

**MATH 6340–MCOM 3301**

**MATH 6340 Complex Analysis I. (3 3 0)** Prerequisite: 3340, 4341. Complex numbers, point set, sequences, mappings, elementary functions, differentiation and integration. Fall of even years. Formerly MATH 5540.

**MATH 6350 Real Analysis I. (3 3 0)** Prerequisite: 4341. Countability; theory of sequences, series and limits of functions; metric spaces and the topology of metric spaces. Fall of odd years. Formerly MATH 5550.

**MATH 6351 Real Analysis II. (3 3 0)** Prerequisite: 3340. Theory of Riemann integration, improper integrals, sequences and series of functions; measure theory and theory of Lebesgue integration. Spring of even years. Formerly MATH 5551.

**MATH 6360 Mathematical Statistics I. (3 3 0)** Prerequisite: 3340. Probability, random variables, distribution theory, statistics and sampling distribution. Fall of odd years. Formerly MATH 5560.

**MATH 6361 Mathematical Statistics II. (3 3 0)** Prerequisite: 2413; 3311 or 3321. Inferential statistics with point and interval estimation of parameters; hypothesis testing using parametric and nonparametric methods. Spring of even years. Formerly MATH 5561.

**MATH 6362 Biomathematical Modeling. (3 3 0)** Prerequisite: 2413, 2414. Quantitative and qualitative behavior of deterministic biological models, steady states, stability and parameter variation with analysis of discrete, continuous, spatially distributed biological models. Spring of odd years. Formerly MATH 5562.

**MATH 6370 Numerical Analysis I. (3 3 0)** Prerequisite: 3340. Error analysis, polynomial approximation, interpolation, numerical summation and numerical solution of algebraic equations. Fall of odd years. Formerly MATH 5570.

**MATH 6371 Numerical Analysis II. (3 3 0)** Prerequisite: 3342, 6370. Numerical solution of initial-value and boundary-value problems including error analysis and stability. Numerical solution of partial differential equations. Spring of even years. Formerly MATH 5571.

**MATH 6398 Mentoring/Leadership. (3 0 0)** Prerequisite: teacher certification in mathematics. Mentoring, coaching, exhibiting leadership, professional development, and develop instructional strategies based on data and supported by research. Opportunities to understand historical development of mathematics ideas, interrelationship between society and mathematics, structure of mathematics, and evolving nature of mathematics and mathematical knowledge. Formerly MATH 5591.

## MCOM—Mass Communications

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

**MCOM 1307 Introduction to Mass Communication. (3 3 0)** Structure, characteristics, functions and support of mass communication in modern society, including radio, television, newspapers, magazines, film, and related areas of advertising and public relations. Fall, summer. Formerly MC 107.

**MCOM 1318 Photography. [ARTS 2356] (3 3 0)** General beginners' course. Taking and processing photos for reproduction in publications. Formerly MC 211.

**MCOM 1319 Digital Photography. [ARTS 2357] (3 3 0)** Prerequisite: 1318. Continuation of 1318. Introduction to digital photography, exploring uses of the digital camera, as well as

print, negative and slide scanning. Appropriate software applications and ethical concerns of image manipulation. Every other spring. Same as ARTS 1319. Formerly MC 212.

**MCOM 1336 Basic TV Production. (3 3 0)** Techniques employed in TV production, instruction in broadcast-equipment operation and types of TV programs produced. Fall. Formerly MC 222.

**MCOM 1375 Race, Gender, Multiculturalism and the Media. (3 3 0)** Media play a vital role in setting the agenda for a multicultural society. Presentation of ethnic issues through mass media and potential societal influences of those representations. Recent events demonstrate the necessity of knowledgeable understanding of how media influence public opinion. Every other spring. Formerly MC 115.

**MCOM 2071 Radio Practicum. [COMM 2120, 2220, 2324] (1-3 0 0)** Participation in live, on-the-air broadcasting on campus radio station KWTS-FM. May be repeated up to a total of eight hours. A maximum of three semester hours may count toward the major. Fall, spring, summer. Formerly MC 291.

**MCOM 2303 Radio Production. [COMM 2303] (3 3 0)** Techniques employed in radio production. Instruction in electronic-audio production and control-equipment operation. Various types of radio programs produced. Spring. Formerly MC 225.

**MCOM 2305 News Editing. (3 1 4)** Prerequisite: 2309 or equivalent. Copy editing and headline writing; laboratory practice in handling copy for publications. Fall. Formerly MC 202.

**MCOM 2309 News Reporting. (3 1 4)** Prerequisite: 2315. Beat reporting for print media. Continued emphasis on interviewing, news gathering and writing; laboratory practice in preparing news stories for publication under newsroom conditions. Fall, spring. Formerly MC 201.

**MCOM 2311 Introduction to Journalism. (3 3 0)** Analysis of journalistic writing. Language, styles and techniques of communication through print media. Fall, spring, summer. Formerly MC 101.

**MCOM 2315 News Writing. (3 1 4)** Prerequisite: 2311. Adaptation of journalistic writing to print and broadcasting news media practices and requirements. Continuation of 2309. Spring, summer. Formerly MC 102.

**MCOM 2327 Advertising Principles. (3 3 0)** Fundamentals of advertising, study of media, copy and layout techniques, and psychology of sales campaigns. Fall. Formerly MC 250.

**MCOM 2331 Broadcast Announcing. (3 3 0)** Techniques of effective radio and TV announcing. Practice in types of announcing. Every third fall. Formerly MC 232.

**MCOM 2375 Desktop Publishing. (3 1 4)** Prerequisite: demonstrated computer competency. Media design theories and application for newspapers, magazines and desktop publishing with emphasis on how to organize, design and produce a newsletter. Spring. Formerly MC 275.

**MCOM 3094 Independent Study. (1-3 0 0)** Individual study designed to meet needs and interests of the student. May be repeated. Fall, spring, summer. Formerly MC 398.

**MCOM 3099 Journalism Practicum. (1-3 0 0)** Advanced individual work in journalism related to needs and interests of the student. May be repeated. Fall, spring. Formerly MC 392.

**MCOM 3301 Feature Writing. (3 1 4)** Types, styles and markets with much writing for publications. Magazine writing; publication requirements. Every other fall. Formerly MC 301.

