961. Analytical Studies in Music Literature
Winter, Summer. 3(3-0) 960.
Continuation of 960.

962. Analytical Studies in Music Literature
Spring, Summer. 3(3-0) 961.
Continuation of 961.

970. Contrapuntal Techniques
Fall of odd-numbered years, Summer. 3(3-0) 482 or approval of department.
Advanced contrapuntal practice from the sixteenth century to the present.

971. Contrapuntal Techniques
Winter of even-numbered years, Summer. 3(3-0) 970.
Continuation of 970.

972. Contrapuntal Techniques
Spring of even-numbered years, Summer. 3(3-0) 972.
Continuation of 972.

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

NATURAL RESOURCES N R

College of Agriculture and Natural Resources

202. Soils and Man's Environment
Winter. 3(3-0) Interdepartmental with the departments of Crop and Soil Sciences, Resource Development, and Fisheries and Wildlife and administered by the Department of Crop and Soil Sciences.
Use of soil and water resources in a technologial society as it relates to environmental quality. Nature and pollution problems and their possible solutions. Food production and world population.

220. Plants and Their Environment
Winter. 3(3-0) Interdepartmental with and administered by the Department of Forestry.
Fundamental ecological relationships between various climatic, edaphic and biotic environmental factors of the ecosystem and plant response, including structure, function and evaluation of species.

275. Exploring International Agriculture
Spring. 3(3-0) Interdepartmental with and administered by Agriculture.
Introduces students to the international arena and potential world food actualities and potentialities; special problems of the tropics compared with those in temperate regions.

350. Leadership Development for Agriculture and Natural Resources
Winter, Spring. 3(3-0) May re-enroll for a maximum of 8 credits. Approval of department. Interdepartmental with and administered by Agriculture.

390. Agriculture Internship
Fall, Winter, Spring, Summer. Zero to 10 credits. [10 credits] Juniors and approval of department. Interdepartmental with and administered by Agriculture.
Practical work experience in related areas of agriculture. Supervised work experience conducted by faculty and cooperating agencies.

425. Agriculture and Natural Resources Seminar
Spring. 3(3-0) 490 or approval of department. Interdepartmental with and administered by Agriculture.
Current agricultural, natural resources, and environmental problems and solutions as presented by discussion leaders from various disciplines, arranged by undergraduate students.

435. Pest Management I: Pesticide Chemistry and Application Systems for Plant Protection
Fall, 3(3-4) EN 430, BOT 405, HRT 408 or CSE 483. Interdepartmental with Agriculture and the College of Natural Science. Administered by the College of Natural Science.
A broad overview of pesticide chemistry, efficient usage, environmental fate, legislation and application techniques.

436. Pest Management II: Biocological Systems for Plant Protection
Winter. 3(3-0) ENT 430, BOT 405, HRT 408 or CSE 483. Interdepartmental with Agriculture and the College of Natural Science. Administered by the College of Natural Science.
 Management of plant pests utilizing host resistance, cultural practices, legislation, and biological systems.

437. Pest Management III: Systems Management for Plant Protection
Spring. 3(3-0) NSC 435 and 436, FST 209 or CSE 483. Interdepartmental with Agriculture and the College of Natural Science. Administered by the College of Natural Science.
Designed to integrate knowledge and improve ability to arrive at pest management decisions of varying complexity involving the fields of agronomy, wildlife, horticulture, entomology, and plant pathology.

450. Natural Resource Administration
Fall, Spring. 4(4-0) Seniors. Interdepartmental with the departments of Fisheries and Wildlife, Forestry, Park and Recreation Resources and Wildlife and Resource Development. Administered by the Department of Forestry.

455. Natural Resource Economics
Winter, 4(4-0) 450 or approval of department. Interdepartmental with the departments of Fisheries and Wildlife, Forestry, Park and Recreation Resources and Resource Development. Administered by the Department of Forestry.
Basic economic and political principles and techniques that govern the production and consumption of forest land products, including basic forest valuation procedures.

471. Environmental Topics in Nonmetropolitan Regions
Fall. 4(4-0) Nomination of students by own department and approved by participating faculty. Interdepartmental with the College of Natural Science and Agriculture.
Environmental topics in nonmetropolitan regions including issues on: production agriculture, service industries, natural agricultural uses, rural urban balance, discussion topics and case studies.

