Coordinating Advisor: Professor Matthew Saltzman, saltzman.11@osu.edu

The 12-13.5 credit hour Marine Science Certificate will provide students with a competitive advantage in pursuing careers in marine science in the private and public sectors or pursuing entrance into a graduate degree program in marine science. The certificate is designed to enhance both critical thinking and the technical skills in marine science.

**Required core course (3 credits):**
- EARTHSC 5206: Advanced Oceanography (3)

**Elective courses (9 credits):**
In addition, students will select from the courses listed below.
- EARTHSC 4450: Water, Ice and Energy in the Earth System (3)
- EARTHSC 5622: Stable Isotope Biogeochemistry (3)
- EARTHSC 5602.02: Carbonate Depositional Systems (3)
- EARTHSC 5780: Reflection Seismology (4)
- GEOG 5900: Climatology (3)
- EEOB 5410: Ocean Ecology (1.5)
- EEOB 5430: Fish Ecology (3)
- EEOB 4230: Focused study on ecology and evolution of invertebrates (2)
- ENR 5614: Marine and aquatic education ()

**Of these electives, no more than one of:**
- GEOG 5210: Fundamentals of Geographic Information Systems (3)
- EARTHSC 5310: Remote Sensing in the Earth Sciences (3)
- CIVILEN 5001: Introduction to Geographic Information Systems (4)

**Certificate Completion:** If the certificate is not complete on the DAR, the student must consult with the College of Arts and Sciences Coordinating Advisor.

**Filing the certificate program form:** The certificate program form must be filed at least by the time the graduation application is submitted to a college/school counselor.

**Changing the certificate:** Once the certificate program is filed in the college office, any changes must be approved by the College of Arts and Sciences Coordinating Advisor.

**School of Earth Sciences undergraduate advisor:**
Dr. Karen Royce, royce.6@osu.edu

**School of Earth Sciences graduate advisor:**
Professor Michael Durand, durand.8@osu.edu

**Marine Geology Certificate program guidelines**

The following guidelines govern the Marine Geology Certificate.

**Credit hours required:** 12-13.5 credit hours.

**Overlap with a major**
- The certificate must be in a different subject than the major.
- Max 50% overlap with degree program (i.e. major, minor, other certificate, or GE)

**Grades required**
- Minimum C- for a course to be listed on the certificate.
- Minimum 2.00 cumulative point-hour ratio required for the certificate.

**X193 credits:** Not permitted.