

840. Pedagogy of Theory

Fall, Summer. 3(3-0) Approval of department.

Music theory treatises and pedagogical practices of historical importance.

841. Pedagogy of Theory

Winter, Summer. 3(3-0) 840.

Current literature in the field of music theory and approaches to theory pedagogy.

842. Pedagogy of Theory

Spring, Summer. 3(3-0) 841.

Continuation of 841 with emphasis upon new instructional media.

850. Applied Music

Fall, Winter, Spring, Summer. 3 credits for Applied Music majors; 2 credits for others. May re-enroll for credit.

852. Choral Technique and Materials

Spring, Summer. 3(3-0) Completion of undergraduate program in music education.

Advanced course for further development of choral proficiency. Demonstrations of choral techniques, conducting by students, examination and evaluation of new materials.

860. Problems in Analysis

Fall, Winter, Spring, Summer. 4(4-0) May re-enroll for a maximum of 8 credits. Approval of department.

An application of analytical procedures to school music repertoire.

880. Materials of Music

Fall, Winter, Spring, Summer. 1 to 4 credits. 282.

Correlation of the areas of music theory as a basis for the study of 19th and 20th century music.

881. Materials of Music

Fall, Winter, Spring, Summer. 1 to 4 credits. 880.

Continuation of 880.

882. Materials of Music

Fall, Winter, Spring, Summer. 1 to 4 credits. 881.

Continuation of 881.

899. Research

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

915. Medieval Music

Fall. 3(3-0)

Investigation of various developments in European music to middle of fifteenth century. Some attention given to Gregorian Chant as well as to various types of secular Monody, but greater stress is laid on the forms and styles of Polyphonic music.

916. Renaissance Music

Winter. 3(3-0)

Investigation of developments in European music from 1450 to 1600, tracing developments in both sacred and secular music.

917. Music of the Seventeenth Century

Spring. 3(3-0)

Instrumental and vocal music of Early Baroque period.

924. Seminar in Musicology

Fall, Winter, Spring. 3 credits. May re-enroll for credit. 426 or approval of department.

954. Music Supervision

Summer of even-numbered years. 3(3-0) Completion of undergraduate program in Music Education.

955. Current Tendencies in Music Education

Summer of odd-numbered years. 3(3-0) Completion of undergraduate program in Music Education.

960. Analytical Studies in Music Literature

Fall, Summer. 3(3-0) 382 and two years of music literature or approval of department.

Melodic, formal, contrapuntal and harmonic analysis of music from plainsong to contemporary music.

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) 971.

Continuation of 971.

980. Seminar in Theory

Fall, Winter, Spring, Summer. 3(3-0) May re-enroll for a maximum of 9 credits. 482 or approval of department.

999. Research

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

475. International Studies in Agriculture and Natural Resources

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 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

Alternative approaches or tracks are offered on an optional basis all of which meet the course objectives of 191, 192, 193. These are described briefly below and are designated by letters which are used as part of the course number for registration. No student may receive credit for more than one track within a course (191, 192, 193).

181. Natural Science

Fall. 4(2-3) Students may not receive credit in both 181 and 192. 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) Students may not receive credit in both 182 and 193. 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) Students may not receive credit in both 183 and 191. 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.

191. Natural Science

(183.) Fall, Winter, Spring, Summer. 4(2-3)

A. The Copernican Revolution, Atomic Theory and Relativity related to man's attempt to find a unified view of nature. Emphasis on effects of science and society on one another.

B. Man's conception of nature and origin of the universe and social and philosophical implications of his changing views. Consideration of major controversies regarding man's place in the universe.

NATURAL RESOURCES N R

College of Agriculture and Natural Resources

202. Soils and Man's Environment

Winter. 3(3-0) Interdepartmental with the Resource Development, and Fisheries and Wildlife Departments and Soil Science and administered by Soil Science.

Use of soil and water resources in a technological society as it relates to environmental quality. Nature of pollution problems and their possible solutions. Food production and world population.

