

**AGRICULTURE AND NATURAL RESOURCES**

**475\*.** **International Studies in Agriculture and Natural Resources**  
 Fall, Spring, Summer. 2 to 6 credits.  
 May reenroll for a maximum of 6 credits.  
 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 the Department(s) of Agricultural Economics, Animal Science, 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 emphasizing an integrated, multidisciplinary team approach to case study problems.  
 QP: MTH 109 ORMTH 110ORMTH 111

**491\*.** **Selected Topics**  
 Fall, Spring, Summer. 1 to 4 credits.  
 May reenroll for a maximum of 6 credits.  
 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(-) May reenroll for a maximum of 6 credits.  
 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 student's major field of study.  
 QA: ANR 399

**AMERICAN STUDIES AMS**

**491\*.** **Perspectives in American Studies**  
 Fall. 3(3-0) May reenroll for a maximum of 6 credits.  
 R: juniors-seniors  
 Methods and significant works in American Studies for majors.  
 QA: AMS 410

**492\*.** **Seminar in American Studies**  
 Spring. 3(3-0) May reenroll for a maximum of 6 credits.  
 R: Juniors and seniors Arts and Letters, James Madison  
 Seminar approach to selected topics in American life emphasizing interdisciplinary approaches. Topics vary.  
 QA: AMS411

**881\*.** **American Studies Theory, Methods, Bibliography**  
 Fall. 3(3-0)  
 R: Graduate Arts & Letters American Studies  
 Methods and bibliographical sources of American Studies research. Interdisciplinary approaches to studying American culture.  
 QA: AL 801

**890\*.** **Independent Study**  
 Fall, Spring, Summer. 1 to 4 credits.  
 May reenroll for a maximum of 12 credits.  
 R: Approval of the program director  
 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(04-00) May reenroll for a maximum of 12 credits.  
 R: Approval of the program director  
 Special topics supplementing regular course offerings proposed by faculty on a group study basis for graduate students.  
 QA: A L 802

**899\*.** **Master's Thesis Research-Plan A**  
 Fall, Spring, Summer. 1 to 6 credits.  
 May reenroll for a maximum of 6 credits.  
 R: Approval of the program director  
 Directed research leading to a master's thesis, used in partial fulfillment of plan A master's degree requirements.

**AMERICAN THOUGHT AND LANGUAGE ATL**

There will be 4 credit Tier One writing courses numbered ATL 110 and higher.

There will be a 4 credit Honors Tier One course numbered ATL 195H.

There will be a developmental Tier One writing course.

**ANATOMY ANT**

**316\*.** **General Human Anatomy**  
 Spring. 3(-)  
 P: BS 211 or BS 212 R: Approval of Department  
 Designed to impart the basic concepts of the broad field of anatomy. Special requirements of the various disciplines will be met in their respective laboratories.  
 QP: BS 211 BS 212 QA: ANT 316

**515\*.** **Comparative Veterinary Gross Anatomy**  
 Fall. 6(2-10)  
 P: Admission to the College of Veterinary Medicine R: College of Veterinary Medicine Veterinary Medicine none  
 Essentials of canine anatomy with comparisons to ruminant, porcine and equine anatomy.

**516\*.** **Veterinary Histology and Cell Biology**  
 Fall. 4(3-2)  
 P: Admission to the College of Veterinary Medicine. R: College of Veterinary Medicine

Introduction to the principles of developmental, cellular, and molecular biology relevant to future courses in the veterinary curriculum.

**517\*.** **Veterinary Neuroanatomy**  
 Spring. 1(1-0)  
 P: Admission to the College of Veterinary Medicine. R: College of Veterinary Medicine Veterinary Medicine none  
 Introduction to the anatomy of the canine nervous system.

**551.** **Medical Gross Anatomy**  
 Fall. 7(4-6)  
 R: Graduate-professional students in colleges of Human and Osteopathic Medicine.  
 Gross anatomy of the human body using prosections, medical imaging, clinical correlations, case studies, video tapes, and computer aided instruction.

**552.** **Medical Neuroscience**  
 Spring. 4(3-2) Interdepartmental with the Department(s) of Physiology, Radiology.  
 R: Graduate-professional students in colleges of Human and Osteopathic Medicine.  
 Correlation of normal structure and function of the human nervous system with clinical testing, classical lesions, and common diseases.

**562.** **Medical Histology**  
 Spring. 3(2-2)  
 R: Graduate-professional students in colleges of Human and Osteopathic Medicine.  
 Histology of the human body.

**585.** **Human Gross Anatomy Dissection**  
 Fall, Spring, Summer. 2 to 7 credits.  
 May reenroll for a maximum of 15 credits.  
 P: ANT 551 R: Graduate-professional students in colleges of Human and Osteopathic Medicine.  
 Dissection of selected regions of the human body.

**802\*.** **Clinical Surgical Anatomy**  
 Spring. 6(04-04) Interdepartmental with the Department(s) of Surgery.  
 P: Must be a surgery resident with MD or DO C: Must be in the MSU system  
 Review of surgical anatomy; the opportunity to obtain detailed anatomical information through lecture and dissection sessions; and the clinical interpretation of anatomy surgical approaches.

**813\*.** **Problems in Anatomy**  
 Fall, Spring, Summer. 1 to 5 credits.  
 May reenroll for a maximum of 5 credits.  
 P: Approval of department  
 Various anatomical fields such as gross anatomy, histology, tissue culture, cytology, neurology and embryology will be studied  
 QA: ANT 813

**814\*.** **Graduate Student Seminar**  
 Spring of even-numbered years. 1 to 3 credits.  
 R: Anatomy graduate program  
 Supervised practice in delivering and evaluating written abstracts and public oral presentations of anatomical sciences, techniques or organization, timing and effective illustrations  
 QA: ANT 814

**820\*.** **Advanced Neuroanatomy**  
 Summer of odd-numbered years. 1 to 3 credits. May reenroll for a maximum of 99 credits.  
 P: Permission of instructor  
 Current topics concerning anatomy and physiology of CNS cells and their processes  
 QP: ANT 815 QA: ANT 820