Master of Science in Earth and Environmental Sciences
Degree Requirements (49 units)

Professional Science Masters (PSM) Option (49 units)
Core Courses (41 units)
1. CHEM 610. Advanced Environmental Chemistry (5)
2. GEOG 470. Hydrology and Water Resources (4)
3. GEOL 610. Environmental Geosciences (5)
4. Two units chosen from:
   CHEM 690. Graduate Seminar in Environmental Sciences (2)
   GEOL 690. Graduate Seminar in Environmental Sciences (2)
5. HSCI 612. Public Health Statistics (4)
7. Four units chosen from:
   ECON 360. Economics of the Environment (4)
   IST 309. Information Systems and Technology (4)
   IST 474. Advanced Database Management and Information Assurance (4)
8. A minimum of nine units, including one internship and one graduate study, chosen from:
   CHEM 575. Internship in Chemistry (4-5)
   CHEM 695. Supervised Graduate Study in Chemistry (4-5)
   GEOL 575. Internship in Geology (4-5)
   GEOL 695. Supervised Graduate Study in Geology (4-5)
9. Choose one of the following courses:
   CHEM 696. Graduate Project (4)
   CHEM 699. Graduate Thesis (4)
   GEOL 696. Graduate Project (4)
   GEOL 699. Graduate Thesis (4)

Elective Courses (8 units)
1. A minimum of 8 units; at least one course must be graduate level.
   Undergraduate Electives:
   (Some of these elective courses have prerequisites that must be satisfied before the course
   can be taken)
   BIOL 320. Microorganisms (6)
   BIOL 349. Biology of Ecosystems (5)
   BIOL 450. Ecology (5)
   BIOL 455. Marine Biology and Ecology (5)
   CHEM 345. Modern Quantitative Analysis (5)
   GEOG 306. Remote Sensing of Environment (4)
   GEOG 308. Advanced Geographic Information Systems (5)
   GEOG 350. Conservation and Natural Resources (4)
   GEOG 402. Geographic Information Systems Applications (5)
   GEOL 375. Groundwater Hydrology (4)
   GEOL 376. Field Methods in Hydrology (4)
   GEOL 430. Engineering Geology (5)
   HSCI 380. Toxicology (4)
   HSCI 478. Environmental Health Management (4)
MGMT 335. Business and Society (4)
PA 315. Government-Business Relations (4)

Graduate Electives:
- CHEM 501. Advanced Laboratory Techniques (1-2)
- CHEM 545. Instrumental Analysis (6)
- CHEM 691. Graduate Independent Study (2-4)
- CHEM 697. Advanced Internship (4)
- ECON 545. Economics of Water Resources (4)
- GEOG 650. Environmental Issues of Land Management (4)
- GEOL 510. Scientific Issues in Surface and Groundwater Management (4)
- GEOL 550. Earth Resources (5)
- GEOL 551. Neotectonics and Seismic Hazard Analysis (5)
- GEOL 620. Digital Mapping and GIS for Scientists (4)
- GEOL 621. Graduate Geologic Mapping (4)
- GEOL 630. Environmental Geochemistry (4)
- GEOL 635. Low-temperature Geochemistry (4)
- GEOL 691. Graduate Independent Study (2-4)
- GEOL 697. Advanced Internship (4)
- HSCI 557. Hazardous Materials Control (4)
- HSCI 558. Management of Water Quality (4)
- HSCI 651. Air Quality Management (4)
- IST 609. Information Systems and Technology Management (4)
- PA 672. Administrative Regulation (4)