

# Industrial Engineering and Operations Research and Business Administration

## M.E.T. at a Glance: One Program, Two Bachelor of Science (BS) Degrees

The Industrial Engineering and Operations Research 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 (<http://met.berkeley.edu>).

## Accreditation

The IEOR undergraduate degree program in the College of Engineering is accredited by 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

1. A minimum of 38 upper division business units are required, and a minimum of 12 upper division non-business units are required. (Upper division IEOR classes will fulfill the 12 upper division non-business units.)
2. Students must complete the College Requirements (p. 3) and the Major Requirements.
3. Students must complete the degree program in eight semesters. (Summer Session is not required for degree completion in eight semesters.)
4. All Haas business courses must be taken for a letter grade, with the exception of UGBA 194 ([http://guide.berkeley.edu/search/?P=UGBA](http://guide.berkeley.edu/search/?P=UGBA%20194)

%20194), UGBA 198 ([http://guide.berkeley.edu/search/?P=UGBA](http://guide.berkeley.edu/search/?P=UGBA%20198) %20198) and UGBA 199 ([http://guide.berkeley.edu/search/?P=UGBA](http://guide.berkeley.edu/search/?P=UGBA%20199) %20199) (only offered *Pass/No Pass*).

5. All technical courses that can be used to fulfill a requirement must be taken for a letter grade.
6. 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.
7. Students must complete their business prerequisite courses (including Reading & Composition A & B) by the spring semester of their sophomore (2nd) year.
8. Two M.E.T. Special Topics courses are required. M.E.T. Special Topics courses will count as upper division business elective units. A passing grade of C- or better is required.
9. 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 (p. 3).

## 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 & 1AL                               | General Chemistry and General Chemistry Laboratory <sup>1</sup>          | 4-5 |
| or CHEM 4A                                  | General Chemistry and Quantitative Analysis                              |     |
| or BIOLOGY 1A                               | General Biology Lecture and General Biology Laboratory                   |     |
| & 1AL                                       |                                                                          |     |
| or BIOLOGY 1B                               | General Biology Lecture and Laboratory                                   |     |
| 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 (Programming) | 4   |
| Reading & Composition Parts A and B         |                                                                          | 4-4 |
| <b>Programming</b>                          |                                                                          |     |
| Select one of the following: <sup>2</sup>   |                                                                          | 4   |
| COMPSCI C8                                  | Foundations of Data Science [4]                                          |     |
| COMPSCI 61A                                 | The Structure and Interpretation of Computer Programs [4]                |     |
| <b>Engineering Breadth Electives</b>        |                                                                          |     |
| Select at least 9 units from the following: |                                                                          | 9   |
| BIO ENG 10                                  | Introduction to Biomedicine for Engineers [4]                            |     |
| BIO ENG 102                                 | Biomechanics: Analysis and Design [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 70                                  | Engineering Geology [3]                                                  |     |
| CIV ENG 126                                 | Engineering Dynamics and Vibrations [3]                                  |     |
| CIV ENG 132                                 | Applied Structural Mechanics [3]                                         |     |

|                                |                                                                                           |
|--------------------------------|-------------------------------------------------------------------------------------------|
| CIV ENG 155                    | Transportation Systems Engineering [3]                                                    |
| DES INV 15                     | Design Methodology [3]                                                                    |
| EECS 16A                       | Foundations of Signals, Dynamical Systems, and Information Processing [4]                 |
| EECS 16B                       | Introduction to Circuits & Devices [4]                                                    |
| ENGIN 11                       | A Hands-on Introduction to Radiation Detection: Getting to know our Radioactive World [3] |
| ENGIN 26                       | Three-Dimensional Modeling for Design [2]                                                 |
| ENGIN 29<br>or ENGIN 25        | Manufacturing and Design Communication [4]<br>Visualization for Design                    |
| ENGIN 27                       | and Introduction to Manufacturing and Tolerancing & ENGIN 27                              |
| ENGIN 40                       | Engineering Thermodynamics [4]                                                            |
| MAT SCI 45                     | Properties of Materials [3]                                                               |
| MAT SCI 45L                    | Properties of Materials Laboratory [1]                                                    |
| MAT SCI 111                    | Properties of Electronic Materials [4]                                                    |
| MEC ENG 40                     | Thermodynamics [3]                                                                        |
| MEC<br>ENG C85/<br>CIV ENG C30 | Introduction to Solid Mechanics [3]                                                       |
| MEC ENG 126                    | The Science and Engineering of Cooking [4]                                                |
| MEC ENG 132                    | Dynamic Systems and Feedback [3]                                                          |

<sup>1</sup> CHEM 4A is for students majoring in chemistry or a closely related field. CHEM 1A and CHEM 1AL, or CHEM 4A are prerequisites for BIOLOGY 1A.

<sup>2</sup> Students must acquire fluent programming skills as demonstrated by completion of coursework in a high-level language such as Python, C, C++ or Java. This requirement may be completed by taking COMPSCI 61A or COMPSCI C8 or equivalent. The CS 9xx series self-paced courses are intended for those already skilled as programmers in a high-level language to learn a second language and thus are not appropriate for meeting this requirement.

## Upper Division Requirements

### IEOR Upper Division

|                                                     |                                                                                                                     |   |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|---|
| IND ENG 120                                         | Principles of Engineering Economics                                                                                 | 3 |
| IND ENG 160                                         | Nonlinear and Discrete Optimization                                                                                 | 3 |
| IND ENG 162                                         | Linear Programming and Network Flows                                                                                | 3 |
| IND ENG 165                                         | Engineering Statistics, Quality Control, and Forecasting                                                            | 4 |
| IND ENG 171                                         | Berkeley Changemaker: Ethical and Effective Entrepreneurship in High Tech <sup>4</sup>                              | 3 |
| IND ENG 172<br>or STAT 134<br>or STAT/<br>DATA C140 | Probability and Risk Analysis for Engineers <sup>1</sup><br>Concepts of Probability<br>Probability for Data Science | 4 |
| IND ENG 173                                         | Introduction to Stochastic Processes                                                                                | 3 |
| IND ENG 174                                         | Simulation for Enterprise-Scale Systems                                                                             | 3 |
| IND ENG 180                                         | Senior Project                                                                                                      | 4 |

