

Course Descriptions

Course Description Information

Course Numbers

Beginning fall 2004, West Texas A&M University will change from the current three-digit numbering scheme to a four-digit numbering system, known as the Texas Common Course Numbering System (TCCNS). The four-digit numbers are identified as follows:

- First digit identifies the level (1 = freshman, 2 = sophomore, 3 = junior, 4 = senior, 5 = stacked undergraduate/masters, 6 = masters, 7 = masters/doctoral, 8 = doctoral);
- Second digit identifies the credit-hour value;
- Third and fourth digits establish the course sequence or type of course.

0001–0999—developmental courses, do not count toward degree.

1000–2999—primarily freshman and sophomore courses.

3000–4999—open to students who have completed at least 30 hours and any prerequisite.

5000–5999—graduate stacked with undergraduate.

6000–6999—masters level.

7000–7999—masters/doctoral level.

8000–8000—doctoral students only.

NOTE: Students who have taken undergraduate “stacked” courses at WTAMU that have a graduate component cannot take the graduate course if they have already received credit for the corresponding undergraduate course.

Course Prefix

The course prefix indicates the assigned WTAMU course abbreviation and course number; e.g., **ACCT 2301**.

Course Abbreviation and Number in Brackets

A course abbreviation and number in brackets indicates the corresponding common course number, established by the Texas Higher Education Coordinating Board, if the common course number is different from the WTAMU number; e.g., **[GOVT 1310]**.

Field of Study Curriculum (FOSC)

Field of study curriculum is a set of courses that satisfy lower-division requirements for a bachelor's degree in a specific academic area. All public four-year institutions of higher education are required to accept Texas Higher Education Coordinating Board-approved field of study courses. Field of study curriculum is indicated with the abbreviation “FOSC” within the brackets indicating the common course number of a course; e.g., **[MUSI 1181, 1182; FOSC]**.

Numbers in Parentheses

Numbers in parentheses indicate semester credit hours, lecture clock hours per week and lab clock hours per week; e.g., **(3 3 0)** indicates three semester credit hours, three clock hours of lecture per week and zero clock hours of lab per week.

ACCT—Accounting

(Offered through the Department of Accounting, Economics and Finance.)

- ACCT 2301 Principles of Accounting I. (3 3 0)** Completing an accounting cycle for sole proprietorships, both service and retailer; analyzing balance sheet items—cash, receivables, inventory, long-term assets and current liabilities; accounting for partnership equity. Fall, spring, summer. Formerly ACC 231.
- ACCT 2302 Principles of Accounting II. (3 3 0)** Prerequisite: 2301. Corporations: organization, equity, dividends, bonds and investments; cash flows, financial statement analysis; job order and process cost systems, cost behavior and analysis; budgeting; standards; differential analysis; capital investment analysis. Fall, spring, summer. Formerly ACC 232.
- ACCT 3311 Federal Tax Accounting I. (3 3 0)** Prerequisite: 2302. Practice and procedure in determination of income tax liability of individuals. Fall. Formerly ACC 311.
- ACCT 3331 Intermediate Accounting I. (3 3 0)** Prerequisite: 2301, 2302. Financial statement format, accounting cycle review; cash and temporary investments; inventories; noncurrent investments; fixed assets. Fall, spring. Formerly ACC 331.
- ACCT 3332 Intermediate Accounting II. (3 3 0)** Prerequisite: 3331. Current liabilities; long-term liabilities; capital stock; retained earnings; statement analysis. Fall, spring. Formerly ACC 332.
- ACCT 3371 Cost Accounting. (3 3 0)** Prerequisite: 2302. Fundamentals of cost accounting under job order and process cost systems. Cost concepts, reports and behavior. Responsibility accounting by use of standard cost and variance analysis. Fall, spring. Formerly ACC 371.
- ACCT 3375 Accounting Information Systems. (3 3 0)** Prerequisite: 3331, recommended CIS 3330, demonstrated computer competence or concurrent enrollment. Using technology and computing in specific business and accounting contexts, using and controlling accounting information systems. Spring. Formerly ACC 375.
- ACCT 4096 Supervised Readings in Accounting. (1-6 0-6 0)** Prerequisite: 12 semester hours of advanced work in accounting, junior standing, approval of department head. Current problems in accounting through reading of periodicals, government publications and books which have had a profound influence on American business philosophy. Formerly ACC 412.
- ACCT 4311 Taxation of Business Entities. (3 3 0)** Prerequisite: 3311, junior standing. Income tax reporting requirements with respect to property transactions and corporations; analysis and research of tax questions. Spring. Formerly ACC 411.
- ACCT 4315 Contemporary Issues in Tax Planning. (3 3 0)** Prerequisite: 2302. Introduction to income-tax law and how that law interfaces with business, investment, personal activities and decisions. Designed for majors other than accounting. May not be taken by accounting majors to satisfy accounting requirements. Fall. Formerly ACC 415.
- ACCT 4331 Taxation of Business Entities. (3 3 0)** Prerequisite: 3311. Taxation of partnerships, S Corporations, trusts and estates, and federal estate and gift taxes. Analysis and research of tax questions. Winter intersession. Formerly ACC 431.
- ACCT 4332 Advanced Accounting. (3 3 0)** Prerequisite or concurrent enrollment: 3332. Principles and techniques of

