

COURSE DESCRIPTIONS

Courses are numbered as follows: freshmen - 100 level; sophomores - 200 level; juniors - 300 level; seniors - 400 level; graduate students - 500 & 600 level. Certain 300- and 400-level courses may be taken by graduate students for graduate credit; in such cases, graduate students complete additional research assignments to bring the courses up to graduate level rigor. The letter **G** in parentheses, (**G**), appears at the end of those 400-level undergraduate course descriptions which are approved for graduate level work. Only students admitted to the Graduate School may enroll in 500 & 600 level courses.

No credit is allowed in any curriculum for any course with a catalog number beginning with zero (0) (e.g. ENGL 099). These courses are open only to those students who place in them by examination.

The numerical listing after each course title gives the following information: the first number represents lab hours per week; the second digit represents the number of 75-minute lecture periods per week; the third digit is the semester credit hours earned for completion of the course. A few courses will have a fourth digit in parentheses. This means the course may be repeated for credit and the fourth digit designates the total amount of semester hour credit that may be earned through repetition of the course. Typically, these courses are research-, performance-, or project-oriented and found in the 300-, 400-levels (undergraduate student) or 500-, 600-levels (graduate student).

Some courses require the student to complete a prerequisite course or to secure special permission from faculty prior to enrolling in the course. These prerequisites are listed immediately after the numerical semester credit hour designations. Each student is responsible for complying with prerequisite course work requirements and special instructions.

NOTE: Course offerings for each term are listed in the *Quarterly Schedule of Classes*, published prior to Early Registration each quarter. Offerings by quarter are subject to change to accommodate needs of students.

ACCOUNTING (ACCT)

- 201: Elementary Accounting.** 0-3-3. Basic understanding of concepts and methods of accounting and the significance of accounting information for managerial decision-making.
- 202: Elementary Accounting.** 0-3-3. Preq., ACCT 201. Basic understanding of concepts and methods of accounting and the significance of accounting information for managerial decision-making.
- 206: Financial Statement Analysis for Entrepreneurial Decision Making.** 0-3-3. Not open to accounting majors. This course is designed to provide non-accounting majors with an understanding of financial statement analysis from an entrepreneurial decision making perspective.
- 303: Intermediate Accounting.** 0-3-3. Preq., ACCT 202. The theory and application of accounting procedures to financial reporting.
- 304: Intermediate Accounting.** 0-3-3. Preq., ACCT 303. The theory and application of accounting procedures to financial reporting.
- 305: Intermediate Accounting.** 0-3-3. Preq., ACCT 304. The theory and application of accounting procedures to financial reporting.
- 307: Income Tax.** 0-3-3. Preq., ACCT 201. A study of Federal income tax laws and state income tax laws and their effect on individual income.
- 308: Managerial Cost Accounting.** 0-3-3. Preq., ACCT 202. A study of cost systems; accounting peculiar to manufacturing enterprises; making cost statements; and solving cost problems.
- 401: Internship in Accounting I.** 3 hours credit. (Pass/Fail) Preq. consent of instructor and senior standing. On site, supervised, structured work experiences in the field of business.
- 402: Internship in Accounting II.** 3 hours credit. (Pass/Fail) Preq. consent of instructor and senior standing. On site, supervised, structured work experiences in the field of business.
- 404: Tax Factors in Entrepreneurial Decision Making.** 0-3-3. Preq., ACCT 201 or 206. Not open to undergraduate accounting majors or MPA students. This course is designed to provide non-accounting majors with an understanding of major federal income tax, estate, and gift tax issues that confront entrepreneurs. (**G**)
- 406: Advanced Income Tax.** 0-3-3. Preq., ACCT 307. A continuation of ACCT 307 with further study into tax problems of fiduciaries, partnerships, and corporations; solutions of problems.
- 412: Municipal and Government Accounting.** 0-3-3. Preq., ACCT 303. Accounting procedures of the Federal, municipal, and state governments.

Attention is given to the preparation of budgets, financial statements, and to budgetary control. (**G**)