- MCOM 3302 Advanced Reporting. (3 3 0)** Prerequisite: 2311. Emphasis on computer-assisted reporting and investigative work. Every other fall. Formerly MC 302.
- MCOM 3303 Advanced Print Editing. (3 1 4)** Prerequisite: 2315. Continued work on copy editing and headline writing with emphasis on page designing and use of photographs for print media. Laboratory practice in preparing news stories for publication under newsroom conditions. Every other spring. Formerly MC 303.
- MCOM 3304 Broadcast/Cable Programming. (3 3 0)** Successful programming strategies for radio, television and cable stations. Formats, counterprogramming, and format change theory and practice. Every third fall. Formerly MC 304.
- MCOM 3305 New Media. (3 3 0)** Prerequisite: 1307. Mass communication as a growth industry. New technologies, corporate mergers, and state and federal changes of industry. Fall. Formerly MC 305.
- MCOM 3306 Advanced Radio Production. (3 3 0)** Prerequisite: 2303. Audio production of news, commercials, music, theatre, sound effects and other audio program elements. Multi-track/digital equipment will be the primary tool of instruction. Every third spring. Formerly MC 306.
- MCOM 3307 Public Relations and Advertising Campaigns. (3 3 0)** Students act in agency capacity for national, state and local campaigns. During the fall semester, students will direct public relations campaigns for clients, and in the spring semester, they will direct a national campaign selected by the American Advertising Federation. May be repeated once for credit. Fall, spring. Formerly MC 307.
- MCOM 3310 Movies as Mass Medium. (3 3 0)** Movies as an art, industry and a social force in American society. Every third fall. Formerly MC 310.
- MCOM 3312 Advertising Copywriting. (3 3 0)** Fundamentals of advertising copywriting for print, radio and television campaigns. Fall. Formerly MC 312.
- MCOM 3313 Public Relations Copywriting. (3 3 0)** Fundamentals of public relations copywriting with emphasis in background, position, media, advertising and crisis writing. Spring. Formerly MC 313.
- MCOM 3314 Public Relations and Advertising Research. (3 3 0)** In-depth analysis of advertising and public relations research techniques that delivers market information suitable for both public relations and advertising planning and implementation. Includes statistical analysis, survey, focus groups and other commonly used public relations and advertising methodologies. Fall. Formerly MC 314.
- MCOM 3322 Intermediate TV Production. (3 3 0)** Prerequisite: 1336 and 2331. Intermediate techniques in TV production. Spring. Formerly MC 322.
- MCOM 3327 Mass Media Law. (3 3 0)** Federal, state and local government regulation of mass media industries from development through present-day media regulations. Emphasis on print and broadcast/cable media and advertising. Spring. Formerly MC 327.
- MCOM 3331 History and Principles of Journalism. (3 3 0)** History and development of American journalism from the earliest colonial period to present with attention to English background and development of principles of press freedom and law. Literature of journalism. Every other spring. Formerly MC 331.
- MCOM 3335 Television Reporting. (3 3 0)** Prerequisite or concurrent enrollment: 1307 or 3322. Advanced study in preparation of news copy for radio and television. Fundamentals of news film, tape recorder and interview techniques. Spring. Formerly MC 335.
- MCOM 3350 Public Relations and Publicity. (3 3 0)** Theory and principles of public relations. Public attitudes, public relations activities and the public relations process. Development of a public-relations program. Publicity emphasized throughout. Spring. Formerly MC 350.
- MCOM 3375 Mass Media Sales. (3 3 0)** Theory and production of commercial advertising sales in radio, television, print, cable and other news-communication technologies. Every third semester. Formerly MC 375.
- MCOM 3379 Mass Communications Management. (3 3 0)** Theories of management applied to mass media organizations. Management's role in directing mass media activities and examination of applicable rules and regulations specific to mass media. Every third semester. Formerly MC 379.
- MCOM 3392 Special Topics. (3 3 0)** Special media-related topics germane to a rapidly changing mass media environment. May be repeated once. Formerly MC 399.
- MCOM 4301 Politics and the Media. (3 3 0)** Public affairs journalism including operations of local, state and national government. Reporters learn who to interview, what the issues are and how to convey that information to the public. Every other fall. Formerly MC 401.
- MCOM 4302 Mass Communications Ethics. (3 3 0)** Ethical standards for reporters and broadcasters. Evaluation of past, current and hypothetical ethical problems facing the industry. Spring. Formerly MC 402.
- MCOM 4306 Mass Communications Criticism. (3 3 0)** Theories of criticism dealing with mass media including art, styles and audience appeal. Every other fall. Formerly MC 406.
- MCOM 4322 Advanced TV Production. (3 3 0)** Prerequisite: 3322. Instruction in advanced television and directing programs. Creative aspects of TV production. Every third spring. Formerly MC 422.
- MCOM 4371 Broadcast Writing. (3 3 0)** Mechanics and style of radio and TV writing. Practice in writing commercial copy, PSAs, documentaries and news. Every third semester. Formerly MC 471.
- MCOM 4372 Contemporary Music Video. (3 3 0)** Analysis, discussion and survey of music videos. Popularity, censorship, history, production techniques, styles and their effects on society. Music videos as art, entertainment and commercialization. Same as SCOM 4372 and THRE 4372. Every third spring. Formerly MC 493.
- MCOM 4390 Senior Project. (3 0 0)** Prerequisite: senior standing. Professional conduct and standards of the industry, individual assessment of skills and potential employment opportunities. Final closure to the student's academic career. Fall, spring, summer. Formerly MC 499.
- MCOM 4398 Media Internship. (3 0 0)** Prerequisite: six semester hours each in editing and reporting, or program director's permission. One semester of prearranged work in operational activities in a designated enterprise cooperating with the mass communications program. Students will obtain professional work experience and will be responsible for periodic reports and appraisals as required by the instructor. No class hours are to be met; conferences are arranged. May be repeated once with permission of department head and program director. Fall, spring, summer. Formerly MC 495.

**MENG 3311–MGT 4096****MENG—Mechanical Engineering**

(Offered through the Department of Mathematics, Physical Sciences and Engineering.)

- MENG 3311 Nuclear Issues. (3 3 0)** Historical perspective of the development of nuclear technology. Discussions of contemporary nuclear issues. Such issues may include the nuclear arms race, treaty negotiations, status of nuclear waste, siting, storage and transportation of nuclear materials. Formerly MENG 311.
- MENG 3312 Radiation Safety and Biology. (3 3 0)** Prerequisite: MATH 1348 or consent of instructor. Types of radiation and their various behaviors. Risks and benefits of radiation. Approaches to radiation safety. Effects of radiation on humans, modes of transportation, inhalation and injection. Formerly MENG 312.
- MENG 3340 Structural Analysis. (3 3 0)** Prerequisite: PHYS 2426, ENGR 2302. Applications of conservation principles and stress/deformation relationships for continuous media to structural members; axially loaded members; thin-walled pressure vessels; torsional and flexural members; shear; moment; deflection of members; combined loadings; stability of columns; nonsymmetrical bending; shear center; indeterminate members; elastic foundation. Formerly MENG 350.
- MENG 3360 Engineering Ethics. (3 3 0)** Prerequisite: junior classification. Professional ethics, social and environmental responsibilities of engineers. Role of communication, considerations of risk, safety, and liability in engineering design and practice. Fall. Formerly MENG 360.
- MENG 4097 Mechanical Engineering Research and Problems. (1-6 0 0)** Selected individual research topics in mechanical engineering to accommodate more substantial research than can be encountered in normal course work. May be repeated for a maximum of six hours.
- MENG 4264 Heat Transfer and Fluid Flow Experiments. (2 1 3)** Prerequisite: 4360. Experiments in laminar and turbulent flows, steady-state and transient problems of conduction, convection and radiation heat transfer in one, two and three dimensions. Formerly MENG 464.
- MENG 4304 Fundamentals of Fluid Mechanics. (3 3 0)** Prerequisite: PHYS 1402 or 2426, MATH 2413. Fluid properties; conservation of energy and momentum; incompressible flow in pipes; Bernoulli equation; standard symbols: components and control of hydraulic systems and pneumatic systems. Formerly MENG 404.
- MENG 4307 Finite Element Methods. (3 3 0)** Prerequisite: MATH 3342 and 3311. Theory and application of finite element method to structural and fluid mechanics problems. Formerly MENG 407.
- MENG 4321 Engineering Risk and Decision Analysis. (3 3 0)** Prerequisite: MATH 4361 or consent of instructor. Mathematical theory of the assessment of risk associated with engineering decisions and problems. Formerly MENG 421.
- MENG 4340 Control Theory. (3 3 0)** Prerequisite: MATH 3342. Control systems theory, control systems hardware, discrete time systems, and microprocessor based and digital control. Formerly MENG 423.
- MENG 4351 Electric Power Systems. (3 3 0)** Prerequisite: MATH 1348 or higher. Theory and devices for electric power systems. Functionality and analysis of electric power grid. Formerly MENG 415.