- consolidated statements; foreign exchange; governmental; actuarial science. Summer. Formerly ACC 432.
- ACCT 4334 Fundamentals of Petroleum Accounting. (3 3 0)** Prerequisite: 3332. Generally accepted accounting practices in petroleum accounting, including successful efforts, full cost, tax, joint interest, conveyances, international aspects. Formerly ACC 434.
- ACCT 4351 Auditing. (3 3 0)** Prerequisite or concurrent enrollment: 3332. Ethics and standards, internal control, and auditing techniques and objectives. Spring, May intersession. Formerly ACC 451.
- ACCT 4352 Advanced Auditing. (3 3 0)** Prerequisite: 4351. Procedures with emphasis on use of statistical computer-based methods. Formerly ACC 452.
- ACCT 4361 Advanced Accounting Theory. (3 3 0)** Prerequisite: senior standing. Development of accounting theory; AICPA research bulletins and opinions; pronouncements of other authoritative bodies. Formerly ACC 461.
- ACCT 4371 Accounting Law. (3 3 0)** Prerequisite: junior standing. Law regarding the Bankruptcy Act, the Federal Corrupt Practice Act, accountant's legal liability, product liability, employer-employee laws, Uniform Commercial Code and other topics. Formerly ACC 471.
- ACCT 4372 Advanced Cost Accounting. (3 3 0)** Prerequisite: 4371. Advanced cost and managerial topics relating to planning, control and decision making, including flexible budgeting, variable costing, differential cost analysis, decision making with uncertainty, profitability analysis, and cost accumulation and analysis relating to activity-based costing and just-in-time systems. Formerly ACC 472.
- ACCT 4391 Governmental and Non-Profit Accounting. (3 3 0)** Prerequisite: 2302. Fund and government-wide accounting and reporting for governmental, proprietary and fiduciary funds; accounting and reporting for both public and private non-profit entities. Fall. Formerly ACC 491.
- ACCT 4398 Internship in Accounting. (3 0 0)** Prerequisite: junior standing, approval of department head. On-the-job experience in a phase of the accounting profession. Must be first-time experience on a full-time basis. Fall, spring, summer. Formerly ACC 497.
- ACCT 5311 Federal Tax Accounting II. (3 3 0)** Prerequisite: 3311. Income-tax reporting requirements with respect to property transactions and corporations. Analysis and research of tax questions. Spring. Formerly ACC 5411.
- ACCT 5315 Contemporary Issues in Tax Planning. (3 3 0)** Prerequisite: 2302. Introduction to income-tax law and how that law interfaces with business, investment, personal activities and decisions. Designed for majors other than accounting. May not be taken by accounting majors to satisfy accounting requirements. Fall. Formerly ACC 5415.
- ACCT 5331 Taxation of Business Entities. (3 3 0)** Prerequisite: ACC 3311. Taxation of partnerships, S Corporations, trusts and estates, and federal estate and gift taxes. Analysis and research of tax questions. Winter intersession. Formerly ACC 5431.
- ACCT 5332 Advanced Accounting. (3 3 0)** Prerequisite: ACC 3332 or concurrent enrollment. Principles and techniques of consolidated statements; foreign exchange; governmental; actuarial science. Summer. Formerly ACC 5432.
- ACCT 5334 Fundamentals of Petroleum Accounting. (3 3 0)** Prerequisite: 3332. Generally accepted accounting practices in petroleum accounting, including successful efforts, full cost, tax, joint interest, conveyances, international aspects. Formerly ACC 5434.
- ACCT 5351 Auditing. (3 3 0)** Prerequisite or concurrent enrollment: 3332. Ethics and standards, internal control, and auditing techniques and objectives. Spring, May intersession. Formerly ACC 5451.
- ACCT 5361 Advanced Accounting Theory. (3 3 0)** Prerequisite: 3331 and 3332. Development of accounting theory; AICPA research bulletins and opinions; pronouncements of other authoritative bodies. Formerly ACC 5461.
- ACCT 5372 Advanced Cost Accounting. (3 3 0)** Prerequisite: ACC 3371. Advanced cost and managerial topics relating to planning, control and decision making, including flexible budgeting, variable costing, differential cost analysis, decision making with uncertainty, profitability analysis and cost accumulation, analysis relating to activity-based costing and just-in-time systems. Alternate summers. Formerly ACC 5472.
- ACCT 5391 Governmental and Non-profit Accounting. (3 3 0)** Prerequisite: 2302. Fund and government-wide accounting and reporting for local governments; accounting and reporting for health care providers, college and universities, and voluntary health and welfare organizations. Fall. Formerly ACC 5491.
- ACCT 6092 Special Topics. (1-3 3 0)** Prerequisite: 12 hours of accounting. Topics of special graduate interest. May be repeated for credit when topics change. Formerly ACC 5599.
- ACCT 6096 Reading and Conference. (1-3 0-3 0)** Prerequisite: approval of department head. Directed reading and reporting accounting related to student's sphere of concentration. Formerly ACC 5516.
- ACCT 6300 Financial Accounting. (3 3 0)** Prerequisite: graduate standing, consent of department head. Structure of accounting, income determination, asset valuation, liability recognition, accounting for ownership equity, and interpretation and analysis of financial statements. Fall. Formerly ACC 5500.
- ACCT 6301 Thesis. (3 0 0)** Fall, spring, summer. Formerly ACC 5501.
- ACCT 6302 Thesis. (3 0 0)** Fall, spring, summer. Formerly ACC 5502.
- ACCT 6305 Accounting for Decision Making. (3 3 0)** Prerequisite: 6300 or 12 hours upper-division courses in accounting and/or business administration. Preparation and use of budget with respect to measuring performance of the firm; responsibility accounting; relevant costs; cost-volume-profit relationships; contribution approach to cost allocation. Students should not take this course if they have had ACC 4372, 5372 or equivalent. Fall. Formerly ACC 5505.
- ACCT 6306 Seminar in Accounting Theory. (3 3 0)** Prerequisite: 18 semester hours of accounting. Financial accounting theory; current pronouncements and theory; assigned readings of selected literature; oral and written reports. Spring. Formerly ACC 5506.
- ACCT 6307 Seminar in Accounting Systems. (3 3 0)** Prerequisite: 18 semester hours of accounting including ACCT 3375. Analysis of design and installation of professional and private accounting systems from the standpoint of consultants. Emphasis on survey techniques, budgets, internal control, procedures, manuals, operating controls and reporting objectives. Spring. Formerly ACC 5507.
- ACCT 6308 Seminar in SEC Accounting. (3 3 0)** Prerequisite: 18 semester hours of accounting. Accounting and auditing practice and procedures before the Securities Exchange Commission, standards of professional conduct, problems

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encountered in public practice and current auditing pronouncements. Formerly ACC 5508.

- ACCT 6309 Seminar in Tax Research. (3 3 0)** Prerequisite: 3311. Researching problems of all areas of federal taxation. Fall. Formerly ACC 5509.
- ACCT 6310 Seminar in Auditing. (3 3 0)** 4351/5351 and 15 semester hours of accounting. Comprehensive analysis of theory and practice of independent auditing with emphasis on real-world applications and current topics. Fall. Formerly ACC 5510.
- ACCT 6320 Seminar in Professional Accounting. (3 3 0)** Prerequisite: 24 completed or concurrent accounting hours and consent of instructor. Development and refinement of knowledge of auditing and attestation, financial accounting and reporting, taxation, ethics, professional responsibilities, business law, and the business environment and concepts to assist students in preparing for the CPA exam. Spring.

AGBE—Agricultural Business and Economics

(Offered through the Division of Agriculture.)

- AGBE 2317 Fundamentals of Agricultural Economics. [AGRI 2317] (3 3 0)** Prerequisite: minimum of 15 semester hours. Introduction to fundamental economic principles and their application to problems of agricultural firms. Formerly AGBE 213.
- AGBE 2375 Computer Records for Agribusiness. (3 3 0)** Application of computer software to the development, maintenance and analysis of agricultural business records. Utilization of personal income tax software in income tax planning, management and reporting. Development and analysis of production, marketing and efficiency records with specialized software. Formerly AGBE 215.
- AGBE 3301 Farm and Ranch Management. (3 3 0)** Prerequisite: 2317 or six semester hours of economics. Application of economic and business principles to organization and operation of farms and ranches. Formerly AGBE 301.
- AGBE 3302 Marketing of Agricultural Products. (3 3 0)** Prerequisite: 2317 or six semester hours of economics. Problems of marketing grains, cotton, vegetables, livestock and livestock products. Formerly AGBE 302.
- AGBE 3304 Agricultural Business Management. (3 3 0)** Prerequisite: junior standing. Organizational structure and management principles of agricultural businesses and cooperatives. Formerly AGBE 304.
- AGBE 3320 Quantitative Analysis in Agricultural and Environmental Economics. (3 3 0)** Prerequisite: 2317 or six hours of economics, and AGRI 3318. Econometric and mathematical methods used to solve problems in agricultural and environmental economics relating to decision making, marginal analysis, production and consumption functions, optimization models, maximization and minimization principles, firm and market equilibrium, uncertainty, and static and dynamic models. Formerly AGBE 320.
- AGBE 4097 Management Training in Agribusiness. (1-6 0 0)** Prerequisite: 2317, 3301 and consent of instructor. Supervised work and training in management of selected agribusinesses, farms or ranches. Practical working knowledge combined with training received through conference and supervision from managers of cooperating business. A report will be submitted to the instructor. Formerly AGBE 498.
- AGBE 4098 Undergraduate Research. (2-4 0 0)** Prerequisite: consent of instructor. Selected individual research problems. Completion of a problem which is more extensive than problems encountered in normal class work. Formerly AGBE 497.
- AGBE 4301 Advanced Farm and Ranch Management. (3 3 0)** Prerequisite: 2317, 3301, ACCT 2301. Acquisition and use of land, capital and other production inputs under risks and uncertainty. Utilization of computers in management of farms, ranches and agribusiness firms. Formerly AGBE 401.
- AGBE 4310 Agricultural Policy and Trade. (3 3 0)** Prerequisite: 2317 or six semester hours of economics. Development and implementation of public policy in agriculture; implications of international competition and trade; and development and interpretation of argument in policy development. Formerly AGBE 410.
- AGBE 4311 Agricultural Land Use and Appraisal. (3 3 0)** Prerequisite: 2317, 3301, ACCT 2301 or consent of instructor. Principles and practices applied to use and appraisal of agricultural lands. Formerly AGBE 411.
- AGBE 4312 Agricultural Marketing Analysis. (3 3 0)** Prerequisite: 2317, 3302, 3318 or nine semester hours of approved economics. Development and analysis of statistical models essential in decision-making processes associated with marketing of agricultural products; individual commodity problems. Formerly AGBE 412.
- AGBE 4313 Agricultural Finance. (3 3 0)** Prerequisite: 2317, ACCT 2301, 2302 or consent of instructor. Characteristics of agriculture in relation to financing costs, risks and returns, organization and practices of agricultural credit institutions. Formerly AGBE 413.
- AGBE 4316 Food and Fiber Marketing. (3 3 0)** Prerequisite: 3302 or MKT 3340. Structural and functional dimensions and dynamics of the U.S. food and fiber marketing industry. Food and fiber marketing management including dynamic social, technological, economic and political environments facing food and fiber marketing firms. Formerly AGBE 416.
- AGBE 4328 Futures and Options. (3 3 0)** Prerequisite: 2317, 3302 or consent of instructor. Theory and practical trading applications for agricultural, financial, and petroleum futures and options markets. Same as FIN 428. Formerly AGBE 428.
- AGBE 4354 Speculation in Agricultural Commodity Futures Markets. (3 3 0)** Prerequisite: 3302, 4328 or consent of instructor. Use of commodity futures markets for speculation in agricultural products. Formerly AGBE 454.
- AGBE 4355 Environmental and Natural Resource Economics. (3 3 0)** Prerequisite: 2317. Economic issues involved in development and maintenance of the environment; problems of resource allocation, social cost, pollution and policy issues involved in these areas. Competing uses for natural resources, including agricultural, industrial, domestic and municipal, will be evaluated along with current environmental issues. Same as ECON 4355. Formerly AGBE 455.
- AGBE 4365 Advanced Agribusiness Management. (3 3 0)** Prerequisite: 3304, senior standing or consent of instructor. Examination of organization, management and operation of agricultural business with special reference to the application of managerial principles for effective decision making in a dynamic environment. Formerly AGBE 495.

