AGRICULTURE ANR
AND NATURAL RESOURCES

College of Agriculture and Natural Resources

101 Preview of Science Fall. 3(2-2) SA: AE 052
Operating principles of gasoline and diesel engines and their systems. Operation and maintenance requirements.

254 Fluid Power Technology Spring. 2(2-2) R: Open only to students in Agriculture and Natural Resources. SA: AE 054
Fluid power in mobile equipment. Operation and characteristics of system components and circuits. Component disassembly. System testing and diagnosis. Offered first ten weeks of semester.

261 Principles of Animal Environments Spring. 2(1-2) Interdepartmental with Animal Science. SA: AE 061, ATM 326

431 Irrigation, Drainage and Erosion Control Systems Fall. 3(2-2) RB: (MTH 116 and CSS 210) R: Not open to freshmen or sophomores. Principles of soil and water conservation engineering including: land and soil surveying, basic hydraulics, hydrology, soil moisture, and soil and water conservation practices with applications to irrigation, drainage and erosion control systems.

490 Independent Study Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: (ATM 240 or BCM 311) R: Open only to majors in Agricultural Technology and Systems Management. Approval of department; application required. Supervised individual student research and study in agricultural technology and systems management.

491 Pathways in Connected Learning Fall, Spring. 2(2-0) RB: (MTH 116 and CSS 210) R: Approval of college. Active, self-directed, and reflective learning associated with agriculture and natural resource issues. Orientation to sources for research and learning. Self-directed study integrating agricultural and natural resources heritage to family, community and careers.

492 New Student Seminar: Issues and Ideas in Agriculture and Natural Resources Fall. 1(0-2) R: Open only to freshmen or sophomores or juniors in the College of Agriculture and Natural Resources. Issues in agriculture and natural resources. Personal and professional development through discussion and interactive experiences.

493 Environmental Issues Seminar Fall, Spring. 1 credit. A student may earn a maximum of 4 credits in all enrollments for this course. Interdepartmental with Natural Science; Engineering; Social Science; Communication Arts and Sciences. Administered by College of Natural Science. R: Open only to students in the College of Agriculture and Natural Resources or College of Engineering or College of Natural Science or College of Communication Arts and Sciences or College of Social Science. Approval of college. Environmental issues and problems explored from a variety of perspectives, including legal, scientific, historical, political, socio-economic, and technical points of view.

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110 New Student Seminar: Issues and Ideas in Agriculture and Natural Resources Fall. 1(0-2) R: Open only to freshmen or sophomores or juniors in the College of Agriculture and Natural Resources. Issues in agriculture and natural resources. Personal and professional development through discussion and interactive experiences.

202 Michigan's Agricultural and Natural Resources Heritage Fall. 2(2-0) Interdepartmental with ANR Education and Communication Systems. R: Completion of Tier I writing requirement. Michigan's historical agricultural and natural resources. Orientation to sources for research and learning. Self-directed study integrating agricultural and natural resources heritage to family, community and careers.

205 Course for College of Agriculture Students Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: (MTH 116 and CSS 210) R: Approval of college. Active, self-directed, and reflective learning associated with agriculture and natural resource issues. Orientation to sources for research and learning. Self-directed study integrating agricultural and natural resources heritage to family, community and careers.

210 Pathways in Connected Learning Fall, Spring. 3(2-2) R: Approval of college. Active, self-directed, and reflective learning associated with agriculture and natural resource issues. Orientation to sources for research and learning. Self-directed study integrating agricultural and natural resources heritage to family, community and careers.

289 Civilization, Food Crops and the Environment Fall. 3(3-0) Interdepartmental with Crop and Soil Sciences. SA: GCC 289
Role of the major food crops in the survival of civilizations and cultures. Synthesis and analysis of structured experiences in popular culture.

310 Connected Learning Seminar I Fall, Spring, Summer. 3(3-0) R: (ANR 210) Learner-directed critical analysis of contemporary issues in agriculture and natural resources. Communication of outcomes to professional communities. Collaborative learning integrated with individual experiences.

311 Connected Learning Seminar II Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 3 credits in all enrollments for this course. R: (ANR 310) Advanced analysis and presentation of contemporary issues in agriculture and natural resources.

392 Agriculture and Natural Resources Seminar Spring. 1(2-0) R: Not open to freshmen or sophomores. Current agricultural, natural resources and environmental problems and solutions. Discussion leaders from various disciplines.

410 Connected Learning Transitions Fall, Spring. 3(3-0) R: (ANR 310) Synthesis and analysis of structured experiences in agriculture and natural resources. Personal and interpersonal development, personal and professional integrity, communication competence, and critical and reflective thinking.

475 International Studies in Agriculture and Natural Resources Fall. 3 credits. Fall: Given at various off campus sites. Spring: Given at various off campus sites. Approval of college; application required. Study-travel experience. Contemporary problems affecting agriculture and natural resources in world, national and local communities. Case studies and interviews with officials, community leaders and leading professionals.

490 Independent Study in Agriculture and Natural Resources Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to sophomores or juniors or seniors in the College of Agriculture and Natural Resources. Supervised individual study in topics related to agriculture and natural resources.

491 Selected Topics Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Not open to freshmen or sophomores. Special topics in agriculture and natural resources.

493 Professional Internship in Agriculture and Natural Resources Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to juniors or seniors in the College of Agriculture and Natural Resources. Approval of department; application required. A student may earn a maximum of 6 credits in all enrollments for any or all of these courses: ABM 493, AEE 493, ANR 493, ANS 493, CSS 493, EEP 493, CSU 493, FW 493, HRT 493, PKG 493, PLP 493, PRR 493, and RD 493. Supervised professional experiences in agencies and businesses related to a student's major field of study.

AMERICAN STUDIES

College of Arts and Letters

210 American Popular Culture Fall. 4(4-0) R: Completion of Tier I writing requirement. Significant social issues in American popular culture. American studies theory and methods employed to analyze thematic and historical cultural representations in popular culture.