- 413: Auditing.** 0-3-3. Preq., ACCT 305 and credit for or registration in ACCT 308. The study of basic auditing concerns, objectives and methodology.
- 414: Advanced Accounting.** 0-3-3. Preq., ACCT 305. Study of business combinations and consolidated financial statements; partnerships; international operations; fiduciary accounting; and governmental and not-for-profit entities. (**G**)
- 422: Taxation of Corporations and Shareholders.** 0-3-3. Preq., ACCT. 307 and senior standing. In-depth study of tax law that pertains to corporations and shareholders; corporate organizations; liquidation; reorganization; and Subchapters. (**G**)
- 433: Accounting Systems.** 0-3-3. A study of accounting systems and systems installations.
- 451: Advanced Cost Accounting.** 0-3-3. Preq., ACCT 308. A study of the advanced phases of cost accounting: standard costs; distribution costs; cost analysis. (**G**)
- 490: Contemporary Problems in Accounting.** 0-3-3. (Pass/Fail). Intensive study of current advanced accounting topics.
- 491: Advanced Theory of Accounting.** 0-3-3. Preq., permission of adviser. Intensive study of current advanced accounting theory. (**G**)
- 493: Advanced Auditing.** 0-3-3. Preq., ACCT 413. Intensive study of professional conduct, auditing standards, auditor's liability, reports, and internal auditing. (**G**)
- 505: Accounting Analysis for Decision-Making.** 0-3-3. Preq., ACCT 201 and 202. A study of accounting data and their uses with the goal of aiding management in the use of such data for decision making.
- 506: Seminar in Financial Accounting.** 0-3-3. Preq., ACCT 305 A brief historical development of accounting thought followed by investigations into controversial and special areas of financial accounting.
- 507: Contemporary Accounting Theory.** 0-3-3. Preq., ACCT 305. An intensive study of recent developments, research and literature in accounting theory promulgated by the various professional accounting associations and related financial organizations.
- 508: Advanced Managerial Accounting.** 0-3-3. Preq., ACCT 308. A study of the role of accounting in supporting the management of organizations.
- 513: Advanced Auditing.** 0-3-3. Preq., ACCT 413. Intensive study of professional conduct, auditing standards, auditor's liability, reports, statistical sampling, and internal auditing.
- 517: EDP Accounting.** 0-3-3. Preq., ACCT 413. A study of the accounting procedures and systems in a computer-intensive environment, including the proper utilization of computers in auditing the firm.
- 519: International Accounting.** 0-3-3. Preq., ACCT 305. A study of the financial and managerial accounting issues and practices related to the globalization of business.
- 521: Cases and Problems in Income Taxes.** 0-3-3. Preq., ACCT 307. Research cases covering various phases of income taxes; study of some source materials and research methods for ascertaining current rulings and trends in laws and regulations.
- 541: Accounting Analysis.** 0-3-3. Preq., ACCT 413. Accounting policy and analysis through integration and application of knowledge gained in accounting and accounting related courses; emphasizes interrelationships of major functions of business and analysis.
- 550: Directed Study in Accounting.** 1-3 hours credit. Hours and credits to be arranged. Consent of instructor and approval of department head required. Special problem or specific area of accounting.
- 606: Seminar in Financial Accounting.** 0-3-3. Preq., ACCT 305. Requires Doctoral standing. May require additional class meetings. A brief historical development of accounting thought followed by investigations into controversial and special areas of financial accounting. Credit will not be given for ACCT 606 if credit is given for ACCT 506.
- 607: Contemporary Accounting Theory.** 0-3-3. Preq., ACCT 305. Requires Doctoral standing. May require additional class meetings. An intensive study of recent developments, research and literature in accounting theory promulgated by the various professional accounting associations and related financial organizations. Credit will not be given for ACCT 607 if credit is given for ACCT 507.
- 608: Advanced Managerial Accounting.** 0-3-3. Preq., ACCT 308. Requires Doctoral standing. May require additional class meetings. A study of the role of accounting in supporting the management of organizations. Credit will not be given for ACCT 608 if credit is given for ACCT 508.

- 610: Current Accounting Research.** 0-3-3 Preq., Doctoral Standing with MPA or equivalent. Accounting research and design with emphasis on evaluation of results of research.
- 613: Advanced Auditing.** 0-3-3. Preq., ACCT 413. Requires Doctoral standing. May require additional class meetings. Intensive study of professional conduct, auditing standards, auditor's liability, reports, statistical sampling, and internal auditing. Credit will not be given for ACCT 613 if credit is given for ACCT 513.
- 615: Theory of Accounting.** 0-3-3. Preq., Doctoral Standing with MPA or equivalent. A detailed study of the development of accounting with emphasis on what should be as compared to Generally Accepted Accounting Principles.
- 617: EDP Accounting.** 0-3-3. Preq., ACCT 413. Requires Doctoral standing. May require additional class meetings. A study of the accounting procedures and systems in a computer-intensive environment, including the proper utilization of computers in auditing the firm. Credit will not be given for ACCT 617 if credit is given for ACCT 517.
- 619: International Accounting.** 0-3-3. Preq., ACCT 305. Requires Doctoral standing. May require additional class meetings. A study of the financial and managerial accounting issues and practices related to the globalization of business. Credit will not be given for ACCT 619 if credit is given for ACCT 519.
- 621: Cases and Problems in Income Taxes.** 0-3-3. Preq., ACCT 307. Requires Doctoral standing. May require additional class meetings. Research cases covering various phases of income taxes; study of some source materials and research methods for ascertaining current rulings and trends in laws and regulations. Credit will not be given for ACCT 621 if credit is given for ACCT 521.
- 641: Accounting Analysis.** 0-3-3. Preq., ACCT 413. Requires Doctoral standing. May require additional class meetings. Accounting policy and analysis through integration and application of knowledge gained in accounting and accounting related courses; emphasizes interrelationships of major functions of business and analysis. Credit will not be given for ACCT 641 if credit is given for ACCT 541.
- 650: Directed Study in Accounting.** 1-3 hours credit. Hours and credits to be arranged. Consent of instructor and approval of department head required. Special problem or specific area of accounting.
- 685: Comprehensive Exam in Accounting.** No credit. Doctoral standing required. Required for all business administration doctoral students seeking to take the comprehensive exam in accounting. Successful completion is a prerequisite to the oral comprehensive exam for those seeking a primary field or examined minor in accounting. Requires consent of graduate director.

ADMINISTRATION & BUSINESS (AB)

- 110: Introduction to Business.** 0-3-3. Preq., CIS 110. A foundations course that emphasizes decision-making and entrepreneurial activities in an ever-changing world economy.
- 189: Special Topics.** 1-4 hours credit. Selected topics in an identified area of study in the College of Administration and Business. May be repeated for credit
- 194: Special Topics.** 1-4 hours credit. Selected topics in an identified area of study in the College of Administration and Business. May be repeated for credit.
- 289: Special Topics.** 1-4 hours credit. Selected topics in an identified area of study in the College of Administration and Business. May be repeated for credit.
- 294: Special Topics.** 1-4 hours credit. Selected topics in an identified area of study in the College of Administration and Business. May be repeated for credit.
- 300: Special Problems.** 0-3-3. Preq., approval of instructor and department head. Selected contemporary business and economics topics. Topic will determine course admissions criteria.
- 301: Independent Study.** 1-3 hours credit. Preq., approval of instructor and department head. Selected contemporary business and economics topics. Normally taken only by CAB students in their curricular specialty.
- 389: Special Topics.** 1-4 hours credit. Selected topics in an identified area of study in the College of Administration and Business. May be repeated for credit.
- 394: Special Topics.** 1-4 hours credit. Selected topics in an identified area of study in the College of Administration and Business. May be repeated for credit.