- AGBE 5301 Advanced Farm and Ranch Management. (3 3 0)**
Prerequisite: graduate standing. Acquisition and use of land, capital and other production inputs under risks and uncertainty. Utilization of the computer in management of farms, ranches and agribusiness firms. Formerly AGBE 5401.
- AGBE 5310 Advanced Agricultural Policy and Trade. (3 3 0)**
Prerequisite: 2317 or six semester hours of economics. Development and implementation of public policy in agriculture; implications of international competition and trade; and development and interpretation of argument in policy development. Formerly AGBE 5410.
- AGBE 5312 Advanced Agricultural Marketing Analysis. (3 3 0)**
Prerequisite: 2317, 3302 or six semester hours of approved economics. Analysis of statistical models essential in decision-making processes associated with marketing of agricultural products; individual commodity problems. Formerly AGBE 5412.
- AGBE 5313 Advanced Agricultural Finance. (3 3 0)** Prerequisite: 2317. Characteristics of agriculture in relation to financing costs, risks and returns; organization and practices of agricultural credit institutions. Formerly AGBE 5413.
- AGBE 5316 Advanced Food and Fiber Marketing. (3 3 0)**
Prerequisite: 3302 or MKT 3340. Structural and functional dimensions and dynamics of the U.S. food and fiber marketing industry. Food and fiber marketing management including dynamic social, technological, economic and political environments facing food and fiber marketing firms. Formerly AGBE 5416.
- AGBE 5328 Futures and Options. (3 3 0)** Prerequisite: 2317, 3302 or consent of instructor. Theory and practical trading applications for agricultural, financial, and petroleum futures and options markets. Same as FIN 5328. Formerly AGBE 5428.
- AGBE 5354 Advanced Speculation in Agricultural Commodity Futures Markets. (3 3 0)** Prerequisite: 3302, 4328 or consent of instructor. Use of commodity futures for speculation in agricultural products. Formerly AGBE 5454.
- AGBE 5355 Environmental and Natural Resource Economics. (3 3 0)** Prerequisite: 2317. Economic issues involved in development and maintenance of the environment; problems of resource allocation, social cost, pollution and policy issues. Competing uses for natural resources, including agricultural, industrial, domestic and municipal, will be evaluated along with current environmental issues. Same as ECON 5355. Formerly AGBE 5455.
- AGBE 6095 Problems and Research. (1-6 0 0)** Investigation of current economic problems facing segments of the agricultural industry. May be repeated for credit. Formerly AGBE 5598.
- AGBE 6098 Advanced Management Internship. (2-6 0 0)**
Supervised work and management training in a selected agribusiness, farm or ranch. A detailed business analysis will be made and written report prepared. Formerly AGBE 5597.
- AGBE 6394 Directed Studies in Agricultural Business and Economics. (3 3 0)** Prerequisite: consent of instructor. Readings and directed individual studies in various topic areas that specifically relate to the graduate student's interests and needs. May be repeated with approval of the department head. Formerly AGBE 5550.
- AGBE 7092 Special Topics. (1-6 0-6 0-12)** Recent advances and current topics in agricultural business and economics. May be repeated once for credit. Formerly AGBE 5599.
- AGBE 7304 Advanced Management Techniques. (3 3 0)**
Prerequisite: 3301 or consent of instructor. Economic principles and techniques applied to decision-making processes required in management of farms, ranches and agricultural management, marketing, financing and policy. Formerly AGBE 5504.
- AGBE 7305 Agricultural Production Economics. (3 3 0)** Resource allocation, production selection, scale of operation of agricultural firms including risk and uncertainty associated with agricultural production. Formerly AGBE 5505.
- AGBE 7313 Financial Analysis and Management. (3 3 0)**
Prerequisite: 4313 or 5313, or consent of instructor. Application of finance and credit to agricultural business situations. Decision-making techniques related to alternative uses of limited capital in agriculturally related business. Formerly AGBE 5513.
- AGBE 7320 Econometrics. (3 3 0)** Prerequisite: Nine hours of graduate courses in agricultural economics, economics or statistics. Introduction to econometric analysis. Application of econometric analysis techniques to problems in agriculture and business. Includes multivariate distributions, maximum likelihood, simultaneous equations systems, nonlinear regression and nonlinear optimization. Same as QBA 6320. Formerly AGBE 5520.
- AGBE 7330 Agricultural Risk Management. (3 3 0)** Current issues and solutions to associated risks present in production agriculture. Market, production, financial, legal and environmental risk. Formerly AGBE 5530.
- AGBE 8301 Organization, Operation and Management of Agribusiness. (3 3 0)** Structure, operation and management of the agribusiness firm. Integration of personnel management, finance, asset management, and operational structure into the planning, production and marketing of the firm's products. Formerly AGBE 6001.
- AGBE 8302 Policy, Trade and the Agribusiness Firm. (3 3 0)**
Effect of monetary and fiscal policy on the growth and operation of the agribusiness firm. Formerly AGBE 6002.

AGRI—Agriculture

(Offered through the Division of Agriculture.)

