455. Natural Resource Economics

(N R 455) Fall, 3(3-0) Approval of department. Interepartmental with the departments of Fisheries and Wildlife, Forestry, 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.

462. Agricultural and Rural Development in Developing Nations

(AG 462) Fall, 3(3-0) PAM 201 or EC 201, PAM 260 recommended. Interepartmental with Public Affairs Management, and Food Systems Economics and Management. Administered by Food Systems Economics and Management.

Traditional agricultural systems and the incentive environment for economic growth in rural areas. Adjustment to technological, institutional and human change. Strategies for rapid agricultural transformation.

475. International Studies in Agriculture and Natural Resources

(AG 475) Spring, 3(3-0) Approval of department.

Selected topics in international agriculture, with emphasis on the role of natural resources. Study-travel experience emphasizing contemporary problems affecting agriculture in the world. Credit varies. May reenroll for a maximum of 9 credits if different topics are taken. Approval of department. Majors must reenroll for a maximum of 6 credits. AMS 410, Juniors in American Studies or approval of American Studies Committee.

491. Natural Resources and Modern Society

(N R 491) Spring, 3(3-0) Juniors. Interdepartmental with the departments of Forestry and Resource Development. Administered by the Department of Forestry.

A survey of the social and economic significance of natural resources in modern and urban society. Current problems of natural resources management and use are examined in terms of the society in which they exist.

521. Agricultural Education in Rural Development

(ED 821F) Winter, 3(3-0) Approval of department.

Agricultural education at various levels and in different forms for rural development. Formal and non-formal education, planning, conducting and evaluating. Case studies from selected developing countries.

526. Methods of Teaching Agricultural Mechanics

(ED 830G) Fall of odd-numbered years, 3(3-0) Approval of department.

Methods of instruction including program planning, scheduling, use of teaching aids, management of buildings, facilities and equipment; the selection, organization, and evaluation of activities in farm mechanics.

528. Teaching Farmer Classes in Agriculture

(ED 823B) Fall of even-numbered years, 3(3-0) Approval of department.

Objectives of adult education in agriculture, organizing and promoting classes, course planning, instructional procedures, follow-up and evaluation.

AMERICAN STUDIES AMS

College of Arts and Letters

301. Issues in American Civilization

Fall, Winter, Spring, 3(3-0) May reenroll for a maximum of 9 credits. Not applicable to major requirements.

Selected issues in American life past and present, with materials drawn from such disciplines as history, social sciences, philosophy, literature and the arts. Topics vary.

578. Popular Culture and Technical Change

Winter, 3(3-0) Juniors of approval of department. Interdepartmental with and administered by Lyman Briggs School.

Interrelationships among elements of mass culture and technical change. Introduction to relevant research methods.

410. Perspectives in American Studies

Fall, 3 credits. Juniors in American Studies or approval of American Studies Committee.

Methods and significant works for majors in the American Studies program. Offered by members of the relevant departments.

411. Problems in American Civilization

Winter, Spring, 3 credits. Majors must reenroll for a maximum of 6 credits. AMS 410, Juniors in American Studies or approval of American Studies Committee.

Seminar approach to selected problems in American life employing the objectives and approaches of interdisciplinary studies. Offered by members of relevant departments, for majors in the American Studies program.

AMERICAN THOUGHT AND LANGUAGE

ATL

College of Arts and Letters

To satisfy the University General Education requirement, a student must take one course in each of the following groups. Additional courses may be taken for elective credit.

1. 1144, 121, 122, 133, 143, 151, 153, 155, 161, 171, 181, 191H
2. 1154, 122, 132, 142, 152, 162, 172, 182, 192H
3. 1164, 123, 133, 143, 153, 155, 163, 173, 183, 193H

0142. Writing Laboratory I

Fall, Winter, Spring, 0(0-2) (2-0) See page A-1 item 3.) ATL 0591 or admission by placement test. ATL 1144 concurrently.

An individualized program to develop composition skills by aiding students to discover how language functions in communication and by helping them to accept responsibility for learning to write correctly.

0152. Writing Laboratory II

Fall, Winter, Spring, 0(0-2) (2-0) See page A-1 item 3.) ATL 0142, ATL 1144 or approval of department. ATL 1154 concurrently. Continuation of ATL 0142.

