It prepares students for the analysis of management and policy issues in business, finance, marketing, production, agriculture, food distribution, natural resources, the environment, resource allocation, and international trade and development. Students specialize in one or more emphases selected from the following: (1) Business Economics focuses on the economic aspects of managerial decision-making essential for solving problems in business, management, marketing, and finance. (2) International Business Economics explores the economic drivers and policy challenges in the major emerging markets and focuses on how these markets are impacting the world economy. (3) Environmental and Resource Economics focuses on issues related to the use of resources and environmental quality. (4) Agricultural Economics focuses on the economic and policy aspects of production and marketing of foods and fibers.

Students in the Managerial Economics program develop valuable skills and strengths that lead to careers in business and government.

Internships and Career Alternatives. Students in Managerial Economics have opportunities to gain additional career information and preparation through internships in a variety of business enterprises and governmental agencies. Graduates qualify for supervisory and management training positions in banking, insurance, accounting, commodity and stock brokerages in the private sector, farm and ranch production, food and agricultural processing, sales and service, and a variety of agency career paths in state, and federal government. Graduates are well qualified to seek advanced degrees in agricultural and resource economics, economics, business administration, accounting, public policy, or law. For more information, see http://sicweb.ucdavis.edu.

Study Abroad. The Agricultural and Resource Economics department encourages students to complement their Managerial Economics degree or minor with a study abroad experience. Two upper-division courses, a maximum of 4 units per course, may be taken at international campuses. Students must select courses from the pre-approved list at UC Davis Study Abroad and seek pre-approval from a Managerial Economics staff adviser.

Graduate Study. Students who meet the admission requirements of Graduate Studies and the Department of Agricultural and Resource Economics may pursue studies leading to the M.S. and Ph.D. degrees. For information on admission to graduate study, degree requirements, consult the Graduate Program Coordinator in the Agricultural and Resource Economics; also see http://agecon.ucdavis.edu.

B.S. Major Requirements:

<table>
<thead>
<tr>
<th>Major English Requirement</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Writing Program 104A</td>
<td>4</td>
</tr>
<tr>
<td>(The upper-division composition exam will not satisfy this requirement.)</td>
<td></td>
</tr>
</tbody>
</table>

### Preparatory Subject Matter: 39-41

<table>
<thead>
<tr>
<th>Agricultural and Resource Economics</th>
<th>18</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 1A-1B</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>1A-1B</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15 or 30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
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<td></td>
<td>4</td>
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<tr>
<td></td>
<td>8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16-18-16C</td>
<td></td>
</tr>
<tr>
<td></td>
<td>21A-21B</td>
<td></td>
</tr>
<tr>
<td>Statistics</td>
<td>13</td>
<td>103</td>
</tr>
<tr>
<td>3, 103</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Total Depth Subject Matter</td>
<td>52-55</td>
<td></td>
</tr>
<tr>
<td>Core</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Agricultural and Resource Economics 100A, 100B, 106, 155 and 156</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Restricted Electives</td>
<td>32-35</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Choose at least one of the emphases below:</td>
<td></td>
</tr>
</tbody>
</table>

#### Business Economics


Choose at least 16 units from Agricultural and Resource Economics 175 and 176. International Business Economics

Choose at least 20 units from Agricultural and Resource Economics 175, 176, 140, 145, 146, 150, 156, Economics 125, 130, Environmental Science and Policy 168A, 168B, 17B. Select the remaining 12 units from the above list or upper-division courses in Agricultural and Resource Economics, or Environmental Science and Policy 160, 161, 163, 167, 171, 172, 173 or Environmental Toxicology 138. Agricultural Economics

Choose at least 16 units from Agricultural and Resource Economics 120, 121, 130, 132, 138, 140, 145, 150. Select the remaining 16 units from the above list or upper division courses in Agricultural and Resource Economics and/or Economics.

* Students must attain a major GPA of at least a C average (2.000) in courses taken for depth subject matter (core and restricted electives). These courses must be taken for a letter grade. All restricted elective courses taken will be calculated as part of the major GPA, including courses with F grades that have not been repeated.

