

MEES - MARINE-ESTUARINE-ENVIRONMENTAL SCIENCES

MEES412 Applied Bayesian Statistics (2 Credits)

This seminar will explore the practices of Bayesian network and graphical model to high dimensional inter-disciplinary environmental data. Through hands-on experience and real studies from Bayesian perspectives, students will learn the basics of evaluating Bayesian network and graphical analyses, and interpreting and communicating the results. Case studies involving ecological and environmental science will be used to illustrate Bayesian analyses. The statistical programming language R and software packages such as OpenBUGS, JAGS, and STAN will be used in illustrating Bayesian models.

Jointly offered with: MEES612.

Credit Only Granted for: MEES608R, MEES612, or MEES412.

MEES432 Physiological Ecology of Animals (3 Credits)

An examination of the influence of environmental constraints on animal function and energetic efficiency in the context of abiotic conditions in the habitats occupied by individuals.

Prerequisite: BSCI361; or students who have taken courses with comparable content may contact the department; or permission of instructor.

Credit Only Granted for: MEES498E, MEES698E, MEES432, or MEES632.

Formerly: MEES498E.

MEES484 Marine Microbial Ecology (3 Credits)

The primary goal of this course is to become familiar with the diversity, ecology, and biogeochemical roles of Bacteria, Archaea, microbial Eukaryotes, viruses, and fungi in the marine environment. The course will also cover the latest discoveries in molecular microbial ecology. Each main topic will begin with a lecture and will be followed by a paper discussion. For the paper discussions, each student will present selected papers specified in the syllabus (or by consensus with the course instructors). Students will also participate in class discussions.

Jointly offered with: MEES684.

Credit Only Granted for: MEES484 or MEES684.

MEES498 Topics in Marine-Estuarine-Environmental Sciences (1-4 Credits)

Lecture and/or laboratory series organized to study a selected area of marine-estuarine-environmental sciences not otherwise considered in formal courses.