- AGRI 2371 Introduction to Agriculture Education. (3 3 0)** An introduction to the field of agriculture science education at the secondary school level with an in-depth examination of ag science curricula in Texas schools. Formerly AGRI 201.
- AGRI 2372 Welding and Metalwork. (3 1 4)** Basic principles of welding and metalwork including an introduction to basic metallurgy, cutting and joining metals, use of oxyacetylene, electric arc welding, and plasma arc welding. Emphasis on understanding properties and theory of welding of various metals. Formerly AGRI 202.
- AGRI 3301 Genetics. (3 3 0)** Principles of genetics to include historical development, fundamental concepts, and contemporary advancements as applied to animal, plant, microbial and human heredity. Cannot receive credit for both AGRI 3301 and BIOL 3301. Same as BIOL 3301. Formerly AGRI 301.
- AGRI 3303 Agricultural Agencies in the United States. (3 3 0)**
An in-depth study of the goals, mission and purpose of agricultural agencies including the U.S. Department of Agriculture and the cooperative extension service. Formerly AGRI 303.
- AGRI 3304 Mechanical Systems Management in Agriculture. (3 1 4)** Basic principles of internal combustion engine

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- theory and operation with emphasis on small gas powerplants for agricultural and non-agricultural systems. Formerly AGRI 304.
- AGRI 3306 Principles of Agricultural Leadership. (3 3 0)** Application of leadership principles with emphasis on the national FFA organization, interpersonal and personal skills, dynamics of organizational structure, and institutional and agency leadership. Formerly AGRI 306.
- AGRI 3318 Agricultural Statistics. (3 3 0)** Prerequisite: MATH 1314 or 1324, demonstrated computer competency. Principles and procedures involved in analysis of agricultural data including indices of central tendency and dispersion, probability, sampling, significant tests, concepts of experimental design, one-way and multiway analysis of variance, and linear and multiple regression techniques. Formerly AGRI 318.
- AGRI 3330 Computer Applications in Agriculture. (3 3 0)** Prerequisite: demonstrated computer competency or equivalent. Use of the microcomputer, computer networks and agricultural software in solving agricultural problems and improving agricultural business management. Formerly AGRI 330.
- AGRI 4103 Senior Seminar. (1 1 0)** Prerequisite: senior standing. Group discussion and oral and written presentations on current topics in agriculture. Career orientation and development of professional résumé. Formerly AGRI 403.
- AGRI 4302 Agricultural Buildings and Environmental Control. (3 1 4)** Determination of agricultural building requirements, materials, design and construction. Includes construction, tools and equipment, framing, environmental control and utilities. Formerly AGRI 402.
- AGRI 4305 Conducting Supervised Agricultural Experience Programs. (3 2 2)** Prerequisite: AGRI 2371 or consent of instructor. Designed for students to gain an understanding of competencies needed to successfully manage and supervise agricultural experience programs conducted through agricultural science FFA programs. Formerly AGRI 405.
- AGRI 4310 Global Agriculture and the Environment. (3 3 0)** Prerequisite: PSES 3411 or BIOL 3418 or consent of instructor. Discussion of agriculture systems and practices in relation to how they affect environmental quality from local to global scales. Same as ENVR 4310. Formerly AGRI 410.
- AGRI 5310 Global Agriculture and the Environment. (3 3 0)** Prerequisite: PSES 3411 or BIOL 3418 or consent of instructor. Discussion of agriculture systems and practices in relation to how they affect environmental quality from local to global scales. Same as ENVR 5310. Fall. Formerly AGRI 5410.
- AGRI 6111 Seminar. (1 1 0)** Review and analysis of current professional literature. Preparation of written literature review, oral presentations and discussions. May be repeated for up to three credit hours. Formerly AGRI 5511.
- AGRI 6301 Thesis. (3 0 0)** Formerly AGRI 5501.
- AGRI 6302 Thesis. (3 0 0)** Formerly AGRI 5502.
- AGRI 6316 Agricultural Statistical Analysis I. (3 3 0)** Sampling techniques, univariate analysis, analysis of variance and other basic statistical methods. Emphasis on application and interpretation. Formerly AGRI 5516.
- AGRI 7318 Agricultural Statistical Analysis II. (3 3 0)** Prerequisite: 6316 or consent of instructor. Simple and multiple regression/correlation, multivariate analysis of variance, and experimental design. Emphasis on application and interpretation. Formerly AGRI 5518.
- AGRI 7375 Systems Agriculture I. (3 3 0)** A multi-disciplinary introduction to key issues faced by agriculture with emphasis on developing a systems approach to problem solution. Formerly AGRI 5575.
- AGRI 7376 Biotechnology in Agriculture. (3 3 0)** Technological, economic and social issues surrounding the use of biotechnology in the various agricultural sectors including plant and animal production, waste management, food safety and environmental engineering. Formerly AGRI 5576.
- AGRI 8000 Doctoral Dissertation. (1-6 0 0)** Prerequisite: consent of division head. Doctoral dissertation.
- AGRI 8097 Doctoral Research. (1-6 0 0)** Prerequisite: consent of division head. Investigation of a topic requiring a multi-disciplinary solution. May be repeated for credit. Formerly AGRI 7000.
- AGRI 8101 Doctoral Seminar. (1 0 0)** Prerequisite: consent of division head. Analysis of significant research with oral presentations and discussions. May be repeated for credit. Formerly AGRI 7001.
- AGRI 8301 Advanced Agricultural Statistics. (3 3 0)** Prerequisite: 6316, 7318 or equivalent. Advanced statistical methods for design and analyses of research data from both traditional and non-traditional data sets. Formerly AGRI 6001.
- AGRI 8302 Agricultural Perspectives on Environmental Risk. (3 2 2)** Prerequisite: 8301. Contemporary approaches to the assessment of environmental and human health risks from agricultural sources. Formerly AGRI 6002.
- AGRI 8303 Systems Agriculture II. (3 3 0)** Prerequisite: 7375, 7376, 8301, 8302. An interactive, team-taught, multi-disciplinary capstone course, taken near the end of the Ph.D. program, focusing on development of useful solutions to problems in production agriculture. Formerly AGRI 6003.

ANSC—Animal Science

(Offered through the Division of Agriculture.)

- ANSC 1178 Horsemanship I. (1 0 2)** Review of fundamental horse safety and horsemanship to include handling, grooming, equipping, riding western or English, and the relationship of riding to physical and mental well-being. May be used to meet one hour of physical education activity. Same as PHED 1178. Formerly ANSC 158.
- ANSC 1274 Western Horsemanship. (2 0 4)** Prerequisite: ANSC/PHED 1178 or consent of instructor. Development of balanced seat, hands and posture at natural gaits of the horse. Emphasis on control of the horse through primary and secondary aids. Welfare and communication considerations for effective horse-human relationships. Relationship of riding to physical and mental well-being. May be used to meet one hour of required physical education activity. Same as PHED 1274. Formerly ANSC 164.
- ANSC 1275 English Riding and Jumping I. (2 0 4)** Prerequisite: 1178 or consent of instructor. Introduction to principles of forward seat riding with emphasis on control and use of primary and secondary aids. Use of caveletti and introduction to jumping. Safety considerations for jumping. May be used to meet one hour of required PE activity. Same as PHED 1275. Formerly ANSC 165.
- ANSC 1319 Principles of Animal Science. [AGRI 1319] (3 2 2)** Introduction to the livestock industry and application of