### IEOR Electives

|                                      |                                                    |
|--------------------------------------|----------------------------------------------------|
| Select 5 courses from the following: | 15                                                 |
| IND ENG 115                          | Industrial and Commercial Data Systems [3]         |
| IND ENG 130                          | Methods of Manufacturing Improvement [3]           |
| IND ENG 135                          | Applied Data Science with Venture Applications [3] |

|              |                                                                       |
|--------------|-----------------------------------------------------------------------|
| IND ENG 142A | Introduction to Machine Learning and Data Analytics [4]               |
| IND ENG 142B | Machine Learning and Data Analytics II [4]                            |
| IND ENG 145  | Fundamentals of Revenue Management [3]                                |
| IND ENG 150  | Production Systems Analysis [3] <sup>2</sup>                          |
| IND ENG 151  | Service Operations Design and Analysis [3] <sup>2</sup>               |
| IND ENG 153  | Logistics Network Design and Supply Chain Management [3] <sup>2</sup> |
| IND ENG 156  | Healthcare Analytics [3]                                              |
| IND ENG 164  | Introduction to Optimization Modeling [3]                             |
| IND ENG 166  | Decision Analytics [3]                                                |
| IND ENG 170  | Industrial Design and Human Factors [3]                               |

### Industrial Engineering & Operations Research Ethics Requirement

|                             |                                                                       |   |
|-----------------------------|-----------------------------------------------------------------------|---|
| DATA C104/<br>HISTORY C184D | Human Contexts and Ethics of Data - DATA/<br>History/STS <sup>5</sup> | 4 |
|-----------------------------|-----------------------------------------------------------------------|---|

### Business Administration Upper Division

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

### MET Special Topics

Two courses required. <sup>3</sup> 2-4

### Upper Division Business Administration Elective Courses

Select 4-6 units of upper division Business Administration (UGBA) elective courses in order to complete a minimum of 38 units of upper division business. 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 [3] <sup>2</sup>                           |

|           |                                                                            |
|-----------|----------------------------------------------------------------------------|
| 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 [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 [4-6]                                                      |
| 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] |
| <b>Total Units</b> | <b>81</b>                                       |

- <sup>1</sup> STAT 134, STAT C140/DATA C140 or IND ENG 172 will be accepted for the Business Administration statistics requirement for students in the M.E.T. Program. IND ENG 172 is an alternative course for STAT 134 or STAT C140/DATA C140. In semesters when IND ENG 172 is offered, we recommend students take IND ENG 172. Students will receive credit for only one of these courses. The statistics requirement must be completed by spring semester of the sophomore (2nd) year.
- <sup>2</sup> Students who take IND ENG 151 and IND ENG 150, or IND ENG 151 and IND ENG 153, will not receive credit for UGBA 141.
- <sup>3</sup> M.E.T. Special Topics courses are required and will count as upper division business units.
- <sup>4</sup> IND ENG 171 will be used to fulfill the UGBA 105 requirement for the Business major and will count as 3 units of upper division UGBA coursework.
- <sup>5</sup> DATA C104/HISTORY C184D should be taken to fulfill the IEOR Ethics Requirement and the M.E.T. Historical Studies breadth requirement. Additionally approved courses that fulfill the IEOR Ethics Requirement only are: ENGIN 125, ENGIN 157AC, BIO ENG 100, ENE,RES C100, PUB POL W184, or IAS 157AC. UGBA courses will not fulfill the IEOR Ethics Requirement.

### 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 adviser.

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.

|                                                    |            | First Year                                                      |    |
|----------------------------------------------------|------------|-----------------------------------------------------------------|----|
|                                                    | Fall Units | Spring Units                                                    |    |
| CHEM 1A & 1AL <sup>2</sup>                         |            | 5 MATH 1B <sup>8</sup>                                          | 4  |
| DES INV 15 (Engineering Breadth) <sup>3</sup>      |            | 3 ENGIN 7                                                       | 4  |
| UGBA 10X                                           |            | 3 ECON 1<br>(Breadth: Social & Behavioral) <sup>4,5</sup>       | 4  |
| MATH 1A <sup>1</sup>                               |            | 4 Breadth: Arts & Literature/<br>American Cultures <sup>4</sup> | 4  |
| M.E.T. Introductory Topics (UGBA 196) <sup>7</sup> |            | 2 Reading & Composition<br>Part B Course <sup>6</sup>           | 4  |
| Reading & Composition Part A Course <sup>6</sup>   |            | 4                                                               |    |
|                                                    |            | 21                                                              | 20 |
|                                                    |            | Second Year                                                     |    |
|                                                    | Fall Units | Spring Units                                                    |    |
| IND ENG 172, STAT 134, or STAT C140 <sup>10</sup>  |            | 4 COMPSCI C8 or 61A <sup>11</sup>                               | 4  |
| MATH 53                                            |            | 4 IND ENG 120                                                   | 3  |
| PHYSICS 7A <sup>9</sup>                            |            | 4 MATH 54                                                       | 4  |

|                                                |                                                                                                         |                     |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------------------|
| Engineering Breadth <sup>3</sup>               | 3 PHYSICS 7B<br>(Breadth:<br>Physical<br>Science)                                                       | 4                   |
| Breadth: International Studies <sup>4</sup>    | 4 Engineering<br>Breadth <sup>3</sup>                                                                   | 4                   |
| <b>19</b>                                      |                                                                                                         | <b>19</b>           |
| <b>Third Year</b>                              |                                                                                                         |                     |
|                                                | <b>Fall Units</b>                                                                                       | <b>Spring Units</b> |
| IND ENG 160                                    | 3 IND ENG 165                                                                                           | 4                   |
| IND ENG 162                                    | 3 IND ENG 173                                                                                           | 3                   |
| IND ENG Elective <sup>12</sup>                 | 3 IND ENG<br>Elective <sup>12</sup>                                                                     | 3                   |
| IND ENG 171 <sup>14</sup>                      | 3 UGBA 101B                                                                                             | 3                   |
| UGBA 100                                       | 2 UGBA 102A                                                                                             | 3                   |
| UGBA 101A                                      | 3 UGBA 107<br>(Breadth:<br>Philosophy<br>and Values) <sup>4</sup>                                       | 3                   |
| M.E.T. Capstone Course (UGBA 196) <sup>7</sup> | 2                                                                                                       |                     |
| <b>19</b>                                      |                                                                                                         | <b>19</b>           |
| <b>Fourth Year</b>                             |                                                                                                         |                     |
|                                                | <b>Fall Units</b>                                                                                       | <b>Spring Units</b> |
| IND ENG Elective <sup>12</sup>                 | 3 IND ENG 180                                                                                           | 4                   |
| IND ENG Elective <sup>12</sup>                 | 3 UGBA 102B                                                                                             | 3                   |
| UGBA 103                                       | 4 UGBA<br>Elective <sup>13</sup>                                                                        | 2                   |
| UGBA 104                                       | 3 UGBA<br>Elective <sup>13</sup>                                                                        | 2                   |
| UGBA 106                                       | 3 DATA C104<br>or HISTORY<br>C184D (IEOR<br>Ethics &<br>Historical<br>Studies<br>breadth) <sup>15</sup> | 4                   |
| IND ENG 174                                    | 3 IND ENG ELE                                                                                           | 3                   |
| <b>19</b>                                      |                                                                                                         | <b>18</b>           |
| <b>Total Units: 154</b>                        |                                                                                                         |                     |

