Integrated Approaches to Agriculture and Natural Resources Problems (W)
Fall, Spring. 3(2-2) P.M.: (MTH 110 or MTH 116) and (EC 201 or EC 202) and completion of Tier I writing requirement. R: Open only to seniors in Agriculture and Natural Resources.

Holistic solutions to resource management and allocation: an integrated, multidisciplinary team approach to case study problems.

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 or graduate students in the College of Agriculture and Natural Resources.

Supervised individual study in topics related to agriculture and natural resources.

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.

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, FIM 493, FW 493, HRT 493, PKG 493, PRM 493, PRR 493, and RD 493.

Supervised professional experiences in agencies and businesses related to a student’s major field of study.

The Natural Environment: Perceptions and Practices
Spring. 4(4-0) Interdepartmental with Lyman Briggs School. Administered by Lyman Briggs School. P.M.: Completion of Tier I writing requirement. R: Open only to sophomores or juniors or seniors in the American Studies major or in Lyman Briggs School. American attitudes toward the natural environment and related public and private institutions.

American Art through 1875
Spring of even years. 3(3-0) Interdepartmental with History of Art. Administered by Department of History of Art. P.M.: (HA 120 or HA 121 or HA 250) and completion of Tier I writing requirement. SA: HA 438

Artistic production in North America from colonial times to 1875, in its cultural context.

American Art, 1875-1940
Fall of even years. 3(3-0) Interdepartmental with History of Art. Administered by Department of History of Art. P.M.: (HA 120 or HA 121 or HA 250) and completion of Tier I writing requirement. SA: HA 458, HA 358

Artistic production in North America from 1875 to 1940, in its cultural context.

Seminar in American Material Folk Culture
Spring of odd years. 3(3-0) RB: Coursework in arts, humanities and cultural studies. Understanding American material folk culture and folklore as sources for analysis and appreciation. Methodological approaches and fieldwork techniques.

Perspectives in American Studies
Fall. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. Methods and significant works in American Studies. Topics vary.

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 students in the College of Arts and Letters or James Madison College or Lyman Briggs School. Selected topics in American life emphasizing interdisciplinary approaches. Topics vary.

Seminar in American Art
Spring of odd years. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to students in the College of Arts and Letters or James Madison College or Lyman Briggs School. Intensive investigation of a topic in the history of American art.

American Studies Theory, Methods, and Bibliography
Fall. 3(3-0) Methods and bibliographical sources of American Studies research. Interdisciplinary approaches to studying American culture.

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.

Special Topics in American Studies
Fall, Spring, Summer. 3(3-0) A student may earn a maximum of 12 credits in all enrollments for this course. Special topics supplementing regular course offerings proposed by faculty/graduate students on a group study basis.

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.

Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 12 credits. A student may earn a maximum of 30 credits in all enrollments for this course. R: Approval of college.

Doctoral dissertation research.

AMERICAN THOUGHT AND LANGUAGE

Preparation for College Writing
Fall, Spring, Summer. 4(4-0) P.M.: Designated score on English placement test. C: ATL 1004 concurrently
Practice in applying the principles of English grammar, syntax, and word usage to writing.

Preparation for College Writing
Fall, Spring. 3(3-0) P.M.: Designated score on English placement test. C: ATL 1002 concurrently
Composing, revising, and editing. Active reading and pre-writing strategies. Style, mechanics, and usage. Organization and proofreading.

Writing: Science and Technology
Fall, Spring. 4(4-0) P.M.: (ATL 1004) or designated score on English placement test. Not open to students with credit in MC 111 or MC 112 or LBS 133 or AL 192 or AL 192H or ATL 115 or ATL 120 or ATL 125 or ATL 130 or ATL 135 or ATL 140 or ATL 145 or ATL 150 or ATL 195H
Dratting, revising, and editing compositions derived from readings on American science and technology to develop skills in narration, persuasion, analysis, and documentation.