- genetics, physiology, endocrinology, meat science and nutrition to breeding, selection, feeding and management of farm animals. Formerly ANSC 121.
- ANSC 1329 Food Science. [AGRI 1329] (3 3 0)** Food types, composition, nutritional quality, processing and preservation including Federal Food and Drug Regulations. Nutrient classification emphasized. Formerly ANSC 230.
- ANSC 2074 Independent Study. (1-3 0 0)** Individual study designed to meet needs and interests of the student. Formerly ANSC 250.
- ANSC 2276 English Riding and Jumping II. (2 0 4)** Prerequisite: 1275 or consent of instructor. Development of principles of English riding with emphasis on primary and secondary aids. Fence work, course designing, show-ring techniques and cross-country jumping. Safety considerations for advanced jumping activities. Formerly ANSC 265.
- ANSC 2279 Introduction to Hippo Therapy. (2 1 2)** Overview of hippo therapy (equine-assisted therapy) programs including acility, personnel and animal requirements. Requirements for personnel and horse-training program certification. Application of a hippo-therapy program. Formerly ANSC 219.
- ANSC 2374 Equine Industry and Care of Horses. (3 2 2)** Review of history, breeds, careers and all segments of the horse industry. Overview of equine anatomy and physiology, including feet and legs. Acceptable management procedures, welfare issues, equine health, and nutritional and reproductive management. Overview of facility design. Formerly ANSC 224.
- ANSC 2375 Selection and Evaluation of Horses. (3 1 4)** Influence of heredity, conformation, training and environmental effects on performance. Detailed evaluation of athletic performance and conformation as it relates to function, and criteria used for evaluation and selection of breeding, race and show animals. Emphasis on developing critical-thinking and oral-presentation skills. Formerly ANSC 225.
- ANSC 2376 Meat Animal and Carcass Evaluation. (3 2 2)** Prerequisite: 1319 or consent of instructor. Consideration of factors involved in classifying, grading, and evaluating meat animals and beef, pork and lamb carcasses. Formerly ANSC 121. Formerly ANSC 204.
- ANSC 2377 Equine Behavior Modification. (3 1 4)** Review of principles of behavior, learning and behavior modification. Practicum on proper techniques and procedures for routine handling, training and presentation of horses. Preparation and training of horses for handling and care of hooves. Formerly ANSC 226.
- ANSC 3240 Advanced Animal and Meat Evaluation. (2 0 0)** Prerequisite: 2375 or 3304 or consent of instructor. Advanced training in judging and grading animals and meat, and evaluating performance for members of the senior livestock, horse and meat judging teams. May be repeated for credit. Formerly ANSC 340.
- ANSC 3304 Independent Studies in Livestock Evaluation and Selection. (3 0 6)** Prerequisite: 2376 or consent of instructor. Visual evaluation of traits pertaining to selection of livestock for the breeding herd and for slaughter. Emphasis on use of performance records and terminology related to selections. Students from this course will be chosen to participate in collegiate livestock-judging contests. Formerly ANSC 304.
- ANSC 3310 Applied Animal Nutrition. (3 3 0)** Prerequisite: 1319. Nutritional functions of water, protein, carbohydrates, fats, minerals and vitamins, and their digestion, absorption and excretion in livestock. Characteristics of feedstuffs and processing, feeding of farm animals, nutritional requirements, and principles of diet evaluation and formulation. Not for animal science majors. Will not qualify as prerequisite for 3375. Formerly ANSC 310.
- ANSC 3340 Reproductive Physiology. (3 2 2)** Prerequisite: 1319 or BIOL 2401 or consent of instructor. Anatomy and physiology of reproduction in mammals. Includes hormones, reproductive communications, cycles, spermatogenesis, folliculogenesis, oogenesis, ovulation, gestation, parturition, lactation and reproductive management techniques. Same as BIOL 3340. Formerly ANSC 350.
- ANSC 3355 Animal Breeding. (3 2 2)** Prerequisite or concurrent enrollment: AGRI 3301. Principles of inheritance, breeding systems and selection and their application to domestic species. Formerly ANSC 355.
- ANSC 3374 Principles of Nutrition. (3 3 0)** Prerequisite: 1319 or consent of instructor. In-depth study of function, digestion, absorption, metabolism and excretion of nutrients. Anatomy and physiology of the gastrointestinal tract and related organs. Introduction to nutrient requirements for maintenance, growth and performance. Same as SES 3374. Formerly ANSC 374.
- ANSC 3375 Feeds and Feeding. (3 2 2)** Prerequisite: 3374 or consent of instructor. Characteristics of feedstuffs used in livestock enterprises. Nutrient requirements of livestock. Manual and computer diet formulation; and nutritional management of beef and dairy cattle, sheep, goats, swine, horses, poultry and other animals. Methods of grain, protein supplement, and forage evaluation and processing. Formerly ANSC 375.
- ANSC 4097 Undergraduate Research. (2-4 0 0)** Prerequisite: consent of division head. Selected individual research problems. Completion of a problem which is more extensive than problems encountered in normal class work. Formerly ANSC 498.
- ANSC 4098 Animal Science Internship. (1-6 0 0)** Prerequisite: consent of division head. Supervised internship in an approved discipline of animal agriculture. Students receive on-the-job training under supervision of faculty and industry personnel. Formerly ANSC 497.
- ANSC 4317 Meat Science (3 2 2)** Prerequisite: 1319 or consent of instructor. Introduction to the value of meat and meat products. Harvest, fabrication and anatomy of beef, lamb and pork carcasses, and the curing of meat products. Animal by-products and its utilization. Formerly ANSC 217.
- ANSC 4320 Beef Cattle Management. (3 2 2)** Prerequisite: 3374 or 3310 or consent of instructor. Breeding, feeding, reproduction, care, management and marketing of beef cattle. Emphasis on profitable commercial cow-calf operations. Includes field trips to purebred and commercial ranches. Formerly ANSC 420.
- ANSC 4322 Dairy Cattle Management. (3 2 2)** Prerequisite: 3374 or 3310 or consent of instructor. Dairy industry including milk production, product quality evaluation and marketing. Dairy cattle husbandry emphasized. Formerly ANSC 422.
- ANSC 4324 Swine Management. (3 2 2)** Prerequisite: 3374 or 3310 or consent of instructor. Management of genetics and environment for efficient swine production. Methods of breeding, feeding, managing and marketing swine for profitable production. Includes field trips to commercial swine operations. Formerly ANSC 424.

ANSC 4326–ANTH 3302**ANSC 4326 Poultry and Game Bird Management. (3 2 2)**

Prerequisites: 3374 or 3310 or consent of instructor.

In-depth study of poultry including anatomy and physiology, genetics, nutrition, diseases, rearing, housing and marketing. Game bird and habitat management for commercial hunting. Formerly ANSC 426.

ANSC 4328 Feedlot Management. (3 2 2)

Prerequisite: 3374 or 3310 or consent of instructor. Application of modern technology to cattle feeding with emphasis on the Texas High Plains area. Procurement, marketing, feeding, waste management, and care and management of feeder cattle. Formerly ANSC 428.

ANSC 4370 Equine Science and Production. (3 2 2)

Prerequisite: 3374 or 3310 or consent of instructor. In-depth study of genetics, nutrition and feeding, exercise physiology, and reproduction and breeding as it pertains to the horse. Formerly ANSC 470.

ANSC 4473 Equine Business Planning and Management. (4 3 2)

Prerequisite: AGRI 3330, 3318, AGBE 3302 or MKT 3340, and AGBE 4313 or FIN 3320. Review of economic forces that influence the equine industry. Legal aspects, taxation and tax laws as they pertain to the equine industry, including contracts, waivers, liability laws and syndication agreements. Operational strategies and management issues involved in business plans, including organization, implementation and administration of equine enterprises. Spring. Formerly ANSC 5473.

ANSC 5370 Equine Science and Production. (3 2 2)

Prerequisite: 3374 or 3310 or consent of instructor. In-depth study of genetics, nutrition and feeding, exercise physiology, and reproduction and breeding as it pertains to the horse. Formerly ANSC 5470.

ANSC 5473 Equine Business Planning and Management. (4 3 2)

Prerequisite: AGRI 3330, 3318, AGBE 3302 or MKT 3340, and AGBE 4313 or FIN 3320. Review of economic forces that influence the equine industry. Legal aspects, taxation and tax laws as they pertain to the equine industry, including contracts, waivers, liability laws and syndication agreements. Operational strategies and management issues involved in business plans, including organization, implementation and administration of equine enterprises. Spring.

ANSC 6097 Research. (1-6 0 0)

Investigation of current interest. May be repeated for credit. Formerly ANSC 5598.

ANSC 6396 Directed Studies in Animal Science. (3 0-3 0)

Readings and independent study of topics related to the graduate student's special needs and interests. May be repeated with different content. Formerly ANSC 5550.

ANSC 6698 Advanced Professional Internship. (6 0 0)

Supervised internship in a selected area of animal agriculture. Detailed analysis of the selected work area will be made and a written report prepared. Formerly ANSC 5597.