<sup>1</sup> 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.

<sup>2</sup> CHEM 1A/1AL 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. CHEM 4A, BIOLOGY 1A& BIOLOGY 1AL, or BIOLOGY 1B may also be used to fulfill this requirement. CHEM 4A is intended for students majoring in chemistry or a closely-related field.

<sup>3</sup> Engineering Breadth: 9 units must be completed from the following list: BIO ENG 10, BIO ENG 102, CIV ENG 11, CIV ENG C30, CIV ENG 60, CIV ENG 70, CIV ENG 126, CIV ENG 132, CIV ENG 155, DES INV 15, EECS 16A, EECS 16B, ENGIN 11, ENGIN 29 (or ENGIN 25 & ENGIN 27), ENGIN 26, ENGIN 40, MAT SCI 45, MAT SCI 45L, MAT SCI 111, MEC ENG 40, MEC ENG C85, MEC ENG 126, MEC ENG 132.

<sup>4</sup> 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 and/or Historical Studies breadth requirement; use Requirements filters to search the Class Schedule

(<http://classes.berkeley.edu/>) for courses that apply. See College Requirements for further restrictions on breadth courses.

<sup>5</sup> 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.

<sup>6</sup> 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.

<sup>7</sup> M.E.T. Special Topics courses are required and will count as upper division business elective units. A passing grade of C- or higher is required.

<sup>8</sup> 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.

<sup>9</sup> PHYSICS 7A may be fulfilled with a score of 5 on the AP Physics C Mechanics exam.

<sup>10</sup> STAT 134, STAT C140/DATA C140 or IND ENG 172 will be accepted for the Business Administration statistics requirement for students in the M.E.T. Program. The statistics requirement for Business Administration must be completed spring semester of sophomore year. IND ENG 172 is an alternative course for STAT 134 or STAT C140/DATA C140. In semesters when IND ENG 172 is offered, we recommend students take IND ENG 172. Students will receive credit for only one of these courses.

<sup>11</sup> Students must acquire fluent programming skills as demonstrated by completion of coursework in a high-level language such as Python, C, C++, or Java. This requirement may be completed by taking COMPSCI 61A or COMPSCI C8 or equivalent. The COMPSCI 9xx series self-paced courses are intended for those already skilled as programmers in a high-level language to learn a second language and thus are not appropriate for meeting this requirement.

<sup>12</sup> Students must take a minimum of five courses from the following: IND ENG 115, IND ENG 130, IND ENG 135, IND ENG 142A, IND ENG 142B, IND ENG 145, IND ENG 150, IND ENG 151, IND ENG 153, IND ENG 156, IND ENG 164, IND ENG 166, IND ENG 170.

<sup>13</sup> Students must complete a minimum of 38 units of upper division business coursework. See UGBA Elective course list under "Major Requirements" tab. Students who take IND ENG 151 and IND ENG 150, or IND ENG 151 and IND ENG 153, will not receive credit for UGBA 141.

<sup>14</sup> IND ENG 171 will be used to fulfill the UGBA 105 requirement for the Business major and will count as 3 units of upper division UGBA coursework.

<sup>15</sup> DATA C104/HISTORY C184D should be taken to fulfill the IEOR Ethics Requirement and the M.E.T. Historical Studies breadth requirement. Additional courses that will fulfill the IEOR Ethics requirement only are: ENGIN 125, ENGIN 157AC/IAS 157AC, BIO ENG 100, ENE/RES C100, PUB UGBA courses will not fulfill the IEOR Ethics Requirement.

## Industrial Engineering and Operations Research

### Learning Goals

1. Quantitative modeling and analysis of a broad array of systems-level decision problems concerned with economic efficiency, productivity, and quality.
2. Development and creative use of analytical and computational methods for solving these problems.
3. Collection of and analysis of data, and the use of database and decision-support tools.
4. Comprehension and analysis of uncertainty.
5. In addition, the department expects their graduates to obtain the broader skills, background, and knowledge necessary to be an effective professional in a rapidly changing global economy.

### curricular Outcomes

1. Identify, analyze, and evaluate alternative or candidate solutions for decision problems.
2. Identify appropriate models and methods for solving decision problems.
3. Formulate mathematical optimization models for real-life decision problems.
4. Understand methods for solving deterministic optimization problems and utilize optimization software for solving such problems.
5. Formulate analytical models and develop computer simulations to predict and optimize systems under uncertainty.
6. Develop models and utilize analytical tools and software to evaluate decisions under uncertainty.
7. Understand performance measurement.
8. Understand important concepts in manufacturing and service operations.
9. Design and apply analytical models for manufacturing and service operations.
10. Critique and reorganize business and industrial process flows and information flows.
11. Structure data to support decisions related to the aforementioned topics.
12. Understand organizational design and management issues.

## Business Administration

### MISSION

Guided by the missions of the undergraduate program, and the University's mission of teaching, research, and service, the mission of the Haas School of Business is to develop leaders who redefine how we do business.

The Haas School of Business Undergraduate Program has developed student learning goals for the Business major that provide faculty and students with a shared understanding of the purpose of the major as well as what graduating seniors are expected to know or to be able to do at the end of their course of study as it relates to the school's mission.

The learning goals are assessed to determine whether students are achieving the outcomes. The assessment results are used to inform curricular design and other program offerings. All steps require input and participation from the business school community, particularly the faculty. The resulting learning goals, which have their origin in

the core curriculum, were shaped over several months by faculty and administration and are listed below.