- MENG 4352 Thermal Power Systems. (3 3 0)** Prerequisite: PHYS 3320. Methodology and approach to design of thermal energy systems; component and system modeling; optimization, including economic considerations. Formerly MENG 420.
- MENG 4360 Heat Transfer. (3 3 0)** Prerequisite: MATH 2414. Conservation of energy principles applied to steady-state and transient problems of conduction, convection and radiation heat transfer in one, two and three dimensions. Formerly MENG 460.
- MENG 4380 Mechanical Engineering Design. (3 0 0)** Prerequisite: senior classification. A project will be selected by the student to work as part of a student team. The project will integrate theory and application of the engineering curriculum and incorporate all aspects of the design/research process. Final oral and written reports are required. Capstone course intended to be taken in the final semester. Formerly MENG 480.
- MENG 4392 Special Topics in Mechanical Engineering. (3 3,0 0)** Current topics or topics of special interest to mechanical engineering. May be repeated for a maximum of six hours if subject matter varies.

**MGT—Management**

(Offered through the Department of Management, Marketing and General Business.)

- MGT 2370 First-Line Management. (3 3 0)** Focuses on developing effective first-line management. Emphasizes responsibilities and problems of basic first-line supervisors as they channel efforts of work-place employees in carrying out basic functional tasks within organizations. Formerly MGT 230.
- MGT 3330 Principles of Management. (3 3 0)** Analysis of theory and practice of management as related to functions of planning, organizing, staffing, directing and controlling. Fall, spring, summer. Formerly MGT 330.
- MGT 3332 New Venture Creation. (3 3 0)** Prerequisite: 3330, MKT 3340, FIN 3320. Entrepreneurial process of starting a new business. Idea creation and evolution, development of a business plan, and gathering human, financial, physical and information resources necessary to start a new enterprise. Fall, summer. Formerly MGT 332.
- MGT 3333 Small Business Management. (3 3 0)** Prerequisite: 3330, MKT 3340, FIN 3320. Unique challenges of managing a small growing business. Emphasis on marketing, human resource acquisition and development, financial management and control, and growth strategies for the small business. Spring. Formerly MGT 333.
- MGT 3335 Organizational Behavior. (3 3 0)** Prerequisite: junior standing. Systematic study of attitudes and actions of people in organizations. Course is designed around the study of individuals, groups and organization environments, and the manner in which they effect and determine behavior in organizations. Fall, spring, summer. Formerly MGT 335.
- MGT 4096 Supervised Readings in Management. (1-6 0 0)** Prerequisite: 12 semester hours of advanced work in a business major, junior standing and permission of department head. Current problems in management through reading business periodicals, government publications and books which have had a profound influence on American management philosophy. Fall, spring. Formerly MGT 412.

- MGT 4311 Business Ethics and Society. (3 3 0)** Prerequisite: junior standing. Examination of the business environment, its influence on business decisions, results of business operations and the ethical nature of such decisions. Fall, spring, summer. Formerly MGT 411.
- MGT 4315 Strategic Management and Policy. (3 3 0)** Prerequisite: FIN 3320, MGT 3330, MKT 3340, senior standing. Capstone course utilizing cases as the means of integrating all aspects of business administration from the viewpoint of analyzing and formulating decisions under conditions of uncertainty relative to administrative policies of the firm. Fall, spring, summer. Formerly MGT 415.
- MGT 4330 Human Resources Management. (3 3 0)** Issues, problems and philosophies in personnel management with emphasis on selecting, developing, maintaining, utilizing, evaluating and controlling personnel. Fall, spring, summer. Formerly MGT 430.
- MGT 4333 Diversity and Cross Cultural Management. (3 3 0)** Prerequisite: junior standing. Examination of management issues related to changes in the makeup of the workplace, implications for managing diversity, as well as raising awareness of potential barriers, skills and strategies related to managing effectively in intercultural environments. Fall. Formerly MGT 432.
- MGT 4334 Compensation Administration. (3 3 0)** Prerequisite: 3330. Procedures for collecting and analyzing job information; conducting job evaluation; conducting salary surveys; and establishing and maintaining a compensation structure, including benefits and services, performance evaluations, individual and group incentive systems and legislation affecting compensation. Fall. Formerly MGT 434.
- MGT 4335 International Management. (3 3 0)** Prerequisite: 3330, senior. Analysis of theory and practice of management as related to functions of planning, organizing, staffing, directing and controlling at the international level. Functional areas of international business as well as problems related to internationalization of the firm. Fall, spring. Formerly MGT 435.
- MGT 4336 Leadership Development. (3 3 0)** Prerequisite: 3330, senior standing or consent of instructor. Exploration of the challenges to effective leadership and management that the contemporary manager faces in a rapidly changing environment. Focus on leadership styles and behaviors conducive to high performance in various organizational settings with a very diverse work force. Fall, spring. Formerly MGT 437.
- MGT 4370 Biotechnology and Healthcare Management. (3 3 0)** Prerequisite: 3330 or consent of instructor. Prepares students for management positions in the healthcare industry. Covers conditions and issues that make management in healthcare different from management in other industries. Focuses on management issues in biotechnology.
- MGT 4398 Supervised Internship. (3 0 0)** Prerequisite: junior standing and approval of department head. One semester of prearranged work in operational activities in a designated enterprise cooperating with the T. Boone Pickens College of Business. Students will obtain comprehensive work experience in the area and be responsible for periodic reports and appraisals as required by the instructor. No class hours are to be met; conferences are arranged. Maximum of six credits, total, may be taken in MGT 4398, MKT 4398 and BUSI 4398. Fall, spring, summer. Formerly MGT 497.
- MGT 5311 Business Ethics and Society. (3 3 0)** Examination of business environment, its influence on business decisions, results of business operations and ethical nature of such decisions.
- MGT 5330 Critical Issues in Human Resource Management. 3 3 0)** Issues, problems and philosophies in personnel management with emphasis on selecting, developing, maintaining, utilizing, evaluating and controlling personnel. Fall, spring, summer.
- MGT 5333 Diversity and Cross-Cultural Management. (3 3 0)** Examination of management issues related to changes in the makeup of the workplace, implications for managing diversity, as well as raising awareness of potential barriers, skills and strategies related to managing effectively in intercultural environments. Significant independent study and research. Fall. Formerly MGT 5432.
- MGT 6300 Business Management. (3 3 0)** Prerequisite: graduate standing, consent of department head. Framework of basic knowledge to develop an operational theory of management. Analysis of basic functions of management planning, organizing, directing and controlling. Spring. Formerly MGT 5500.
- MGT 6318 Strategic Management. (3 3 0)** Prerequisite: FIN 6320, MGT 6334, MKT 6340 or equivalent. Discussion of general management cases concerning analysis, appraisal, formulation, implementation, direction, and control of corporate policy and strategy. Fall, spring, summer. Formerly MGT 5518.
- MGT 6320 Entrepreneurship. (3 3 0)** Prerequisite: ACCT 6300, FIN 6300, MKT 6300, MGT 6300, or proficiency in these courses in an undergraduate program. Interdisciplinary course involving all requirements for starting a business: the idea, market assessment, how to raise funds, exploiting opportunities, legal organization, taxes, entrepreneurial characteristics necessary for success and creation of a business plan. Summer. Formerly MGT 5520.
- MGT 6330 Seminar in International Management. (3 3 0)** Prerequisite: 6300 or equivalent. Study and application of principles of management to international fields of business organization and cross-cultural operation. The degree of universality of management functions to all phases of business and development. Spring. Formerly MGT 5530.
- MGT 6332 Seminar in Organization Theory. (3 3 0)** Analysis of theory and practice in designing organization structure. Topics include systems and contingency theories, strategic management, patterns of organization design, technology, size, innovation and change, and information systems and control. Summer. Formerly MGT 5532.
- MGT 6334 Seminar in Organizational Behavior. (3 3 0)** In-depth explanation of individual and group behavior in organizations. Attitudes and perception, satisfaction, motivation, leadership, conflict, stress and organization, change and development. Spring. Formerly MGT 5534.
- MGT 6336 Advanced Human Resources Management. (3 3 0)** Prerequisite: 6300. Examination of principles and methodology of Human Resources Management with emphasis on functions of recruitment and selection; training and development, performance appraisal, compensation and labor relations. Fall. Formerly MGT 5536.
- MGT 6370 Seminar in Biotechnology and Healthcare Management. (3 3 0)** Prerequisite: 3330 or 6300 or consent of instructor. Analysis of significant conditions and issues impacting healthcare management with a focus on

**MGT 6375–MKT 6300**

upper-level strategic management. Prepares students for leadership positions in the biotechnology and healthcare industry.

