

443. Machinery and Tractor Systems
(A E 443.) Fall, Spring. 4(3-2) A E 243 or approval of department.
Characteristics of basic agricultural field machinery. Diesel engine, fuel injection and combustion chamber characteristics. Torque and power transmission, tractor stability and implement hitching.

AGRICULTURE **AG**

College of Agriculture and Natural Resources

124A. Introduction to Careers in Vocational and Practical Arts Education—Agriculture
Fall. 2(1-2) Interdepartmental with and administered by Education.

275. Exploring International Agriculture
Spring. 3(3-0) Interdepartmental with Natural Resources.
Exploration of overseas assignments with international agencies; 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 6 credits. Approval of department. Interdepartmental with Natural Resources.
Leadership development. Preparation for community leadership. Firsthand look at social, economic, and political problems. Series of seminars, interviews, field trips. Emphasis on awareness, action, and involvement.

399. Agriculture Internship
Fall, Winter, Spring, Summer. Zero credit. [10 credits.]† Juniors and approval of department. Interdepartmental with Natural Resources.
An opportunity for exposure to the applied aspects of a student's major. Supervision and evaluation conducted by faculty and cooperating agencies.

401. Agriculture and Natural Resources Communications
Winter, Spring. 3(2-2) JRN 201 or other writing course and approval of department.
Techniques, strategies and practices in development of agricultural and natural resources information programs. Including writing, public relations, TV and radio production for specialized and general audiences.

402. Agriculture and Natural Resources Communications Internship
Fall, Winter, Spring, Summer. 1 to 6 credits. May re-enroll for a maximum of 6 credits. 401, approval of college.
Internship with professionals in communications field with emphasis on student's areas of interest—writing, radio, TV, publications, etc.

425. Agriculture and Natural Resources Seminar
Spring. 2(2-0) Interdepartmental with Natural Resources.
Current agricultural, natural resources, and environmental problems and solutions as presented by discussion leaders from various disciplines, arranged by undergraduate students.

IDC. The Impact of Animal Resource Management Upon the World's Developing Nations
For course description, see Interdisciplinary Courses.

462. Agricultural and Rural Development in Developing Nations
Fall. 3(3-0) PAM 201 or EC 201; PAM 260 recommended. Interdepartmental with Public Affairs Management and Food Systems Economics and Management and 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.

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 Natural Resources and administered by Natural Resources.
Environmental topics in nonmetropolitan regions including issues on: production agriculture, service industries, non-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 Natural Resources.
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.

AMERICAN STUDIES **AMS**

College of Arts and Letters

301. Issues in American Civilization
Fall, Winter, Spring. 3(3-0) May re-enroll 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.

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 re-enroll for a maximum of 6 credits. 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**

University College

Students may earn credit in only one of the courses in each of the following three groups:
1. 121, 131, 141, 151, 161, 171, 181, 191H
2. 122, 132, 142, 152, 162, 172, 182, 192H
3. 123, 133, 143, 153, 163, 173, 183, 193H

101A. Comprehensive English
(100.) Fall, Winter, Spring, Summer. 3(3-1) No student may receive credit in both 101A and 101B. Admission by examination or approval of department.
Instruction and practice in reading and writing. Emphasis upon mastery of fundamental skills needed for a variety of reading and writing assignments.

101B. Comprehensive English
(100.) Fall, Winter, Spring, Summer. 3(3-1) No student may earn credit in both 101A and 101B. Admission by examination or approval of department.
Instruction and practice in reading and writing. Instruction in reading is emphasized.

102. Comprehensive English
Fall, Winter, Spring, Summer. 3(3-1) 101A or 101B.
Continuation of 101 with emphasis on writing and reading.

103. Comprehensive English
Fall, Winter, Spring, Summer 3(3-1) 102.
Continuation of 102 with emphasis on reading and writing on American cultural topics.

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

121. American Expression
(111A.) Fall, Winter, Spring, Summer. 3(3-0) Satisfactory grade on English proficiency examination or in Comprehensive English.
Aims to improve the student's ability to read and write and to acquaint him with his American heritage. Selected reading and theme topics.

122. American Expression
(112A.) Fall, Winter, Spring, Summer. 3(3-0) Three credits in the first term of any ATL sequence numbered 121 or above; or satisfactory performance in Comprehensive English.
Aims to improve the student's ability to read and write, and to acquaint him with his American heritage. Selected reading and theme topics.

123. American Expression
(113A.) Fall, Winter, Spring, Summer. 3(3-0) Three credits in the second term of any ATL sequence numbered 121 or above; or satisfactory performance in Comprehensive English.
Aims to improve the student's ability to read and write, and to acquaint him with his American heritage. Selected reading and theme topics.

131. Major Documents in American Experience
(111B.) Fall, Winter, Spring, Summer. 3(3-0) Satisfactory grade on English proficiency examination or in Comprehensive English.
Aims to acquaint the student with significant works, and to improve his abilities at reading and writing. Selected readings and theme topics.

†See page A-2, item 3.