### LEARNING GOALS

1. Students will be skilled in critical thinking and decision making, as supported by the appropriate use of analytical and quantitative techniques.
2. Students will apply functional area concepts and theories appropriately.
3. Students will be effective communicators who can prepare and deliver oral and written presentations using appropriate technologies.
4. Students will be sensitive to the ethical requirements of business activities.
5. Students will tackle strategic and organizational challenges with innovative solutions.

For a visual representation of the relationship between the core curriculum and the expected outcomes, please see the Haas School of Business website (<http://www.haas.berkeley.edu/Undergrad/learninggoals.html>).

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/industrial-engineering-operations-research-business-administration/>)

- Industrial Engineering and Operations Research (p. 7)
- Business Administration (p. 22)

## Industrial Engineering and Operations Research

### IND ENG 10 Computer Programming for Analytics 4 Units

Terms offered: Not yet offered

An introduction to computer programming focused on developing foundational skills that can be used for implementing analytics methodologies and software. Programming concepts that will be introduced include: control statements, functions, sequences, dictionaries and sets, vectorization, strings, files and exceptions, object-oriented programming, recursion, search, sort, and databases. Applications of these concepts towards simulation analytics and optimization analytics will also be introduced. There are several homeworks and small-scale programming projects.

#### Objectives & Outcomes

**Course Objectives:**

1. Learn how to structure the flow and control of basic software programs
2. Learn how to use different programming data structures
3. Learn how to read, save, and manage files in software programs
4. Learn how to use the object-oriented programming paradigm in structuring software programs
5. Learn how to use basic computer science algorithms for recursion, search, and sort
6. Learn how to create, extract and insert information using relational databases
7. Learn how to apply programming concepts for simulation and optimization analytics

#### Rules & Requirements

**Prerequisites:** MATH 51 (co-requisite) and ENGIN 7 (can be taken concurrently)

**Credit Restrictions:** Students will receive no credit for IND ENG 10 after completing COMPSCI 61A, COMPSCI 61AS, DATA C88C, or DATA C8.

#### 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 2 hours of laboratory per week

#### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

### IND ENG 24 Freshman Seminars 1 Unit

Terms offered: Fall 2017, Fall 2016, Fall 2015

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.

#### Objectives & Outcomes

**Course Objectives:** Provide an introduction to the field of Industrial Engineering and Operations Research through a series of lectures.

**Student Learning Outcomes:** Learn more about Industrial Engineering and Operations Research.

#### 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:** Industrial Engin and Oper Research/ Undergraduate

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

## IND ENG 66 A Bivariate Introduction to IE and OR 3 Units

Terms offered: Fall 2016

This Freshman-level Introductory course will provide an intuitive overview of the fundamental problems addressed and methods in the fields of Industrial Engineering and Operations Research including Constrained Optimization, Human Factors, Data Analytics, Queues and Chains, and Linear Programming. The course will focus on two-dimensional, i.e., bivariate, examples where the problems and methods are amenable to visualization and geometric intuition. The course will discuss applications such as dieting, scheduling, and transportation. This course will not require pre-requisites and will present the core concepts in a self-contained manner that is accessible to Freshmen to provide the foundation for future coursework.

### Objectives & Outcomes

#### Course Objectives: •

Provide a broad survey of the important topics in IE and OR, and develop intuition about problems, algorithms, and abstractions using bivariate examples (2D).

•

Describe different mathematical abstractions used in IEOR (e.g., graphs, queues, Markov chains), and how to use these abstractions to model real-world problems.

•

Introduce students to the data analysis process including: developing a hypothesis, acquiring data, processing the data, testing the hypothesis, and presenting results.

•

Provide students with concrete examples of how the mathematical tools from the class apply to real problems such as dieting, scheduling, and transportation.

### Rules & Requirements

**Credit Restrictions:** Course restricted to Freshman students.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

**Instructor:** Goldberg

## IND ENG 98 Supervised Group Study and Research 1 - 3 Units

Terms offered: Spring 2019, Fall 2015, Spring 2015

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:** Industrial Engin and Oper Research/ Undergraduate

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

## IND ENG 99 Supervised Independent Study and Research 1 - 4 Units

Terms offered: Prior to 2007

Supervised independent study for lower division students.

### Rules & Requirements

**Prerequisites:** Freshman or sophomore standing and 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 independent study per week

### Summer:

8 weeks - 1.5-7.5 hours of independent study per week

10 weeks - 1.5-6 hours of independent study per week

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

## IND ENG 115 Industrial and Commercial Data Systems 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Design and implementation of databases, with an emphasis on industrial and commercial applications. Relational algebra, SQL, normalization. Students work in teams with local companies on a database design project. WWW design and queries.

### Rules & Requirements

**Prerequisites:** Upper division standing

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

**Instructor:** Goldberg

## IND ENG 120 Principles of Engineering Economics 3 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

Economic analysis for engineering decision making: Capital flows, effect of time and interest rate. Different methods of evaluation of alternatives. Minimum-cost life and replacement analysis. Depreciation and taxes. Uncertainty; preference under risk; decision analysis. Capital sources and their effects. Economic studies. Formerly Engineering 120.

### Rules & Requirements

**Credit Restrictions:** Students will receive 2 units for 120 after taking Civil Engineering 167. Students will not receive credit after taking Engineering 120.

### Hours & Format

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

**Summer:** 8 weeks - 4 hours of lecture and 2 hours of discussion per week

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

**Instructor:** Adler

## IND ENG 130 Methods of Manufacturing Improvement 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Analytical techniques for the improvement of manufacturing performance along the dimensions of productivity, quality, customer service, and throughput. Techniques for yield analysis, process control, inspection sampling, equipment efficiency analysis, cycle time reduction, and on-time delivery improvement. Applications on semiconductor manufacturing or other industrial settings.

### Rules & Requirements

**Prerequisites:** IND ENG 172, MATH 54, or STAT 134 (STAT 134 may be taken concurrently)

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

**Instructor:** Leachman

## IND ENG 135 Applied Data Science with Venture Applications 3 Units

Terms offered: Spring 2023, Spring 2022, Fall 2021

This highly-applied course surveys a variety of key concepts and tools that are useful for designing and building applications that process data signals of information. The course introduces modern open source, computer programming tools, libraries, and code samples that can be used to implement data applications. The mathematical concepts highlighted in this course include filtering, prediction, classification, decision-making, Markov chains, LTI systems, spectral analysis, and frameworks for learning from data. Each math concept is linked to implementation using Python using libraries for math array functions (NumPy), manipulation of tables (Pandas), long term storage (SQL, JSON, CSV files), natural language (NLTK), and ML frameworks.

