

# Fishery Resources

Kerry Paul Reese, Dept. Head, Dept. of Fish and Wildlife Resources (104 CNR Bldg. 83844-1136; phone 208/885-6434).

**Prerequisite:** Courses in this subject field that are numbered above 299 are not open to undergraduate students on academic probation.

## **Fish 102 The Fish and Wildlife Professions (1 cr)**

Same as WLF 102. Orientation of students to the profession of fishery resources and wildlife resources: introduction to fish and wildlife faculty, review of fish and wildlife curriculum, awareness of career opportunities, employment procedures, associated job duties/responsibilities, job preparation, educational preparation, and management challenges in the Pacific Northwest. (Fall only)

## **Fish 200 (s) Seminar (cr arr)**

## **Fish 203 (s) Workshop (cr arr)**

## **Fish 204 (s) Special Topics (cr arr)**

## **Fish 299 (s) Directed Study (cr arr)**

## **Fish ID314 Fish Ecology (3 cr) WSU Biol 413**

Examination of physical, chemical, and biological factors that affect fish populations and communities, with emphasis on environmental stressors. (Fall only)

**Prereq:** For 221 or Biol 314

## **Fish 315 Fish Ecology Lab (1 cr)**

Laboratory and field experience in fish ecology with emphasis on field techniques, laboratory experimentation, and habitat assessment. One weekend field trip and several day trips required. (Fall only)

**Prereq:** For 221 or Biol 314

**Coreq:** Fish 314

## **Fish 316 Principles of Population Dynamics (2 cr)**

Basic principles of population ecology of animals. Taught first half of semester. (Spring only)

**Prereq:** Fish 314 and Fish 315 with a grade of 'C' or better and For 221 or Biol 314; or Permission

## **Fish 398 (s) Renewable Natural Resources Internship (cr arr)**

Supervised field experience with an appropriate public or private agency. Req'd for cooperative education students. Graded P/F.

**Prereq:** Permission of department

## **Fish 400 (s) Seminar (cr arr)**

## **Fish 403 (s) Workshop (cr arr)**

## **Fish 404 (s) Special Topics (cr arr)**

## **Fish 415 Limnology (4 cr)**

Physical, chemical, and biological features of lakes and streams. Four 1-day field trips. (Fall only)

**Prereq:** Stat 251 and For 221 or Biol 314

## **Fish ID&WS418 Fisheries Management (4 cr) WSU NATRS and Biol 416**

Techniques employed in sampling and application of principles toward managing recreational and commercial aquatic resources. Three lec and one 3-hr lab a wk; two weekend field trips. (Fall only)

**Prereq:** Fish 314, Biol 481, Stat 251

## **Fish ID422 Concepts in Aquaculture (3 cr) WSU NATRS 424 and 425**

Concepts and methods of extensive and intensive aquaculture in warm water and cold water systems. Two field trips req'd (a 1-day and a 3-day field trip). (Fall only)

**Prereq or Coreq:** Biol 481

## **Fish ID424 Fish Health Management (4 cr) WSU NATRS 421**

Epidemiology, prevention, diagnostics, and treatment of infections and non-infectious diseases of free-living and confined finfish and shellfish. Two field trips req'd (a 1-day and a 3-day field trip). Recommended Preparation: Fish 422. (Spring only)

**Prereq:** MMBB 250

## **Fish 430 Riparian Ecology and Management (3 cr)**

Structure, function, and management of riparian ecosystems; interrelationships of terrestrial and aquatic components of riparian areas. 3 field trips. Special fee required. (Spring only)

**Prereq:** For 221 or Biol 314

**Fish WS469 Aquaculture Systems Design (2 cr) WSU AgTM 469**

Aquaculture production system design, species adaptation to aquaculture, management of water flows, oxygen and nutrient consumption, system impacts and economics.

**Prereq:** Permission of department

**Fish 483 Senior Project Presentation (1 cr)**

See For 483.

**Fish 485 Ecology and Conservation Biology Senior Project (1-3 cr, max 3)**

See WLF 485.

