LIVE AND STUDY AT THE OREGON COAST
Get hands-on, in-the-field experience as you complete your degree. In-state tuition for everyone. *Student housing scholarships are available (applications due May 1st).*
Registration opens April 12, 2020

COURSES

**JUNE 22 - JULY 17 (SESSION 2)**
- Biology and Conservation of Marine Mammals
  FW 302, 4 cr., with weekend lab course in field methods FW 301, 1 cr.
- Pacific Northwest Coastal Ecosystems
  BI 353, 4 cr.
- **New offering!** Coastal and Estuarine Oceanography
  OC 433/533, 3 cr.
- Biological Oceanography
  OC 440, 4 cr.
- Photographic Field Studies
  ART 399/ART 499, 4 cr.

**JULY 20-AUGUST 14 (SESSION 4)**
- **New course!** Phycology
  BOT 417X/517X, 4 cr.
- Ecology of Marine and Estuarine Birds
  FW 331, 4 cr.
- Marine and Estuarine Invertebrate Zoology
  Z 461/561, 4 cr.
- Marine Conservation Biology
  FW 464/564, 3 cr.

**AUGUST 17-SEPTEMBER 4 (SESSION 5)**
- Aquaculture Laboratory
  FW 498/598, 3 cr.

Available at OSU Hatfield all Summer Sessions:
Research Credit (401) and Internship Credit (410) June 22 to September 7, 2020

For more information
Hatfield Marine Science Center Academics: https://beav.es/Zza
Contact HMSCacademic@oregonstate.edu or OSUOceanAdvising@oregonstate.edu
COASTAL AND ESTUARINE OCEANOGRAPHY

OC 433 (CRN 74655)/ OC 533 (CRN 74656), SESSION 2, 3 CREDITS, T/TH 2-5:20PM*


One year of college physics and one year of calculus is recommended.

*Features a field trip aboard the R/V Elakha on the Yaquina Bay estuary on Saturday, July 11, 2020.

Instructor: Jack Barth, Executive Director, Marine Studies Initiative, and Professor, College of Earth, Ocean, and Atmospheric Sciences

This is a session 2 summer course (6-22-2020 to 7-17-2020). Summer session information can be found at beav.es/4i3

For information about Disability Access Services, please visit ds.oregonstate.edu

Contact: HMSCAcademic@oregonstate.edu or OSUOceanAdvising@oregonstate.edu

Additional course information: hmsc.oregonstate.edu/academics
Course will focus on learning “hands on” techniques for rearing oyster larvae, salmonids, microalgae as well as water quality measurements. Field trips to local shellfish and fish hatcheries will provide additional learning opportunities. For more information about fisheries and wildlife courses at Hatfield, visit [beav.es/4w6](beav.es/4w6)

*First week online; second and third week in person 8:30 am to 5:00 pm M/T/W/TH/F at Hatfield.

**Prerequisites:** One year of introductory biology and chemistry courses.

**Instructors:** Dr. Chris Langdon, Professor of Fisheries, and Dr. Matt Hawkyard, Post doc Research Associate.

This is a session 5 summer course (8-17-2020 to 9-04-2020).

For information about Disability Access Services, please visit: [ds.oregonstate.edu](ds.oregonstate.edu)
This course is an introduction to various ecosystems found on the Pacific Northwest coast. We will explore the geologic and oceanographic processes that built and shape the distribution, structure, and dynamics of physical features, species, and communities in each local ecosystem. The course will meet nine times (one Saturday) and consist of six field trips and two labs in addition to lectures. In 2020 we will explore: estuarine mud flats and eelgrass beds, estuarine subtidal, salt marshes, sand dunes, rocky intertidal, rocky subtidal, sandy subtidal, and coastal forests. Within each ecosystem we will identify the major structuring organisms (vegetation type or structure-forming invertebrate) and the ecosystem functions and services they provide. We will investigate various positive and negative species interactions within each ecosystem. Additionally, we will discuss how climate change and anthropogenic activities are impacting the structure and functioning of these systems. Team projects will present management strategies and/or personal actions that can be taken or are proposed to mitigate climate or anthropogenic impacts on these various ecosystems. The Saturday meeting will be a field trip on the Research Vessel Elakha in Yaquina Bay. Other field trips will consist of walks/hikes of up to three miles.

**Prerequisite:** BI-21x

**Additional costs:** $30 field trip fee

**Instructor:** Sarah Henkel

This is a session 2 summer course (6-22-2020 to 7-17-2020). Summer session information can be found at beav.es/4i3

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An examination of the biology of whales, pinnipeds, and other marine mammals, including general adaptations to a marine existence; systematics and biogeography; reproduction; diving physiology; communication and echolocation; feeding and migratory behavior; and marine mammal/human interactions; including conservation issues. Photogrammetric techniques from drone imagery will be used to assess body condition. 1-3 field trips weekly, 1 boat trip. Taught at Hatfield Marine Science Center OR online through Ecampus.

**Prerequisite:** Biology series must be complete

**Instructor:** Renee Albertson, Marine Mammal Professor, Hatfield Marine Science Center

This is a session 2 summer course (6-22-2020 to 7-17-2020). Summer session information can be found at [beav.es/4i3](http://beav.es/4i3)

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A laboratory and hands-on experience covering field techniques, computer software for data organization and analyses, and understanding the practical management conservation application for students who are taking or have taken FW 302. Collect data from boat-based and shore-based surveys of harbor seals and gray whales. Analyze photo-identification data and apply statistical methods for conservation considerations. Course is run through Ecampus, additional time required online for course completion.

Field trips both Saturday and Sunday, course fees include overnight stay at Hatfield.

Prerequisite: FW 302 is prerequisite, but may take concurrently

Instructor: Renee Albertson, Marine Mammal Professor, Hatfield Marine Science Center

This is a weekend course (6-27-2020 to 6-28-2020) during summer session 2 (6-22-2020 to 7-17-2020). More summer session information can be found at beav.es/4i3

For information about Disability Access Services, please visit ds.oregonstate.edu