### Objectives & Outcomes

**Student Learning Outcomes:** Students will be able to design and build data sample application systems that can interpret and use data for a wide range of real life applications across many disciplines and industries; implement these concepts within applications with modern open source CS tools. understand relevant mathematical concepts that are used in systems that process data;

### Rules & Requirements

**Prerequisites:** Prerequisites include the ability to write code in Python, and a probability or statistics course. This course is ideal for students who have taken COMPSCI C8 / DATA C8 / INFO C8 / STAT C8

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

**Instructor:** Sidhu

## IND ENG 142 Introduction to Machine Learning and Data Analytics 3 Units

Terms offered: Fall 2023, Spring 2023, Fall 2022

This course introduces students to key techniques in machine learning and data analytics through a diverse set of examples using real datasets from domains such as e-commerce, healthcare, social media, sports, the Internet, and more. Through these examples, exercises in R, and a comprehensive team project, students will gain experience understanding and applying techniques such as linear regression, logistic regression, classification and regression trees, random forests, boosting, text mining, data cleaning and manipulation, data visualization, network analysis, time series modeling, clustering, principal component analysis, regularization, and large-scale learning.

### Objectives & Outcomes

#### Course Objectives: 1.

To expose students to a variety of statistical learning methods, all of which are relevant in useful in wide range of disciplines and applications.

2. To carefully present the statistical and computational assumptions, trade-offs, and intuition underlying each method discussed so that students will be trained to determine which techniques are most appropriate for a given problem.

3. Through a series of real-world examples, students will learn to identify opportunities to leverage the capabilities of data analytics and will see how data analytics can provide a competitive edge for companies.

4. To train students in how to actually apply each method that is discussed in class, through a series of labs and programming exercises.

5. For students to gain some project-based practical data science experience, which involves identifying a relevant problem to be solved or question to be answered, gathering and cleaning data, and applying analytical techniques.

6. To introduce students to advanced topics that are important to the successful application of machine learning methods in practice, include how methods for prediction are integrated with optimization models and modern optimization techniques for large-scale learning problems.

### Rules & Requirements

**Prerequisites:** IEOR 165 or equivalent course in statistics. Prior exposure to optimization is helpful but not strictly necessary. Some programming experience/literacy is expected

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

**Instructors:** Grigas, Paul

## IND ENG 142A Introduction to Machine Learning and Data Analytics 4 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

This course introduces students to key techniques in machine learning and data analytics through a diverse set of examples using real datasets from domains such as e-commerce, healthcare, social media, finance, the Internet, and more. Through these examples, conceptual exercises, data analysis exercises in Python, and a comprehensive team project, students will gain experience understanding and applying techniques such as linear regression, logistic regression, classification and regression trees, random forests, boosting, text mining, data cleaning and manipulation, data visualization, time series modeling, clustering, principal component analysis, regularization, and large-scale learning with neural networks.

### Rules & Requirements

**Prerequisites:** IND ENG 165 and IND ENG 172 or equivalent courses in probability and statistics. Prior exposure to optimization (either IND ENG 160 or IND ENG 162 or equivalent). Some programming experience/literacy is expected

**Credit Restrictions:** Students will receive no credit for IND ENG 142A after completing IND ENG 142, IND ENG 242, IND ENG 242A, COMPSCI 189, COMPSCI 289, or STAT 154. A deficient grade in IND ENG 142A may be removed by taking IND ENG 142.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

**Instructors:** Grigas, Paul

## IND ENG 142B Machine Learning and Data Analytics II 4 Units

Terms offered: Spring 2025, Spring 2024

Following IEOR 142A/242A, this course further introduces students to essential methodologies and recent trends in machine learning and data analytics. The course will bridge theoretical foundations with applied data analytics by using examples and real datasets from domains such as e-commerce, social media, finance, and more. Students will gain experience with various data analytics packages in Python and will deliver a comprehensive team project. Topics include: deep learning, time series and survival analysis, end-to-end learning, causal inference, reinforcement learning, and ethics, fairness and safety in artificial intelligence.

### Rules & Requirements

**Prerequisites:** IndEng 142A or IndEng 242A or equivalent introductory machine learning class. Familiarity with the Python programming language

**Credit Restrictions:** Students will receive no credit for IND ENG 142B after completing IND ENG 242B.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

## IND ENG 145 Fundamentals of Revenue Management 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Revenue management (RM) is the decision science of efficiently selling a fixed supply of various goods and services when the demand is heterogeneous and uncertain. This undergraduate course will focus on fundamental models and algorithms for RM. Broad usefulness of concepts will be demonstrated through applications in airline reservation systems, retail, advertising, e-commerce and school-student assignments.

### Rules & Requirements

**Prerequisites:** IndEng 162, IndEng 169 and either IndEng 173 Or IndEng 172 (or equivalent introductory courses in mathematical programming and probability). Familiarity with algorithm design and mathematical maturity recommended

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

**Instructor:** Udwani

## IND ENG 150 Production Systems Analysis 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2020

Quantitative models for operational and tactical decision making in production systems, including production planning, inventory control, forecasting, and scheduling.

### Rules & Requirements

**Prerequisites:** IND ENG 160, IND ENG 173, IND ENG 162, IND ENG 165, and ENGIN 120

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

**Instructor:** Yano

## IND ENG 151 Service Operations Design and Analysis 3 Units

Terms offered: Spring 2025, Fall 2022, Fall 2021

This course is concerned with improving processes and designing facilities for service businesses such as banks, health care organizations, telephone call centers, restaurants, and transportation providers. Major topics in the course include design of service processes, layout and location of service facilities, demand forecasting, demand management, employee scheduling, service quality management, and capacity planning.

### Rules & Requirements

**Prerequisites:** IND ENG 162, IND ENG 173, and a course in statistics

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

## IND ENG 153 Logistics Network Design and Supply Chain Management 3 Units

Terms offered: Fall 2025, Fall 2024, Spring 2024

We will focus primarily on both quantitative and qualitative issues which arise in the integrated design and management of the entire logistics network. Models and solution techniques for facility location and logistics network design will be considered. In addition, qualitative issues in distribution network structuring, centralized versus decentralized network control, variability in the supply chain, strategic partnerships, and product design for logistics will be considered through discussions and cases.

