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 (1)

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)

**Marine Geology Certificate program guidelines**

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

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

**X193 credits:** Not permitted.

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

**Consult with Coordinating Advisor**
- For filing deadlines.
- For changes or exceptions to a certificate plan.

**Undergraduate certificate program:**
- Coordinating Advisor: Professor Ashley Griffith, 381 Mendenhall Labs, Columbus, OH 43210; griffith.233@osu.edu
- Minimum C- for a course to be listed on the certificate.
- Minimum 2.00 cumulative point-hour ratio required for the certificate.

**Graduate certificate program:**
- Coordinating Advisor: Professor Steve Lower, 084 Orton Hall, lower.9@osu.edu; 614-292-1571
- Course selections must be numbered 4000+ outside the student’s home unit and 5000+ within the home unit.
- Minimum 3.00 cumulative point-hour ratio required for the certificate
- Minimum C- for a course to be listed on the certificate.