ANSC 7092 Special Topics. (1-6 0-6 0-12)

Recent advances and current topics in animal science. May be repeated once for credit. Formerly ANSC 5599.

ANSC 7322 Ruminant Nutrition I. (3 3 0)

Prerequisite: CHEM 2573 or equivalent or instructor consent. Classification of ruminants and anatomy and physiology of the ruminant gastrointestinal tract. Ruminant microbiology, ruminal fermentation, intestinal digestion, and tissue metabolism of carbohydrates, nitrogen and lipids. Formerly ANSC 5522.

ANSC 7324 Digestive Physiology. (3 3 0)

Prerequisite: CHEM 2573 or equivalent or instructor consent. Digestion and absorption of nutrients by ruminants and nonruminants with emphasis on gastrointestinal physiology. Metabolism

of absorbed nutrients by the intestines, liver and other tissues. Formerly ANSC 5524.

ANSC 7328 Advancements in Livestock Production. (3 3 0)

Prerequisite: appropriate undergraduate production course or consent of instructor. Student may enroll in each of the following areas: (1) beef cattle, (2) sheep, (3) swine, (4) horse production, (5) feedlot management. Survey of current knowledge and concepts in the specific livestock production area; professional literature, scientific basis, and relation to future production practices and investigations. Economic considerations and current problems operation. Enrollment once in each production area. Formerly ANSC 5528.

ANSC 7330 Advanced Reproduction in Farm Animals. (3 2 2)

Theory and development of appropriate skills in application of animal reproduction techniques; artificial insemination, pregnancy diagnosis, fertility testing, and semen processing and evaluation. Formerly ANSC 5530.

ANSC 7346 Advanced Livestock Management Systems. (3 3 0)

Alternate management schemes for livestock enterprises. Cow-calf, stocker-calf finishing cattle, farrow-to-finish swine and sheep production systems. Management, inputs, expected production and husbandry techniques for various operations. Formerly ANSC 5546.

ANSC 7363 Advanced Meat Science and Technology. (3 2 2)

Prerequisite: 2377 or equivalent. Conversion of muscle to meat with emphasis on physical and biochemical changes. Microbiology and other related characteristics of meat and its implication in commercial meat processing. Formerly ANSC 5563.

ANSC 7370 Endocrinology. (3 3 0)

Prerequisite: permission of instructor. Function of endocrine glands and hormonal regulatory systems. Mechanisms of action of hormones at the cellular and molecular level. Recent advances in endocrinological research. Same as BIOL 7370. Formerly ANSC 5570.

ANSC 7407 Research Techniques in Animal Nutrition. (4 1 6)

Prerequisite: 3310 or 3375 or equivalent. Sampling techniques and preparation of samples for analysis in nutrition experiments. Laboratory techniques for measurement of proximate components of feeds, detergent fiber components, and in vitro and in vivo digestibility. Use of spectroscopy and chromatography in analysis of biological samples. Evaluation of experimental designs commonly used in nutrition. Formerly ANSC 5507.

ANSC 8301 Integrated Animal and Resource Management

(3 3 0) Structure of the animal industry, use of natural and capital resources, and effects on the environment and society. Formerly ANSC 6001.

ANTH—Anthropology

(Offered through the Department of Life, Earth and Environmental Sciences.)

ANTH 2351 Cultural Anthropology. [ANTH 2351] (3 3 0)

Examination of nature and activities of contemporary cultures throughout the world. Fall, spring. Formerly ANTH 201.

ANTH 3301 Introduction to Archaeology. (3 3 0)

Investigation of scientific study of ancient people using field, laboratory and theoretical approaches. Spring. Formerly ANTH 301.

ANTH 3302 American Archaeology. (3 3 0)

Survey of prehistoric cultures of North and South America. Fall. Formerly ANTH 302.

- ANTH 3321 Human Origins. (3 3 0)** A survey of physical, biological and cultural origins of humans in the Old World using data gathered from the fossil record, archeological excavations, modern primate behavior, geological age dating and stratigraphy, genetics and molecular biology. Fall of odd years. Formerly ANTH 321.
- ANTH 4095 Problems in Anthropology/Archeology. (1-3 0 0)** Prerequisite: consent of instructor. Library, field and laboratory research in anthropology/archeology problems. May be repeated for up to six credit hours. Fall, spring. Formerly ANTH 421.

ARTS—Art

(Offered through the Department of Art, Communication and Theatre.)

- ARTS 1303 Art History I. (3 3 0)** Survey of painting, sculpture, architecture and minor arts from prehistoric times to the 14th century. Fall, spring. Formerly ART 151.
- ARTS 1304 Art History II. (3 3 0)** Survey of painting, sculpture, architecture and minor arts from the 14th century to present. Fall, spring. Formerly ART 152.
- ARTS 1311 Design I. (3 2 4)** Emphasis on two-dimensional design: fundamentals of dot, line, color, form, texture, shape, space and arrangement. Fall. Formerly ART 121.
- ARTS 1312 Design II. (3 2 4)** Prerequisite: 1311. Continuation of Design I with emphasis on three-dimensional forms and concepts. Spring. Formerly ART 122.
- ARTS 1316 Drawing I. (3 2 4)** Beginning course investigating a variety of media, techniques and subjects, exploring perceptual and descriptive possibilities with consideration of drawing as a development process as well as an end in itself. Fall, spring, summer. Formerly ART 111.
- ARTS 1317 Drawing II. (3 2 4)** Prerequisite: 1316. Expansion of Drawing I stressing expressive and conceptual aspects of drawing including the human figure within a spatial environment. Spring. Formerly ART 112.
- ARTS 1319 Digital Photography. [COMM 1310] (3 3 0)** Basics of digital photography and exploration of the digital process; slide scanning, graphics and photo manipulation. Same as MCOM 1319. Formerly ART 212.
- ARTS 1372 Two-Dimensional Art for Non-Art Majors I. (3 2 4)** Introductory exploration of two-dimensional art for non-art majors. Materials, technique, creative process and studio experience in painting and printmaking. May be repeated once for credit. Fall, spring, summer. Formerly ART 102.
- ARTS 1373 Three-Dimensional Art for Non-Art Majors I. (3 2 4)** Introductory exploration of three-dimensional art for non-majors. Materials, technique, creative process and studio experience in ceramics, metalsmithing and sculpture. May be repeated once for credit. Fall, spring, summer. Formerly ART 103.
- ARTS 1374 Digital/Computer Art for Non-Art Majors I. (3 2 4)** Introductory exploration of digital/computer art for non-art majors. Materials, technique, creative process and studio experience in computer graphics and computer art. May be repeated once for credit. Fall, spring, summer. Formerly ART 104.
- ARTS 2313 Graphic Design I. (3 2 4)** Prerequisite: foundation studio core. Introduction to visual communication through graphic design. Problems in design, color, type, concept, history, etc. Emphasis on clear visual thinking, craftsmanship and execution. The computer is used for typesetting. Fall. Formerly ART 265.
- ARTS 2316 Painting I. (3 2 4)** Prerequisite: foundation studio core. Exploring potentials of oil, acrylic or mixed media with emphasis on color and composition. May be repeated once. Fall, spring. Formerly ART 216.
- ARTS 2323 Drawing III—Life. (3 2 4)** Prerequisite: foundation studio core. Life drawing emphasizing anatomy, structure and action of the human figure. Live models provided. May be repeated once. Fall. Formerly ART 211.
- ARTS 2326 Sculpture I. (3 2 4)** Prerequisite: foundation studio core. Exploration of various sculptural approaches in a variety of media including additive and subtractive techniques. May be repeated once. Fall. Formerly ART 231.
- ARTS 2333 Printmaking I. (3 2 4)** Prerequisite: foundation studio core. Introduction to basic printmaking techniques. Emphasis on proper use of tools and equipment. Basic exploration of relief, planographic and intaglio processes. May be repeated once. Spring. Formerly ART 226.
- ARTS 2341 Metalsmithing/Jewelry I. (3 2 4)** Prerequisite: foundation studio core. Introduction to basic jewelry-making processes and materials. May be repeated once. Spring. Formerly ART 236.
- ARTS 2346 Ceramics I. (3 2 4)** Prerequisite: foundation studio core. Introduction to various ceramic processes: hand building, wheel throwing, glazing, and firing in stoneware and raku. May be repeated once. Fall, spring. Formerly ART 241.
- ARTS 2366 Watermedia I. (3 2 4)** Prerequisite: foundation studio core. Exploring potentials of watercolor and other aqueous media with instructor's consent; emphasis on color and composition. May be repeated once. Spring. Formerly ART 217.
- ARTS 2371 Crafts I. (3 2 4)** Introduction to a variety of craft media. May be repeated once. Formerly ART 201.
- ARTS 2375 Glass I—Introduction to Basic Glass Processes. (3 2 4)** Prerequisite: Foundation Studio Core. Introduction to basic glass and glass-blowing processes. Emphasis on process and safety. May be repeated once for credit. Fall, spring. Formerly ART 244.
- ARTS 2377 Computer Art I. (3 2 4)** Prerequisite: foundation studio core. Introduction to computer art. Exploring use of the computer as a tool for both studio and graphic arts. Basic understanding of hardware and software. May be repeated once. Fall, spring. Formerly ART 246.
- ARTS 2378 Type I. (3 2 4)** Prerequisite: foundation studio core. Using type and typography as the primary design element. Exploration of uses of type as a strong communications tool. Spring. Formerly ART 267.
- ARTS 3301 Crafts II. (3 2 4)** Prerequisite: 2371. Advanced investigation of various crafts processes. Course will not fulfill art requirements for the B.F.A. degree. May be repeated once. Formerly ART 301.
- ARTS 3313 Graphic Design II. (3 2 4)** Prerequisite: 2313. Exploration of the poster as a vehicle for visual communication. Emphasis on concept, design and execution. The computer is used for typesetting. Fall. Formerly ART 365.
- ARTS 3316 Painting II. (3 2 4)** Prerequisite: 2316. Different forms of the picture surface in order to express various types of visual experiences with emphasis on aesthetic and individual exploration. May be repeated once. Fall, spring. Formerly ART 316.
- ARTS 3323 Drawing IV—Life. (3 2 4)** Prerequisite: 2323. Emphasis on composition and exploration of various media,