### Rules & Requirements

**Prerequisites:** IND ENG 160, IND ENG 162 or senior standing

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

**Instructor:** Kaminsky

## IND ENG 156 Healthcare Analytics 3 Units

Terms offered: Spring 2025, Spring 2024

With the growing complexity of providing healthcare, it is increasingly important to design and manage health systems using engineering and analytics perspectives. This course will cover topics related to healthcare analytics, including: optimizing chronic disease management, designing matching markets for health systems, developing predictive analytics models, and managing resource utilization.

### Rules & Requirements

**Prerequisites:** Courses in mathematical modeling (such as IND ENG 160 and IND ENG 172) and computer programming (such as CS C8 or CS 61A) are recommended

**Credit Restrictions:** Students will receive no credit for IND ENG 156 after completing IND ENG 256.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/  
Undergraduate

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

**Instructor:** Aswani

## IND ENG 160 Nonlinear and Discrete Optimization 3 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

This course introduces unconstrained and constrained optimization with continuous and discrete domains. Convex sets and convex functions; local optimality; KKT conditions; Lagrangian duality; steepest descent and Newton's method. Modeling with integer variables; branch-and-bound method; cutting planes. Models on production/inventory planning, logistics, portfolio optimization, factor modeling, classification with support vector machines.

### Rules & Requirements

**Prerequisites:** MATH 53 and MATH 54

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/  
Undergraduate

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

**Instructor:** Atamturk

## IND ENG 162 Linear Programming and Network Flows 3 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

This course addresses modeling and algorithms for optimization of linear constrained optimization problems. The simplex method; theorems of duality; complementary slackness. Applications in production planning and resource allocation. Graph and network problems as linear programs with integer solutions. Algorithms for selected network flow problems. Transportation and logistics problems. Dynamic programming and its role in applications to shortest paths, project management and equipment replacement.

### Rules & Requirements

**Prerequisites:** MATH 53 and MATH 54

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/  
Undergraduate

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

**Instructor:** Hochbaum

## IND ENG 164 Introduction to Optimization Modeling 3 Units

Terms offered: Spring 2025, Spring 2024

Designed for students from any science/engineering major, this upper-division course will introduce students to optimization models, and train them to use software tools to model and solve optimization problems. The main goal is to develop proficiency in common optimization modeling languages, and learn how to integrate them with underlying optimization solvers. Students will work primarily on modeling exercises, which will develop confidence in modeling and solve optimization methods using software packages, and will require some programming. Review of linear and nonlinear optimization models, including optimization problems with discrete decision variables. Applications to practical problems from engineering and data science.

### Objectives & Outcomes

#### Course Objectives: •

To introduce students to the core concepts of optimization

•

To train them in the art and science of using software tools to model and solve optimization problems.

### Rules & Requirements

**Prerequisites:** No prerequisites except some Python programming skills, which can be met by COMPSCI C8 (or any other Python-based course)

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

## IND ENG 165 Engineering Statistics, Quality Control, and Forecasting 4 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This course will introduce students to basic statistical techniques such as parameter estimation, hypothesis testing, regression analysis, analysis of variance. Applications in forecasting and quality control.

### Rules & Requirements

**Prerequisites:** IND ENG 172, or STAT 134, or an equivalent course in probability theory

**Credit Restrictions:** Students will receive no credit for IND ENG 165 after completing STAT 135.

### 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:** Industrial Engin and Oper Research/ Undergraduate

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

## IND ENG 166 Decision Analytics 3 Units

Terms offered: Spring 2025, Fall 2023, Spring 2022

Introductory course on the theory and applications of decision analysis. Elective course that provides a systematic evaluation of decision-making problems under uncertainty. Emphasis on the formulation, analysis, and use of decision-making techniques in engineering, operations research and systems analysis. Includes formulation of risk problems and probabilistic risk assessments. Graphical methods and computer software using event trees, decision trees, and influence diagrams that focus on model design.

### Rules & Requirements

**Prerequisites:** IND ENG 172 or STAT 134

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

**Instructors:** Oren, Righter

## IND ENG 169 Integer Optimization 3 Units

Terms offered: Spring 2022, Spring 2021, Fall 2020

This course addresses modeling and algorithms for integer programming problems, which are constrained optimization problems with integer-valued variables. Flexibility of integer optimization formulations; if-then constraints, fixed-costs, etc. Branch and Bound; Cutting plane methods; polyhedral theory. Applications in production planning, resource allocation, power generation, network design. Alternate formulations for integer optimization: strength of Linear Programming relaxations. Algorithms for integer optimization problems. Specialized strategies by integer programming solvers.

### Objectives & Outcomes

#### Course Objectives: •

Enable the students to recognize when problems can be modeled as integer optimization problems.

•

Familiarize students in leading methodologies for solving integer optimization problems, and techniques in these methodologies.

•

To acquire skills in the best modeling approach that is suitable to the practical problem at hand.

•

To train students in modeling of integer optimization problems;

•

To train the students in the selection of appropriate techniques to be used for integer optimization problems.

### Rules & Requirements

**Prerequisites:** MATH 53, MATH 54, and background in Python and programming

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

**Instructor:** Rajan

## IND ENG 170 Industrial Design and Human Factors 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This course surveys topics related to the design of products and interfaces ranging from alarm clocks, cell phones, and dashboards to logos, presentations, and web sites. Design of such systems requires familiarity with human factors and ergonomics, including the physics and perception of color, sound, and touch, as well as familiarity with case studies and contemporary practices in interface design and usability testing. Students will solve a series of design problems individually and in teams.

### 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:** Industrial Engin and Oper Research/ Undergraduate

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

**Instructor:** Goldberg

## IND ENG 171 Berkeley Changemaker: Ethical and Effective Entrepreneurship in High Tech 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

This course emphasizes the three Berkeley Changemaker pillars of critical thinking, effective communication, and productive collaboration. It combines critical examination of entrepreneurial challenges with strategic, ethical, and leadership theories. It develops verbal and collaborative leadership skills, through flipped classroom and intense case discussions, a team project, and a formal final presentation of the project. The case discussions in particular will develop effective listening, real-time analysis, and verbal leadership skills. The project will challenge you to analyze a current or historical ethical challenge in a high technology industry, or analyze the ethical implications of your own entrepreneurial plans.