Writing: Law and Justice in the United States
Fall, Spring. 4(4-0) P.M.: (ATL 1004) or designated score on English placement test. Not open to students with credit in MC 111 or MC 112 or LBS 133 or AL 192 or AL 192H or ATL 110 or ATL 120 or ATL 125 or ATL 130 or ATL 135 or ATL 140 or ATL 145 or ATL 150 or ATL 195H
Dratting, revising, and editing compositions derived from readings on American law and justice to develop skills in narration, persuasion, analysis, and documentation.
120 Writing: American Philosophy, Literature, and the Arts
Fall, Spring. 4(4-0) P:M: (ATL 1004) or designated score on English placement test. Not open to students with credit in MC 111 or MC 112 or LBS 133 or AL 192 or AL 192H or ATL 110 or ATL 115 or ATL 125 or ATL 130 or ATL 135 or ATL 140 or ATL 145 or ATL 150 or 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.

125 Writing: The American Ethnic and Racial Experience
Fall, Spring. 4(4-0) P:M: (ATL 1004) or designated score on English placement test. Not open to students with credit in MC 111 or MC 112 or LBS 133 or AL 192 or AL 192H or ATL 110 or ATL 115 or ATL 120 or ATL 130 or ATL 135 or ATL 140 or ATL 145 or ATL 150 or 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.

130 Writing: American Radical Thought
Fall, Spring. 4(4-0) P:M: (ATL 1004) or designated score on English placement test. Not open to students with credit in MC 111 or MC 112 or LBS 133 or AL 192 or AL 192H or ATL 110 or ATL 115 or ATL 120 or ATL 125 or ATL 130 or ATL 135 or ATL 140 or ATL 145 or ATL 150 or ATL 195H.
Drafting, revising, and editing compositions derived from readings on American radical thought to develop skills in narration, persuasion, analysis, and documentation.

135 Writing: Public Life in America
Fall, Spring. 4(4-0) P:M: (ATL 1004) or designated score on English placement test. Not open to students with credit in MC 111 or MC 112 or LBS 133 or AL 192 or AL 192H or ATL 110 or ATL 115 or ATL 120 or ATL 125 or ATL 130 or ATL 140 or ATL 145 or ATL 150 or ATL 195H.
Drafting, revising, and editing compositions derived from readings on American civic tradition and community service-learning experiences to develop skills in narration, persuasion, analysis, and documentation.

140 Writing: Women in America
Fall, Spring. 4(4-0) P:M: (ATL 1004) or designated score on English placement test. Not open to students with credit in MC 111 or MC 112 or LBS 133 or AL 192 or AL 192H or ATL 110 or ATL 115 or ATL 120 or ATL 125 or ATL 130 or ATL 135 or ATL 140 or ATL 145 or ATL 150 or ATL 195H.
Drafting, revising, and editing compositions derived from readings on women in America to develop skills in narration, persuasion, analysis, and documentation.

145 Writing: Men in America
Fall, Spring. 4(4-0) P:M: (ATL 1004) or designated score on English placement test. Not open to students with credit in MC 111 or MC 112 or LBS 133 or AL 192 or AL 192H or ATL 110 or ATL 115 or ATL 120 or ATL 125 or ATL 130 or ATL 135 or ATL 140 or ATL 150 or ATL 195H.
Drafting, revising, and editing compositions derived from readings on men in America to develop skills in narration, persuasion, analysis, and documentation.

150 Writing: The Evolution of American Thought
Fall, Spring. 4(4-0) P:M: (ATL 1004) or designated score on English placement test. Not open to students with credit in MC 111 or MC 112 or LBS 133 or AL 192 or AL 192H or ATL 110 or ATL 115 or ATL 120 or ATL 125 or ATL 130 or ATL 135 or ATL 140 or ATL 195H.
Drafting, revising, and editing compositions derived from American historical, social, and cultural texts to develop skills in narration, persuasion, analysis, and documentation.

195H Writing: Major Topics in American Thought
Fall, Spring. 4(4-0) P:NM: Designated score on English placement test. Not open to students with credit in MC 111 or MC 112 or LBS 133 or AL 192 or AL 192H or ATL 110 or ATL 115 or ATL 120 or ATL 125 or ATL 130 or ATL 135 or ATL 140 or ATL 145 or ATL 150.
Drafting, revising, and editing compositions derived from readings on major topics in American thought to develop advanced skills in narration, persuasion, analysis, and documentation.