- C. Major revolutions in physical science illustrate growth and structure of theories. Special attention to effects on man's world view, the impact of science on society and of society on scientists.
- D. Development of physical sciences; emphasis on contemporary social and moral dilemmas created by scientific advancement; application of scientific criteria, and exploration of future potential of man.
- E. World views (man's view of himself, his universe and his place in the universe) are emphasized. The Copernican Revolution and Relativity illustrate how major changes in world view come about.
- F. Concentrates on man's concept of motion from Copernicus to Einstein in an effort to give the student an understanding of the methodology of science, and the interaction of science with the culture of which it is a part.
- H. Honors track. Man's attempt to find a unified view of nature. Effects of science and society on one another.

192. Natural Science

(181.) Fall, Winter, Spring, Summer. 4(2-3) Four credits in a 191 track.

- A. A major explanatory system in depth: the gene theory. Cell and reproduction as background and, once developed, its subsequent modification resulting from experiment and observation.
- B. Man's conception of life. Development of contemporary ideas on its nature and origin. Is scientific discovery an orderly, logical process? Is life only a matter of physics and chemistry?
- C. Cell and gene concepts illustrate development and nature of theories. The present biological revolution raises social problems of genetic surgery, creation of life, conquest of death, transplants, mind control, etc.
- D. Development of the concepts of life, reproduction and heredity. Examination of contemporary socio-scientific problems associated with these topics and application of scientific criteria to proposed solutions.
- F. Genetics as a scientific theory; its application to man and the scientific basis of "races" and the social problems of racism.
- H. Honors track. A major explanatory system in the gene theory. Development and modification of the theory.
- J. The subject matter of ecology and genetics is used to explore the methodology of science and the relationship between science and the society of which it is a part.

193. Natural Science

(182.) Fall, Winter, Spring, Summer. 4(2-3) Four credits in a 192 track.

- A. Interaction of scientific and cultural thought leading to consideration of man's past, present and future. Interaction of scientific and cultural thought in the rise of geology and biology.
- B. Man's conception of his own nature and origins. Consideration of human biological and cultural evolution directed to investigation of the question: "What is the nature of man?"
- C. Recent geological research gives new view of earth. Concept of uniformity used to interpret this evidence and tie it to evolution. Evolutionary principles applied to problems of population, pollution and aggression.
- D. Development of the concept of evolution in science. Emphasis given to human evolution and application of evolutionary principles to contemporary socio-scientific problems.

- F. Evolution of the earth and lower organisms as background and context for extended discussion of the origin and evolution of man. Science related problems faced by modern man.
- H. Honors track. Interaction of scientific and cultural thought leading to consideration of man's past, present and future.

300. Supervised Individual Study

Fall, Winter, Spring. 1 to 4 credits. 193; 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.

321. Studies in Natural Science I

Fall. 4(2-3) Juniors. Students may not earn credit in NS 191 or 183 and 321.

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. Students may not earn credit in NS 192 or 181 and 322.

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. Students may not earn credit in NS 193 or 182 and 323.

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 from 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 dark room 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(2-3) 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.

207. Foundations of Nursing

Spring. 4(2-6) 206.

Continues building on concepts, using principles and knowledge introduced in the foregoing nursing courses. The laboratory now moves into the clinical area where practice in the nursing of patients becomes the focus of application of past learning and study.

303. Medical and Surgical Nursing

Fall, Spring. 12 credits. 207.

Care of individuals receiving medical and surgical therapy with emphasis on integration of preventive, emotional and social aspects of illness, pathological relationships, and all forms of therapy and rehabilitation as they relate to medical and surgical nursing. Instruction and guided practice.

304. Medical and Surgical Specialties

Winter, Summer. 12 credits. 303.

Continuation of 303.

305. Obstetrical Nursing

Fall, Winter, Spring, Summer. 12 credits. Approval of school.

Nursing through pregnancy, parturition, and puerperium, including care of the new born. Instruction and guided practice.

306. Nursing of Children

Fall, Winter, Spring, Summer. 12 credits. 207; FCS 362B.

Normal growth and development from infancy through adolescence, care and health supervision of well children, treatment and rehabilitation of sick and handicapped children. Instruction and guided practice.

400H. Honors Work

Fall, Winter, Spring, Summer. 1 to 12 credits. Approval of school.

402. Psychiatric Nursing

Fall, Winter, Spring. 12 credits. Approval of school.

Principles of practice in nursing the mentally ill with emphasis on rehabilitation program. Fundamental bases of behavior reactions. Instruction and guided practice.