475. International Studies in Agriculture and Natural Resources

Spring, 3 to 9 credits. Approval of the college. Interdepartmental with and administered by Agriculture.

Study-travel experience emphasizing contemporary problems affecting agriculture in the world, national, and local communities. Field trips, case studies, interviews with leading experts, government officials, community leaders. Supervised individual study.

491. Natural Resources and Modern Society

Spring, Summer. 3(3-0) Juniors. Interdepartmental with the Forestry and the Resource Development Departments and administered by Forestry Department.

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.

NATURAL SCIENCE N S

University College

Students may earn credit in only one of the courses in each of the following three groups:

1. 111, 117, 121, 131, 151
2. 112, 118, 122, 132, 134, 135, 155
3. 113, 116, 120, 133, 153, 163, 173H, 183, 321

111. The Nature of Science I

(192A.) Fall, Winter, Spring, Summer. 4(2-3) The development and validation of scientific concepts as examples of man's attempt to understand the world in which he lives. Selected topics from the life sciences illustrate the process of scientific investigation.

112. The Nature of Science II

(193A.) Fall, Winter, Spring, Summer. 4(2-3) 111 preferred; or 117, 121, 131, 151, 171H, 181, or 322.

Man's attempts to explain the present in terms of past events are explored through selected topics from the life sciences and earth sciences. Stresses the role of controversy in science and the nature of scientific evidence.

113. The Nature of Science III

(193B.) Fall, Winter, Spring, Summer. 4(2-3) 111 preferred; or 117, 121, 131, 151, 171H, 181, or 322.

The origin and development of scientific explanations of the physical world. The origins of modern science and scientific revolutions.

116. Integrated Studies in Science I

(191D.) Fall, Winter, Spring, Summer. 4(2-3) Science as a process of studying of nature, explored through consideration of the organization science perceives in nature. Topics from the physical and life sciences need to illustrate the integration of the sciences into a concept of natural systems.

117. Integrated Studies in Science II

(192B.) Fall, Winter, Spring, Summer. 4(2-3) 116 preferred; or 120, 150, 160, or 321.

The nature of scientific theories and the means of supporting or refuting them. Emphasis on the interaction of theories from the physical, earth and life sciences.
152. The Dynamics of Scientific Ideas III
(193E.) Fall, Winter, Spring. 4(2-3). 151 preferred; or 111, 117, 121, 151, 171H, 181, or 182.
Controversies concerning interpretation of modern scientific concepts such as evolution, uncertainty and relativity are discussed in terms of developing a personal philosophy.

160. Knowledge and Science
(191B.) Fall, Winter, Spring, Summer. 4(2-3).
The intuitive and reasonable nature of scientific "truth" is examined in relation to the structure and functions of the human brain.

171H. Honors Natural Science
(192H.) Fall. 4(2-3).
Exploration of various topics of interest and value to students eligible for Honors, especially the nature and significance of science in western culture and its interrelationship with other creative activities.

172H. Honors Natural Science
(193H.) Fall, Winter, Spring, Summer. 4(2-3) 171H.
A continuation of 171H.

173H. Honors Natural Science
(194H.) Fall, Winter, Spring, Summer. 4(2-3) 172H.
Continuation of 172H.

181. Natural Science
Fall. 4(2-3) Approval of department.
The role of methods in science emphasizing the development and modification of systems of explanation. The nature of the cell and sexual reproduction as background for Mendelian gene theory and its modern modifications. Social implications are emphasized.

182. Natural Science
Winter. 4(2-3) 181 or approval of department.
Methods in science continued with emphasis on evolutionary ideas regarding the origin of earth features and existing life forms. The origin and development of man is considered along with a number of modern problems.

183. Natural Science
Spring. 4(2-3) 182 or approval of department.
Nature of science as exemplified by ideas from Physical Science. The Copernican Revolution is used as an example of the science-society interaction. Modern concepts of the nature of matter are also introduced.

321. Studies in Natural Science I
Fall. 4(2-3) Juniors.
An interdisciplinary analysis of the nature of science and its role in the human experience, with emphasis on science as a way of knowing. Subject matter used includes material from the physical sciences.

322. Studies in Natural Science II
Winter. 4(2-3) Juniors.
An interdisciplinary study of the nature of science and its role in the human experience, with emphasis on the way science affects society and is, in turn, affected by society. Subject matter used includes material from the biological sciences.

323. Studies in Natural Science III
Spring. 4(2-3) Juniors.
An interdisciplinary approach to the nature of science and its role in the human experience, with emphasis on man and his understanding of the world around him. Subject matter used includes material from the historical sciences.

NATURAL SCIENCE
NSC (COLLEGE OF)

390H. The Human Organism
Winter. 3(2-0) Juniors; approval of the Honors College.
The importance of new discoveries in biology for our understanding of the human organism with emphasis on the fields of genetics, molecular biology, behavior, developmental biology, physiology and ecology.

391H. Man’s Universe
Fall. 3(2-0) Juniors; approval of the Honors College.
A creative review by senior faculty from astronomy, biochemistry, biophysics, geology, physics, and philosophy of the impact of recent space probes in developing modern concepts of the universe, the origin of the earth and life upon it.

800. Electron Microscopy of Biological Material
Fall. 4(2-6) Graduate student in area of biology; or approval of college.
Preparation of biological material for observation in the electron microscope; operation and principles of the electron microscope; associated electron microscope photography and darkroom techniques.

801. Special Problems in Electron Microscopy
Fall, Winter, Spring, Summer. 1 to 15 credits. Approval of instructor.

NURSING
NE

College of Natural Science

205. Foundations of Nursing
Fall. 3(3-3) Approval of school.
Introduction to principles basic in identifying nursing problems and their use in sound planning of patient care.

206. Foundations of Nursing
Winter. 4(3-3) 205.
Fundamental principles are presented as they relate to the care of the whole person; identification of problems confronting the individual in illness, methods of approach to the patient as a person whereby joint effort may contribute to improved well-being and/or recovery.