evaluate and implement sustainability strategies that also maintain or maximize financial returns. Students are taught to identify opportunities to create business value from environmental and social challenges, and to evaluate the competitive implications related to sustainability initiatives. What type of long-term strategies can organizations set to simultaneously foster sustainable development strategy and sound financial practice? How should decision makers make trade-offs between these two organizational objectives? When is “sustainability” also “good business”?

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Summer: 6 weeks - 5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 192T Topics in Responsible Business 1 - 4 Units

Terms offered: Fall 2025, Summer 2025 Second 6 Week Session, Spring 2025

Advanced study in the field of corporate social responsibility that will address current and emerging issues. Topics will vary with each offering and will be announced at the beginning of each term.

Rules & Requirements

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 1-4 hours of lecture per week

Summer:

6 weeks - 2.5-10 hours of lecture per week

8 weeks - 2-8 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA C192R Business, Sustainability, and Society 3 Units

Terms offered: Summer 2025 Second 6 Week Session, Summer 2024 Second 6 Week Session, Summer 2022 8 Week Session, Summer 2021 8 Week Session

As corporations have grown in influence, concerns over their impact on people and the planet have also grown, pushing sustainability, corporate social responsibility, and the wider impact of business into the spotlight. This course focuses on business ethics, supply chains, resource constraints, labor issues, innovation, and environmental externalities, as well as the internal challenges, competitive pressures, external stakeholders, and other issues that businesses must consider while trying to act responsibly.

Hours & Format

Summer:

6 weeks - 7.5 hours of lecture per week

8 weeks - 6 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required, with common exam group.

Instructor: Rochlin

Also listed as: ENE, RES C192

UGBA 193B Energy & Civilization 4 Units

Terms offered: Fall 2024, Fall 2023, Fall 2022

Energy is one of the main drivers of civilization. Today we are at the precipice of what many hope will be a major paradigm shift in energy production and use. Two transitions are needed. On the one hand, we must find ways to extend the benefits of our existing energy system to the impoverished people living in the developing world while continuing to provide these benefits to the people of the developed world. On the other hand, we must completely overhaul the existing system to fight climate change and other forms of air and water pollution. Are these shifts truly within our reach? Can we achieve both simultaneously? If so, how? This Big Ideas course will grapple with these questions using an interdisciplinary systems approach.

Rules & Requirements

Credit Restrictions: Students will receive no credit for UGBA 193B after completing L & S 126. A deficient grade in UGBA 193B may be removed by taking L & S 126.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA 193C Practical Training 0.5 Units

Terms offered: Summer 2014 10 Week Session, Summer 2013 10 Week Session, Summer 2012 10 Week Session

A structured reflective experience on the applied aspects of Business Administration in a professional off-campus environment. The self-selected experience from a CPT employer is designed to provide students with opportunities to make connections between the theory and practice of academic study and the practical application of that study in a real world setting. This applied course is intended for students to enhance their academics through their experience with the experiential learning activity of their choice.

Rules & Requirements

Repeat rules: Course may be repeated for credit without restriction. Students may enroll in multiple sections of this course within the same semester.

Hours & Format

Fall and/or spring: 15 weeks - 0 hours of internship per week

Summer: 6 weeks - 0 hours of internship per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Offered for pass/not pass grade only. Alternative to final exam.

UGBA 193I Business Abroad 4 - 6 Units

Terms offered: Summer 2019 8 Week Session, Summer 2018 Second 6 Week Session, Summer 2017 Second 6 Week Session

This course includes both formal learning in lectures, experiential learning, and action research through site visits abroad. Students and instructor will visit with international companies and/or organizations to learn about the business opportunities and challenges of operating in a specific country or region. Evaluation is based on student participation, presentations, and a research paper. Country and business industry focus may vary from term to term depending upon the instructor.

Rules & Requirements

Prerequisites: To be determined by instructor depending on topic

Repeat rules: Course may be repeated for credit when topic changes.

Hours & Format

Fall and/or spring: 15 weeks - 4-6 hours of lecture per week

Summer: 5 weeks - 16-25 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

UGBA 194 Undergraduate Colloquium on Business Topics 1 Unit

Terms offered: Spring 2025, Spring 2024, Spring 2023

This is a speakers series course designed to give students insights from practitioners into complex issues facing American business leaders. Each week a guest speaker will discuss an issue related to a particular theme, ranging from corporate governance to the social responsibilities of business. Students will be challenged to synthesize, question, and extend those insights under the guidance of the instructor.

Rules & Requirements

Repeat rules: Course may be repeated for credit when topic changes.

Hours & Format

Fall and/or spring: 15 weeks - 1 hour of lecture per week

Summer: 6 weeks - 2.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Offered for pass/not pass grade only. Final exam required.

