

**COLLEGE OF ARTS AND SCIENCES  
THE OHIO STATE UNIVERSITY**

**TYPE 1B & 3 MARINE SCIENCE CERTIFICATE (MARINE-CT)**

**Student:** \_\_\_\_\_

Other degree programs (Majors, minors, certificate): \_\_\_\_\_

Course	Credit Hours	Semester Completed	Overlap with other major, minor, other certificate program or GE?
<i>Required</i>			
EARTHSC 5206	3		
<i>Electives (minimum 9 credit hours)</i>			

Total Credit hours: \_\_\_\_\_ (minimum 12)

Credits double counted with major, minor, other certificate program, or GE:  
\_\_\_\_\_ (maximum 50%)

**Advisor's signature:** \_\_\_\_\_

**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)