Appressed Limnology
Spring of even-numbered years. 3(0-0)
1: Open only to graduate students in the Colleges of Agriculture and Natural Resources, Engineering, and Natural Science.
2: Applied aquatic ecology. Quantitative relationships between physical, chemical, and biological parameters in polluted and unpollluted lakes.

Fish Population Dynamics
Fall of even-numbered years. 3(2-2)
1: Open only to graduate students in the College of Agriculture and Natural Resources or College of Natural Science.
2: Quantitative analysis of fish populations. Evaluation, causes, and impacts of the rates of change in survival, growth, reproduction, and recruitment for fish populations and their yield.

Dynamics of Trace Contaminants in Aquatic Systems
Spring of even-numbered years. 3(3-0)
1: Open only to graduate students in the Colleges of Agriculture and Natural Resources, Engineering, Veterinary Medicine.
2: Chemical and environmental parameters controlling movement and disposition of trace contaminants in aquatic environments. Fate models.

Advanced Limnology
Spring of odd-numbered years. 3(3-0)
1: Open only to graduate students in the Colleges of Agriculture and Natural Resources, Engineering, and Natural Science.
2: Physical, chemical, and biological processes affecting productivity of aquatic ecosystems.

Advanced Topics
Fall, Spring, Summer. 2 to 4 credits. A student may earn a maximum of 10 credits in all enrollments for this course.

Biodiversity
Spring, 2/2-4. A student may earn a maximum of 4 credits in all enrollments for this course.

Seminar in Fisheries and Wildlife
Fall, Spring. 1(0-0) A student may earn a maximum of 7 credits in all enrollments for this course. Study and research in advanced problems and current development in fisheries and wildlife.

Community and Ecosystem Ecology
Spring. 4(4-0) Interdepartmental with Zoology, Botany and Plant Pathology. Administered by Zoology.

Master's Research
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 10 credits in all enrollments for this course.
1: Open only to graduate students in Fisheries and Wildlife.

Master's Thesis Research
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 9 credits in all enrollments for this course.
R: Open only to graduate students in Fisheries and Wildlife.

Techniques of Analyzing Unbalanced Research Data
Spring. 4(4-0) Interdepartmental with Animal Science, Forestry, Crop and Soil Sciences, and Agriculture. Administered by Animal Science.

Multivariate Methods in Agriculture and Natural Resources
Spring. 4(4-0) Interdepartmental with Agriculture and Natural Resources and in the Interdepartmental Graduate Specializations in Ecology and Evolutionary Biology. Application of multivariate methods to research problems. Hotelling's T²-test, profile analysis, discriminant analysis, canonical correlation, principal components, principal coordinates, correspondence analysis, and cluster analysis.

Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 99 credits in all enrollments for this course.
R: Open only to Doctoral level graduate students in Fisheries and Wildlife.

Food Science—Descriptions of Courses

Principles of Food Science
Fall. 3(3-0)
P: CEM 141.
Scientific principles, historical perspective and current status of technology related to food composition, safety, technology, processing, preservation and distribution.

Seafood Systems Management
Spring. 3(3-0) Interdepartmental with Animal Science and Fisheries and Wildlife. Administered by Fisheries and Wildlife.
Domestic and international perspectives on major aquatic foods. Cultural and nutritional value; wild harvest; aquaculture; processing technology; food handling and food safety.

Fundamentals of Food Engineering
Spring. 3(3-0) Interdepartmental with Food Engineering. Administered by Food Engineering. P: FSC 211, MTH 124, PHY 231. R: Not open to freshmen and sophomores.
Unit operations in food industry: fluid mechanics, heat transfer, rate processes, refrigeration, freezing, and dehydration. Thermal process calculations.

Food Processing: Fruits and Vegetables
Fall. 3(3-0)
P: MTH 116, FSC 211. R: Not open to freshmen.
Harvest and post harvest technology. Preservation systems: canning, freezing and specialized techniques. Offered first half of semester.

Food Processing: Cereals
Fall. 3(3-0)
P: MTH 116, FSC 211. R: Not open to freshmen.

Food Processing: Dairy Foods
Spring. 2(1-3)
P: MTH 116, FSC 211. R: Not open to freshmen.

Food Processing: Meat, Poultry and Fishery Products
Spring. 2(1-3)
P: FSC 211, MTH 116. R: Not open to freshmen.
Manufacturing practices and principles of fresh, frozen, and cured meats, eggs, and processed products. Product formulation and quality control. Offered second half of semester.

Food Chemistry
Fall. 3(3-0)
P: FSC 211, CEM 251. R: Not open to freshmen and sophomores. Not open to students with credit in HNP 390.
Organic and biological reactions of food constituents. Chemical changes in foods during processing and storage affecting texture, color, flavor, stability and nutritional qualities.

Food Chemistry Laboratory
Fall. 1 credit.
P: FSC 401 or concurrently. R: Open only to majors in Food Science, Foods: Technology and Management, and Food Engineering. Completion of Tier I writing requirement. Chemical changes in food constituents which affect stability of food products and properties such as color, flavor and texture.