

**Descriptions — Forestry  
of  
Courses**

**491. Natural Resources and Modern Society**

Spring, Summer. 3(3-0) Juniors. Interdepartmental with the Resource Development Department and Natural Resources. A survey of the social and economic significance of natural resources in modern industrial and urban society. Current problems of natural resources management and use are examined in terms of the society in which they exist.

**807. Special Problems**

Fall, Winter, Spring, Summer. 2 to 5 credits. May re-enroll for credit with a maximum of 10 credits. Advanced study in administration, biometrics, photogrammetry, dendrology, silviculture, management, economics, ecology, genetics, arboriculture, hydrology, soils, recreation, physiology, policy, entomology, products harvesting, wood preservation, timber mechanics, wood conversion, fire, range management, extension and pathology.

**809. Natural Resources Economics**

Winter. 3(3-0) Approval of department. Interdepartmental with the Resource Development Department. Applications of economic analysis to natural resource problems.

**828. Seminar**

Winter. 1(1-0) Critical study and discussion of advanced forestry topics.

**830. Physiological Genetics**

Winter. 3(3-0) Approval of department. Interdepartmental with Crop Science. Physiological bases for genetic variation in higher plants including adaptive physiology, quantitative genetics, growth correlations, biochemical genetics, hybrid physiology, and geneecology.

**840. Recreation Economics**

Spring. 4(4-0) 809 or approval of instructor. Interdepartmental with the departments of Park and Recreation Resources and Resource Development and administered by the Department of Park and Recreation Resources. Applications of economic analysis to recreation resource problems including measurement of demand and supply, valuation of recreation resources, determination of economic impact, economic decision making and policy considerations.

**850. Administering the Public Land Agency**

Spring. 4(4-0) 450 or approval of department. Case studies of administrative problems in land management agencies. Students are organized as teams and prepare team reports on specified aspects of each case.

**855. Research Methods**

Fall. 3(3-0) Approval of department. Interdepartmental with and administered by the Resource Development Department. Research techniques applicable to management, and policy-oriented natural resource investigations. Analysis of project designs; preparation of project proposals. Evaluation of representative published research studies.

**899. Research**

Fall, Winter, Spring, Summer. Variable credit. Approval of department.

**909. Timber Economics**

Fall of odd-numbered years. 3(3-0) 457, 809, EC 800, 801, 802. Economic theory relevant to study of timber production, regional and national timber supply, demand and price, the effect of institutional factors, and other topics by review of past research.

**910. Resource Economics Proseminar**

Spring. 3(3-0) May re-enroll for a maximum of 9 credits. Approval of department. Interdepartmental with the departments of Agricultural Economics and Resource Development. A seminar wherein advanced graduate students in the fields of resource economics participate with faculty in the joint conduct of a major research project in resource economics and policy.

**960. Simulation Models in Natural Resource Management**

Winter of odd-numbered years. 3(3-0) 855 and knowledge of FORTRAN programming or approval of department. Interdepartmental with and administered by the Department of Resource Development. The role of simulation models in developing management strategies. Applications of computer simulation in natural resources. Modeling of decision systems in natural resources management.

**999. Research**

Fall, Winter, Spring, Summer. Variable credit. Approval of department.

**FRENCH**

See Romance Languages

**GENETICS**

**College of Natural Science**

**800. Genetics Seminar**

Fall, Winter, Spring. 1(1-0) May re-enroll for a maximum of 12 credits. Approval of director. Student seminar to cover genetics subjects not considered in formal courses. Course is also intended to give students experience in reviewing and organizing literature in a subject, and orally presenting and defending the analysis.

**801. Molecular Genetics**

Fall. 3(3-0) ZOL 441 or approval of instructor. Molecular genetics. Chemical nature of the gene, inter- and intra-genetic recombination, genetic organization and gene action.

**802. Population and Quantitative Genetics**

Winter. 3(3-0) ZOL 441, or approval of instructor. Genetics of quantitative characteristics in populations with special reference to polygenic variation and its interactions with environment, gene action and its measurement, mating systems, and selection.

**803. Modern Genetics in Evolution**

Spring. 3(3-0) ZOL 441 or approval of instructor. Genetic basis of evolution. Cellular, chromosomal, and mutational bases of genetic variability. Natural selection and protein variations. Diversity of evolution.

**880. Special Problems**

Fall, Winter, Spring, Summer. 1 to 4 credits. May re-enroll for a maximum of 12 credits. Approval of instructor. Students with special interests and abilities may study published literature in a selected genetics topic or they may carry on research in the laboratory on a selected subject in collaboration with genetics faculty.

**890. Selected Topics in Genetics**

Fall, Winter, Spring, Summer. 2 to 5 credits. May re-enroll for a maximum of 9 credits. ZOL 441 and approval of instructor. Topics will be selected from molecular genetics, physiological genetics, population genetics, quantitative genetics, evolution, radiology and mutagenesis, microbial genetics, somatic cell genetics, behavioral genetics, and human genetics.

**999. Research**

Fall, Winter, Spring, Summer. 3 to 12 credits. Majors. Research for the doctoral dissertation in genetics.

**GEOGRAPHY**

**GEO**

**College of Social Science**

Courses are classified as follows:

- Cultural—170, 201, 404, 801, 901.
- Economic—213, 409, 412, 413, 435, 454, 806, 807, 809, 835, 906.
- Field Techniques—415, 850.
- Geographic Education—458, 858.
- Historical—310, 810, 910.
- Independent Research—400H, 411, 480, 818, 899, 918, 999.
- Medical—470, 870, 970.
- Physical—206, 206L, 429, 430, 431, 432, 451, 834, 902.
- Political—170, 416, 808, 908.
- Population—215, 320, 836, 934.
- Quantitative Methods—427, 428, 811.
- Regional—204, 300, 315, 316, 319, 321, 322, 340, 342, 350, 360, 361, 362, 363, 364, 812, 912.
- Recreational and Environmental—307, 309, 828.
- Theory and Philosophy—150, 280, 425, 480, 825, 826, 827.
- Urban—318, 401, 402, 403, 805.
- Visual Media and Techniques—122, 223, 224, 424, 426, 436.

**100. Man, Location and Environment**  
Fall, Spring. 3(3-0) Primarily for non-majors.

Concepts, theory and methods of modern geography.

**122. The World of Maps**  
(222.) Fall. 3(3-0)

Discussion of types, practical applications, and sources of maps.

**150. Geography of Selected Current Problems**

Winter. 2(2-0) The geographic perspective is used to examine U. S. and world problems of major concern such as international conflicts, environment quality, spatial change, and economic development.

**170. Future Worlds**

Fall, Spring, Summer. 2(2-0) Geographical approach to environmental, biological, economic, social and political problems facing mankind between now and year 2000.

**IDC. Resource Ecology and Man**

For course description, see Interdisciplinary Courses.