

BI 474/574: MARINE ECOLOGY

8 quarter credits

Instructor:

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Course description:

BI 474/574 will be an ecological survey of (1) major marine habitats, (2) structurally or functionally important taxa, (3) ecological patterns and processes, as well as (4) classical and contemporary literature. Areas of emphasis will be Oregon rocky shore biota, soft-sediment communities, and planktonic assemblages.

The course will combine lectures with quantitative field and laboratory investigations. Students will collect data to test hypotheses and will learn techniques of data analysis, graphing, and report writing. Group and individual research projects will be undertaken.

This intensive field course is designed for upper-division undergraduates and graduate students in biological fields. Because of the timing of low tides, early morning field trips will be scheduled on several days. Lecture and lab times will be flexible but will be consistent with the 8-credit course designation.

General topics covered:

- Responses of marine organisms to physical factors such as tides, wave exposure, currents, salinity, light, and temperature
- Interspecific interactions including competition, predation, mutualism, facilitation, disturbance, and succession
- Structure of marine communities
- Factors influencing the distribution of the species
- Reproduction, dispersal, and larval ecology
- Habitats and adaptations of marine organisms

Required materials:

- Waterproof field notebook (available at OIMB)
- Memory stick for transferring digital computer material
- Rubber boots (knee-high) or hip waders (please, no chest waders)
- Rain gear (coats & pants)
- Loose-leaf notebook or binder with lined paper