UGBA 194S Sports Management 2 Units

Terms offered: Spring 2025

This course focuses on key issues and influencers within the sports industry, with an emphasis on college athletics. Subjects research, review and discuss topics in law, marketing, finance, and management; issues range from pending NCAA lawsuits, naming rights, conference television agreements, multi-media rights, and athletic facility financing, to coaching and player / student-athlete experiences. Students have the opportunity to engage with sports industry professionals and guest speakers on a variety of present day issues.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/ Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

UGBA 195A Entrepreneurship 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

Whether you have an idea for a business right now, are interested in being an entrepreneur in the future, or want to build entrepreneurial skills to be an innovator at an established company, this course will cover the topics you need to know to succeed. The course takes students through the entire new venture process including how to: evaluate new business ideas, get customers to buy your product, validate that your business is scalable and profitable, pitch to investors/raise capital, scale and exit a business, and beyond. Through a group project, students create their own venture and learn by doing what entrepreneurs actually do. Each week students also get insights from successful entrepreneur/investor guest speakers.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam not required.

UGBA 195B Startup and Small-Business Consulting 2 Units

Terms offered: Fall 2021

This course is designed to provide students with an understanding of the concepts and principles for consulting with startups and small businesses. Students will work in self-created teams of 3-4 and can either bid for projects provided by the instructor, or source their own project so long as it fits the course criteria. Course time will include guest lecturers and consulting skills workshops. Student teams will be expected to meet together and with the client outside of class time.

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

UGBA 195M M.E.T. Innovation and Entrepreneurship Immersion 2 Units

Terms offered: Prior to 2007

This course is an experiential capstone for seniors in the M.E.T. program. The pedagogical objective is to consolidate and build upon the learning over the four years in the program through a week-long immersion, in which the students will be visiting another leading technology cluster domestically or internationally. The purpose is to expose them to companies and approaches for pursuing innovation and entrepreneurship differently from the California Bay Area, to both integrate and expand the concepts and skills they've accumulated in their curriculum.

Hours & Format

Fall and/or spring: 8 weeks - 1 hour of lecture and 6 hours of fieldwork per week

Summer: 8 weeks - 1 hour of lecture and 6 hours of fieldwork per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Offered for pass/not pass grade only.
Alternative to final exam.

UGBA 195P Entrepreneurship: How to Successfully start a New Business 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This course explores and examines key issues facing entrepreneurs and their businesses. It is intended to provide a broad spectrum of topics across many business disciplines including accounting, finance, marketing, organizational behavior, production/quality, technology, etc. Students will acquire a keen understanding of both the theoretical and real world tools used by today's entrepreneurial business leaders in achieving success in today's global business environment.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Summer: 6 weeks - 7.5 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

UGBA 195S Entrepreneurship To Address Global Poverty 3 Units

Terms offered: Spring 2013, Spring 2012, Spring 2011

This course examines whether and how entrepreneurial ventures can meaningfully address global poverty vs. more traditional approaches such as foreign aid, private philanthropy or corporate social responsibility initiatives. Combining lectures, case studies, and interviews with social entrepreneurs, it explores poverty and entrepreneurship before focusing on their intersection in various bottom-of-pyramid markets, from health, housing, and education to energy, agriculture, and finance.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam not required.

UGBA 195T Topics in Entrepreneurship 1 - 3 Units

Terms offered: Summer 2025, Spring 2025, Spring 2024

Courses of this kind will cover issues in entrepreneurship that either appeal to a specialized interest by type of firm being started (e.g., new ventures in computer software) or in the aspect of the entrepreneurial process being considered (e.g., new venture funding). The courses typically will be designed to take advantage of the access offered by the University and the locale to knowledgeable and experienced members of the business community.

Rules & Requirements

Repeat rules: Course may be repeated for credit when topic changes.

Hours & Format

Fall and/or spring: 15 weeks - 1-3 hours of lecture per week

Summer: 3 weeks - 5-15 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

UGBA C195C Life Sciences, Business, and Entrepreneurship Capstone Course 4 Units

Terms offered: Prior to 2007

Blended lecture / Project-based course where student teams build out a business plan for a mock biotech company, demonstrating advanced knowledge in therapeutics and business development. Throughout the course student teams will work toward a final project in which they will identify and present a technology overview, disease overview and explanation of unmet need, a development plan, a commercialization plan, risk mitigation strategy, and financials. Class will include field trips, guest lectures, and a pitch competition with prize.

Rules & Requirements

Prerequisites: Students must be in their fourth and final year of the Life Sciences, Business, and Entrepreneurship Program in order to enroll in this class

Hours & Format

Fall and/or spring: 15 weeks - 4 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

Instructors: Schaletzky, Dillin

Also listed as: MCELLBI C175

UGBA 196 Special Topics in Business Administration 1 - 4 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

Study in various fields of business administration. Topics will vary from year to year and will be announced at the beginning of each semester.

Rules & Requirements

Prerequisites: Upper division standing

Repeat rules: Course may be repeated for credit when topic changes.