- 400: Special Problems.** 0-3-3. Preq., Approval of instructor, department head, and dean. Special contemporary business and economic topics. Topic will determine course admissions criteria.
- 401: Independent Study.** 1-3 hours credit. Preq., Approval of instructor, department head, and dean. Selected contemporary business and economic topics in a student's curricular specialty.
- 444: Critical Thinking for Business.** 0-3-3. An overview of the elements of thinking, reasoning, and questioning as applied to business decision-making.
- 489: Special Topics.** 1-4 hours credit. Selected topics in an identified area of study in the College of Administration and Business. May be repeated for credit.
- 494: Special Topics.** 1-4 hours credit. Selected topics in an identified area of study in the College of Administration and Business. May be repeated for credit.
- 495: Business Administration Capstone.** 0-3-3. Preq., all core business courses and senior standing in the College of Administration & Business. Administrative policy determination through integration and application of knowledge gained in previous courses; emphasizes interrelationships of major functions of business under conditions of uncertainty; utilizes case study approach.
- 551: Research and Thesis.** 3 hours credit. Maximum credit allowed is 6 hours.
- 594: Special Topics.** 1-4 hours credit. Preq., graduate standing. Selected topics in an identified area of study in the College of Administration and Business.
- 610: Current Topics in Research.** 0-3-3. May be repeated. Required of resident DBAs each quarter. Non-degree credit. Pass-Fail. Research methodology, current research of doctoral candidates, faculty, invited lecturers.
- 685: Oral Comprehensive Exam.** No credit. Doctoral standing required. Required for all business administration doctoral students. Successful completion of the oral comprehensive exam is a prerequisite to beginning the doctoral dissertation. Requires consent of graduate director and advisory committee chair.
- 690: Research and Dissertation.** 3 hours credit. Minimum credit allowed is 15 hours.

AGRICULTURAL BUSINESS (AGBU)

- 220: Principles of Agricultural Economics.** 0-3-3. Economic theory with application to production, marketing, and financing in agribusiness. Institutions such as cooperatives, farm credit systems, foreign agricultural trade, and government will be emphasized.
- 310: Agricultural Policy.** 0-3-3. The impact of agricultural policy on the farm firm and agribusiness industry. Emphasis is placed on policy issues affecting producers and consumers of agricultural products.
- 402: Economics of Farm Management.** 0-3-3. Economics principles applied to individual farm organization and management and study of farm accounting systems. (G)
- 411: Seminar.** 0-1-1 (3). Reviews, reports, and discussion of current problems in Agriculture and related fields.
- 430: Principles and Practices of Agricultural Marketing.** 0-3-3. Methods and channels of agricultural marketing; marketing principles; governmental action concerned with the marketing process; analysis and evaluation of marketing problems. (G)
- 450: Natural Resource Economics.** 0-3-3. Tools for economic decision-making applied to the use and allocation of natural resources associated with agriculture. Costs and benefits of various approaches to natural resource management.
- 460: Agricultural Finance.** 0-3-3. Analysis of financial investments in the agricultural firm, credit sources, debt repayment, capital allocation, and the use of short, intermediate, and long-term credit. (G)

AGRICULTURAL EDUCATION (AGED)

- 450: Advanced Agricultural Shop Methods and Safety.** 3-2-3. Preq., AGSC 209 and 211. Methods and techniques for instruction in agricultural shop safety and power tool use in the high school agricultural shop laboratory. (G)
- 460: Fundamentals of Agricultural Education.** 0-3-3. History, traditions, and guidelines of agricultural education. Consideration of federal, state, and local laws and regulations concerning agricultural education and Louisiana's public high schools. (G)

AGRICULTURAL SCIENCE (AGSC)

- 201: Microcomputer Applications.** 0-3-3. Introduction to microcomputers with specific applications in filing conventions, word processing, spreadsheets, electronic communications, and other topics.
- 209: Small Engines.** 3-0-1. Principles of operation, construction, application, maintenance, and overhaul procedures of small internal combustion engines.
- 211: General Shop.** 6-0-2. Care and use of tools, gas and electric welding, cold metal work, and woodwork.
- 320: Statistical Methods.** 0-3-3. Preq., sophomore standing or above. Introduction to descriptive and inferential statistics, probability, sampling distributions, confidence intervals, hypothesis testing, ANOVA, correlation and regression, with an emphasis on biological data and applications.
- 321: Electricity Applied to Bio-Systems.** 3-2-3. Practical application of electricity to farm and forest operations including electric motors, safety, wiring, lighting, refrigeration, and heating.
- 477: Practica/Internship/Cooperative Education Work Experience.** 1-9 hours credit. (Pass/Fail). On-site supervised, structured work experiences located within a 100-mile radius of Ruston. Application and supervision fee required.
- 478: Practica/Internship/Cooperative Education Work Experience.** 1-9 hours credit. (Pass/Fail). On-site supervised, structured work experiences located within a 101- to 200-mile radius of Ruston. Application and supervision fee required.
- 479: Practica/Internship/Cooperative Education Work Experience.** 1-9 hours credit. (Pass/Fail). On-site supervised, structured work experiences located beyond a 201-mile radius of Ruston. Application and supervision fee required.
- 516: Contemporary Topics.** 1-6 hours credit (6). Examination and discussion of a variety of timely topics pertaining to the agricultural sciences. May be repeated with a change in subject matter.