**Fish 494 Current Issues in Fish Health (1 cr)**

Focus on a range of issues related to fish health that are of regional and/or global importance. It is designed as a discussion course focusing on published literature. Professionals working in the fish health field may also present guest lectures. Recommended Coreq: MMBB 250. (Fall, Alt/yrs)

**Prereq:** Senior standing

**Fish 495 (s) Seminar (1 cr)**

Discuss integrating biological, social, political, economic, and philosophic aspects of problems in managing fishery resources. (Spring only)

**Prereq:** Senior standing

**Fish 497 Senior Thesis (1-3 cr, max 6)**

Preparation of thesis, exhibition, video, computer program, multimedia program, or other creative presentation based on research conducted under the guidance of a faculty mentor.

**Prereq:** Cumulative GPA of at least 3.2 in all college courses, completion of at least 90 credits, and permission of a faculty mentor

**Fish 499 (s) Directed Study (cr arr)**

For the individual student; conferences, library, field, or lab work.

**Prereq:** Senior standing, GPA 2.5, and Permission

**Fish 500 Master's Research and Thesis (cr arr)**

**Fish 501 (s) Seminar (cr arr)**

Major philosophy, management, and research problems of wildlands; presentation of individual studies on assigned topics. Graded P (pass)/F (fail).

**Prereq:** Permission

**Fish 502 (s) Directed Study (cr arr)**

**Fish 503 (s) Workshop (cr arr)**

Selected topics in the conservation and management of natural resources.

**Prereq:** Permission

**Fish 504 (s) Special Topics (cr arr)**

**Fish ID510 Advanced Fishery Management (3 cr) WSU Biol 523**

Contemporary management of marine and freshwater fish and shellfish populations of the world. Approaches, factors and models used to manage commercial, recreational and subsistence fisheries; and the policy interface of biological systems with governmental and social institutions. (Spring, Alt/yrs)

**Fish ID511 Fish Physiology (2 cr) WSU Biol 515**

Principles and methods used to study vital organs, organ systems, growth, and reproduction of fishes; emphasis on osmoregulation, metabolism, endocrinology, and respiration.

**Prereq:** Fish 411 and Permission (Fall, Alt/yrs)

**Fish ID514 Fish Population Ecology (2 cr) WSU Biol 510**

Review of abiotic and biotic factors controlling or regulating fish population densities and critical review of relevant literature. (Fall, Alt/yrs)

**Fish 515 Large River Fisheries (2 cr)**

Management issues and problems in large river fisheries in North America and globally; importance of flood plains; ecological bases for management actions in large rivers; river fisheries in the context of multiple use of large rivers. (Fall, Alt/yrs)

**Fish WS519 Fish Genetics (2 cr) WSU Biol 514**

**Fish ID520 Fish Behavior (3 cr) WSU Biol 527**

Causes, mechanisms, and functions of fish behavior, including reproduction, communication, schooling, feeding, migration, and orientation. (Irregular offering)

**Fish 530 Stream Ecology (3 cr)**

Same as REM 530. Structure and function of running water ecosystems; principles of population, community, and ecosystem ecology in streams and rivers. Three 1-day field trips reqd. (Fall, Alt/yr)

**Fish 540 Wetland Restoration (3 cr)**

This web-based course contains modules covering wetland science, restoration ecology, freshwater restoration, coastal restoration, and monitoring/maintenance. The emphasis is on the science of wetland ecosystems and the applied ecology/practice of restoration, with additional consideration of cultural and socio-political contexts. Extensive readings, an assignment, and a study guide are required for each module. Students apply their learning in and contribute relevant professional experience to weekly online discussions. Students are also responsible for obtaining documentation of at least one wetland restoration site in their region and conducting a site visit in order to evaluate the success of the restoration project. A final exam (re-design of a failed restoration project) is administered online, with partial credit earned through discussion with an interdisciplinary team of classmates and the remaining credit earned through individual analysis and synthesis. (Fall only)

**Prereq:** Biol 115 and 116; and For 221 or Biol 314 or Permission

**Fish 597 (s) Practicum (cr arr)**

**Fish 598 (s) Internship (cr arr)**

**Fish 599 (s) Non-thesis Master's Research (cr arr)**

Research not directly related to a thesis or dissertation.

**Prereq:** Permission

**Fish 600 Doctoral Research and Dissertation (cr arr)**