0162. Writing Laboratory III

Fall, Winter, Spring, 0(0-2) (2-0) See page A-1 item 3.) ATL 0152, ATL 1154 or approval of department. ATL 1164 concurrently. Continuation of ATL 0152.

0591. Preparatory Writing Skills

Fall, Winter, Spring, Summer, 0(0-2) (3-0) See page A-1 item 3.) Admission by placement test.

Instruction and practice in writing. Emphasis on mastery of fundamental skills needed for a variety of writing assignments.
114. Developmental Writing I
Fall, Winter, Spring. 3(3-0) ATL 0991 or satisfactory performance on the placement test; ATL 0142 concurrently.
Students engage in expressive writing to respond to reading in clear and direct prose. Students write personal essays and read autobiographical materials, making use of college-level readings.

115. Developmental Writing II
Fall, Winter, Spring. 3(3-0) ATL 0142, ATL 1144 or satisfactory performance on the placement test; ATL 0152 concurrently.
Interpretive, analytical, and expository writing in response to college-level readings.

116. Developmental Writing III
Fall, Winter, Spring. 3(3-0) ATL 0152, ATL 1154 or satisfactory performance on the placement test; ATL 0162 concurrently.
Students write analytical/critical/persuasive papers and undertake a research project. Reading of college-level materials.

117. Use of Libraries
Fall, Winter. 1(1-0)
The use of libraries, with emphasis on MU Library. Course will stress knowledge and use of bibliographic and reference resources.

121. American Expression
Fall, Winter, Spring, Summer. 3(3-0)
Satisfactory performance on the placement test.
Aims to improve students' ability to read and write and to acquaint them with their American heritage. Selected reading and theme topics.

122. American Expression
Fall, Winter, Spring, Summer. 3(3-0)
Three credits in the first term of any ATL sequence numbered 121 or higher or approval of department.
Aims to improve students' ability to read and write and to acquaint them with their American heritage. Selected reading and theme topics.

123. American Expression
Fall, Winter, Spring, Summer. 3(3-0)
Three credits in the second term of any ATL sequence numbered 121 or higher or approval of department.
Aims to improve students' ability to read and write and to acquaint them with their American heritage. Selected reading and theme topics.

131. Major Currents in American Experience
Fall, Winter, Spring, Summer. 3(3-0)
Satisfactory performance on the placement test.
Investigation into the significance Americans place on individual search for meaning and its effect on our American heritage. Subject matter is the focus for improving reading and writing abilities.

132. Major Currents in American Experience
Fall, Winter, Spring, Summer. 3(3-0)
Three credits in the first term of any ATL sequence numbered 121 or higher or approval of department.
The dreams and realities by which Americans have been inspired and betrayed are emphasized. Subject matter is the focus for improving reading and writing abilities.

133. Major Currents in American Experience
Fall, Winter, Spring, Summer. 3(3-0)
Three credits in the second term of any ATL sequence numbered 121 or higher or approval of department.
Literary and historical study of the major cultural confrontations among groups and subcultures in America's heterogenous society. Subject matter is the focus for improving reading and writing abilities.

134. American Humanities
Fall, Winter, Spring, Summer. 3(3-0)
Aims to acquaint students with their American heritage with emphasis on artistic and literary expression; and to improve their ability to read and write.

142. American Humanities
Fall, Winter, Spring, Summer. 3(3-0)
Three credits in the first term of any ATL sequence numbered 121 or higher or approval of department.
Aims to acquaint students with their American heritage with emphasis on artistic and literary expression; and to improve their ability to read and write.

143. American Humanities
Fall, Winter, Spring, Summer. 3(3-0)
Three credits in the second term of any ATL sequence numbered 121 or higher or approval of department.
Aims to acquaint students with their American heritage with emphasis on artistic and literary expression; and to improve their ability to read and write.

151. American Minorities
Fall, Winter. 3(3-0)
Satisfactory performance on the placement test.
Aims to acquaint students with the experience of minorities in America, and to improve their ability at reading and writing. Selected readings and theme topics.

152. American Minorities
Fall, Winter. 3(3-0)
Three credits in the first term of any ATL sequence numbered 121 or higher or approval of department.
Aims to acquaint students with the experience of minorities in America, and to improve their ability at reading and writing. Selected readings and theme topics.