Hours & Format

Fall and/or spring: 15 weeks - 1-4 hours of lecture per week

Summer:

6 weeks - 2.5-10 hours of lecture per week

10 weeks - 2-4 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Formerly known as: Business Administration 196

UGBA 196SA Business Models for Sustainability 3 Units

Terms offered: Summer 2025 First 6 Week Session, Summer 2024 First 6 Week Session, Summer 2023 First 6 Week Session

This course explores the ways in which business, social and environmental sustainability are intertwined. The course maps how business can play a definitive role in addressing the problems of sustainability, primarily with regard to climate change. The course examines a range of approaches to developing business models in the context of sustainability, the actions that business can take to improve environmental outlook, and the emergence of a sustainability-aware economy.

Hours & Format

Summer: 6 weeks - 6 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

UGBA 196SB Innovation and Entrepreneurship for Sustainability 3 Units

Terms offered: Summer 2025 First 6 Week Session, Summer 2024 First 6 Week Session, Summer 2023 First 6 Week Session

This course is an optimistic take on the daunting issues of environmental and social sustainability, primarily through the lens of innovation and entrepreneurship, and maps how new business creation can play a definitive role in addressing the social and environmental problems of sustainability. In terms of balance, the course starts with a primer on the fundamentals of innovation and entrepreneurship (the first 20% of the course) before moving on to the core topic of sustainability entrepreneurship (80% of the course).

Hours & Format

Summer: 6 weeks - 6 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

UGBA 196SC Investing for Sustainability 3 Units

Terms offered: Summer 2025 First 6 Week Session, Summer 2024 First 6 Week Session, Summer 2023 Second 6 Week Session

This course examines how capital markets and the investment industry are responding to the growth in social and environmental sustainability, both as a financial risk to investment opportunities and increased public awareness in the role of financial markets and investment in social and environmental issues. The course includes 1) an introduction to capital markets including institutional investment, public finance and private capital, and 2) an examination of the rise of sustainability-related investing including environmental, social and governance investing, mission-related investment, venture capital impact investing, blended finance and shareholder activism on issues ranging from climate change to diversity, equity and inclusion.

Hours & Format

Summer: 6 weeks - 6 hours of lecture per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

UGBA C196C The Berkeley Changemaker 2 - 3 Units

Terms offered: Fall 2025, Summer 2025 Second 6 Week Session, Spring 2025, Fall 2023, Summer 2023 Second 6 Week Session, Spring 2023
Berkeley Changemaker impact occurs across many fronts: scientific, artistic, social, and entrepreneurial. This course helps students identify as a Berkeley Changemaker and learn the critical thinking, communication, and collaboration skills to become one. Combining disciplines across UC Berkeley, the course also helps launch the Berkeley Discovery arc. Students develop their own leadership styles and discover how they can create and lead diverse teams to act upon the world. Values in Berkeley's DNA like Questioning the Status Quo and going Beyond Yourself support students in leading from whatever position they occupy, preparing them to leave their mark on campus, in their communities, or beyond. More at: <http://changemaker.berkeley.edu>.

Rules & Requirements

Credit Restrictions: Students will receive no credit for UGBA C196C after completing UGBA C12. A deficient grade in UGBA C196C may be removed by taking UGBA C12.

Hours & Format

Fall and/or spring: 15 weeks - 2-2 hours of lecture and 0-1.5 hours of discussion per week

Summer:

6 weeks - 6-6 hours of lecture and 0-0 hours of discussion per week
8 weeks - 4-4 hours of lecture and 0-3 hours of discussion per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Letter grade. Alternative to final exam.

Formerly known as: Undergrad. Business Administration C112/Letters and Science C112

Also listed as: L & S C196C

UGBA 198 Directed Study 1 - 4 Units

Terms offered: Spring 2025, Spring 2016, Fall 2015

Organized group study on topics selected by upper division students under the sponsorship and direction of a member of the Haas School of Business faculty.

Rules & Requirements

Prerequisites: Consent of instructor

Credit Restrictions: Enrollment is restricted; see the Introduction to Courses and Curricula section of this catalog.

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 1-4 hours of directed group study per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Offered for pass/not pass grade only. Final exam not required.

Formerly known as: Business Administration 198

UGBA 199 Supervised Independent Study and Research 1 - 4 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

Enrollment restrictions apply.

Rules & Requirements

Prerequisites: Consent of instructor

Credit Restrictions: Enrollment is restricted; see the Introduction to Courses and Curricula section of this catalog.

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 0 hours of independent study per week

Summer:

6 weeks - 1-4 hours of independent study per week
8 weeks - 1-4 hours of independent study per week

Additional Details

Subject/Course Level: Undergrad. Business Administration/
Undergraduate

Grading/Final exam status: Offered for pass/not pass grade only. Final exam not required.

Formerly known as: Business Administration 199