

**891. Advanced Topics in Agricultural Technology and Systems Management**  
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course.  
R: Open only to graduate students in College of Agriculture and Natural Resources or College of Engineering.  
New developments in agricultural technology and systems management.  
QA: ATM 890

**899. Master's Thesis Research**  
Fall, Spring, Summer. 1 to 10 credits. A student may earn a maximum of 99 credits in all enrollments for this course.  
R: Open only to graduate students in Agricultural Technology and Systems Management. Approval of department.  
QA: ATM 899

**999. Doctoral Dissertation Research**  
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 99 credits in all enrollments for this course.  
R: Open only to Ph.D. students in Agricultural Technology and Systems Management. Approval of department.  
QA: ATM 999

## AGRICULTURE AND NATURAL RESOURCES ANR

### College of Agriculture and Natural Resources

**350. Leadership Development for Agriculture and Natural Resources**  
Spring. 2(2-0)  
R: Not open to freshmen and sophomores. Approval of college; application required.  
Preparation for community leadership. Field observation of social, economic and political problems. Emphasis on awareness, action and involvement. Seminars and interviews.  
QA: ANR 350

**392. Agriculture and Natural Resources Seminar**  
Spring. 1(2-0)  
R: Not open to freshmen and sophomores.  
Current agricultural, natural resources and environmental problems and solutions. Discussion leaders from various disciplines.  
QA: ANR 425

**475. International Studies in Agriculture and Natural Resources**  
Fall, Spring, Summer. Given at various off campus sites. 2 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course.  
R: Approval of college; application required.  
Study-travel experience emphasizing contemporary problems affecting agriculture and natural resources in the world, national and local communities. Case studies and interviews with officials, community leaders and leading professionals.  
QA: ANR 475

**481. Agricultural Research Systems in Developing Countries**  
Summer. 2(2-0) Interdepartmental with Agricultural Economics, Animal Science, and Crop and Soil Sciences.  
R: Open only to seniors and graduate students in the College of Agriculture and Natural Resources.  
Planning, organizing and managing agricultural research systems. Problems and alternative reforms to improve research productivity. Adapting new agricultural technology in developing countries.  
QA: ANR 480

**489. Integrated Approaches to Agriculture and Natural Resources Problems**  
Fall, Spring. 3(2-2)  
P: MTH 110 or MTH 116; EC 201 or EC 202. R: Open only to seniors in the College of Agriculture and Natural Resources.  
Holistic solutions to resource management and allocation: an integrated, multidisciplinary team approach to case study problems.  
QP: MTH 109, MTH 110, MTH 111, EC 201, EC 202

**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 and sophomores.  
Special topics in agriculture and natural resources.  
QA: ANR 480

**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 and seniors in the College of Agriculture and Natural Resources. Approval of department; application required.  
Supervised professional experiences in agencies and businesses related to a student's major field of study.  
QA: ANR 399

## AMERICAN STUDIES AMS

### College of Arts and Letters

**491. Perspectives in American Studies**  
Fall. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course.  
R: Not open to freshmen and sophomores.  
Methods and significant works in American Studies. Topics vary.  
QA: AMS 410

**492. Seminar in American Studies**  
Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course.  
R: Open only to majors in Arts and Letters, James Madison College, and Lyman Briggs School.  
Selected topics in American life emphasizing interdisciplinary approaches. Topics vary.  
QA: AMS 411

**881. American Studies Theory, Methods, and Bibliography**  
Fall. 3(3-0)  
Methods and bibliographical sources of American Studies research. Interdisciplinary approaches to studying American culture.  
QA: A L 801

**890. Independent Study**  
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course.  
R: Approval of college.  
Special projects, directed reading, and research arranged by an individual graduate student and a faculty member in areas supplementing regular course offerings.  
QA: A L 803

**891. Special Topics in American Studies**  
Fall, Spring, Summer. 4(4-0) A student may earn a maximum of 12 credits in all enrollments for this course.  
R: Approval of college.  
Special topics supplementing regular course offerings proposed by faculty for graduate students on a group study basis.  
QA: A L 802

**899. Master's Thesis Research**  
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course.  
R: Approval of college.  
Directed research leading to a master's thesis in partial fulfillment of Plan A master's degree requirements.