#### Total Units for the Major: 99-104

### Minor Program Requirements:

#### Managerial Economics: 24

| Agricultural and Resource Economics 100A, 100B, 106, 155, 156 | 12 |
| NOTE: Preparation for the minor includes Economics 1A, 1B, Mathematics 16A-16B-16C or 17A-17B or 21A-21B; Statistics 13 and 103. |

### Prerequisites for courses taken for the minor are mandatory and students should consult their course handbook. Accordingly, one upper-division course to satisfy the minor may be taken for passed/not passed grading. All minor courses must be taken in residence. Two upper-division courses, or one upper-division course, may be taken through UC Study Abroad. Students must seek pre-approval from a Managerial Economics staff adviser for any international courses.

### Marine and Coastal Science

The major in Marine and Coastal Science focuses on the interdisciplinary nature of marine sciences by exposing students to core, breadth, and focus area courses in the discipline, in addition to a strong foundation of science preparatory material. The major builds upon existing strengths at UC Davis in marine and coastal sciences as well as field-based courses offered at Bodega Marine Laboratory to provide students a unique, interdisciplinary, “hands on” education. Advising is provided by the Department of Earth and Planetary Sciences for interested students.

### The Program

The major begins with introductory courses in mathematics, chemistry, physics, biology, and earth sciences. These are followed by core courses in Marine and Coastal Science. The major requirements provide focus and breadth, so that each student gains mastery in one area and broad exposure to many facets of Marine and Coastal Science. Focus and Breadth areas include: Coastal Environmental Processes, Marine Ecology and Organismal Biology, Marine Environmental Chemistry, and Oceans and the Earth System.

In this major, students will be exposed to the foundational disciplines within marine science (biology, chemistry, geology, physics) as well as modern issues facing marine and coastal environments, e.g., climate change, pollution, carbon cycling, conservation. The major requires field experience, independent research or internship, and concludes with a capstone course featuring current research in marine science. These integrative experiences will require students to synthesize the disciplinary topics that they have encountered through this degree program. The mastery achieved provides a strong foundation for future careers in academic science, government, policy, and the private sector.

### Internships and Career Alternatives

A B.S. in Marine and Coastal Science will provide students with knowledge and practical experience needed to pursue careers in marine science (government, private sector, research) and/or advanced degree programs. The major program includes both research and internship experiences to help prepare students for these career paths.

### Advising

Students majoring in Marine and Coastal Science are strongly encouraged to meet with their faculty adviser (assigned, based upon Focus Area choice) once per year to review their coursework plans. Staff advising is available through the Department of Earth and Planetary Sciences, and student peer advisers are available. Faculty advisers include: Tessa Hill (College of Letters and Science), Anne Todgham and John Largier (College of Agricultural and Environmental Sciences), and Brian Gaylord (College of Biological Sciences). The student’s chosen Focus Area will determine the college into which the student is admitted, the college where the degree is awarded, and the associated department:

- **Coastal Environmental Processes,** College of Agricultural and Environmental Sciences; Environmental Science & Policy
- **Marine Ecology & Organismal Biology,** College of Biological Sciences; Evolution & Ecology
- **Marine Environmental Chemistry,** College of Agricultural and Environmental Sciences; Environmental Toxicology
- **Oceans and the Earth System,** College of Letters and Science; Earth and Planetary Sciences

### B.S. Major Requirements:

* denotes courses only offered at Bodega Marine Laboratory.

<table>
<thead>
<tr>
<th>Preparatory Subject Matter</th>
<th>51-63</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Sciences 2A-2B</td>
<td>15</td>
</tr>
</tbody>
</table>
the carbon cycle, and contaminant fate and transport.

The focus area requirement can be fulfilled using: Chemistry 100, Environmental Toxicology 101, 102A, 120, 126, Environmental Science & Policy 110, 111, Evolution and Ecology 140L, Geology 145L, 145L, Hydrology 140, 140L, Wildlife, Fish and Conservation Biology 153

* Some courses may require additional prerequisites, such as: Chemistry 88, Geology 50, 60, Hydrology 145, Civil and Environmental Engineering 144

Oceans and the Earth System. A study of our changing oceans in the context of earth system history, including climate change, paleoceanography, ecological shifts, conservation, and marine policy.


