

**Section 1. Proposed Course Outline** (A general statement of course content that informs class syllabus construction. Once approved, all sections of a given course must include this content, no matter which instructor teaches the course, or the mode of delivery. Divisions must include this new course outline in the Divisional Course Outline binder as required by COPPs.)

Course Number: **ENSC 183** Full Course Title for print catalog: **Aquatic Environment**

Abbreviated Course Title for Banner: **Aquatic Environment** (30 character limit)

Prerequisites: none

Co-requisites: none

Grade Option:  Graded (with P/NP option)   Pass/No Pass only

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| --- | --- | --- | --- |
| **Number/Type Credits** | **Term Minimum Contact** | **Term Maximum Contact** | **11-Week Term Contact** |
| 2 Lecture | 20 hours (lecture credits x 10) | 24 hours (lecture credits x 12) | 22 hours (lecture credits x 11) |
| 2 Lec/Lab | 40 hours (lec-lab credits x 20) | 48 hours (lec-lab credits x 24) | 44 hours (lec-lab credits x 22) |
| Lab | hours (lab credits x 30) | hours (lab credits x 36) | hours (lab credits x 33) |
| 4 **Total credits (sum)** | 60 **Total hours (sum)** | 72 **Total hours (sum)** | 66 **Total hours (sum)** |

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| --- | --- | --- | --- |
| **Course Description (300 character limit):** changes highlighted | | | |
| Students learn about freshwater and marine systems including their biology, geology, chemistry, circulation, climate and interactions with humans. Topics and labs include aquatic biodiversity, streams, water pollution, ocean currents, fisheries, sustaining aquatic systems and water resources. Take ENSC 181-183 in any order. | | | |
| **Course Outcomes and Proficiencies** | | | **Assessments Planned** |
| What will the student ***know*** or ***be able to do*** at the end of the course?  What ***attitudes*** related to the subject will the student hold? | | What evidence will demonstrate that students have achieved course outcomes? (assessment tools may include departmental tests, written products, portfolios, juried performances, quizzes and exams, or alternative assessments such as qualitative studies, capstone projects, external reviewers, etc.) | |
| **Upon successful completion of this course, the student will:** | **How each outcome will be assessed:** | | |
| Evaluate and perform scientific procedures and methods. | Lab activity, observation, experiments, field trips and outdoor exploration, case studies | | |
| Demonstrate and describe key chemical and physical properties of water. | Lab experiments, experiment write-ups, quizzes, and/or exams | | |
| Evaluate major environmental threats to, mitigation of and adaptation to change in freshwater and marine systems related to pollution, fisheries collapse, water shortages, and/or effects of climate change. Explore social justice issues associated with these problems. | Lab activities, case studies, collaborative problem-solving, role playing, journal writing, quizzes, and/or exams | | |
| Research the global importance of aquatic biodiversity and ongoing conservation efforts. | Lab activities, case studies, collaborative problem-solving, individual environmental projects, quizzes, and/or exams | | |
| Develop hypotheses and collect field data to study physical parameters including dissolved oxygen, nutrients, pH, and turbidity, and to study life in aquatic ecosystems. | Collaborative lab project following scientific method using established protocols, field-based water sampling | | |
| Demonstrate critical thinking skills by gathering and assessing information about current environmental issues and sustainability related to aquatic ecosystems and water resources conservation. | Lab activities, case studies, online data-mining activities, quizzes, and/or exams | | |

**Course Content by Major Topics**What topics will be presented? What are the main activities of the course? What are the central themes?

(See sample at <http://www.lanecc.edu/copps>

**Topics:**

Scientific methodds

Scientific methods, observation, measurement, data management and processing, graphs, communicating, experimentation, replication, control, hypothesizing, testing hypotheses, communicating, modeling, theorizing, communicating

Water

Chemical and Physical Properties of Water, properties of groundwater and soil water, atmosphere, biosphere, lithosphere, and cryosphere water cycling

Freshwater

Freshwater chemistry and ecology; watershed geometry and dynamics, stream flow, flooding; lakes, eutrophication, groundwater; map skills; aquatic ecosystem comparison; freshwater organisms and nutrient cycling; water resources; field data collection and analysis, effects of climate change on watersheds