## AMERICAN THOUGHT AND LANGUAGE ATL

### Department of American Thought and Language College of Arts and Letters

**0102. Preparation for College Writing**  
Fall, Spring. 0(0-2)/1(1-2) See page A-2, item 3.]  
C: ATL 1004 R: Designated score on English placement test.  
Practice in applying the principles of English grammar, syntax, and word usage to writing.  
QA: ATL 0991

**1004. Preparation for College Writing**  
Fall, Spring. 3(3-0)  
C: ATL 0102 R: Designated score on English placement test.  
Composing, revising, and editing. Active reading and pre-writing strategies. Style, mechanics, and usage. Organization and proofreading.  
QA: ATL 1144, ATL 1154

**101. Library Resources**  
Fall, Spring, Summer. 1(1-0)  
Use of libraries for researching college assignments and papers. Emphasis on bibliographic and reference tools.  
QA: ATL 117

**110. Writing: Science and Technology**  
Fall, Spring. 4(4-0)  
P: Designated score on English placement test or ATL 1004. R: Not open to students with credit in MC 111, MC 112, LBS 133, ATL 120, ATL 125, ATL 130, ATL 140, ATL 145, ATL 150, ATL 195H.  
Drafting, revising, and editing compositions derived from readings on American science and technology to develop skills in narration, persuasion, analysis, and documentation.  
QA: ATL 1154, ATL 1164, ATL XY2, ATL XY3

**120. Writing: American Philosophy, Literature, and the Arts**  
Fall, Spring. 4(4-0)  
P: Designated score on English placement test or ATL 1004. R: Not open to students with credit in MC 111, MC 112, LBS 133, ATL 110, ATL 120, ATL 130, ATL 140, ATL 145, ATL 150, ATL 195H.  
Drafting, revising, and editing compositions derived from readings on American philosophy, literature, and the arts to develop skills in narration, persuasion, analysis, and documentation.  
QA: ATL 1154, ATL 1164, ATL XY2, ATL XY3

**125. Writing: The American Ethnic and Racial Experience**  
Fall, Spring. 4(4-0)  
P: Designated score on English placement test or ATL 1004. R: Not open to students with credit in MC 111, MC 112, LBS 133, ATL 110, ATL 120, ATL 130, ATL 140, ATL 145, ATL 150, ATL 195H.  
Drafting, revising, and editing compositions derived from readings on the experience of American ethnic and racial groups to develop skills in narration, persuasion, analysis, and documentation.  
QA: ATL 1154, ATL 1164, ATL XY2, ATL XY3

**130. Writing: American Radical Thought**  
Fall, Spring. 4(4-0)  
P: Designated score on English placement test or ATL 1004. R: Not open to students with credit in MC 111, MC 112, LBS 133, ATL 110, ATL 120, ATL 125, ATL 140, ATL 145, ATL 150, ATL 195H.  
Drafting, revising, and editing compositions derived from readings on American radical thought to develop skills in narration, persuasions, analysis, and documentation.  
QA: ATL 1154, ATL 1164, ATL XY2, ATL XY3

**140. Writing: Women in America**  
Fall, Spring. 4(4-0)  
P: Designated score on English placement test or ATL 1004. R: Not open to students with credit in MC 111, MC 112, LBS 133, ATL 110, ATL 120, ATL 125, ATL 130, ATL 145, ATL 150, ATL 195H.  
Drafting, revising, and editing compositions derived from readings on women in America to develop skills in narration, persuasion, analysis, and documentation.  
QA: ATL 1154, ATL 1164, ATL XY2, ATL XY3