**MGT 6375 Planning for IT in Biotechnology and Healthcare. (3 3 0)** Prerequisite: CIS 6335 or consent of instructor. Issues and strategies associated with strategic planning and implementation of the application of IT in healthcare organizations. Examination of role of information technology as a critical contributor to strategies and plans to integrate care, reduce costs and respond to a complex reimbursement environment.

**MKT—Marketing**

(Offered through the Department of Management, Marketing and General Business.)

**MKT 3340 Principles of Marketing. (3 3 0)** Description and analysis of our marketing system and investigation of basic responsibilities held by marketing executives in business organizations. Fall, spring, summer. Formerly MKT 340.

**MKT 3342 Consumer Behavior. (3 3 0)** Buyer as a problem solver; buying decision processes; factors influencing behavior; principles, theories and models of behavioral research. Attention on behavioral science concepts related to consumer behavior; e.g., mass communication, reference groups, sociological, psychological and economic aspects. Fall, spring, summer. Formerly MKT 342.

**MKT 3346 Personal Selling and Sales Promotion. (3 3 0)** Selling and negotiating and sales promotion as related to both the new enterprise and on-going firm. Promotional strategies especially appropriate for the smaller firm where uniqueness of promotional tools is more critical than in the larger firm that has a much larger promotional budget. Spring. Formerly MKT 346.

**MKT 3348 Marketing Research. (3 3 0)** Prerequisite: 3340, CIS 3330, QBA 2342. Theories, concepts and methodology in applying research to market problems. Attention toward the application of sampling, sample design, data analysis of marketing problems and how findings are used in formulating marketing policies. Fall, spring. Formerly MKT 348.

**MKT 3350 E-Commerce. (3 3 0)** Prerequisite: CIS 3330. Examination of marketing in the context of electronic commerce as well as other emerging methods of distributing goods and services. Attention to the role of technology in marketing and development of sound strategies for Internet-related business. Spring. Formerly MKT 350.

**MKT 4096 Supervised Readings in Marketing. (1-6 0 0)** Prerequisite: 12 semester hours of advanced work in a business major, junior standing and permission of department head. Current problems in marketing through reading business periodicals, government publications and books which have had a profound influence on marketing philosophies. Fall, spring, summer. Formerly MKT 412.

**MKT 4340 International Marketing. (3 3 0)** Prerequisite: 3340. Problems and procedures of marketing in foreign countries, including effects of cultural dynamics in assessing world markets. Emphasis on comparative differences in markets, marketing functions, legal, socioeconomic stages of industrial development, and cultural and political considerations of overseas markets. Spring, summer. Formerly MKT 440.

**MKT 4342 Principles of Advertising. (3 3 0)** Prerequisite: 3340. Nature, scope and contribution of advertising to the firm's

problems of demand stimulation. Attention on establishing objectives and budgets for promotional activities and advertiser-agency relationships. Emphasis on technical aspects of advertising layout. Course content is culminated into a full-scale advertising campaign. Spring, summer. Formerly MKT 442.

**MKT 4344 Retail Marketing. (3 3 0)** Prerequisite: 3340. Analysis of factors governing store operations: location, store layout, buying and selling, advertising and display, merchandise planning and control, personnel management, consumer relations, recent trends, and problems connected with retail buying and selling. Fall, summer. Formerly MKT 444.

**MKT 4346 Sales Management. (3 3 0)** Prerequisite: 3340. Analysis of current behavioral concepts of personal selling, and study of principles and concepts involved in managing a sales force. Emphasis on organization of sales departments developing territories, motivating sales people and control over sales operations. Fall, spring. Formerly MKT 446.

**MKT 4348 Marketing Strategy. (3 3 0)** Prerequisite: 3340, CIS 3330, senior standing. Actual marketing cases and problems: marketing costs, brand policy, channels of distribution, sales promotion, sales policies, price policies and operating control. Capstone course in the marketing curriculum. Spring. Formerly MKT 448.

**MKT 4398 Supervised Internship. (3 0 0)** Prerequisite: junior standing and approval of department head. One semester of prearranged work in operational activities in a designated enterprise cooperating with the T. Boone Pickens College of Business. Students will obtain comprehensive work experience and be responsible for periodic reports and appraisals as required by the instructor. No class hours will be met; conferences are arranged. Maximum of six credits, total, may be taken in MKT 4398, MGT 4398 and BUSI 4398. Fall, spring, summer. Formerly MKT 497.

**MKT 5340 International Marketing. (3 3 0)** Prerequisite: 3340 or equivalent. Additional research analysis not covered in the text is required. Special study of current international monetary problems, international political problems and world-trade problems that affect strategies in international marketing. Spring, summer. Formerly MKT 5440.

**MKT 5342 Principles of Advertising. (3 3 0)** Prerequisite: 3340. Nature, scope and contribution of advertising to the firm's problems of demand stimulation. Attention on establishing objectives and budgets for promotional activities and advertiser-agency relationships. Emphasis on technical aspects of advertising layout. Course content is culminated into a full-scale advertising campaign. Spring, summer. Formerly MKT 5442.

**MKT 5344 Retail Marketing. (3 3 0)** Analysis of factors governing store operations: location, store layout, buying and selling, advertising and display, merchandise planning and control, personnel management, consumer relations, recent trends, and problems connected with retail buying and selling. Fall, summer. Formerly MKT 5444.

**MKT 5346 Sales Management. (3 3 0)** Prerequisite: 3340 or equivalent. An additional research project is required in such areas as planning for a specific sales management seminar and/or construction of specific sales compensation plan. Fall, spring. Formerly MKT 5446.

**MKT 6300 Managerial Marketing. (3 3 0)** Prerequisite: graduate standing, consent of department head. Description or survey course of our marketing system and investigation of basic responsibilities of marketing executives in business organizations. Fall. Formerly MKT 5500.

- MKT 6340 Seminar in Marketing. (3 3 0)** Prerequisite: 6300 or equivalent. Business activities involved in moving goods from production to consumption; marketing functions and problems. Developing a philosophy of the role of marketing in the American economy. Fall, summer. Formerly MKT 5540.
- MKT 6350 Contemporary Issues in Marketing. (3 3 0)** Prerequisite: 6340. Selected topics of current interest in the field, including electronic commerce, marketing strategy and sales management. Semester-long examination of the selected topic. May be repeated once with consent of instructor. Spring, summer. Formerly MKT 5550.
- MKT 6352 Seminar in E-Commerce. (3 3 0)** Prerequisite: 6300 or equivalent. Methods of conducting e-commerce, models, comparison to the old paradigm, consumer behavior issues, Web advertising, security, branding and strategy. Formerly MKT 5552.
- MKT 6370 Healthcare Marketing. (3 3 0)** Prerequisite: 6300 or equivalent. Application of strategic marketing to biotechnology and healthcare organizations. Topics include strategic planning, market research, segmentation and targeting, positioning, marketing mix tactical decisions, organization and budgeting, and public relations and fund raising.