153. American Minorities
Fall, Winter. 3(3-0)
Three credits in the second term of any ATL sequence numbered 121 or higher or approval of department.
Aims to acquaint students with the experience of minorities in America, and to improve their ability at reading and writing. Selected readings and theme topics.

161. American Radical Thought
Fall, Winter. 3(3-0)
Satisfactory performance on the placement test.
Aims to acquaint students with ideas concerning radical social change, and to improve their ability at reading and writing. Selected readings and theme topics.

162. American Radical Thought
Winter. 3(3-0)
Three credits in the first term of any ATL sequence numbered 121 or higher or approval of department.
Aims to acquaint students with ideas concerning radical social change, and to improve their ability at reading and writing. Selected readings and theme topics.

163. American Radical Thought
Spring. 3(3-0)
Three credits in the second term of any ATL sequence numbered 121 or higher or approval of department.
Aims to acquaint students with ideas concerning radical social change, and to improve their ability at reading and writing. Selected readings and theme topics.

171. America on Film
Fall. 3(3-2)
Satisfactory performance on the placement test.
Aims to acquaint students with cinematic and fictional representation of experience, and to improve their ability at reading and writing. Selected readings and theme topics.

172. America on Film
Winter. 3(3-2)
Three credits in the first term of any ATL sequence numbered 121 or higher or approval of department.
Aims to acquaint students with cinematic and fictional representation of experience, and to improve their ability at reading and writing. Selected readings and theme topics.

181. Women in America
Fall. 3(3-0)
Satisfactory performance on the placement test.
Aims to acquaint the student with women's experience in America, and to improve the student's ability at reading and writing. Selected readings and theme topics.

182. Women in America
Winter. 3(3-0)
Three credits in the first term of any ATL sequence numbered 121 or higher or approval of department.
Aims to acquaint the student with women's experience in America, and to improve the student's ability at reading and writing. Selected readings and theme topics.

183. Women in America
Spring. 3(3-0)
Three credits in the second term of any ATL sequence numbered 121 or higher or approval of department.
Aims to acquaint the student with women's experience in America, and to improve the student's ability at reading and writing. Selected readings and theme topics.

191H. Honors Work in American Experience
Fall. 3(3-0)
Satisfactory performance on the placement test.
Students read and write on selected topics to improve their knowledge of the American heritage and their ability at reading and writing.

192H. Honors Work in American Experience
Winter. 3(3-0)
Satisfactory grade in the first term of any ATL sequence numbered ATL 121 or above.
Students read and write on selected topics to improve their knowledge of the American heritage and their ability at reading and writing.
193. Honors Work in American Experience
   Spring, 3(3-0) Satisfactory grade in the second term of any ATL sequence numbered ATL 121 or above.
   Students read and write on selected topics to improve their knowledge of the American heritage and their ability at reading and writing.

205. Reading for University-Level Understanding
   Fall, Winter, Spring, 2(0-4) May reenroll for a maximum of 4 credits.
   Individualized instruction in techniques for improving vocabulary, comprehension, rate, study skills and test taking skills in order to achieve a better understanding of university-level materials.

232. American Humor
   Winter, 4(4-0) Sophomores.
   An interdisciplinary study of the relationship between American humor and the developing American experience, especially of the nineteenth and twentieth centuries.

292. Selected Topics
   Fall, Winter, Spring, 3 to 5 credits. May reenroll for a maximum of 5 credits if different topic is taken.
   Interdisciplinary study of topics in American culture.

300. Supervised Individual Study
   Fall, Winter, Spring, Summer, 2 to 4 credits. May reenroll for a maximum of 12 credits. 9 credits in a composition course; 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.

350. American Film
   Fall, Winter, Spring, 4(2-4) May reenroll for a maximum of 6 credits if different topic is taken. Sophomores.
   American films as they reflect and influence society.

356. Microscopic Anatomy
   Fall, Winter, Spring, Summer, 1 to 5 credits. May reenroll for a maximum of 15 credits. Admission to professional program in the College of Human Medicine, College of Osteopathic Medicine or the College of Veterinary Medicine, and approval of department.
   Biomedical research, gross anatomy, histology, neurology, immunology or embryology.

420. Microscopic Anatomy
   Winter, 5(2.8) Medical Technology students or approval of department.
   Microscopic study of the structure of cells, tissues and organs.