AIR FORCE AEROSPACE STUDIES (AFAS)

- 125: Introduction to the U. S. Air Force. (GMC).** 0-1-1. Discussion of the Air Force today. Includes topics such as professionalism, communications, and the Air Force installation. Must be taken concurrently with AFAS 155.
- 126: U.S. Air Force Organization (GMC).** 0-1-1. Analysis of the organization of the U.S. Air Force with discussion of the various major Air Force commands. Must be taken concurrently with AFAS 156.
- 127: The U.S. Air Force Doctrine (GMC).** 0-1-1. Completes the analysis of Air Force organization. Examines Air Force doctrine and relationships with other U.S. military forces. Must be taken concurrently with AFAS 157.
- 155: AFROTC Leadership Laboratory.** 1-0-0. Orientation and instruction in Air Force dress and grooming standards and application of Air Force discipline, customs and courtesies. Study of the Armed Forces and AFROTC grade structure, insignia, and chain of command. Introduction to military drill. (Pass/Fail)
- 156: AFROTC Leadership Laboratory.** 1-0-0. Continuation in military customs and courtesies and military drill. Familiarization with Air Force services and activities. Application of physical fitness regimen to meet weight and fitness standards. (Pass/Fail)
- 157: AFROTC Leadership Laboratory.** 1-0-0. Structure and functions within the cadet corps, wing and base organizations. Additional instruction in military customs, courtesies and drill. Application of physical fitness regimen to meet weight and fitness standards. (Pass/Fail)
- 225: The Development of Air Power I (GMC).** 0-1-1. The beginnings of manned flight from balloons and dirigibles, to the Wright Brothers, World War I and the interwar years. Must be taken concurrently with AFAS 255.
- 226: The Development of Air Power II (GMC).** 0-1-1. Continuation of 225. A study of air power during World War II, the Berlin Airlift and Korea. Must be taken concurrently with AFAS 256.
- 227: The Development of Air Power III (GMC).** 0-1-1. Continuation of 226. A study of U.S. air power in the international arena from 1955 to the present. Must be taken concurrently with AFAS 257.
- 255: AFROTC Leadership Laboratory.** 1-0-0. Understanding the Air Force base environment. Application of Air Force standards, discipline, conduct, customs, and courtesies. Advanced drill positions and movements. Application of physical fitness regimen to meet weight and fitness standards. (Pass/Fail)

- 256: AFROTC Leadership Laboratory.** 1-0-0. Understanding selected career areas available based on individual qualifications. Advanced drill movements to include review and ceremony procedures. Discussion of privileges and responsibilities associated with an Air Force commission. Physical fitness training. (Pass/Fail)
- 257: AFROTC Leadership Laboratory.** 1-0-0. Advanced drill movements to include orientation in commanding a flight, command voice, and use of guidon. Preparation for summer field training. Application of physical fitness regimen to meet weight and fitness standards and conditioning for field training environment. (Pass/Fail)
- 331: Communications for the Air Force (POC).** 0-2-2. Functions and formats of Air Force communications. Emphasis on written and oral communications used by junior officers. Must be taken concurrently with AFAS 351.
- 332: Air Force Leadership (POC).** 0-2-2. Analysis of leadership styles and the traits of a leader. Group dynamics. Must be taken concurrently with AFAS 352.
- 333: Military Management (POC).** 0-2-2. Study of management principles with emphasis on the view of an Air Force junior officer. Must be taken concurrently with AFAS 353.
- 351: AFROTC Leadership Laboratory.** 1-0-0. Attain leadership and management competence through participation in advanced leadership experiences. General structure and progression patterns common to selected officer career fields. Application of physical fitness regimen to meet weight and fitness standards. (Pass/Fail)
- 352: AFROTC Leadership Laboratory.** 1-0-0. Continuation of advanced leadership experiences to attain leadership and management competence. Application of procedures for evaluating cadets. Application of physical fitness regimen to meet weight and fitness standards. (Pass/Fail)
- 353: AFROTC Leadership Laboratory.** 1-0-0. Continuation of advanced leadership experiences to attain leadership and management competence. Comprehension of special summer training programs available to cadets. Application of physical fitness regimen to meet weight and fitness standards. (Pass/Fail)
- 431: National Security Policy and Professionalism. (POC).** 0-2-2. Examination of the national security policy process and all of the key participants. Military professionalism and officership will also be examined as to their impact on patterns of civil-military relations. Must be taken concurrently with AFAS 451.
- 432: Defense Strategy, Policy and Military Law (POC).** 0-2-2. Examination of the methods of managing conflict to include arms control and the threat of war. The military justice system and professionalism will be covered as topics of special interest. Must be taken concurrently with AFAS 452.
- 433: Regional Studies and Preparation for Active Duty. (POC).** 0-2-2. Examination of sensitive areas of the world and their impact on American National Security and what the new officer may expect on his/her initial assignment. Must be taken concurrently with AFAS 453.
- 451: AFROTC Leadership Laboratory.** 1-0-0. Application of effective leadership and management techniques with individuals and groups. Comprehension of special education programs available to senior cadets. Application of physical fitness regimen to meet weight and fitness standards. (Pass/Fail)
- 452: AFROTC Leadership Laboratory.** 1-0-0. Continuation of the application of effective leadership and management techniques with individuals and groups. Comprehension of Communications and Operations Security programs. Application of physical fitness regimen to meet weight and fitness standards. (Pass/Fail)
- 453: AFROTC Leadership Laboratory.** 1-0-0. Continuation of effective leadership and management techniques with individuals and groups. Comprehension of active duty service commitments incurred throughout an officer's career. Understanding factors which facilitate a smooth transition from civilian to military life. Application of physical fitness regimen to meet weight and fitness standards. (Pass/Fail)

ANIMAL SCIENCE (ANSC)

- 111: Introduction to Animal Science.** 0-3-3. Introduction to the field of Animal Science with emphasis on breeds, terminology and basic husbandry practices of dairy and beef cattle, horses, swine, sheep and poultry.
- 113: Introduction to Animal Science Laboratory.** 3-0-1. Practical application and study of the different areas of animal science.

