AGM 1010 Introduction to Agricultural Mechanization and Business 1 (3) Introduces the Agricultural Mechanization and Business program. Gives an overview of the curriculum, introduces students to relevant extracurricular activities, exposes students to employment opportunities through alumni and interns, and helps students to prepare for careers relevant to the major.

AGM 2050 Principles of Fabrication 3 (2) Principles, techniques, and methods in the selection, proper use, and maintenance of hand and power tools. Principal topics include welding, tool fitting, metalworking, woodworking, finishing and preserving, and heat treatment. Coreq: AGM 2051.

AGM 2051 Principles of Fabrication Laboratory 0 (3) Non-credit laboratory to accompany AGM 2050. Coreq: AGM 2050.

AGM 2060 Machinery Management 3 (2) Teaches agriculture students to apply physical principles and sound reasoning to the mechanization of modern agricultural production and processing enterprises. Stresses planning efficient operational systems and wise selection of equipment, based on function and economic suitability. Prq or concurrent enrollment: MATH 1020 or MATH 1060; and PHYS 2000 or PHYS 2070. Coreq: AGM 2061.

AGM 2061 Machinery Management Laboratory 0 (3) Non-credit laboratory to accompany AGM 2060. Coreq: AGM 2060.

AGM 2190 Agribusiness and Food Systems 3 (3) Provides a general introduction to the major activities associated with the movement of agricultural and food products from producers to processors to consumers and the essential supply chain functions of buying, selling, transportation, storage, financing, standardization, pricing and risk bearing.

AGM 2210 Surveying: Earthwork and Area Measurements 3 (2) Fundamentals of surveying relative to earthwork and land area measurements, including linear measurements, leveling, angular measurements, and computations. Levels and total stations are used with an introduction to GPS. Prq or concurrent enrollment: MATH 1020 or MATH 1060. Coreq: AGM 2211.

AGM 2211 Surveying: Earthwork and Area Measurements Laboratory 0 (3) Non-credit laboratory to accompany AGM 2210. Coreq: AGM 2210.

AGM 3010 Soil and Water Conservation 3 (3) Soil and water management is studied by applying principles of mathematics, fluid flow, hydrology, and soil characteristics as related to soil-water-vegetation complexes in runoff, erosion control, channel design, water conservation, drainage, irrigation, stormwater best management practices and stream restoration. Prq or concurrent enrollment: MATH 1020 or MATH 1060.

AGM 3030 Calculations for Mechanized Agriculture 3 (2) Enhances students' ability to analyze and solve a wide range of problems requiring engineering technology. Laboratory periods introduce students to microcomputer hardware. Basic programming and typical applications to agricultural mechanization problems are included. Prq or concurrent enrollment: PHYS 2000 or PHYS 2070. Coreq: AGM 3031.

AGM 3031 Calculations for Mechanized Agriculture Laboratory 0 (3) Non-credit laboratory to accompany AGM 3030. Coreq: AGM 3030.

AGM 3190 Agribusiness Decision Analysis 3 (3) Improvement of the decision-making process in agricultural businesses through the use of decision-analysis software. Students build their own decision-making models using spreadsheets. Prq: AGM 2190 or APEC 3020 or APEC 3190 or MGT 2010.

AGM 3710 Agricultural Mechanization Practicum 1-3 (1-3) Pre-planned internship with an approved employer involved in agricultural technical or business endeavors. 130 hours of supervised responsibility are required per credit hour. A work journal, written/oral reports, company consent and evaluation must be on file. May be repeated for a maximum of twelve credits. To be taken Pass/No Pass only.

AGM 4000 Senior Seminar in Agricultural Mechanization and Business 1 (1) Seminar and project-based course providing information on a variety of topics of value for the development of professionals in agricultural mechanization and business and in agricultural education. Topics include development of a professional resume, professional ethics, and current topics related to agricultural technology and systems management. Prq: Junior or senior standing in Agricultural Mechanization and Business or in Agricultural Education.

AGM 4020 Landscaping Drainage and Irrigation 3 (2) Uses basic soil-water-plant relationships to determine the need for and methods of irrigation and drainage. Topics include irrigation methods, drainage needs and drainage methods. Prq or concurrent enrollment: AGM 3010. Coreq: AGM 4021.

AGM 4021 Landscaping Drainage and Irrigation Laboratory 0 (3) Non-credit laboratory to accompany AGM 4020. Coreq: AGM 4020.

AGM 4050 Environmental Control in Animal Structures 3 (2) Design of environmental control systems for animal production facilities. Topics include effects of the thermal and chemical environment on animals, ventilation system design, thermal design of structural envelopes, design of heating, cooling, and lighting systems. Emphasis is on practical, energy-efficient applications to modern animal production facilities. Prq: AGM 3030 or AVS 3010. Coreq: AGM 4051.