## MPS—Math and Physical Science

(Offered through Department of Mathematics, Physical Sciences and Engineering.)

- MPS 4097 Math/Physical Science Research. (1-6 0 0)** Selected individual research problems in chemistry, mathematics and/or physics. Formerly MPS 497.
- MPS 4364 Mathematics/Science Activities for Instruction. (3 3 0)** Concepts/activities to enhance the instruction in mathematics and science. Topics will vary, but all courses involve concentration in mathematics and physical sciences. May be repeated with different content. Formerly MPS 464.
- MPS 4365 Science Activities for Secondary Teachers II. (3 3 0)** Laboratory activities, demonstrations and simulations to enhance science background for secondary science teachers. Topics/activities will vary, but all courses involve concentration in physical sciences. May be repeated with different content. Formerly MPS 465.
- MPS 4393 Math/Physical Science/Engineering Technology Honors. (3 3 0)** Completion of a senior thesis or research project by a student who is a candidate for graduation with special honors in the department. Formerly MPS 499.
- MPS 4398 Math/Physical Science Problems. (3 3 0)** Selected individual problems. Completion of a problem more extensive than those encountered in normal courses. Formerly MPS 498.
- MPS 6320 Advanced Mathematics/Science Activities for Instruction I. (3 3 0)** Concepts/activities to enhance the instruction in science. Topics will vary, but all courses involve concentration in science and physical sciences. May be repeated with different content. Formerly MPS 5520.
- MPS 6321 Advanced Mathematics/Science Activities for Instruction II. (3 3 0)** Science: Research summative and formative assessment techniques with emphasis on appropriateness, validity, reliability, level of bias and

dissemination of assessment data. Science: Laboratory activities, demonstrations and simulations. May be repeated with different content. Formerly MPS 5521.

## MUAP—Applied Music

(Offered through the Department of Music and Dance.) Applied Music is private instruction for music majors. MUAP is the prefix for applied music courses. The number identifies the level and type of lesson by medium; e.g., MUAP 3037, section 2, indicates two credit hours of upper-division (junior- or senior-level) trumpet.

### Applied Music Level Numbers

- 1000—First- and second-year students
- 3000—Third- and fourth-year students
- 6000—Graduate students

### Applied Music Medium Numbers

- Bassoon—1025, 3025, 6025 [1025, 1026, 1027, 1028]
- Brass—1040
- Clarinet—1029, 3029, 6029 [1029, 1030, 1031, 1032]
- Composition—1087, 3087, 6087
- Conducting—1088, 3088, 6088
- Double Bass—1013, 3013, 6013 [1013, 1014, 1015, 1016]
- Euphonium—1049, 3049 [1049, 1050, 1051, 1052]
- Flute—1017, 3017, 6017 [1017, 1018, 1019, 1020]
- Harp—1077, 3077 [1077, 1078, 1079, 1080]
- Horn—1041, 3041, 6041 [1041, 1042, 1043, 1044]
- Oboe—1021, 3021, 6021 [1021, 1022, 1023, 1024]
- Organ—1065, 3065, 6065 [1065, 1066, 1067, 168]
- Percussion—1057, 3057, 6057 [1057, 1058, 1059, 1060]
- Piano—1069, 3069, 6069 [1069, 1070, 1071, 1072]
- Saxophone—1033, 3033, 6033 [1033, 1034, 1035, 1036]
- Trombone—1045, 3045, 6045 [1045, 1046, 1047, 1048]
- Trumpet—1037, 3037, 6037 [1037, 1038, 1039, 1040]
- Tuba—1053, 3053, 6053 [1053, 1054, 1055, 1056]
- Viola—1005, 3005, 6005 [1005, 1006, 1007, 1008]
- Violin—1001, 3001, 6001 [1001, 1002, 1003, 1004]
- Violoncello—1009, 3009, 6009 [1009, 1010, 1011, 1012]
- Voice—1081, 3081, 6081 [1081, 1082, 1083, 1084]
- Woodwinds—1020
- Jazz Improvisation—1085
- Piano Improvisation (for music therapy majors after completing piano requirement)—3086 (one two-hour enrollment)

### Credit Hours

- One credit hour is a half-hour lesson per week for secondary music majors and non-music majors (subject to availability of instructor).
- Two credit hours is an hour lesson per week for music majors.
- Three credit hours is an hour lesson per week in junior and senior years and is limited to music performance majors only in their principal area of performance. Three credit hours at the graduate level is limited to master of music (M.M.) degree students in their major performance area.

## MUEN—Music Ensemble

(Offered through the Department of Music and Dance.)

### MUEN 1026 Marching Band. [MUEN Major; FOSC] (1,2 0 2,5)

Marching band for the length of football season and concert band for the remainder of the fall semester. Open to all University students. (Contact the Department of Music and Dance in July for details about early band.) Required of all wind and percussion instrument majors (optional for keyboard majors) to fulfill major ensemble requirements (two hours credit) in the fall semester. Non-music majors may enroll for one or two hours credit. Fall. Formerly MUS FBND.

