Descriptions — Natural Science of Courses

155. Cosmology, Humanity's Place in the Universe (N) (N S 335D) Fall, Winter, Spring, Summer 4(3-2) Students may not receive credit in more than one of the following: AST 119, AST 217, AST 229, N S 135, N S 135. Our attempts to understand the universe and our place within it. The interaction between scientific concepts and the beliefs and values of the culture in which they are proposed.


171H. Our Biological Nature (N) Fall 4(4-0) Honors College students or approval of department. Various issues confronting us in our attempt to understand our biological selves. Emphasis on the role that science can play in helping to resolve these issues.

172H. Our Place in Nature (N) Winter 4(4-0) Honors College students or approval of department. Various issues confronting us in our attempt to understand our 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 (N) Spring 4(4-0) Honors College students or approval of department. The nature and significance of science and technology in Western culture, with emphasis on their relationship to other creative activities, particularly those within the arts.

1814. Natural Science (N) Winter 4(3-2) Not open to students with credit in N S 115. Enrollment in Remedial-Developmental Writing Program 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.

1824. Natural Science (N) Winter 4(3-2) Not open to students with credit in N S 125, N S 1814 or approval of department. Scientific methods with emphasis on evolutionary theory, including human origins, development of culture and considered, with a number of modern problems.

1834. Natural Science (N) Spring 4(3-2) Not open to students with credit in N S 135, N S 1824 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 cosmology are also introduced.

200. Technology, Society and Public Policy Winter 3(3-0) Twelve credits from natural science or engineering, Interdepartmental with and administered by Engineering. Description and analysis of certain current technologies and their consequences; exploration of avenues for assessing such consequences as an aid to formulation of public policy.

209. Humans and Disease (N) Fall, Winter, Spring 4(4-0) Disease as a natural biological phenomenon and how it has influenced the human race from a worldwide perspective. Environmental and cultural factors and how these influence and relate with disease.

242. Wilderness Environmental Field Studies (N) Winter, Summer 4(4-0) Approval of instructor. Students may not receive credit in more than one of the following: N S 142, N S 142A, N S 242. Study of ecosystem balance between physical, biological and human elements while hiking in selected wilderness areas. Requires out-of-state travel.

292. Selected Topics Fall, Winter, Spring 3 to 5 credits. May enroll for a maximum of 9 credits if different topics are taken. Interdisciplinary study of topics in the natural sciences or the natural sciences as related to the humanities and social sciences.

300. Supervised Individual Study Fall, Winter, Spring Summer 2 to 4 credits. May enroll for a maximum of 13 credits. Approval of department. Selected students requesting individual study of interdisciplinary problems. Variable elective credit will be determined when the student secures instructor, adviser, and department approval.

325. Biological and Social Aspects of Human Reproduction Fall, Winter, 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 drug use.


401. Engineering and Public Policy Spring 3(3-0) Seniors, approval of department. Interdepartmental with and administered by Engineering. Sociotechnical assessment of impact of technology on society. Analysis of role of engineering and natural science in contributing to public policy formulation.

456. Foundations of Developmental Biology Winter of even-numbered years 3(3-0) ZOL 317 ZOL 415 recommended. Interdepartmental with and administered by the Department of Zoology. Reading and discussion of original research which posed significant problems of modern developmental biology.

NATURAL SCIENCE (COLLEGE OF)

201. Science Problem Solving Seminar I Fall 2(2-0) MTH 108 concurrently, approval of instructor. Problem solving principles and application of strategies to problems in science and mathematics. Activities reflecting the types of problems encountered in these disciplines emphasized.

202. Science Problem Solving Seminar II Winter 2(2-0) NSC 201, approval of instructor. Continuation of NSC 201. Emphasis upon problem solving in science disciplines and principles of research design.


305. Women in Science Spring 3(3-0) Introductory course in chemistry or physics or biological science or approval of instructor. Introduction to the development of women scientists of the past, present, and future will be examined. Emphasis will be on representation of women in science as related to the specific disciplines.

394H. Current Topics in Science (MTC) Fall, Winter, Spring 3(3-0) May enroll for a maximum of 9 credits if different topics are taken. Approval of Honors College or course coordinator. Scientists from several disciplines lecture on a common topic of current scientific interest, indicating the key concepts, the major analytical approaches, the processes and the constraints of their respective disciplines.

410. Environmental Toxicology Winter 4(4-0) B S 212, BCH 401. Interdepartmental with Agriculture and Natural Resources. Fate and effects of toxic chemicals in soil, plants, wildlife, and aquatic systems. Interactions between chemicals and the environment which influence their fate and ecological importance.