AGM 4051 Environmental Control in Animal Structures Laboratory 0 (3) Non-credit laboratory to accompany AGM 4050. Coreq: AGM 4050.

AGM 4060 Mechanica and Hydraulic Systems 3 (2) Study of power transmission systems for agricultural production emphasizing mobile equipment. Characteristics, requirements, and design of both V-belt drive and roller-chain drives are presented. Emphasizes hydraulic power transmission systems, including pumps, actuators, control devices, and hydraulic circuitry. Prq: AGM 2060; and PHYS 2000 or PHYS 2070. Coreq: AGM 4061.

AGM 4061 Mechanical and Hydraulic Systems Laboratory 0 (3) Non-credit laboratory to accompany AGM 4060. Coreq: AGM 4060.

AGM 4100* Precision Agriculture Technology 3 (2) Includes principles and hands-on applications of technologies supporting precision agriculture. Topics include global positioning system (GPS), geographic information system software, variable rate technologies, collection of spatial data, automated guidance of equipment, spatial data mapping and analysis, remote sensing, and economic considerations. Prq: Junior standing. Coreq: AGM 4101.

AGM 4101* Precision Agriculture Technology Laboratory 0 (3) Non-credit laboratory to accompany AGM 4100. Coreq: AGM 4100.

AGM 4190 Agribusiness Innovation and Entrepreneurship 3 (3) Emphasis on assessing students' abilities as agribusiness entrepreneurs, evaluating the feasibility of a business idea, creating strategies for organizing and marketing the agricultural business, exploring pricing for products or services, developing capital needs and sound financial statements, and researching, developing, and writing a comprehensive plan for the business. May also be offered as ELE 4190. Prq: AGM 2190 or AGM 3190 or APEC 3020 or APEC 3190 or MGT 2100.

AGM 4520* Mobile Power 3 (2) Study of tractors, emphasizing internal combustion engines and support systems necessary for their proper functioning. Also considers application of power, maintenance, adjustment, and general repair. Prq: PHYS 2000 or PHYS 2070. Coreq: AGM 4521.

AGM 4521* Mobile Power Laboratory 0 (3) Non-credit laboratory to accompany AGM 4520. Coreq: AGM 4520.

AGM 4600* Electrical Systems 3 (2) Students in agriculture and related curricula study electric and other utilities on the farm and in the home. Emphasizes selection, installation, and maintenance of wiring systems, lighting systems, motors, controls, water systems, and waste disposal systems. Prq: Junior standing. Coreq: AGM 4601.

AGM 4601* Electrical Systems Laboratory 0 (3) Non-credit laboratory to accompany AGM 4600. Coreq: AGM 4600.

AGM 4720 Capstone 3 (2) Covers professional conduct, ethics, oral and written communication, and financial matters. Each student completes a comprehensive project on a technical subject. The results are given in a written report and oral presentation. Students use digital portfolio technology to assess their education. Coreq: AGM 4721.

AGM 4721 Capstone Laboratory 0 (3) Non-credit laboratory to accompany AGM 4720. Coreq: AGM 4720.
AGM 4730 Special Topics in Agricultural Mechanization 1-3 (1-3) Comprehensive study and application of new technologies and methods not covered in existing courses. Emphasizes independent study using innovative approaches to problem solving. May be repeated for a maximum of six credits.

ATHLETIC LEADERSHIP
Lecturer: D. J. Cadorette

AL 3490 Principles of Coaching 3 (3) Investigation into the scientific basis of the coaching profession, middle and high school levels. Topics include developing a coaching philosophy, sport psychology, sport pedagogy, sport physiology, athletic administration, and risk management. Current issues regarding sportsmanship, gender equity compliance, and cultural diversity are researched and synthesized. Prep: Athletic Leadership minor.

AL 3500 Scientific Basis of Coaching I: Exercise Physiology 3 (3) Increases understanding of basic scientific information concerning athletic performance by utilizing the conceptual approach. Focuses primarily on an in-depth investigation into the physiological principles that can enhance athletic performance. Includes phases of physical training as well as comprehensive evaluative techniques. Prep: AL 3490.

AL 3520 Scientific Basis of Coaching II: Kinesiology 3 (3) Increases understanding of basic scientific information concerning athletic movement by utilizing the conceptual approach. Deals with the basic laws of human motion necessary in evaluation of athletic movement, utilizing joint structure and anatomic landmarks as a basis for motion. Prep: AL 3490.


AL 3531 Theory of Prevention and Treatment of Athletic Injuries Laboratory 1 (3) Non-credit laboratory to accompany AL 3530. Coreq: AL 3530.

AL 3600 High School Athletics Ethical and Legal Issues 3 (3) Investigates ethical and legal issues specific to high school athletic program administration as identified by the National Interscholastic Athletic Administrators Association (NIAAA) Leadership Program and addressed by the National Association for Sport and P.E. (NASPE) National Standards for Sport Coaches. Prep: AL 3490.

