

FRESHWATER AND MARINE SCIENCES, CERTIFICATE

REQUIREMENTS

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The certificate requires a minimum of 15 credits. Students must complete distinct courses in each requirement; they may not reuse courses to meet multiple requirements.

| Code | Title | Credits |
|------------------------------------------------------------------------------|------------------------------------------------------------|------------|
| Core courses: Complete at least 5 credits from this list of courses. | | 5 |
| ZOOLOGY 304 | Marine Biology | |
| ZOOLOGY/ ENVIR ST 315 | Limnology-Conservation of Aquatic Resources | |
| ZOOLOGY 316 | Laboratory for Limnology-Conservation of Aquatic Resources | |
| ATM OCN/ GEOSCI 105 | Survey of Oceanography | |
| CIV ENGR 311 | Hydroscience | |
| SOIL SCI/ ATM OCN/ BSE 132 | Water and People | |
| Freshwater: Complete one course | | 2-3 |
| ZOOLOGY/ ENVIR ST 315 | Limnology-Conservation of Aquatic Resources | |
| ZOOLOGY 316 | Laboratory for Limnology-Conservation of Aquatic Resources | |
| ATM OCN/BSE/ SOIL SCI 132 | Water and People | |
| BOTANY 330 | Algae | |
| CIV ENGR 311 | Hydroscience | |
| CIV ENGR 415 | Hydrology | |
| CIV ENGR 416 | Water Resources Systems Analysis | |
| CIV ENGR 516 | Hydrologic Data Analysis | |
| LAND ARC/ ENVIR ST 361 | Wetlands Ecology | |
| Marine: Complete one course | | 2-4 |
| ZOOLOGY 304 | Marine Biology | |
| ZOOLOGY 320 | Field Marine Biology | |
| ATM OCN/ GEOSCI 105 | Survey of Oceanography | |
| Freshwater and Marine: Courses count towards either requirement area. | | |
| ZOOLOGY 303 | Aquatic Invertebrate Biology | |
| ZOOLOGY/ ENVIR ST 510 | Ecology of Fishes | |
| ZOOLOGY/ ENVIR ST 511 | Ecology of Fishes Lab | |

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|--------------|----------------------------------------|
| CIV ENGR 514 | Coastal Engineering |
| ATM OCN 310 | Dynamics of the Atmosphere and Ocean I |

Electives to reach 15 credits, any Freshwater or Marine course beyond the minimum requirements counts as electives. **3-6**

Total Credits **15**

RESIDENCE AND QUALITY OF WORK

- Minimum 2.000 GPA on all certificate courses
- At least 8 credits must be taken in residence at UW-Madison

CERTIFICATE COMPLETION REQUIREMENT

This undergraduate certificate must be completed concurrently with the student's undergraduate degree. Students cannot delay degree completion to complete the certificate.