**MUEN 1027–MUSI 2180**

- MUEN 1027 Band. [MUEN Major; FOSC] (1,2 0 2,5)** Students are divided into two performing ensembles—Symphonic Band is open to all University students by audition in October; Concert Band is open to all University students without audition. Required of all wind and percussion instrument majors (optional for keyboard majors) to fulfill major ensemble requirements (two hours credit) in the spring semester. Non-music majors may enroll for one or two hours credit. Music majors may enroll for one credit hour only during first summer session. Spring, summer I. Formerly MUS BAND.
- MUEN 1029 Orchestra. [MUEN Major; FOSC] (1,2 0 2,5)** Open to all University students by audition. Required of all string instrument majors to fulfill major ensemble requirements. Can be chosen by keyboard instrument majors to fulfill major ensemble requirements if the student plays a string instrument. Students enrolling for major ensemble credit must enroll for two hours credit. Students not enrolling to satisfy major ensemble requirements, such as wind and percussion majors and non-majors, may enroll for one hour credit. Fall, spring. Formerly MUS ORCH.
- MUEN 1143 Chorus. (1 0 2)** Open to all University students who are not music majors. Music majors may enroll only during first summer session. No audition is required. Fall, spring, summer I. Formerly MUS CHRS.
- MUEN 1241 Chorale. [MUEN Major; FOSC] (2 0 5)** Open to all University students by audition. Either Chorale or Collegiate Choir is required of all voice majors to fulfill major ensemble requirements. Can be chosen by keyboard instrument majors to fulfill major ensemble requirement. Fall, spring. Formerly MUS CHRL.
- MUEN 1242 Collegiate Choir. [MUEN Major; FOSC] (2 0 5)** Open to all University students by audition. Either Chorale or Collegiate Choir is required of all voice majors to fulfill major ensemble requirements. Can be chosen by keyboard instrument majors to fulfill major ensemble requirement. Fall, spring. Formerly MUS CHOR.
- MUEN 2140 Chamber Music. [MUEN Instrumental Chamber] (1 0 2)** Prerequisite: consent of instructor. Study and performance of chamber music for all media: voice, keyboard, woodwind, brass, string and percussion instruments. May be repeated. Fall, spring. Formerly MUS 252.
- MUEN 2160 Chamber Music [MUEN Vocal Chamber] (102)** Prerequisite: consent of instructor. Study and performance of vocal chamber music. May be repeated. Fall, spring. Formerly MUS 252.
- MUSI 1161 Diction for Singers. (1 1 0)** Introduction to and practical application of the International Phonetic Alphabet (IPA). Fall. Formerly MUS 117.
- MUSI 1180 Piano Class I. [MUSI 1181, 1182; FOSC] (1 1 1)** Prerequisite: ability to read music. Performance of simple music with emphasis on expressive playing and development of necessary technical facility. May be repeated for credit. Fall, spring. Formerly MUS 136.
- MUSI 1208 Literature I. [FOSC] (2 2 0)** Should be taken concurrently with 1372. Introductory survey of music literature of Romantic, Classic, Medieval and Renaissance periods. Fall. Formerly MUS 147.
- MUSI 1209 Literature II. (2 2 0)** Prerequisite: 1208 or consent of instructor. Should be taken concurrently with 1372. Introductory survey of music literature of the Baroque period, Impressionism, Post-Romanticism, 20th-century and Non-Western music. Spring. Formerly MUS 149.
- MUSI 1306 Introduction to Music in World Culture. (3 3 0)** Not for credit to music majors. Non-technical course for the general college student, designed to lead to basic understanding and increased enjoyment of the world's music. Taught in a multimedia format with lectures and guided listening sessions supplemented by video, filmstrips and live performances. Fall, spring, one summer session. Formerly MUS 101.
- MUSI 1372 Theory I. [MUSI 1311 and 1316; FOSC] (3 3 2)** Notation, scales, intervals, simple chord construction and progression; exercises in composition and improvisation; development of aural dictation and sight-singing techniques. Fall. Formerly MUS 146.
- MUSI 1373 Theory II. [MUSI 1312 and 1317; FOSC] (3 3 2)** Prerequisite: 1372. Style analysis, seventh chords, binary and ternary forms, American popular music styles; exercises in composition and improvisation; continuation of aural dictation and sight-singing techniques. Spring. Formerly MUS 148.
- MUSI 1374 Elementary Music Theory. (3 3,0 0)** Reading pitch in all clefs and rhythm in all meters. Sight singing, ear training, critical listening and interval dictation. Key signatures, scales, modes, triads, seventh chords and musical terms. Spring. Formerly MUS 140.
- MUSI 2075 Individual Problems. (1-3 0 0)** Individual work in area of student's interest. Formerly MUS 290.
- MUSI 2171 Accompanying. (1 0 0)** Prerequisite: consent of instructor. Accompanying techniques; practical application in vocal coaching, instrumental accompanying and chamber music. May be repeated three times. Fall, spring. Formerly MUS 251.
- MUSI 2172 Introduction to Music Therapy. (1 1,0 0)** Introduction to history and development of the music therapy profession, basic underlying principles of music therapy and application of music therapy to selected client populations. Spring. Formerly MUS 272.
- MUSI 2173 Therapy Orientation. (1 1,0 0)** Overview of the health care profession with emphasis on the field of music therapy. Role of music therapy and music therapist in the health care profession with exposure to other arts therapies. Professional ethics and standards of the clinical practice. Fall. Formerly MUS 273.
- MUSI 2180 Piano Class II. [MUSI 2181, 2182; FOSC] (1 1 1)** Prerequisite: 1180 or consent of instructor. Continuation of 1180. May be repeated for credit. Fall, spring. Formerly MUS 236.

**MUSI—Music**

(Offered through the Department of Music and Dance.)

- MUSI RCTL Music Recital. (0 0 0)** Required each semester of all undergraduate music majors enrolled in nine or more hours. (Students are exempt during the semester of student teaching or internship.) Attendance at a minimum of 12 recitals/concerts each semester, one of which must be special student or honors recitals designated by the department. A grade of "S" or "F" will appear on the student's transcript. Fall, spring. Formerly MUS RCTL.
- MUSI 1160 Italian Diction for Singers. (1 1 0)** Prerequisite: 1161. Application of the International Phonetic Alphabet (IPA) to Italian language and diction. Spring. Formerly MUS 119.

- MUSI 2274 Practicum in Music Therapy. (2 0 0)** Prerequisite: 2173. Experience in assessing, planning, conducting, measuring and evaluating music therapy treatment with a variety of client populations. Documentation of client progress; variety of clinical experiences may be offered; class presentation and additional clinical setting experience required. Therapy majors must have a minimum of three semesters of enrollment in this course. Fall, spring. Formerly MUS 274.
- MUSI 2371 Recreational Music. (3 3 0)** Role and techniques of recreational music with use of informal instruments with attention to using music to assist exceptional children. One class period per week is devoted to functional guitar instruction. Fall (music therapy); spring (all-level certification). Formerly MUS 271.
- MUSI 2372 Theory III. [MUSI 2011 and 2016; FOSC] (3 2 2)** Prerequisite: 1373. Introduction to 18th-century counterpoint, variation technique and more complex harmonic structures of Classic and early Romantic periods; exercises in composition and improvisation; continuation of aural dictation and sight-singing techniques. Fall. Formerly MUS 246.
- MUSI 2373 Theory IV. [MUSI 2012 and 2017; FOSC] (3 2 2)** Prerequisite: 2372. Sonata and rondo forms; styles in 20th-century music and analysis systems; exercises in composition and improvisation; continuation of aural dictation and sight-singing techniques. Spring. Formerly MUS 248.
- MUSI 3037 Percussion Class. (1-2 0-1 2)** Percussion instruments with emphasis on the snare drum, leading to a teaching knowledge. Spring. Formerly MUS 337.
- MUSI 3092 Special Topics. (1-3 0-3 0-6)** Prerequisite: consent of instructor. Topics in areas of special interest. May be repeated for credit when topics change. Formerly MUS 399.
- MUSI 3105 Baton Technique. (1 1 1)** Prerequisite: consent of instructor. Elements of conducting. Study and application of use and development of basic beat patterns and fundamental gestures. Introduction to score reading. Fall. Formerly MUS 305.
- MUSI 3117 German Diction for Singers. (1 1,0 0)** Prerequisite: 1161. Application of the International Phonetic Alphabet to German language and diction. Fall. Formerly MUS 317.
- MUSI 3119 French Diction for Singers. (1 1,0 0)** Prerequisite: 1161. Application of the International Phonetic Alphabet to French language and diction. Spring. Formerly MUS 319.
- MUSI 3129 Secondary School Band Repertoire. (1 1 0)** Prerequisite: may not enroll concurrently in 4327. For prospective band directors to acquaint students with UIL contest lists, evaluation of band literature and practical conducting experience in a simulated classroom environment. Spring. Formerly MUS 329.
- MUSI 3135 Voice Class. (1 1 1)** Group instruction and practice in fundamentals of singing: breath control, tone production, consonant and vowel formations, etc. Individual song assignments as indicated by the student's problems, background and ability. May be repeated for credit. Fall. Formerly MUS 335.
- MUSI 3162 Opera Workshop. (1 0 0)** Prerequisite: consent of instructor. Organization and staging of standard operas and operettas. Actual production of major work in collaboration with the Department of Art, Communication and Theatre. May be repeated. Fall (opera), spring (musical). Formerly MUS 362.
- MUSI 3175 Techniques in Music Therapy I. (1 1 0)** Prerequisite: 2371, 2172, 2173. Clinical literature and techniques related to specific populations. One-to-one clinical experiences will focus on specific techniques, assessment procedures, treatment planning, measurement and evaluation of changes in behavior and documentation of client progress will be emphasized. Concurrent enrollment in 3278 expected. Fall of odd years. Formerly MUS 375.
- MUSI 3176 Techniques in Music Therapy II. (1 1 0)** Prerequisite: 2371, 2172, 2173. Continuation of 3175. Different client populations should be emphasized. Concurrent enrollment in 3279 expected. Spring of even years. Formerly MUS 376.
- MUSI 3207 Instrumental Conducting. (2 2 0)** Prerequisite: 3105. Development and expansion of 305 as applied to instrumental conducting, including compound meters, expressive gestures, score reading, analysis interpretation, rehearsal and performance techniques. Spring. Formerly MUS 307.
- MUSI 3209 Choral Conducting. (2 2 0)** Prerequisite: 3105. Conducting techniques for glee club, chorus and choir. Training and experience in distinctive features of choral conducting and interpretation. Spring. Formerly MUS 309.
- MUSI 3232 Instrument Techniques. (2 1 2)** Functional knowledge of woodwind, brass and string instruments. Spring. Formerly MUS 332.
- MUSI 3233 Woodwind Class. (2 1 2)** Woodwind instruments, leading to teaching knowledge. Fall. Formerly MUS 333.
- MUSI 3234 Brass Class. (2 1 2)** Brass instruments, leading to teaching knowledge. Fall. Formerly MUS 334.
- MUSI 3238 String Class. (2 1 2)** Violin, viola, cello and double bass, leading to a teaching knowledge of the instruments. Spring. Formerly MUS 338.
- MUSI 3256 Jazz Theory and Practice. (2,2,0 0)** Prerequisite: 1373. Jazz theory (chord progressions, jazz notation, orchestra practices, etc.); practical approach to the style of jazz and jazz improvisation; techniques for teaching and maintaining a jazz program. Spring of odd years. Formerly MUS 390.
- MUSI 3263 Form and Analysis. (2,2,0 0)** Prerequisite: 2373. Analysis of tonality, harmony and form in European music of the 18th and 19th centuries. Includes aural recognition of forms. Fall of odd years. Formerly MUS 391.
- MUSI 3264 Orchestration. (2,2,0 0)** Prerequisite: 2373. Instruments of modern orchestra and their use in combination with each other. Spring of odd years. Formerly MUS 392.
- MUSI 3265 18th-Century Counterpoint. (2,2,0 0)** Prerequisite: 2373. Composition and analysis of contrapuntal music in the instrumental style of high Baroque. Includes canon and fugue. Fall of odd years. Formerly MUS 393.
- MUSI 3266 Choral Arranging. (2,2,0 0)** Prerequisite: 2373. Arranging for choirs of men's, women's and mixed voices of all ages and musical abilities. Includes arranging piano accompaniments. Fall of even years. Formerly MUS 394.
- MUSI 3267 20th-Century Analysis. (2,2,0 0)** Prerequisite: 2373. Analytical methods that have been created to explain the pitch content of music of this century. Fall of even years. Formerly MUS 395.
- MUSI 3268 Band Arranging. (2,2,0 0)** Prerequisite: 2373. Transcribing and arranging for various concert bands. Emphasis on writing for junior and senior high school bands and others. Spring of even years. Formerly MUS 396.