### Objectives & Outcomes

**Student Learning Outcomes:** Students who fully engage with this class will strengthen their in-the-moment abilities to listen, learn, analyze, and convince. They will size up high tech business and entrepreneurial opportunities with new perspectives, both strategic and ethical. They will gain practice in applying strategic and ethical frameworks to entrepreneurship and business decisions in high technology. They will learn how to understand and build upon criticism in real-time, and lead discussions on contentious issues towards productive, inclusive, and mutually beneficial outcomes. They will become an entrepreneur who not only sees how innovation can solve society's problems, but can furthermore convince and lead others in accomplishing and implementing a solution.

### Rules & Requirements

**Prerequisites:** Upper division standing

**Credit Restrictions:** Students will receive no credit for IND ENG 171 after completing UGBA 105.

### 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:** Industrial Engin and Oper Research/ Undergraduate

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

**Instructor:** Fleming

## IND ENG 172 Probability and Risk Analysis for Engineers 4 Units

Terms offered: Fall 2025, Spring 2025, Fall 2024

This is an introductory course in probability designed to develop a good understanding of uncertain phenomena and the mathematical tools used to model and analyze it. Applications will be given in such areas as reliability theory, risk theory, inventory theory, financial models, and computer science, among others. This course is a probability course and cannot be used to fulfill any engineering unit or elective requirements.

### Objectives & Outcomes

**Course Objectives:** Students will learn how to model random phenomena and learn about a variety of areas where it is important to estimate the likelihood of uncertain events. Students will also learn how to use computer simulation to replicate and analyze these events.

### Rules & Requirements

**Prerequisites:** MATH 51, MATH 52, and MATH 53

**Credit Restrictions:** Students will receive no credit for IND ENG 172 after completing STAT 134, or STAT C140.

### 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:** Industrial Engin and Oper Research/ Undergraduate

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

## IND ENG 173 Introduction to Stochastic Processes 3 Units

Terms offered: Spring 2025, Spring 2024, Spring 2023

This is an introductory course in stochastic models. It builds upon a basic course in probability theory and extends the concept of a single random variable into collections of random variables known as stochastic processes. The course focuses on discrete-time Markov chains, Poisson process, continuous-time Markov chains, and renewal theory. It also discusses applications to queueing theory, risk analysis and reliability theory. Along with the theory, the course covers stochastic simulation techniques that will allow students to go beyond the models and applications discussed in the course.

### Objectives & Outcomes

**Course Objectives:** Students will learn how to model random phenomena that evolves over time, as well as the simulation techniques that enable the replication of such problems using a computer. By discussing various applications in science and engineering, students will be able to model many real world problems where uncertainty plays an important role.

### Rules & Requirements

**Prerequisites:** Students should have taken a probability course, such as STAT 134 or IND ENG 172, and should have programming experience in Matlab or Python

**Credit Restrictions:** Students will receive no credit for Ind Eng 173 after taking Ind Eng 161.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

## IND ENG 174 Simulation for Enterprise-Scale Systems 3 Units

Terms offered: Fall 2025, Fall 2024, Fall 2023

Introductory course on design, programming, and statistical analysis of simulation methods and tools for enterprise-scale systems such as traffic and computer networks, health-care and financial systems, and factories. Topics include the types of problems that can be solved by such methods. Programming material includes the theory behind random variable generation for a variety of common variables. Advanced techniques such as variance reduction, simulation optimization, or meta-modeling are considered. Student teams implement an enterprise-scale simulation in a semester-length design project.

### Objectives & Outcomes

#### Course Objectives: •

Exposure students to state-of-art advanced simulation techniques. • Note: the course is a mixture of modeling art, analytical science, and computational technology.

- Have students communicate their ideas and solutions effectively in written reports.
- Insure students become familiar with the fundamental similarities and differences among simulation software packages.
- Introduce students to modern techniques for developing computer simulations of stochastic discrete-event models and experimenting with such models to better design and operate dynamic systems.
- Introduce the different technologies used to develop simulation models and simulator products in order to become critical consumers of simulation study results.
- Teach strengths and weaknesses of different approaches for a foundation for selecting methodologies.
- Teach students how to model random processes and experiment with simulated systems.

### Rules & Requirements

**Prerequisites:** IND ENG 165; IND ENG 173; IND ENG 172 or STAT 134

**Credit Restrictions:** Students will receive no credit for IND ENG 174 after completing IND ENG 131. A deficient grade in IND ENG 174 may be removed by taking IND ENG 131.

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

**Instructor:** Zheng

**IND ENG 180 Senior Project 4 Units**

Terms offered: Spring 2025, Spring 2024, Spring 2023

Application of systems analysis and industrial engineering to the analysis, planning, and/or design of industrial, service, and government systems. Consideration of technical and economic aspects of equipment and process design. Students work in teams under faculty supervision. Topics vary yearly.

**Rules & Requirements**

**Prerequisites:** 160, 162, 165, 173, Engineering 120, and three other Industrial Engineering and Operations Research electives

**Hours & Format**

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 6 hours of fieldwork per week

**Summer:** 10 weeks - 3 hours of lecture and 9 hours of fieldwork per week

**Additional Details**

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

**IND ENG 190B Advanced Topics in Industrial Engineering and Operations Research: Entrepreneurial Marketing and Finance 1 - 4 Units**

Terms offered: Fall 2017, Spring 2014, Fall 2013

The 190 series cannot be used to fulfill any engineering requirement (engineering units, courses, technical electives, or otherwise).

**Rules & Requirements**

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

**Hours & Format**

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

**Summer:**

8 weeks - 1.5-7.5 hours of seminar per week

10 weeks - 1.5-6 hours of seminar per week

**Additional Details**

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

**IND ENG 190C Advanced Topics in Industrial Engineering and Operations Research 1 - 4 Units**

Terms offered: Spring 2020, Fall 2019, Spring 2019

The 190 series cannot be used to fulfill any engineering requirement (engineering units, courses, technical electives, or otherwise).

**Rules & Requirements**

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

**Hours & Format**

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

**Summer:**

8 weeks - 1.5-7.5 hours of seminar per week

10 weeks - 1.5-6 hours of seminar per week

**Additional Details**

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

**IND ENG 190D Advanced Topics in Industrial Engineering and Operations Research 1 - 4 Units**

Terms offered: Spring 2017, Fall 2014, Spring 2014

The 190 series cannot be used to fulfill any engineering requirement (engineering units, courses, technical electives, or otherwise).