- 201: Introduction to Poultry Science.** 3-2-3. The principles and practices of breeding, incubation, nutrition, disease control, management practices and marketing of poultry.
- 202: Introduction to Dairy Science.** 3-2-3. Preq., ANSC 111. Principles and practices of breeding, feeding and managing dairy cattle for maximum productivity with an introduction to processing and manufacturing.
- 204: Meat Animal and Carcass Evaluation.** 3-2-3. Selection of carcasses and wholesale cuts of beef, pork, and lamb; factors influencing grades, yields, and values in cattle, hogs, and sheep.
- 211: Introduction to Equine Science.** 0-3-3. A general survey of principles of horse management and husbandry, to include anatomy, unsoundness, nutrition, health and reproduction.
- 220: Introductory Horsemanship.** 3-1-2. Introduction to methods and techniques for controlling and influencing the performance of horses.
- 301: Principles of Animal Nutrition.** 0-3-3. Preq., ANSC 111 and CHEM 100 or 130. The source, chemical composition, and nutritive value of farm animal feedstuffs.
- 302: Testing Dairy Products.** 3-2-3. Preq., BISC 214. A chemical and bacterial test of milk and milk products.
- 304: Dairy Manufacturing-Fluid Milk Products.** 3-2-3. The sanitary production, transportation, processing, distribution, and public health inspection of milk and related products.
- 305: Dairy Manufacturing-Frozen Dessert Production.** 3-2-3. The manufacture of ice cream and frozen dairy products.
- 306: Dairy Manufacturing-Cultured Dairy Products.** 6-1-3. Manufacture of butter, various types of cheese, and other cultured products. Defects, packaging, and merchandising of butter and cheese.
- 307: Endocrinology and Milk Secretion.** 0-3-3. Development, structure and functional processes of the endocrine and mammary systems.
- 309: Anatomy and Physiology of Animals.** 3-2-3. Preq., BISC 130. The structures and functions of the tissues and organs of animals.
- 315: Meats.** 6-1-3. Methods and practices involved in the processing and preservation of meats.
- 318: Physiology of Reproduction.** 0-2-2. Preq., ANSC 111. Physiology of reproduction of domestic farm animals. Embryology and anatomy of reproductive systems; gametogenesis, fertilization, gestation and parturition.
- 322: Horse Behavior/Training I.** 5-1-3. Horse behavior and application of principles of psychology to halter breaking, lead training and grooming weanlings/yearlings; preparation of horse for competition.
- 324: Yearling Foal Management.** 8-1-2. Preq., ANSC 111 or 211. Techniques of halter breaking, lead training and grooming weanling/yearling foal using pressure-release behavior modification techniques.
- 330: Intermediate Horsemanship.** 3-1-2. Preq., ANSC 220 or equivalent experience. Intermediate methods and techniques for controlling and influencing the performance of horses.
- 340: Horse Evaluation.** 3-1-2. Preq., ANSC 111 or 211. Detailed evaluation of the horse. Influence of conformation and performance. Use of oral and written defense of judgements.
- 401: Animal Breeding.** 0-2-2. Principles and application of animal breeding, including gene frequencies, heritabilities, inbreeding coefficients, selection and mating systems. (G)
- 405: Applied Animal Nutrition.** 3-2-3. Preq., ANSC 301. A review of applied nutritional practices and management, and ration formulation for beef and dairy cattle, horses, swine and poultry. (G)
- 407: Dairy Production.** 3-3-4. Preq., ANSC 202. Principles and practices in breeding, feeding and management of dairy cattle.
- 408: Swine Production.** 3-2-3. Principles and practices of breeding, feeding, marketing and management of swine. (G)
- 409: Animal Pathology.** 3-2-3. Preq., BISC 214 or 260 and ANSC 307 or 309. The etiology, symptoms, prevention, control and eradication of the major diseases of farm animals. (G)
- 410: Beef Production.** 3-3-4. Preq., ANSC 301 or 405. Breeding, feeding, marketing and management of beef cattle. (G)
- 411: Horse Production.** 3-3-4. Preq., ANSC 111 or 211, and 318. Principle and practices in breeding, feeding, and management of horses. (G)
- 418: Assisted Reproduction Techniques.** 3-2-3. Preq., ANSC 318. Application of assistive reproductive techniques in animals. Includes semen evaluation, processing, and preservation, artificial insemination, embryo transfer, pregnancy diagnosis, and other management techniques. (G)
- 420: Horse Behavior/Training II.** 5-1-3. Preq., ANSC 322 or equivalent experience. Horse behavior and application of principles of psychology to

ground driving, breaking and training 2- and 3-year old horses; preparation of horses for competition.

- 425: Special Problems in Animal Science.** 1-4 hours credit (8). Preq., Written consent of instructor. Foal management and sale preparation; steer fitting and showing; or topic selected with consent of adviser.
- 430: Dairy Plant Management.** 6-1-3. Preq., ANSC 302, 304, 305. The management problems of dairy processing and manufacturing plants.
- 440: Equine and Livestock Operations.** 0-3-3. Preq., ANSC 111 or 211. Study of unique aspects of procuring and operating different categories of horse units and relationships of such units to other livestock and farm enterprises. (G)
- 450: Advanced Animal Breeding.** 0-3-3. Preq., ANSC 401 or consent of instructor. Advanced Quantitative Genetics principles applied to horses and livestock. Emphasis on theory and application of variance, selection, inbreeding and crossbreeding, scale, threshold and correlated characters. (G)
- 460: Advanced Horsemanship.** 3-1-2. Preq. ANSC 330 or equivalent experience. Advanced methods and techniques for controlling and influencing the performance of horses.
- 470: Veterinary Techniques.** 4-2-3. Preq., ANSC 309, 409, or special permission. Applications of veterinary diagnostic, therapeutic, and prophylactic techniques used in control of animal diseases. (G)

APPLIED & NATURAL SCIENCES (ANS)

- 189: Special Topics:** 1-4 hours credit. Selected topics in an identified area of study. May be repeated for credit.
- 194: Special Topics:** 1-4 hours credit. Selected topics in an identified area of study. May be repeated for credit.
- 289: Special Topics:** 1-4 hours credit. Selected topics in an identified area of study. May be repeated for credit.
- 294: Special Topics:** 1-4 hours credit. Selected topics in an identified area of study. May be repeated for credit.
- 389: Special Topics:** 1-4 hours credit. Selected topics in an identified area of study. May be repeated for credit.
- 394: Special Topics:** 1-4 hours credit. Selected topics in an identified area of study. May be repeated for credit.
- 489: Special Topics:** 1-4 hours credit. Selected topics in an identified area of study. May be repeated for credit.
- 494: Special Topics:** 1-4 hours credit. Selected topics in an identified area of study. May be repeated for credit.
- 589: Special Topics:** 1-4 hours credit. Preq., Graduate standing. Selected topics in an identified area of study in the College of Applied & Natural Sciences.
- 594: Special Topics:** 1-4 hours credit. Preq., Graduate standing. Selected topics in an identified area of study in the College of Applied and Natural Sciences.