Environmental issues with freshwater

Water Use and Management

Water Pollution and cleanup

Effects of climate change on freshwater environments

Transition from freshwater to saltwater (estuaries)

Estuary dynamics, biodiversity, ecosystem collapse, and pollution

Oceans

Physical processes of the oceans, temperature variation

Ocean currents, El Niño, La Niña

Chemistry of the Oceans: pH, salinity, and solutes

Marine productivity and biodiversity: photosynthesis and chemosynthesis, zonation of coastal waters; open ocean, ocean deserts, vent communities

Ocean pollution, dead zones, ocean acidification, and long-term threats

Effects of climate change on oceans

Marine conservation, empty oceans, fisheries, fishery management

Economic and social issues of ocean pollution and fisheries depletion

**Section 2. Proposal Information**

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| --- | --- | --- |
| **Course Developer:** | **Type of Proposal** | **Type of Course:** |
| Claudia Owen | New course | Lower Division Collegiate (transfer) |
| Date: 1/14/2016 | Currently 199 or 299 | Professional/Technical (required or elective) |
| Catalog year to take effect: | Experimental Course | Developmental, numbered below 100 |
| 2015-2016\_\_\_ | 199 Experimental Course |  |
| 2016-2017\_x\_\_ | 299 Experimental Course |  |
|  | Revised course (If increasing credits, use credit change form) | |
|  | Reactivated course with no change | |
|  | Reactivated course with changes | |

**Rationale:**

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| --- |
| How does this proposal further the goals of the program or department? |
| Reason for changing course number to ENSC 183. The ENVS prefix is used for Environmental Studies programs in Oregon and is therefore confusing since this course is an Environmental Science course. The ENSC prefix is used at OSU. Although ESCI is used for Environmental Science at UO, the same prefix is used for Earth Science elsewhere, so ENSC seems preferable. We are also changing the format of this class to align with other ENSC classes, which now consist of lecture-labs instead of distinct lecture and lab periods. |
| What assessment evidence supports this proposal? |
| People commonly ask about the course as if it is an environmental studies course instead of environmental science because of the ENVS prefix. |
| How do you know there is a demand for this course? |
| It has been taught for many years and is usually full. |

**Section 3. Curriculum Equity** [**http://www.lanecc.edu/copps**](http://www.lanecc.edu/copps)

**To promote an environment where all learners are encouraged to develop their full potential, this course will support Lane’s Curriculum Equity policy in the following way(s):**

* This course includes culturally and ethnically diverse water resources and fisheries practices.
* It discusses environmental justice, especially in areas where water pollution, and environmental degradation burden underprivileged peoples and individuals more out of proportion to privileged groups.
* It portrays the contributions of women and men from diverse cultural and ethnic backgrounds to the field of environmental science and in working toward sustainability.
* It illustrates the valuable role of women in improving environmental conditions when they have seized or were given the opportunity.
* It uses gendered examples equally when illustrating theories and concepts.

It emphasizes the idea that our aquatic environments are needed and must be preserved for everyone regardless of race, gender, age, religion, disability, national origin, marital status, or class background, including those people who do not exist yet--to and beyond the 7th generation and that environmental degradation affects us all now and into the future.

**Section 4. For revised courses only: PREVIOUS Catalog/Course Information:**

Course Number: **ENVS 183** Course Title in Banner: **Aquatic Environment** (30 characters maximum)

Full Course Title in print catalog: Aquatic Environment

Prerequisites: none

Co-requisites: none

Grade Option:  Graded (with P/NP option)  Pass/No Pass only

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| --- | --- | --- | --- |
| **Number/Type Credits** | **Term Minimum Contact** | **Term Maximum Contact** | **11-Week Term Contact** |
| 3 Lecture | 30 hours (lecture credits x 10) | 36 hours (lecture credits x 12) | 33 hours (lecture credits x 11) |
| Lec/Lab | hours (lec-lab credits x 20) | hours (lec-lab credits x 24) | hours (lec-lab credits x 22) |
| 1 Lab | 30 hours (lab credits x 30) | 36 hours (lab credits x 36) | 33 hours (lab credits x 33) |
| 4 **Total credits (sum)** | 60 **Total hours (sum)** | 72 **Total hours (sum)** | 66 **Total hours (sum)** |

**Course Description:**

Students learn about freshwater and marine systems including their biology, geology, chemistry, circulation, climate and interactions with humans. Topics include aquatic biodiversity, streams, water pollution, ocean currents, fisheries, sustaining aquatic systems and water resources. Take ENVS 181-183 in any order.