**MUSI 3269–4698**

- MUSI 3269 Advanced Ear Training. (2 2,0 0)** Prerequisite: 2373. Development of additional skills in reading music: sight reading, dictation, and critical listening of tonal and atonal melodies and harmonies. Emphasis on transposing by reading clefs. Spring of even years. Formerly MUS 397.
- MUSI 3270 16th-Century Counterpoint. (2 2,0 0)** Prerequisite: 2373. Analysis and composition of contrapuntal music in vocal style of the late 16th century. Spring of odd years. Formerly MUS 398.
- MUSI 3278 Music in Therapy I. (2 2 0)** Prerequisite: 2371, 2172, 2173. Functions of the music therapist with emphasis on use of music in specific therapeutic environments: hospitals, institutions and special education. Related literature will be reviewed. Concurrent enrollment in 3175 expected. Fall of odd years. Formerly MUS 378.
- MUSI 3279 Music in Therapy II. (2 2 0)** Prerequisite: 2371, 2172, 2173. Continuation of 3278. Concurrent enrollment in 3176 expected. Spring of even years. Formerly MUS 379.
- MUSI 3312 Vocal Pedagogy. (3 3 0)** Physical aspects of the vocal mechanism and survey of various voice pedagogies from the 17th century to present. Fall of even years. Formerly MUS 312.
- MUSI 3321 General Music for Children. (3 3 0)** Fundamental music concepts and skills to meet minimal Texas Essential Knowledge and Skills (TEKS) music standards for the EC–4 generalist. Music majors may not receive credit for this course. Fall, spring, summer I. Formerly MUS 321.
- MUSI 3343 Computer Assisted Electronic Music. (3 3,0 0)** Prerequisite: 1373. Microcomputers in generation and control of electronic music. Study of one or more commonly available microcomputer programs for MIDI application. Spring. Formerly MUS 343.
- MUSI 3347 Music History from Antiquity to 1750. (3 3 0)** Prerequisite: 1208, 1209 and 2373 (for music majors) or consent of instructor (for non-music majors). Chronological study of musical styles, genres, performance practices, and composers of Medieval, Renaissance and Baroque music, including an introduction to world music cultures. Fall. Formerly MUS 347.
- MUSI 3349 Music History from 1750 to Present. (3 3 0)** Prerequisite: 1208, 1209 and 2373 (for music majors) or consent of instructor (for non-music majors). Chronological study of musical styles, genres, performance practices and composers of Classic, Romantic and 20th-century music. Spring. Formerly MUS 349.
- MUSI 3380 Survey of Music Business. (3 3,0 0)** Survey of the music industry: merchandising, manufacturing, purchasing, recording, performance management and promotion. (Required of music business majors; recommended for music performance majors.) Spring of even years. Formerly MUS 380.
- MUSI 3381 Seminar in Music Business. (3 3,0 0)** Prerequisite: 3380. In-depth study of various areas of the music industry utilizing a series of guest lecturers. Spring of odd years. Formerly MUS 381.
- MUSI 4095 Individual Problems. (1-3 0 0)** Advanced individual work in area of student's special interest. Formerly MUS 490.
- MUSI 4211 Symphonic Literature. (2 2,0 0)** Prerequisite: 2372. Survey course examining major categories of symphonic literature. Fall of even years. Formerly MUS 411.
- MUSI 4212 Song Literature. (2 2,0 0)** Prerequisite: four semesters of APM 100. Survey course examining major categories of solo vocal literature. Fall of odd years/Web-based. Formerly MUS 412.
- MUSI 4213 Chamber Music Literature. (2 2,0 0)** Prerequisite: 2372. Survey of music written for small instrumental ensembles with emphasis on the string quartet. Fall of odd years. Formerly MUS 413.
- MUSI 4251 Piano Pedagogy. (2 2,0 0)** Prerequisite: six semester hours of piano or consent of instructor. Survey of various teaching materials and methods. Development of technique, style and musicianship. Topics will be (1) teaching children and adult beginners and (2) teaching advanced students. May be repeated for credit provided topic is different from that of previous enrollment. Spring. Formerly MUS 451.
- MUSI 4252 Piano Literature. (2 2,0 0)** Prerequisite: 2372 or consent of instructor. Survey of music written for piano from its beginning to the present with consideration for early keyboard music and early keyboard instruments preceding the piano. May be repeated as topic varies. Fall. Formerly MUS 452.
- MUSI 4262 Techniques for the Singing Actor. (2 0 0)** Systematic approach to development of skills for the singing actor. Includes study and preparation of character, style and movement using arias and scenes from the musical stage. Spring of even years. Formerly MUS 462.
- MUSI 4276 Psychological Foundations of Music I. (2 2 0)** Prerequisite: 3278. Acoustical and psychological aspects of music with emphasis on problems of perception, experimental aesthetics, musical function, measurement and diagnosis of music ability. Spring of even years. Formerly MUS 476.
- MUSI 4277 Psychological Foundations of Music II. (2 2 0)** Prerequisite: 4276. Continuation of 4276. Fall of even years. Formerly MUS 477.
- MUSI 4326 Elementary Music Methods. (3 3,0 0)** Singing, games and musical activities based on folk melodies and folk-like music. Listening, singing, rhythmic response and the playing of instruments. Emphasis on classroom management, discipline and motivational strategies. Fall. Formerly MUS 426.
- MUSI 4327 Instrumental Methods. (3 3,0 0)** Music methods and practical experiences for the teaching of instrumental music in the schools. Emphasis on classroom management, discipline and motivational strategies. Spring. Formerly MUS 427.
- MUSI 4378 Influence of Music on Behavior. (3 3 0)** Prerequisite: 4276, 4277. Introduction to the field of research as related to music therapy and music education. Overview of various methods of inquiry including statistical concepts and standardized test. Spring of odd years. Formerly MUS 479.
- MUSI 4393 Honors. (3 0 0)** Prerequisite: 24 hours of honor courses. Students will write a 10-page research paper documenting their senior recital. The manuscript, directed by an honors faculty member, will be catalogued and maintained in the library. Formerly MUS 499.
- MUSI 4398 Internship in Music Therapy. (3 0 0)** Prerequisite: all course work required for a B.M. degree in music therapy. Six-month internship in an approved music therapy program under the direction of a board-certified music therapist (MT-BC). Fall, spring. Formerly MUS 491.
- MUSI 4698 Internship in Music Business. (6 0 0)** Prerequisite: all course work required for B.M. degree in music business. Six-month internship working full time in an approved