APPLIED COMPUTATIONAL ANALYSIS & MODELING (ACAM)

- 610: Current Topics in Research.** 0-3-3. May be repeated. Required for ACAM doctoral students each quarter. Non-degree credit. Research Methodology, current research of doctoral candidates, faculty, invited lecturers.
- 620: Special Topics in Computational Science and Engineering.** 1-3 hours credit. May be repeated for 1-3 hours credit each time.
- 690: Dissertation Research.** 0-3-3. Doctoral students only. Registration in any quarter may be for three semester hours credit or multiples thereof, up to a maximum of nine semester hours credit per quarter. Maximum total credit allowed is thirty hours.

ARCHAEOLOGY (ARCE)

- 401: Introduction to Archaeology.** 4-2-3. An introduction to the techniques of research and field work in Archaeology. (G)
- 410: Selected Topics in Archaeology.** 0-3-3. Seminar in archaeology with topic designated by instructor. May be repeated for credit as topic changes.(G)
- 420: Indians of the Southwest.** 4-2-3. A survey of Indian Archaeology in the southwestern United States. (G)
- 462: Christian Archaeology.** 3-2-3. Preq., HIST 101 or consent of instructor or junior standing. A study of the archaeology, architecture, and inscription in early Christian sites in and nearby Rome. (G)
- 463: Etruscan Archaeology.** 3-2-3. Preq., HIST 101 or consent of the instructor or junior standing. A study of the art, architecture, archaeology, history and inscriptions of the Etruscans. (G)

- 464: Roman Archaeology.** 3-2-3. Preq., HIST 101 (or equivalent). A study of the monuments and antiquities of Classical Rome. (G)
- 466: Egyptian Archaeology.** 3-2-3. Preq., HIST 101. The study of the archaeology, art, architecture, history, and inscriptions of the ancient Egyptians. (G)

ARCHITECTURE (ARCH)

- 110: Foundation Design I.** 6-0-2. Empirical studies of the principles and processes related to the poetic and tectonic aspects of making architectural form.
- 112: Communication Skills.** 6-0-2. An introduction to the principles and techniques of visualization and representational drawing with an emphasis on the development of freehand skills.
- 120: Foundation Design II.** 6-0-2. Preq., ARCH 110. Continuation of ARCH 110. Empirical studies of the principles and processes related to the poetic and tectonic aspects of making architectural form.
- 130: Foundation Design III.** 6-0-2. Preq., ARCH 120. Culmination of a three-course sequence studying the principles and processes related to the poetic and tectonic aspects of making architectural form.
- 131: Architectural Theory.** 0-2-2. An examination of architecture as a language system, involving the investigation of its basic vocabulary and grammar and their development and refinement in the history of architecture.
- 132: Advanced Communication Skills.** 6-0-2. Advanced techniques for presentational and representational communication are explored through studio problems requiring sophisticated graphic or non-verbal communication techniques.
- 200: Issue Investigation.** 0-1-1. A synoptic examination of the principles of site analysis and planning as related to building.
- 210: Foundation Design IV.** 6-0-2. Preq., ARCH 130, 131, and 132. Exploratory studies of strategies for combining and composing the fundamental elements of architecture.
- 211: Architectural History.** 0-2-2. An examination of the classical language of architecture with specific reference to the contributions of the social, cultural, intellectual, technological contexts to its development.
- 220: Foundation Design V.** 6-0-2. Preq., ARCH 210. A continuation of ARCH 210 emphasizing the influences of contextual, functional, and ideological constraints on the combination and composition of the fundamental elements of architecture.
- 221: Building Systems I.** 0-3-3. Introduction to the concepts, principles, and conventions associated with a building's structural and envelope systems.
- 222: Architectural History.** 0-2-2. Preq., ARCH 211. An examination of the modern language of architecture with specific reference to the social, cultural, intellectual, and technological contexts to its developments.
- 230: Foundation Design VI.** 6-0-2. Preq., ARCH 220. A culmination of a three-course sequence exploring strategies and constraints related to combining and composing the fundamental elements of architecture.
- 231: Contemporary Architectural History.** 0-2-2. Preq., ARCH 222. An examination of the various movements that have emerged since 1960 with reference to the social, cultural, intellectual, and technological contexts that fostered their developments.
- 232: Building Systems II.** 0-3-3. Study of environmental and physical systems' impact on building envelope and interior space design emphasizing passive energy techniques, daylight, electrical lighting and acoustics.
- 300: Introduction to Building, Accessibility, and Life Safety Codes.** 0-1-1. A synoptic examination of model building codes, Americans with Disabilities Act, and Life Safety Code as they influence the internal logic of buildings.