445. Pest Management: Pesticide Chemistry and Application Systems for Plant Protection Fall 5(3-4) CEM 143, ENT 425, HRT 402 or CSS 402, BOT 405 or concurrently or approval of instructor. Interdepartmental with Agriculture and Natural Resources. A broad overview of pesticide chemistry, efficient usage, environmental fate, legislation and application techniques.

446. Pest Management: Biological Systems for Plant Protection Fall 3(3-0) ENT 425, HRT 402 or CSS 402, BOT 405 or concurrently or approval of instructor. Interdepartmental with Agriculture and Natural Resources. Management of plant pests utilizing host resistance, cultural practices, legislation, and biological systems.
NURSING  N E  (COLLEGE OF)

200.  Nursing I  Spring, 3(0-0) or 4(4-0) Approval of college.  
Concepts and theories of nursing in relation to professional nursing practice. Role of nursing in contemporary society.
Approved through Winter 1980.

202.  Introduction to Professional Nursing Practice  Winter, 3(3-0) Approval of college, N E 203 concurrently. Not open to Registered Nurses.
Fundamental theoretical concepts necessary for the delivery of professional practice utilizing the nursing process. Development of interpersonal communication and documentation skills. Accountability in nursing practice.

203.  Introduction to Professional Nursing Practice Practicum  Winter, 30(9-9) Approval of college, N E 202 concurrently. Not open to Registered Nurses.
Application of fundamental theoretical concepts in nursing utilizing nursing process in simulated and real life settings. Development of fundamental psychomotor nursing skills.

212.  Professional Nursing I: Basic Concepts  Winter, 2(2-0) Approval of college. 
Introductory concepts forming foundation of professional nursing practice. Standards of practice, code of ethics. Relationship of nursing research to practice and health promotion.

215.  Transition to Professional Nursing  Spring, 4(3-3) Approval of college. 
Open only to Registered Nurses.
Transition issues for Registered Nurses seeking baccalaureate education. Essential theoretical and clinical components for professional nursing practice. Assessment, documentation, and interpersonal skills.

300.  Nursing II  Fall, 10(7-9) N E 200, FCE 200, FCE 255, CEP 450.

301.  Nursing III  Winter, 10(6-12) N E 300.

302.  Nursing IV  Spring, 10(5-15) N E 301, N E 441.

303.  Concepts of Nursing Care of the Young and Older Adult  Fall, Winter, Spring, 3(3-0) Approval of college. N E 304 concurrently.

304.  Practice in Nursing Care of the Young and Older Adult  Fall, Winter, Spring, 40(12) Approval of college. N E 303 concurrently.

305.  Concepts of Nursing Care of the Childbearing Family  Fall, Winter, Spring, 3(3-0) Approval of college. N E 305 concurrently.
Concepts of nursing care of the childbearing family during intermittent, intrapartum and postpartum periods. Typical and atypical client care situations.

306.  Practicum in Nursing Care of the Childbearing Family  Fall, Winter, Spring, 4(0-12) Approval of college, N E 306 concurrently.
Practicum in nursing care of the childbearing family during antenatal, intrapartum and postpartum periods. Implementation of nursing process in a variety of settings.

307.  Concepts of Nursing Care of Children and Their Families  Fall, Winter, Spring, 3(3-0) Approval of college, N E 308 concurrently.
Concepts relative to holistic care of children in real or potential altered health states and their families. Health promotion and application of growth and development concepts.

312.  Professional Nursing II: Change and the Change Process  Spring, 2(2-0) N E 212.
Situations in which the nurse and client experience change. Appropriate independent nursing interventions. Therapeutic relationships and nursing advocacy techniques.

400.  Nursing V  Fall, 10(5-15) N E 202, FCE 245.

401.  Nursing VI  Winter, 10(4-18) N E 400.
Nursing of individuals in depleted-compensated and families in diminished-usable health states. Community assessment. Application of research findings to practice. Interprofessional clinical practice within health care systems. 

403.  Concepts in Advanced Nursing Care of the Young and Older Adult  Fall, Winter, Spring, 3(3-0) Approval of college. N E 404 concurrently.
Concepts of care of adult and elderly clients with complex health problems. Professional, legal, ethical issues and relevant research.

404.  Practicum in Advanced Nursing Care of the Young and Older Adult  Fall, Winter, Spring, 5(0-15) Approval of college. N E 403 concurrently.
Practicum in nursing care of the adult and elderly client in acute care setting. Implementation of nursing process and health promotion.