475. International Studies in Agriculture and Natural Resources
Spring, Summer. 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 departments of Forestry and Resource Development and administered by the Department of Forestry.
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 who have not taken any of the required natural science courses, may take any three courses from the following list.


OR

If you are enrolled in ATL 101, you may take N S 191, 192, 193.

Students who already have taken one or two natural science courses should refer to the chart below to complete the University requirements of 12 credits in Natural Science.

You may take if you have not had credit in

| N S 115  | 111, 116, 121, 131, 140, 151, 161, 181, 192, 322 |
| 152     | 153     |
| 125     | 112, 117, 132, 141, 182, 193, 323 |
| 135     | 112, 120, 133, 150, 160, 183, 191, 321 |
| 142     | 118, 193 |
| 152     | 153 |
| 162     | 153 |
| 171H    | 192 |
| 172H    | 193 |
| 173H    | 191 |
| 181     | 115, 116, 131, 131, 140, 151, 161, 192 |
| 152     | 125, 111, 132, 132, 141, 193 |
| 163     | 133 (113, 120, 133, 150, 160, 191) |

A-142
D. Man's attempts to understand the universe
A. The origin and development

135. Changing Concepts of the

B. The role

129. The Biotechnology of Health Survey
Social issues associated with this biotechnology.

C. The origin and evolution
etiological viewpoints. Emphasis on problem-solving

128. Biocultural Evolution of Man
(193B.) Fall, Winter, Spring. 4(3-2)
Man's current understanding of himself and his beliefs as products of biological and cultural evolution. Implications for man's future.

125. Time and Change in Nature
Fall, Winter, Spring. 4(3-2)
A. Man's attempt 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.
B. Heredity, evolution and diversity of life are examined from the viewpoint of the biological and cultural development of the human species and the relationships between humans and their environment.
C. The origin and evolution of earth and living things are studied as vital and related problems. Emphasis on problem-solving in science and impact of evolutionary concepts on human societies.

127. The Bioculture of Health
Fall, Winter, Spring. 4(3-2)
Man's health examined from evolutionary and ecological viewpoints. Emphasis on the impact as increasingly man-made environment has had on the health of Western man.

129. The Biotechnology of Health
Winter. 4(4-0)
Survey of the biotechnology currently and potentially available to manage health problems. Social issues associated with this biotechnology.

135. Changing Concepts of the Universe
Fall, Winter, Spring. Summer. 4(3-2)
A. The origin and development of scientific explanations of the physical world. The origin of modern science and scientific revolutions.
B. The role of science in the development of Western man's ideas about reality. The origin and development of mechanistic concepts of the physical world and their part in intellectual dialogue.
C. Growth of theories of celestial motion and of matter. Their interrelationship. Impact of scientific knowledge on society. The contribution of science to clarification and solution of social problems.
D. Man's attempts to understand the universe and his relationship with it. The interaction between scientific concepts and the beliefs and values of the culture in which they are proposed.

142. Life, Its Environment
(118.) Fall, Winter, Spring. 4(3-2)
Natural ecological systems and the impact of human biological and cultural development on them. Examination of specific ecological problems and the role of science in seeking solutions.

152. Science and Culture in the 20th Century
(193E.) Fall, Winter, Spring. 4(3-2)
Controversies concerning interpretation of modern scientific concepts such as evolution, uncertainty and relativity are discussed in terms of developing a personal philosophy.

162. Race, The Evolution of an Idea
Fall, Winter, Spring. 4(3-2)
Human races and mankind evolving. The biological concept of race based on the theories of the same, evolution, and natural selection.

171H. Man's Nature
(192H.) Fall. 4(3-2)
Various issues confronting modern man in his attempt to understand his biological self. Emphasis on problem-solving in science and impact of science in helping to resolve these issues.

172H. Man's Place in Nature
(193H.) Winter. 4(3-2)
Vast issues confronting modern man in his attempt to understand his place in and relation to the environment. Emphasis on the role of science in helping to resolve these issues.