- 301: Computer Applications Colloquium.** 6-0-2. Introduction to software applications that facilitate research, communication, drafting, and modeling in the discipline of architecture.
- 310: Architectural Design I.** 9-0-3. Preq., ARCH 230. Examination of theoretical issues and historical antecedents through diagrammatic studies and analysis of organizational strategies with an emphasis on masonry construction and its supporting technologies.
- 311: Built Form and Behavior.** 0-2-2. A critical analysis of the psychological, social and cultural factors that are manifest in and influenced by architectural form.
- 320: Architectural Design II.** 9-0-3. Preq., ARCH 310. Examination of the relationship between architecture and its physical context with emphasis on site analysis, design methodology, light frame construction, and passive/sustainable systems.
- 321: Architectural History Seminar.** 0-2-2 (6). Examination and investigation of selected topics associated with architectural history and theory.
- 331: Theories of Architecture.** 0-2-2. Preq., ARCH 231. A study and evaluation of the architectural profession, its intentions, and its cultural relevance.
- 332: Building Systems III. 0-3-3.** A study of service systems' impact on building envelope and interior spaces emphasizing plumbing, mechanical, electrical, and vertical transportation systems.
- 350: Visual Studies.** 9-0-3-(6). Studies of the art and craft of building through the design and fabrication of architectonic objects.
- 380: Applied Studio Practices.** 6-0-2 (4). Practical problems in graphic and visual communications.
- 400: Studio Problems.** 6-0-2 (4). Specialized studio problems in aqueous media on paper.
- 402: Field Travel.** 0-1-1 (3). The examination and analysis of contemporary architectural works and urban environments through participation in supervised travel.
- 403: Project Documentation.** 9-0-3 (6). Preq., ARCH 301. The full documentation of a project of historic or architectural significance in Historic American Buildings Survey format.
- 407: Computerized Construction Documentation.** 0-2-2. Preq., ARCH 474. Development of architecture details, systems, and techniques in the preparation of contract documents.
- 410: Architectural Design III.** 9-0-3. Preq., ARCH 320. Examination of site selection and program definition within varying contexts through schematic design studies emphasizing steel or concrete structural systems and active mechanical/electrical systems.
- 411: Planning and Urban Design Theory.** 0-2-2. An examination of the process of design and change in urban environments, with discussion of strategies and processes for intervening in the development of these environments.
- 417: Internship in Architecture.** 20-0-4 (8). Preq., Senior Standing. Supervised experience in the office of a registered architect, interior designer, engineer or landscape architect. A minimum of 20 hours per week. (Pass/Fail).
- 420: Architectural Design IV.** 9-0-3. Preq., ARCH 410. Examination of the relationship between architecture and the public realm through detailed design and development emphasizing the integration of structural material and building system technologies.
- 421: Building Systems IV.** 0-3-3. Study of the principles of structural behavior and varied building material assemblies through technical documentation.
- 431: Architectural Seminar I.** 0-2-2 (6). Examination and investigation of selected topics associated with the internal logic of buildings: codes, building systems, construction materials, and assemblies.
- 436: Written Contract Documents.** 0-2-2. Preq., Senior standing. Construction specification writing principles using the CSI format and procedures.
- 445: Professional Problems.** A(4 1/2-0-1); B(9 1/2-0-2); C(13 3/4-0-3). Individual study with variable credit of selected professional problems having educational significance. Topic and credit by agreement with the Department Head.
- 450: Related Readings.** A(4 1/2-0-1); B(9 1/2-0-2); C(13 3/4-0-3). Guided readings in a specific aspect of architectural theory or practice under the supervision of a faculty member. Credit and topic by agreement with the Department Head.
- 471: Professional Practice I.** 0-2-2. Architect's role and responsibility in the project process of predesign, design, construction documents, and the administration of the construction contract.
- 472: Architectural Seminar II.** 0-2-2 (6). Examination and investigation of selected topics associated with the practice of architecture: ethics, management, marketing, services, and finances.
- 473: Design Research.** 0-2-2. A study of research method for the architect including the execution of scholarly research and programming as related to the degree design project.
- 474: Computers for Designers.** 6-0-2. Development of fundamental skills in software applications associated with architectural production and project delivery.
- 480: Degree Design Project I.** 12-0-4. Preq., ARCH 473. Initiation of the degree design project through multiple schematic design iterations that reconcile and resolve contextual, formal, functional, and ideological issues.