- professional position in music industry. Fall, spring. Formerly MUS 492.
- MUSI 5211 Symphonic Literature. (2 2,0 0)** Prerequisite: 2372. Advanced survey examining major categories of symphonic literature. Fall of even years. Formerly MUS 5411.
- MUSI 5212 Song Literature. (2 2,0 0)** Survey course examining major categories of solo vocal literature. Fall of odd years/Web-based. Formerly MUS 5412.
- MUSI 5251 Piano Pedagogy. (2 2,0 0)** Prerequisite: six semester hours of piano or consent of instructor. Survey of various teaching materials and methods. Development of technique, style and musicianship. Topics: teaching children and adult beginners; teaching advanced students. May be repeated for credit as topic varies. Spring. Formerly MUS 5451.
- MUSI 5252 Piano Literature. (2 2,0 0)** Prerequisite: 2372 or consent of instructor. Survey of music written for piano from its beginning to the present with consideration for early keyboard music and instruments preceding the piano. May be repeated as topic varies. Fall. Formerly MUS 5452.
- MUSI 5262 Techniques for the Singing Actor. (2 0 0)** Systematic approach to skill development for the singing actor. Study and preparation of character, style and movement using arias and scenes from the musical stage. Spring of even years. Formerly MUS 5462.
- MUSI 6092 Special Topics. (1-3 0-3 0-6)** Prerequisite: consent of instructor. Topics in areas of special interest. May be repeated for credit when topics change. Formerly MUS 5599.
- MUSI 6095 Graduate Problems. (1-3 0 0)** Advanced exploration and research in the student's major area. May be repeated for credit up to a maximum of six hours. Formerly MUS 5590.
- MUSI 6203 Graduate Recital. (2 0 0)** Presentation of a recital representing culmination of student's graduate study in music. Enrollment limited to the semester in which the recital is scheduled which should coincide with final enrollment in applied music. Formerly MUS 5503.
- MUSI 6205 Introduction to Graduate Study. (2 2 0)** Inquiry into the aims, scope and methods of music research. General areas appropriate to graduate research in music and some specific problems encountered in each. Technique of locating source materials. Collection, tabulation, analysis and interpretations of data. Fall. Formerly MUS 5505.
- MUSI 6215 Seminar in Instrumental Music. (2 2 0)** Advanced rehearsal techniques for band and/or orchestra: instrumental routines and pedagogy; contemporary solutions to rehearsal problems; organization, administration and classroom management. May be repeated for credit when topics vary. Summer I. Formerly MUS 5515.
- MUSI 6216 Seminar in Choral Music. (2 2 0)** Advanced rehearsal techniques for choir: pedagogy and voice building; contemporary solutions to rehearsal problems; administration, organization and classroom management. May be repeated for credit when topics vary. Summer I. Formerly MUS 5516.
- MUSI 6221 Wind Instrument Literature. (2 2 0)** Analysis and evaluation for educational use of published materials for wind instrument solo, ensemble and band. Summer I 2004. Formerly MUS 5521.
- MUSI 6223 Score Study and Preparation. (2 2 0)** Score analysis, transposition, ear training and rehearsal procedures. Summer I 2005. Formerly MUS 5523.
- MUSI 6224 Advanced Instrumental Conducting. (2 2 0)** Prerequisite: 3207 or consent of instructor. Practical training for students who have had considerable study and experience. Score reading, interpretation, and baton technique. Formerly MUS 5524.
- MUSI 6241 Research Seminar in Music. (2 2,0 0)** Prerequisite: 6205. Definition and systematic research of a problem in music. Student may, with approval of instructor, choose a problem in the student's special field of interest. Summer I. Formerly MUS 5541.
- MUSI 6275 Band Directors Workshop. (2 2,0 0)** Offered only during WTAMU Band Camp. Instrument clinics, performance in directors band and band topics presented by band camp faculty. May be repeated twice for credit. Summer II. Formerly MUS 5575.
- MUSI 6281 Advanced Music Theory. (2 2 0)** Prerequisite: 2372. One topic will be studied during each semester of offering: 20th century styles and idioms, basic theory pedagogy, contemporary thought in music theory, advanced instrumental arranging. May be repeated for credit when topics vary. Fall, summer II. Formerly MUS 5581.
- MUSI 6301 Thesis. (3 0 0)** Formerly MUS 5501.
- MUSI 6302 Thesis. (3 0 0)** Formerly MUS 5502.
- MUSI 6312 Advanced Music History. (3 3 0)** Prerequisite: 3347 and 3349 or consent of instructor. Stylistic analysis of representative works and consideration of historical trends. One topic studied each semester of offering: (1) Renaissance, (2) Baroque Era, (3) Classical Era, (4) Romantic Era, (5) 20th Century, (6) Middle Ages, (7) Opera, (8) Music in America, (9) Music of Non-Western cultures. May be repeated for credit when topics vary. Spring, summer I. Formerly MUS 5512.

## NSCI—Natural Sciences

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

- NSCI 1371 Integrated Science: Physics. (3 2 2)** Concepts and activities in natural sciences for elementary school curriculum with emphasis on physics; structures and systems, energy transformations, changes over time, interactions and scientific world view. Fall, spring, summer I. Formerly NSCI 101.
- NSCI 1372 Integrated Science: Chemistry. (3 2 2)** Concepts and activities in natural sciences for elementary school curriculum with emphasis on chemistry; structures and systems, energy transformations, changes over time, interactions and scientific world view. Fall, spring, summer II. Formerly NSCI 102.
- NSCI 2371 Integrated Science: Earth Science. (3 2 2)** Prerequisite: 1371 and 1372. Concepts and activities in natural sciences for elementary school curriculum with emphasis on earth science; structures and systems, energy transformations, changes over time, interactions and scientific world view. May not receive credit for both NSCI 2371 and GEOL 1401 or 1403. Fall, spring. Formerly NSCI 201.
- NSCI 2372 Integrated Science: Biology. (3 2 2)** Prerequisite: 1371 and 1372. Concepts and activities in natural sciences for elementary school curriculum with emphasis on biology; structures and systems, energy transformations, changes over time, interactions and scientific world view. May not