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- techniques and individual concepts. Live models provided. May be repeated once. Fall. Formerly ART 311.
- ARTS 3326 Sculpture II. (3 2 4)** Prerequisite: 2326. Advanced investigation of various sculpture processes: welding, metal casting, assemblage, and stone and wood carving. May be repeated once. Fall. Formerly ART 331.
- ARTS 3333 Printmaking II. (3 2 4)** Prerequisite: 2333. Further investigation of relief, intaglio, planographic and stencil processes. May be repeated once. Spring. Formerly ART 326.
- ARTS 3341 Metalsmithing/Jewelry II. (3 2 4)** Prerequisite: 2341. Advanced investigation of basic metalsmithing techniques and introduction of raising, forging and advanced fabrication in nonferrous metals. May be repeated once. Spring. Formerly ART 336.
- ARTS 3346 Ceramics II. (3 2 4)** Prerequisite: 2346. Continuation of 241. Glazing and firing processes and contemporary and historical ceramic forms. May be repeated once. Fall, spring. Formerly ART 341.
- ARTS 3366 Watermedia II. (3 2 4)** Prerequisite: 2366. Techniques of utilizing water media on various surfaces. May be repeated once. Spring. Formerly ART 317.
- ARTS 3372 Two-Dimensional Art for Non-Art Majors II. (3 2 4)** Intensive exploration of two-dimensional art for non-art majors. Materials, technique, analysis, research, creative process and studio experience in two-dimensional art. May be repeated once for credit. Fall, spring. Formerly ART 302.
- ARTS 3373 Three-Dimensional Art for Non-Art Majors II. (3 2 4)** Intensive exploration of three-dimensional art for non-art majors. Materials, techniques, analysis, research, creative process and studio experience in ceramics, metalsmithing and sculpture. May be repeated once for credit. Fall, spring. Formerly ART 303.
- ARTS 3374 Digital/Computer Art for Non-Art Majors II. (3 2 4)** Intensive exploration of digital/computer art for non-art majors. Materials, techniques, analysis, research, creative process and studio experience in computer graphics and computer art. May be repeated once for credit. Fall, spring. Formerly ART 304.
- ARTS 3375 Glass II—Advanced Investigation of Various Techniques. (3 2 4)** Prerequisite: 2375. Advanced investigation of various glass techniques; glass blowing, stained glass, glass fusing and lamp work. May be repeated once for credit. Fall, spring. Formerly ART 344.
- ARTS 3376 Intermedia I. (3 2 4)** Prerequisite: foundation studio core and 2313. Introduction to video, performance, photography and moviemaking. May involve mixed or experimental media and techniques. May be repeated once. Formerly ART 345.
- ARTS 3377 Computer Art II. (3 2 4)** Prerequisite: 2377 or consent of instructor. Further investigation of computer art. Exploration of various bit-mapped and vector-based drawing programs including photo-image editing software. May be repeated once. Fall, spring. Formerly ART 346.
- ARTS 3378 Type II. (3 2 4)** Prerequisite: 2378. Advanced problems in typographics using type as the primary design element. More in-depth solutions to communications problems through typography. May be repeated once. Spring. Formerly ART 367.
- ARTS 3379 Illustration I. (3 2 4)** Prerequisite: foundation studio core. Introduction to image making and visualization of ideas. The computer is used for typesetting. Spring. Formerly ART 361.
- ARTS 3381 Art Fundamentals. (3 2 2)** Prerequisite: junior standing. To acquaint the student with several basic art media and their use. Fall, spring. Formerly ART 370.
- ARTS 3392 Special Topics. (3 3 0 or 3 2 4, pending)** Intensive exploration of a selected topic in art. Topic to be determined each semester course is offered. May be repeated as topic changes. Formerly ART 399.
- ARTS 3394 Individual Study. (3 0 0,6*)** Prerequisite: 24 semester hours of art and consent of instructor. Individual work in the student's area of interest developed through individual conferences with the instructor in the field of study. May be repeated once. *Classes may meet on a TBA schedule. Fall, spring. Formerly ART 390.
- ARTS 4180 Professional Practices. (1 1 0)** Wide range of practical topics: résumé and portfolio preparation, exhibitions and gallery procedures, and artists' legal rights and tax laws, framing and presentation, and others. Topic to be determined each semester course is offered. May be repeated as topic changes. Formerly ART 475.
- ARTS 4313 Graphic Design III. (3 2 4)** Prerequisite: 3313. Emphasis on concept, design and execution. Assignments require more in-depth solutions to publications and corporate identity. The computer is used for typesetting. May be repeated once. Fall. Formerly ART 465.
- ARTS 4316 Painting III. (3 2 4)** Prerequisite: 3316. Advanced techniques of oil, acrylic or mixed media. May be repeated once. Fall, spring. Formerly ART 416.
- ARTS 4323 Drawing V—Life. (3 2 4)** Prerequisite: 3323. Drawing, emphasizing individuality and experimentation in techniques, composition and subject matter. Live models will be provided. May be repeated once. Fall. Formerly ART 411.
- ARTS 4326 Sculpture III. (3 2 4)** Prerequisite: 3326. Advanced individual investigation of sculpture techniques with emphasis on production of major professional-quality pieces. May be repeated once. Fall. Formerly ART 431.
- ARTS 4333 Printmaking III. (3 2 4)** Prerequisite: 3333. Advanced individual investigation of graphic techniques with emphasis on production of major professional-quality pieces. May be repeated once. Spring. Formerly ART 426.
- ARTS 4341 Metalsmithing/Jewelry III. (3 2 4)** Prerequisite: 3341. Advanced individual investigation of metalsmithing techniques with emphasis on production of major professional-quality pieces. May be repeated once. Spring. Formerly ART 436.
- ARTS 4346 Ceramics III. (3 2 4)** Prerequisite: 3346. Advanced individual investigation of ceramic techniques with emphasis on production of major professional-quality pieces. May be repeated once. Fall, spring. Formerly ART 441.
- ARTS 4366 Watermedia III. (3 2 4)** Prerequisite: 3366. Advanced watermedia techniques. May be repeated once. Spring. Formerly ART 417.
- ARTS 4370 Seminar in Aesthetics and Advanced Criticism. (3 3 0)** Discussions of critical literature and issues as well as aesthetic philosophies of art. Research projects related to semester topic. Topic to be determined each semester course is offered. May be repeated as topic changes. Fall. Formerly ART 401.
- ARTS 4371 Art History. (3 3 0)** (1) Western; (2) 20th century; (3) history of art media, styles and techniques;