- 481: Professional Practice II.** 0-2-2. Preq., ARCH 471. The business of architecture with an emphasis on practice trends of the future in respect to project and design management.
- 482: Architectural Programming.** 0-2-2. Advanced techniques of research, analysis and programming through which the effect of pre-design issues and constraints are examined.
- 490: Degree Design Project II.** 12-0-4. Preq., ARCH 480. A continuation of ARCH 480 emphasizing the detailed design development of the previously resolved schematic design.
- 491: Professional Practice III.** 0-2-2. Preq., ARCH 481. The legal, ethical and moral issues of architectural practice as related to the changing professional context.
- 556: Problems.** 12-2-6. Preq., fifth year classification in Architecture. Special projects in architecture and landscape. Department Head must approve projects.
- 559: Specialized Individual Studio Problems.** 6-1-3-(9). Permission and project approval must be obtained from Department Head.

ART (ART)

- 115: Design.** 6-1-3. Formal problems of the theory and practice in the elements and principles of design.
- 116: Color Design.** 6-1-3. Preq., ART 115 or ARCH 110. The study of color and the interaction of color in design.
- 117: Conceptual Design.** 6-1-3. Preq., ART 116. A materials and techniques course with the emphasis on experimental investigations which combines both traditional and contemporary approaches.
- 118: 3-D Design.** 6-1-3. Preq., ART 115. Problems in three-dimensional design and increased emphasis on the development of individual ideas through various materials such as clay, plaster, fiberglass, wood, and plastics.
- 119: Introduction to Graphic Design Software.** 6-1-3. Preq., ART 115 and 116. Survey of the fundamentals of using graphics-creating software. Students will gain a working knowledge of the applications of specific software programs through design assignments.
- 125: Drawing.** 6-1-3. A study of the principles underlying all creative and representation drawing.
- 126: Drawing.** 6-1-3. Preq., ART 125. A continuation of ART 125.
- 160: Introduction to Graphic Design.** 6-1-3. Preq., ART 116 and 126. An Introduction to the methods, processes, and principles of graphic design.
- 170: Introduction to Photography.** 6-1-3. An introduction to the photographic medium through an exploration of basic tools, techniques, and aesthetics of 35mm black and white photography.
- 173: Intermediate Photographic Practices.** 6-1-3. Preq., ART 170. Advanced black and white techniques covering exposure, development, and printing of small format negatives, with special emphasis on the use of the Zone System.
- 202: Woodshop Orientation.** 3-0-1. A familiarization course for students, preparatory to their use of the woodshop. The course will be a hands-on introduction to all the equipment available for student use.
- 220: Painting.** 6-1-3. Preq., ART 116 and 126. Creative approach to the problems in painting with emphasis on observation and representation.
- 221: Painting.** 6-1-3. Preq., ART 220 and 225. Creative approach to the problems in painting with emphasis on the human figure.
- 225: Drawing.** 6-1-3. Preq., ART 125 and 126. The study of human anatomy as related to problems of art.
- 228-229: Figure Drawing.** 6-1-3 each. Preq., ART 125 and 126. Drawing in media from models.
- 240: Ceramics.** 6-1-3. Introductory course on methods of ceramic construction with emphasis on the creative aspects of pottery.
- 241: Ceramics.** 6-1-3. Emphasis on the use of the potter's wheel.
- 260: Intermediate Graphic Design.** 6-1-3. Preq., ART 160. Studio projects emphasizing problem-solving and introducing use of computers in layout/imaging. Includes a pass/fail portfolio requirement for entry into the major. A specific laptop computer is required for this course.
- 261: Production.** 6-1-3. Preq., ART 160. Introduction to the techniques and technology involved in preparing graphic design projects for printing.
- 262: Layout.** 6-1-3. Preq., ART 260. Studio projects exploring contemporary graphic design formats and techniques. Utilization of the creative process in problem solving is emphasized.
- 263: Illustration.** 6-1-3. Preq., ART 260. Exploration of the media and techniques of contemporary illustration. Emphasis also on creative problem solving.
- 266: History of Art I.** 0-3-3. A survey of the painting, sculpture, architecture, and minor arts of ancient and medieval societies.
- 267: History of Art II.** 0-3-3. A survey of the painting, sculpture, architecture, and minor arts from the Renaissance to the present.
- 270: Concepts of Photographic Imagery.** 6-1-3. Preq., ART 173. An introduction to the many facets of contemporary photography from documentary to conceptual. An overview of approaches to problem solving with the camera.
- 271: Alternative Photographic Processes.** 6-1-3. Preq., ART 173. Alternative processes associated with the photographic medium. Creative approach to various techniques involving ortho films, toning, liquid emulsions, pinhole cameras, and hand-coloring applications.
- 290: Art Appreciation.** 0-3-3. Study and enjoyment of art in its various expressions. Principles for critical judgment. Art in dress, the home, furniture, textiles, pottery, painting, graphic arts, and civic art. (non-art majors only)
- 301: Appreciation and Application of Elementary Art Structure.** 0-3-3. Preq., consent of instructor. Theory and practice using the principles of design as basis for appreciation of the visual arts.
- 320: Painting.** 6-1-3. Preq., ART 221. Creative approach to the problems in painting with emphasis on experimentation in various media, subjects, and techniques.
- 321: Painting.** 6-1-3. Continuation of ART 320.
- 331: Introduction to Printmaking.** 6-1-3. Preq., ART 116 and 126. A basic survey of printing techniques in linoleum cut, wood cut, collograph, dry point, etching and lithography.
- 346: Ceramics.** 6-1-3. Preq., ART 240 and 241. An Advanced course in ceramic design and construction with the introduction to the construction and use of ceramic kilns.
- 347: Ceramics.** 6-1-3. Preq., ART 346. A continuation of ART 346.
- 360: Typography.** 6-1-3. Preq., ART 262. Emphasis on problems in typography with special uses of the computer.
- 361: Art Direction.** 6-1-3. Preq., ART 261, 262, and 263. Advanced studio projects emphasizing problem-solving within a creative team and utilizing multiple design and imaging media and techniques.
- 362: Computer Graphics.** 6-1-3 (9). Preq., ART 260. Exploration of the uses of contemporary computer software and hardware for the creation of graphic design projects.
- 363: Ad Campaign.** 6-1-3. Preq., ART 261, 262. Advanced studio projects exploring advertising graphic design and utilizing contemporary advertising media formats.
- 370: Color Photography.** 6-1-3. Preq., ART 173. An introduction to printing film negatives and transparencies onto color photographic papers.
- 372: Studio Photography.** 6-1-3. Preq., ART 173. Problems in controlled lighting for portraiture, figure, fashion, product, and introduction to view camera operation.
- 373: Commercial Photography.** 6-1-3. Preq., ART 372. An introduction to commercial applications of photography. Large format camera operation is studied with assignments covering a wide range of topics from Architecture to Fashion.
- 374: Commercial Portfolio.** 6-1-3. Preq., ART 373. A concentrated study in one area of interest and production of a portfolio suitable for presentation. Large format color will be used extensively.
- 390: Sculpture.** 6-1-3-(9). Preq., ART 118. Investigations in sculptural processes, materials, and techniques.
- 391: Sculpture.** 6-1-3-(9). Preq., ART 118. Creative approach to problems in metal casting, fabrication, welding, mold technology, and foundry procedures.
- 415: Studio Problems.** 6-1-3 (9). Preq., Permission of instructor. Advanced problems in design. (G)
- 420: Studio Problems.** 6-1-3-(9). Preq., ART 320. Advanced problems in painting. (G)
- 427: Advanced Drawing.** 6-1-3-(9). Preq., ART 228. Interpretive approach to drawing. (G)
- 430: Studio Problems.** 6-1-3-(9). Preq., ART 331. Advanced problems in printmaking. (G)
- 440: Studio Problems.** 6-1-3 (9). Preq., ART 347. An elective course in advanced crafts. (G)
- 459: Women and the Arts.** 0-3-3. Survey of women's involvement with the visual arts. Major emphasis upon anonymous "female" crafts and leading women artists, 1600 to present. (G)
- 460: Monuments of Non-Western Art.** 0-3-3. Survey of monuments of architecture, sculpture, painting, etc. from the most glorious epochs of selected Asian, African, Pre-Columbian, and Oceanic cultures. (G)
- 461: American Art, 1929-1990.** 0-3-3. Survey of major monuments, artists, styles, and changes in modern American art. (G)