450. Special Problems
   Fall, Winter, Spring, Summer, 1 to 5 credits. May reenroll for a maximum of 15 credits. Approval of department.
   Individual study or project under the direction of a faculty member in biomedical research, gross anatomy, histology, neurology, or embryology.

505A. Anatomy in Physical Diagnosis
   Fall, 1 to 3 credits. H M 505 concurrently.
   Exercises in which students study systemic anatomy in a physical diagnosis context. Preparatory self-instruction precedes exercises.

510. Veterinary Gross Anatomy
   Fall, 6(3-0) First-term Veterinary Medicine students.
   Gross anatomy of a representative animal, the dog, is studied. Lecture, dissection of em­balmed specimens, study of prosections, slides, models and living animals.

511. Veterinary Histology
   Fall, 5(3-0) First-term Veterinary Medicine students.
   A general histology course for veterinary students which includes a survey of the tissue of the animal body.

521. Veterinary Neuro Anatomy
   Winter, 2(2-0) Second-term Veterinary Medicine students.
   Gross anatomy of the central nervous system in animals emphasizing functional and dysfunc­tional aspects of pathways and nuclei in dogs as a foundation for clinical neurology.

531. Veterinary Microscopic Anatomy
   Winter, 4(2-4) Second-term Veterinary Medicine students.
   Microscopic anatomy of the digestive, urinary, respiratory, male and female reproductive systems, integumentary system, central nervous system and special sense organs of domesticated animals.

541. Gross Biomedical Structure
   Spring, 1 to 15 credits. Admission to a college of medicine; graduate students with approval of department.
   Regional gross anatomy of the head and neck.

542. Gross Biomedical Structure
   Fall, 1 to 15 credits. Admission to a college of medicine; graduate students with approval of department.
   Regional gross anatomy of the limbs.

543. Microscopic Anatomy
   Fall, 3(1-0) Human Medicine students; approval of department for graduate students.
   The principles of microscopic anatomy, utilizing self-instructional units and laboratory experi­ence with organ sections viewed through the light microscope.

544. Human Ontogenesis
   Fall, 3(3-0) Admission to a college of medicine; graduate students with approval of department.
   Formal lectures, class conferences and student reports on the normal and abnormal or­ganogenesis of the human embryo and fetus with emphasis on clinical correlations.

545. Neuroanatomy
   Winter, 3(4-0) Admission to medical school or approval of Neuroscience Committee.
   Introduction to gross and microscopic anatomy of the human nervous system, related basic neurophysiologic concepts and to a problem-solving approach to the diagnosis of nervous system disease.

560. Medical Histology
   Fall, 4(3-4) Admission to a college of medicine or approval of department.
   Structural and functional characteristics of basic cells, tissues and organ systems. Emphasis on core concepts and visual discrimination.

563. Osteopathic Medical Neuroanatomy
   Fall, 4(3-4) Admission to a college of medicine; graduate students with approval of department.
   Medically oriented problem-solving neuroanatomy with laboratory. Structure of the human nervous system is correlated with normal function, clinical testing and clinical les­sions encountered in medical practice.

565. Introduction to Human Gross Anatomy
   Fall, 6(4-6) Admission to a college of medicine or approval of department.
   Core concepts in regional, systemic and topo­graphical human gross anatomy: Prosection, discussion and lecture methods using audiovisual aids and frequent review.

580. Special Problems
   Fall, Winter, Spring, Summer, 1 to 5 credits. May reenroll for a maximum of 15 credits. Admission to professional program in the College of Human Medicine, College of Osteopathic Medicine or the College of Veterinary Medicine, and approval of department.
   Biomedical research, gross anatomy, histology, neurology, immunology or embryology.

813. Problems in Anatomy
   Fall, Winter, Spring, Summer. Variable credit. May reenroll for a maximum of 15 credits. Basic disciplines in various areas and approval of department.
   Various anatomical fields such as gross anatomy, histology, hematology, tissue culture, cytology, neurology and embryology will be studied.

815. Anatomy of the Nervous System
   Fall, 3(3-5) Approval of department.
   Developmental, gross and microscopic anatomy of the nervous system. Organizational and func­tional aspects of the peripheral and central nervous system are stressed. Gross demonstra­tions include brain and dog dissections.