What will change? Course Number Title Course Description Credit hours Contact hours

**Section 5. Support Courses (New Professional/Technical course proposals must complete.)**

Professional/Technical courses are tracked within programs for purposes of Carl Perkins funding and budgetary planning. Indicate all degree or certificate programs for which this course will be required.

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| --- | --- |
| Program | Division |
|  |  |
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**Section 6. Overlap Courses (New course proposals must complete.)**

While overlap of course materials is not necessarily a flaw, duplication of course materials may lead to inefficient use of college resources. If there is overlap, the faculty of overlapping courses must agree on the extent of overlap and attach a rationale explaining its necessity if it is more then 10%.

Indicate all departments/courses that this course may overlap. Division Dean of existing course enters one of two options at right. Note: N/A is not an option.

Options:

1. No overlap.

2. Approved: overlap is acceptable. Rationale attached.

3. Disapproved: reasons attached.

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| --- | --- | --- | --- | --- | --- |
| Division | Course Number / Title | % Overlap | Option | Division Dean of existing course (Signature required for all options) | Date |
|  |  |  |  |  |  |
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**Section 7. Qualification to fulfill degree requirements** (complete all relevant forms, available at <http://www.lanecc.edu/currsched/curriculum-forms> and send to Curriculum/Scheduling for the Degree Requirements Review Committee):

Form(s) applying for the following degree requirement status have been attached. (Only check this box when forms have been completed and attached.)

**AAOT, ASOT-Bus, OTM:**

Arts & Letters

Social Sciences

Science /Computer Science (this course already has this designation)

Mathematics

Cultural Literacy Option

(please submit with course syllabus to Michael Samano in Social Science)

**All degrees:**

Health/Wellness/Fitness

**AAS, 1-year and 2-year certificates:**

Human Relations

**Optional designation: (applying for)**

Sustainability status

**Section 8. Library Impact Statement**

Under accreditation standards, Library consultation is essential for new programs, new courses and for substantively revised courses when the revisions entail any change in library use.

**What assignments will require the use of library and information resources?**

no changes to what was previously approved for ENVS 183

Each academic area has a Liaison Librarian <http://www.lanecc.edu/library/services/liaison.htm>. Contact the designated librarian to discuss the library needs of your course. Please allow the librarian at least one week to assess library resources.

**To be completed by Liaison Librarian:**

Library resources are adequate to support this proposal.

Additional resources are needed but can be obtained from current funds.

Significant additional Library funds/resources are required to support this proposal.

Liaison Librarian Date

**Section 9. Divisional Approval** (To be completed by Division Chair and Administrative Assistant)

**Human, Physical, and Financial Resources:**

Additional instructional costs (staff, materials, services or facilities) will be incurred to offer this course. Source of funding:

No additional instructional resources (staff, materials, services or facilities) are needed to offer this course.  
Explain:

**Required Certifications:**

We have developed minimum course certification standards according to the COPPs procedure “Instructor Qualifications: Credit,” to be filed with ASA upon course approval.

We have completed faculty certification form(s) for faculty qualified to teach this course, to be filed with ASA and Human Resources upon course approval.

Administrative Assistant/Coordinator Date

**Fees:**

We have completed fee rationale and fee request forms to be submitted to ASA upon course approval, in compliance with the COPPs procedure, “Fees: Special”

No special fees will be required for this course.

**Divisional Recommendation:**

The Academic Dean and Administrative Assistant have reviewed this course proposal and kept a copy for divisional files.

Faculty review of this course was completed within the division on 1/14/2016(date).

Pass  Do Not Pass

02/08/2016

Academic Dean Date

**Section 10. College Approval**

     

Curriculum Committee Chair Date Executive Dean for Academic Affairs Date

Curriculum Approval Committee hearing:       \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date Vice President for Academic & Date

Student Affairs