

**Ecology and Management of Marine Fishes**  
**FW 520**

**Credit hours:** 3

**Term offered:** Fall at HMSC, alternate years, 07, 09.

**Number of days meeting and hours/lab hours:** 2 days/week, 80 minutes, broadcast one day per week to campus

**Instructor:** Selina Heppell

**Course objectives:** FW 520 is a lecture and lab course that applies basic ecological principles to fisheries management to promote sustainable fisheries and conservation. The course covers a range of marine ecological processes, fish life history and population dynamics, and community and ecosystem responses to fishing and natural variability.

The course objectives are to enable students to:

1. Understand and describe the ecological processes that influence marine fish recruitment and population dynamics
2. Critically evaluate and discuss primary literature papers on experimental ecology *and* marine finfish resource management
3. Recognize and evaluate the validity of different viewpoints with regard to how ecological processes should be considered in fisheries management
4. Develop, conduct, evaluate and orally present a laboratory experiment
5. Apply their knowledge of marine fish ecology and management alternatives through the production and critical review of research proposals

**Course content:** Lectures, group discussion of primary literature, and weekly lab exercises or field trips. Graduate students enrolled for credit are required to write a National Science Foundation-style proposal on the fish ecology project of their choice. These proposals are 15-20 pages in length, double spaced, and include a cover page, a brief statement of purpose, background, objectives, methods, anticipated results, rationale and bibliography. Students provide written evaluations of each others' proposals and debate which proposals are "best" and rank them for funding at a mock panel meeting on the last day of class.

**Prerequisites:** Ecology; population dynamics recommended

**Text:** none (primary literature readings in classical ecology and current fisheries ecology)

**Term papers:** research proposals and evaluations

**Testing:** none

**Students for whom the course is intended:** students in natural sciences and natural resource fields