290 Independent Study
Fall, Spring. Summer. 1 to 4 credits. R: Open only to freshmen or sophomores. Approval of department. Special projects arranged by an individual student and a faculty member in areas supplementing regular course offerings.

302 Advanced Neuroanatomy
Summer of odd years. 1 to 5 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Approval of department.
Current topics in anatomy and physiology and processes of central nervous system cells.

389 Systems Neuroscience
Spring of odd years. 4(4-0) Interdepartmental with Pharmacology and Toxicology; Physiology; R: Open only to graduate students in the Colleges of Human Medicine, Osteopathic Medicine, Agriculture and Natural Resources, Natural Science, and Veterinary Medicine.
Anatomy, pharmacology, and physiology of multicellular neural systems. Sensory, motor, autonomic, and chemo-regulatory systems in vertebrate brains.

485 Vertebrate Neural Systems
Spring of odd years. 3(2-2) Interdepartmental with Physiology.
Comparative analysis of major component systems of vertebrate brains. Evolution, ontogeny, structure, and function in fish, amphibians, reptiles, birds and mammals.

899 Master’s Thesis Research
Fall, Spring, Summer. 1 to 8 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to graduate students in Anatomy.
Master’s thesis research.

999 Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 36 credits in all enrollments for this course. R: Open only to graduate students in Anatomy.
Doctoral dissertation research.

ANATOMY ANTR

College of Human Medicine
College of Osteopathic Medicine
College of Veterinary Medicine

ANT 316 General Human Anatomy
Fall, Spring. BS 111) or approval of department. SA:perature of the body.

ANT 802 Clinical Surgical Anatomy
Spring. 4(2-4) Interdepartmental with Surgery. Administered by Department of Surgery; R: Open only to Master's students in Surgery. Review of surgical anatomy. Detailed anatomical information through lecture and dissection sessions. Clinical interpretation of anatomy and surgical approaches.

ANT 813 Problems in Anatomy
Fall, Spring. Summer. 1 to 5 credits. A student may earn a maximum of 5 credits in all enrollments for this course. R: Approval of department. Fields such as gross anatomy, histology, tissue culture, cytology, neurology and embryology.

ANT 814 Graduate Seminar
Spring of even years. 1 to 3 credits. R: Open only to graduate students in Anatomy. Supervised practice in evaluating abstracts and delivering oral presentations of anatomical sciences. Organization, timing and effective illustrations.

ANT 839 Systems Neuroscience
Spring of odd years. 4(4-0) Interdepartmental with Pharmacology and Toxicology; Physiology; R: Open only to graduate students in the Colleges of Human Medicine, Osteopathic Medicine, Agriculture and Natural Resources, Natural Science, and Veterinary Medicine. Systematic analysis of major component systems of vertebrate brains. Evolution, ontogeny, structure, and function in fish, amphibians, reptiles, birds, and mammals.

ANT 841 Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 36 credits in all enrollments for this course. R: Open only to graduate students in Anatomy. Doctoral dissertation research.

HUMAN ANATOMY ANTR

College of Human Medicine

316 General Human Anatomy
Spring. 3(3-0) P:NM: (BS 110 or BS 111) or approval of department. SA: ANT 316 Human structure. Major systems of the human body.

350 Human Gross Anatomy and Structural Biology
Fall, Spring. 3(4-0) P:M: (BS 111) or (BS 149H) or (LBS 145) R: Open only to students in the B.S. Degree in Nursing or approval of department. SA: ANT 316, ANTR 316 Survey of human systemic gross anatomy with clinical illustrations. Introduction to the language of medicine. Structural basis of physiological principles. Designed for pre-professional students entering health-care disciplines.

381 Human Gross Anatomy Laboratory
Spring, Summer. 2(0-6) P:M: (ANTR 350) R: Approval of department. Not open to students with credit in KIN 217 or ZOL 329. Structured survey of human regional gross anatomy using projections, cross-sections, medical imaging, multimedia, and hypermedia.

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