173H. Science-Technology and Human Values
Spring. 4(3-2)
The nature and significance of science and technology in society, with emphasis on their relationship to other creative activities, particularly those within the arts.

181. Natural Science
Fall. 4(3-2) Not open to students with credit in 115. Enrollment in ATL 101 or approval of department.
Scientific methods emphasizing development and modification of explanation systems. The nature of cells and sexual reproduction as background for Mendelian gene theory and its modern modifications. Social implications are emphasized.

182. Natural Science
Winter. 4(3-2) Not open to students with credit in 125. 181 or approval of department.
Scientific methods with emphasis on evolutionary ideal regarding origin of earth features as related to modern problems. Human origins and development are considered, with a number of modern problems.

183. Natural Science
Spring. 4(3-2) Not open to students with credit in 135. 182 or approval of department.
Nature of science as exemplified by ideas from physical sciences. The Copernican Revolution is used as an example of the science-society interaction. Modern concepts of cosmology are also introduced.

200. Technology and Society
Winter. 3(3-0) One term of American Thought and Language. Interdepartmental and administered by the Department of Engineering. An attempt to describe and analyze portions of current technology and its desired and undesired consequences; and exploration of avenues for assessing such consequences for future technologies.

300. Supervised Individual Study
Fall, Winter, Spring. Summer. 2 to 4 credits. May re-enroll for a maximum of 12 credits. Approval of department. Selected students requesting individual study of interdisciplinary problems will work under supervision of University College professors. Variable elective credit will be determined when the student secures instructor, adviser, and department approval.

310. Science and Pseudoscientific
Spring. 3(3-0) Juniors.
Techniques of reasoned, critical analysis applied to science-related ideas such as astrology, gods from outer space, and the secret life of plants. Specific topics selected from recent writings.

325. Biological and Social Aspects of Human Reproduction
Spring. 4(4-0) Juniors or approval of department.
Anatomy and physiology of human reproduction will be integrated with consideration of such current social concerns as contraception, abortion, venereal disease and drugs.

401. Technology Assessment
Spring. 3(3-0) Seniors, or approval of department. Interdepartmental with and administered by the Department of Engineering. Sociotechnical evaluation of impact of proposed technologies on economic, political, and cultural aspects of society. Identification of technical strategies and social goals. Techniques of assessment.

NATURAL SCIENCE
(115) The Nature and Continuity of Life
Fall, Winter, Spring, Summer. 4(3-2)
The development and testing 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 nature of scientific investigation.

B. The role

129. The Biotechnology of Health Survey
Social issues associated with this biotechnology.

C. The origin and evolution
etiological viewpoints. Emphasis on problem-solving

128. Biocultural Evolution of Man
(193B.) Fall, Winter, Spring. 4(3-2)
Man's current understanding of himself and his beliefs as products of biological and cultural evolution. Implications for man's future.

125. Time and Change in Nature
Fall, Winter, Spring. 4(3-2)
A. Man's attempt 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.
B. Heredity, evolution and diversity of life are examined from the viewpoint of the biological and cultural development of the human species and the relationships between humans and their environment.
C. The origin and evolution of earth and living things are studied as vital and related problems. Emphasis on problem-solving in science and impact of evolutionary concepts on human societies.

127. The Bioculture of Health
Fall, Winter, Spring. 4(3-2)
Man's health examined from evolutionary and ecological viewpoints. Emphasis on the impact as increasingly man-made environment has had on the health of Western man.

129. The Biotechnology of Health
Winter. 4(4-0)
Survey of the biotechnology currently and potentially available to manage health problems. Social issues associated with this biotechnology.

135. Changing Concepts of the Universe
Fall, Winter, Spring. Summer. 4(3-2)
A. The origin and development of scientific explanations of the physical world. The origin of modern science and scientific revolutions.
B. The role of science in the development of Western man's ideas about reality. The origin and development of mechanistic concepts of the physical world and their part in intellectual dialogue.
C. Growth of theories of celestial motion and of matter. Their interrelationship. Impact of scientific knowledge on society. The contribution of science to clarification and solution of social problems.
D. Man's attempts to understand the universe and his relationship with it. The interaction between scientific concepts and the beliefs and values of the culture in which they are proposed.