AL 3610 Administration and Organization of Athletic Programs 3 (3) Study of modern techniques and practices used in administering athletic programs. Emphasizes areas such as practice and game organization, purchase and care of equipment, budget and finances, public relations, and legal liability in athletic programs. Prep: AL 3490.


AL 3710 Coaching Baseball 1 (3) Increases understanding of basic technical and practical information concerning the coaching of baseball by utilizing the conceptual approach. Students study basic principles of coaching, competitive organization, and proper technical skills needed to improve athletic performances. Also covers total program development as it pertains to specific levels of competition. Prep: AL 3490.

AL 3720 Coaching Basketball 1 (3) Increases understanding of basic technical and practical information concerning the coaching of basketball by utilizing the conceptual approach. Students study basic principles of coaching, competitive organization, and proper technical skills needed to improve athletic performances. Also covers total program development as it pertains to specific levels of competition. Prep: AL 3490.

AL 3730 Coaching Cross Country 1 (3) Increases understanding of technical and practical information concerning the coaching of cross country by utilizing the conceptual approach. Students study basic principles of coaching, competitive organization, and proper technical skills needed to improve athletic performances. Also covers total program development as it pertains to specific levels of competition. Prep: AL 3490.

AL 3740 Coaching Football 1 (3) Increases understanding of basic technical and practical information concerning the coaching of football by utilizing the conceptual approach. Students study basic principles of coaching, competitive organization, and proper technical skills needed to improve athletic performances. Also covers total program development as it pertains to specific levels of competition. Prep: AL 3490.

AL 3750 Coaching Soccer 1 (3) Increases understanding of basic technical and practical information concerning the coaching of soccer by utilizing the conceptual approach. Students study basic principles of coaching, competitive organization, and proper technical skills needed to improve athletic performances. Also covers total program development as it pertains to specific levels of competition. Prep: AL 3490.

AL 3760 Coaching Strength and Conditioning 1 (3) Increases understanding of basic technical and practical information concerning the coaching of strength and conditioning by utilizing the conceptual approach. Students study basic principles of coaching, training programs, and equipment appraisal as a means to improve athletic performance. Also covers total program development as it pertains to specific levels of competition. Prep: AL 3490.

AL 3770 Coaching Track and Field 1 (3) Increases understanding of basic technical and practical information concerning the coaching of track and field by utilizing the conceptual approach. Students study basic principles of coaching, competitive organization, and proper technical skills needed to improve athletic performances. Also covers total program development as it pertains to specific levels of competition. Prep: AL 3490.

AL 4000 Athletic Leadership Internship 0 (3) Athletic coaching and administration internship for a minimum of 60 hours. To be taken concurrently with any other Clemson University course. To be taken Pass/No Pass only. Students must have current CPR certification. Prep: Consent of Athletic Leadership coordinator.

AL 4380 Selected Topics in Athletic Leadership 1-3 (1-3) Specific athletic leadership topics not found in other courses are selected for in-depth study. May be repeated for a maximum of nine credits, but only if different topics are covered.

AL 4390 Independent Study in Athletic Leadership 1-3 (1-3) Independent study in athletic leadership under the direction of an athletic leadership faculty member. Student and faculty member develop a course of study different from any existing courses and designed for the individual student to enhance leadership skills in athletics. May be repeated for a maximum of nine credits with different course topics.

AL 4530 Athletic Injuries Prevention, Assessment and Rehabilitation 3 (3) Gives students an understanding of prevention, treatment, and rehabilitation procedures of injured athletes. Prep: AL 3490.

ANTHROPOLOGY
Professor: J.M. Coggeshall; Associate Professors: M.A. Vogel, E.L. Williams, Y. Zhang; Assistant Professor: K.E. Weisensee; Adjunct Assistant Professor: L.G. Rapaport

ANTH 2010 Introduction to Anthropology 3 (3) Offers a four-field overview: primates and human biological origins; the development of agriculture and complex societies in the archaeological record; contemporary human societies cross-culturally; and the relationship between languages and cultures. An anthropological perspective on contemporary human problems is also presented.


ANTH 3200 North American Indian Cultures 3 (3) Discusses the prehistory of Native peoples, their cultural diversity at European contact, and the history and impact of that contact. Also examines contemporary issues facing Native Americans. Prep: ANTH 2010.

ANTH 3310 Archaeology 4 (3) Overview of anthropological archaeology emphasizing the scientific analyses, methodologies and theoretical approaches used by anthropological archaeologists to study the human past. Students learn about the origins and development of complex society and explore individual case studies. Coreq: ANTH 3311.

ANTH 3311 Archaeology Laboratory 0 (2) Non-credit laboratory to accompany ANTH 3310. Coreq: ANTH 3310.