* Some courses may require additional prerequisites, such as: Atmospheric Sciences 60, Chemistry 84A, Geology 1, Economics 1A, Hydrology 145, Environmental Resources 100, International Relations 1

Breadth Requirement complete one course from each category below that is not the student’s chosen Focus Area, totaling at least 8 units.

Coastal Environmental Processes. The breadth requirement can be fulfilled using the following courses: Atmospheric Sciences 128, Environmental Science & Policy 112, *155, Geology 182, 183L, Wildlife, Fish & Conservation Biology *157

Marine Ecology and Organismal Biology.

The breadth requirement can be fulfilled using the following courses: Geology 109L, Evolution and Ecology 140L, Geology 145L, Geology 145L, Hydrology 140, 140L, Wildlife, Fish and Conservation Biology 154

* Some courses may require additional prerequisites, such as: Atmospheric Sciences 120, Math 210, Chemistry 88, Environmental Science and Policy 100, Hydrology 103N, Hydrology 141, Hydrology 141, Engineering, Civil and Environmental 144.

Marine Ecology and Organismal Biology. Focus on physiological adaptations to the marine environment, and the biology of marine species from the molecular to population levels. Courses include emphasis on the ecological processes that determine the distribution and abundance of marine organisms, and the patterns and mechanisms of evolution in the ocean.

Marine Environmental Chemistry, Emphasis on major themes in marine chemistry, geochemistry.

Key: ACH=American Cultures; DD=Domestic Diversity; OL= Oral Skills; QL=Quantitative; SL=Scientific; VS=Visual; WC=World Cultures; WE=Writing Experience; Pre-Fall 2011 General Education (GE): ArHum=Arts and Humanities; ScEng=Science and Engineering; SociSci=Social Sciences; Div=Domestic Diversity; Wr=Writing Experience Quarter Offered: F=Fall, W=Winter, S=Spring, Su=Summer; 2017/2018 offering in parentheses

Total Units for the Major (by chosen Focus Area):
- Coastal Environmental Processes...97-119
- Marine Ecology & Organismal Biology
- Marine Environmental Chemistry...97-119
- Oceans and the Earth System...97-119

Master of Education (M.Ed.) (A Graduate Group)
The Master of Education (M.Ed.) program is no longer admitting students; admissions are suspended.

Master of Professional Accountancy (A Graduate Group)

Robert Yetman, Ph.D., Chairperson of the Group

Group Office. Gallagher Hall 530-752-7658; Fax 530-754-9355; http://gsm.ucdavis.edu/master-professional-accountancy

Faculty
- Shannon W. Anderson, Ph.D., Professor (Graduate School of Management)
- Brad Barber, Ph.D., Professor (Graduate School of Management)
- Joseph Chen, Ph.D., Associate Professor (Graduate School of Management)
- Roger Edelen, Ph.D., Associate Professor (Graduate School of Management)
- Paul A. Griffin, Ph.D., Professor (Graduate School of Management)
- Robert Marquez, Ph.D., Professor (Graduate School of Management)
- Hallia A. Skalle, Ph.D., Professor (Graduate School of Management)
- Victor Stango, Ph.D., Associate Professor (Graduate School of Management)
- Ayako Yasuda, Ph.D., Associate Professor (Graduate School of Management)
- Michelle Yetman, Ph.D., Associate Professor (Graduate School of Management)
- Paul Wong, Ph.D., Assistant Professor (Graduate School of Management)

Affiliated Faculty
- William Snyder, M.B.A., C.P.A., Executive Director (Graduate School of Management)

Graduate Adviser. Contact the Group office.

Courses in Master of Professional Accountancy (ACC)

Graduate

201. Financial Reporting (4)
Lecture—4 hours. Restricted to Master of Professional Accountancy graduate students. Course covers the fundamentals of accounting and reporting economic events and transactions. Emphasizes the preparation of balance sheets, income statements, statements of cash flow, and statements of stockholders’ equity. Not open for credit to students who have taken any Management 200A. F (F. Yetman

Lecture—4 hours. Prerequisite: course 201 or Management 200A. Restricted to students enrolled in the Master of Professional Accountancy degree program. Focuses on the preparation of complex financial statements. Topics include accounting.