**Rules & Requirements**

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

**Hours & Format**

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

**Summer:**

8 weeks - 1.5-7.5 hours of seminar per week

10 weeks - 1.5-6 hours of seminar per week

**Additional Details**

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

## IND ENG 190F Advanced Topics in Industrial Engineering and Operations Research 1 - 4 Units

Terms offered: Spring 2013, Spring 2012, Spring 2011

The 190 series cannot be used to fulfill any engineering requirement (engineering units, courses, technical electives, or otherwise).

### Rules & Requirements

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

### Hours & Format

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

### Summer:

8 weeks - 1.5-7.5 hours of seminar per week

10 weeks - 1.5-6 hours of seminar per week

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/  
Undergraduate

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

## IND ENG 190G Advanced Topics in Industrial Engineering and Operations Research 1 - 4 Units

Terms offered: Spring 2020, Fall 2019, Spring 2019

The 190 series cannot be used to fulfill any engineering requirement (engineering units, courses, technical electives, or otherwise).

### Rules & Requirements

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

### Hours & Format

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

### Summer:

8 weeks - 1.5-7.5 hours of seminar per week

10 weeks - 1.5-6 hours of seminar per week

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/  
Undergraduate

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

## IND ENG 190H Cases in Global Innovation 1 Unit

Terms offered: Fall 2021, Spring 2011

This course is designed primarily for upper-level undergraduate and graduate students interested in examining the major challenges and success factors entrepreneurs and innovators face in globalizing a company, product, or service. Over the duration of this course, students will examine case studies of early, mid-stage, and large-scale enterprises as they seek to start a new venture, introduce a new product or service, or capitalize on global economic trends to enhance their existing business. The course content exposes students interested in internationally oriented careers to the strategic thinking involved in international engagement and expansion. Cases will include both U.S. companies seeking to enter emerging markets and emerging market companies looking to expand within their own nations or into markets in developed nations. The course is focused around intensive study of actual business situations through rigorous case-study analysis.

### Rules & Requirements

**Prerequisites:** Junior or Senior standing

### Hours & Format

**Fall and/or spring:** 8 weeks - 2 hours of lecture per week

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/  
Undergraduate

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

## IND ENG 190I Cases in Global Innovation: China 1 Unit

Terms offered: Prior to 2007

This course is designed primarily for upper-level undergraduate and graduate students interested in examining the major challenges and success factors entrepreneurs and innovators face in globalizing a company product or service, with a focus on China. Over the duration of this course, students will examine case studies of foreign companies seeking to start a new venture, introduce a new product or service to the China market, or domestic Chinese companies seeking to adapt a U.S. or western business model to the China market. The course content exposes students interested in internationally oriented careers to the strategic thinking involved in international engagement and expansion and the particularities of the China market and their contrast with the U.S. market. The course is focused around intensive study of actual business situations through rigorous case-study analysis and the course size is limited to 30.

### Rules & Requirements

**Prerequisites:** Junior or senior standing. Recommended, but not required to be taken after or along with Engineering 198

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

**Instructor:** Sidhu

## IND ENG 190K Cases in Global Innovation: South Asia 1 Unit

Terms offered: Prior to 2007

This course is designed primarily for upper-level undergraduate and graduate students interested in examining the major challenges and success factors entrepreneurs and innovators face in conducting business, globalizing a company product or service, or investing in South Asia. Over the duration of this course, students will examine case studies of foreign companies seeking to start a new venture, introduce a new product or service to the South Asian market, or South Asian companies seeking to adapt a U.S or western business model. The course will put this into the larger context of the political, economic, and social climate in several South Asian countries and explore the constraints to doing business, as well as the policy changes that have allowed for a more conducive business environment.

### Rules & Requirements

**Prerequisites:** Junior or senior standing. Recommended but not required to be taken after or along with Engineering 198

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

**Instructor:** Sidhu

## IND ENG H196A Operations Research and Management Science Honors Thesis 3 Units

Terms offered: Fall 2022

Individual study and research for at least one academic year on a special problem approved by a member of the faculty; preparation of the thesis on broader aspects of this work.

### Rules & Requirements

**Prerequisites:** Open only to students in the honors program

**Credit Restrictions:** Course may be repeated for credit with consent of instructor.

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

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/ Undergraduate

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

## IND ENG H196B Operations Research and Management Science Honors Thesis 3 Units

Terms offered: Prior to 2007

Individual study and research for at least one academic year on a special problem approved by a member of the faculty; preparation of the thesis on broader aspects of this work.

### Rules & Requirements

**Prerequisites:** Open only to students in the honors program

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

### Hours & Format

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

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/  
Undergraduate

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

## IND ENG 197 Undergraduate Field Research in Industrial Engineering 1 - 12 Units

Terms offered: Fall 2024, Spring 2023, Fall 2022

Students work on a field project under the supervision of a faculty member. Course does not satisfy unit or residence requirements for bachelor's degree.

### Rules & Requirements

**Prerequisites:** Completion of two semesters of coursework

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

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-12 hours of fieldwork per week

### Summer:

6 weeks - 2.5-30 hours of fieldwork per week

8 weeks - 1.5-22.5 hours of fieldwork per week

10 weeks - 1.5-18 hours of fieldwork per week

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/  
Undergraduate

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

## IND ENG 198 Directed Group Studies for Advanced Undergraduates 1 - 4 Units

Terms offered: Spring 2025, Fall 2024, Spring 2024

Group studies of selected topics. Semester course unit value and contact hours will have a one-to-one ratio.

### Rules & Requirements

**Prerequisites:** Senior standing in Engineering

**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:** Industrial Engin and Oper Research/  
Undergraduate

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

## IND ENG 199 Supervised Independent Study 1 - 4 Units

Terms offered: Fall 2022, Fall 2021, Fall 2020

Supervised independent study. Enrollment restrictions apply.

### Rules & Requirements

**Prerequisites:** Consent of instructor and major adviser

**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 - 2.5-10 hours of independent study per week

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

10 weeks - 1.5-6 hours of independent study per week

### Additional Details

**Subject/Course Level:** Industrial Engin and Oper Research/  
Undergraduate

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

## Business Administration

### 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