- (4) Non-Western. In-depth investigation into a selected period, style or group of art works. Topic to be determined each semester course is offered. May be repeated as topic changes. Fall, spring. Formerly ART 454.
- ARTS 4375 Glass III—Advanced Investigation of Glass Techniques. (3 2 4)** Prerequisite: 3375. Advance individual investigation of glass techniques. May be repeated once for credit. Fall, spring. Formerly ART 444.
- ARTS 4376 Intermedia II. (3 2 4)** Prerequisite: 3376. Emphasis on exploration, video performance, photography and moviemaking. Some individual investigation encouraged. May involve mixed or experimental media and techniques. May be repeated once. Formerly ART 445.
- ARTS 4377 Computer Art III. (3 2 4)** Prerequisite: 3377 or consent of instructor. Advanced techniques in computer art. Individual exploration of computer imagery with emphasis on production of professional-quality pieces. May be repeated once. Fall, spring. Formerly ART 446.
- ARTS 4379 Illustration II. (3 2 4)** Prerequisite: 3379. Various assignments to solve communications problems through original imagery and conceptual thinking. Various formats for illustration will be explored: editorial, institutional, advertising and promotional. May be repeated. Spring. Formerly ART 461.
- ARTS 4381 Art Program Development. (3 3 0)** Familiarize students with various types of art programs, their philosophies, settings and evaluative bases. Several approaches to innovative and alternative art programs. Fall, spring. Formerly ART 470.
- ARTS 4394 B.F.A. Senior Project. (3 0 0,6*)** Prerequisite: completion of 60 hours of art and consent of instructor. Advanced individual work in the student's major area. Preparation for the B.F.A. candidate's senior exhibition or portfolio presentation. Must be repeated once. *Classes may meet on a TBA schedule. Fall, spring. Formerly ART 490.
- ARTS 4398 Art Internship. (3,6 0 0)** Prerequisite: junior standing and permission of instructor. Internship program for students to gain practical experiences in operation and management of museums, art galleries and art sales, or for students to gain practical experiences in the graphic-design industry. May be repeated once. Fall, spring. Formerly ART 495.
- ARTS 5316 Painting IV. (3 2 4)** Prerequisite: 3316. Advanced techniques of painting. May be repeated once. Fall, spring. Formerly ART 5416.
- ARTS 5323 Drawing VI—Life. (3 2 4)** Prerequisite: 3323. Concentrated study of composition of the human figure; effective presentation of ideas using organizational devices and techniques of professional-quality. May be repeated once. Fall. Formerly ART 5411.
- ARTS 5333 Printmaking IV. (3 2 4)** Prerequisite: 3333. Advanced individual investigation of printmaking techniques with emphasis on production of major professional-quality pieces. May be repeated once. Spring. Formerly ART 5426.
- ARTS 5346 Ceramics IV. (3 2 4)** Prerequisite: 3346. Advanced individual investigation of ceramics techniques with emphasis on production of major professional-quality pieces. May be repeated once. Fall, spring. Formerly ART 5441.
- ARTS 5366 Watermedia IV. (3 2 4)** Prerequisite: 3366. Advanced techniques of watermedia painting. May be repeated once. Spring. Formerly ART 5417.
- ARTS 5370 Aesthetics and Advanced Criticism. (3 3 0)** Insights into advanced philosophies of the nature of art, aesthetic principles and critical attitudes through research and discussions. Fall. Formerly ART 5401.
- ARTS 5371 Art History. (3 3 0)** (1) Western; (2) 20th century; (3) art media, styles and techniques; (4) Non-Western. In-depth investigation into a selected period, style or group of art works. Topic to be determined each semester course is offered. May be repeated as topic changes. Fall, spring. Formerly ART 5454.
- ARTS 5375 Glass IV—Advanced Techniques of Glass. (3 2 4)** Prerequisite: 3375. Advanced individual investigation of glass-blowing techniques with emphasis on production of major professional-quality pieces. May be repeated once for credit. Fall, spring. Formerly ART 5444.
- ARTS 5394 Advanced Individual Problems. (3 0 0,6*)** Advanced individual work in the student's major area, developed through individual conferences with the instructor in the field of study. May be repeated. *Classes may meet on a TBA schedule. Fall, spring. Formerly ART 5490.
- ARTS 6301 Thesis. (3 0 0)** Fall, spring. Formerly ART 5501.
- ARTS 6302 Thesis. (3 0 0)** Prerequisite: 5501. Fall, spring. Formerly ART 5502.
- ARTS 6313 Special Problems in Graphic Design. (3 0 0-6)** Prerequisite: 4313. Advanced individual exploration of problems in graphic design. May involve work in print or non-print media commonly encountered in professional design work. May be repeated. Formerly ART 5565.
- ARTS 6316 Special Problems in Painting. (3 0 0-6)** Prerequisite: 3316, 3366, 5316 or 5366. Advanced individual exploration and experimentation in one or more painting media. May be repeated. Fall, spring. Formerly ART 5519.
- ARTS 6323 Special Problems in Drawing. (3 0 0-6)** Prerequisite: 3323 or 5323. Advanced individual exploration and experimentation in one or more drawing processes. May be repeated. Fall, spring. Formerly ART 5511.
- ARTS 6326 Special Problems in Sculpture. (3 0 0-6)** Prerequisite: 3326. Advanced individual exploration of unique problems relating to sculpture. Emphasis on developing new and uniquely personal sculptural statements. May be repeated. Fall. Formerly ART 5531.
- ARTS 6333 Special Problems in Printmaking. (3 0 0-6)** Prerequisite: 3333 or 5333. Advanced individual exploration and experimentation in one or more printmaking processes. May be repeated. Spring. Formerly ART 5526.
- ARTS 6341 Special Problems in Metalsmithing/Jewelry. (3 0 0-6)** Prerequisite: 3341. Advanced individual exploration and experimentation in various metals and techniques. May be repeated. Spring. Formerly ART 5536.
- ARTS 6346 Special Problems in Ceramics. (3 0 0-6)** Prerequisite: 3346 or 5346. Advanced individual exploration of unique problems relating to ceramics. Emphasis on developing new and uniquely personal ceramic statements. May be repeated. Fall, spring. Formerly ART 5541.
- ARTS 6375 Special Problems in Glass. (3 0 0-6)** Prerequisite: 3375 or 5375. Individual exploration of unique problems relating to glass blowing. Emphasis on developing new and uniquely personal glass statements. May be repeated once for credit. Fall, spring. Formerly ART 5544.
- ARTS 6376 Special Problems in Intermedia. (3 0 0-6)** Prerequisite: 4376. Advanced individual investigation of video, performance, photography and moviemaking with emphasis on professional-quality products. May involve