480 Furniture Design (3) Human factors data applied to design of body support, task support, storage and systems, construction drawings, and scale models. Advanced millwork design and materials and manufacturing processes.

Contact Hour Distribution: 2-hour lecture and 2-hour studio.

(Re) Prerequisite(s): 372 or Architecture 372.

491 International Study (1-15) Individual or group studio and/or study abroad. Academic research, field investigation, or studio experiences. Determination of credit based on particular international experience.

Repeatability: May be repeated. Maximum 15 hours.

493 Directed Studies in Interior Design (1-4) Student- or staff-initiated research or studio investigation of special topic.

Repeatability: May be repeated. Maximum 8 hours.

Credit Restriction: Elective credit only.

International Business (583)

409 International Business (3) Survey of strategic implications of conducting business operations in an international context. Analysis of relevant cross-national environments, including cultural, political, economic, and legal characteristics.

(Re) Prerequisite(s): Business Administration 361.

Comment(s): Students must be admitted to an international business collateral or dual concentration.

Registration Restriction(s): Majors in the College of Business Administration.

419 International Environment and Management (3) Critical knowledge about how changing international environments create new complex challenges for international managers. Analysis of international environments at global, regional, and individual-country levels. Exposure to practical problems arising from specific cultural, political, economic, and technological diversity at various units of analysis in organizations.

(Re) Prerequisite(s): Business Administration 361.

Comment(s): Students must be admitted to an international business collateral or dual concentration.

Registration Restriction(s): Majors in the College of Business Administration.


Credit Restriction: Students may not receive credit for both International Business 429 and Economics 322.

(Re) Prerequisite(s): Business Administration 361.

Comment(s): Students must be admitted to an international business collateral or dual concentration.

Registration Restriction(s): Majors in the College of Business Administration.

439 Global Supply Chain Management (3) Explores the complexities of managing supply chains in a global context. Addresses issues relating to the drivers of globalization and managing the supply and demand fulfillment processes across an extended and global organization. Topics include discussions of cultural differences, regional trading blocs, global procurement, offshoring, global infrastructure, security and risk, sustainability, market entry, service quality, gray markets, customer lifetime value, demand/supply integration.

(Re) Prerequisite(s): Business Administration 331 and Business Administration 361.

Comment(s): Students must be admitted to an international business collateral or dual concentration.

Registration Restriction(s): Majors in the College of Business Administration.

449 International Finance (3) Understanding the intricacies of international finance including how multinational companies operate in a number of different business activities within multiple countries. Topics covered include international monetary system, balance of payments, exchange rate utilization, and foreign exchange derivatives including currency forwards, futures options and swaps.

(Re) Prerequisite(s): Business Administration 361 and Finance 301.

Comment(s): A grade of C or better in the prerequisite is required.

Registration Restriction(s): Majors in the College of Business Administration.

459 International Competition and Performance (3) Explores how globalization affects the strategic management of firms. Focus on firm strategies, processes and performance outcomes within an industry context. Addressed issues such as the historic rise of manufacturing multinationals and challenges of recent global growth of service and retail enterprises. Topics include: measuring performance differences across competitors, how domestic defenders challenge multinationals, roll-up strategies to manage global growth, and leadership and structural challenges of global competition.

(Re) Prerequisite(s): Business Administration 361.

Comment(s): Students must be admitted to an international business collateral or dual concentration.

Registration Restriction(s): Majors in College of Business Administration.

489 Study Abroad (0) Study abroad program approved by the College of Business Administration Undergraduate Programs Office.

Grading Restriction: Satisfactory/No Credit grading only.

Registration Restriction(s): Admission to the College of Business Administration.

Italian (584)

111 Elementary Italian (3) Introduction to Italian. Language laboratory required.

112 Elementary Italian (3) Introduction to Italian. Language laboratory required.

(Re) Prerequisite(s): 111.

211 Intermediate Italian (3) Sequence stresses reading, writing, listening, and speaking Italian to prepare for upper-division courses in the language. Language laboratory required. (CC)

(Re) Prerequisite(s): 112.

212 Intermediate Italian (3) Sequence stresses reading, writing, listening, and speaking Italian to prepare for upper-division courses in the language. Language laboratory required. (CC)

(Re) Prerequisite(s): 211.

311 History of Italian Literature (3) Chronological view of Italian literature in relation to the specific historical developments that have influenced it.

(Re) Prerequisite(s): 212.

314 Highlights of Italian Civilization (3) Survey of Italian civilization with special attention to major social, political, and cultural achievements.

(Re) Prerequisite(s): 212.

341 Intermediate Grammar, Composition and Conversation (3) Grammatical analysis of Italian prose. Review of grammatical principles and their application in translation from English to Italian, both written and oral. Exercises in free composition.

(Re) Prerequisite(s): 212.

342 Intermediate Grammar, Composition and Conversation (3) Grammatical analysis of Italian prose. Review of grammatical principles and their application in translation from English to Italian, both written and oral. Exercises in free composition.

(Re) Prerequisite(s): 341.

401 Dante and Medieval Culture (3) Introduction to the significance of this great Italian writer. Writing-emphasis course. (Same as Medieval Studies 401.)

402 Petrarch and Boccaccio (3) Writing-emphasis course. (Same as Medieval Studies 402.)

403 Literature of the Rinascimento (3) From Pucci to Tasso, the Quattrocento and the Cinquecento.

409 Directed Readings (3)

411 Aspects of Modern Literature and Culture (3) Representative works of modern literature and culture.

412 Advanced Literary Reading and Conversation (3) Representative works of contemporary literature and culture.

414 Italian Cultural Studies (3) This course will examine Italian culture as a set of practices characteristic of Italian society, from its modes of material production to its eating habits, dress codes, celebrations, and rituals. The objective of the course is to achieve a greater understanding of contemporary Italian culture. Writing-emphasis course.

422 Topics in Italian Cinema (3) Examination of Italian cinema from 1930 to the present focusing on feature films, documentaries and, depending on the topic of the course, on literary works in light of political, cultural, and social contexts. Films are shown in Italian with English subtitles. Writing-emphasis course. (Same as Cinema Studies 422.)

Repeatability: May be repeated. Maximum 6 hours.

Comment(s): Open to non-majors. Majors will read texts and write papers in Italian.

490 Internship (1-15) Career-related experiences in the United States or abroad.

Grading Restriction: Satisfactory/No Credit grading only.

Repeatability: May be repeated. Maximum 15 hours.

Registration Restriction(s): Italian major/language and world business concentration.

491 Foreign Study (1-15)

Repeatability: May be repeated. Maximum 15 hours.

493 Independent Study (1-15)

Repeatability: May be repeated. Maximum 15 hours.
Japanese (589)
151 Elementary Japanese I (5) (See Asian Languages 151.)
152 Elementary Japanese II (5) (See Asian Languages 152.)
251 Intermediate Japanese I (5) (See Asian Languages 251.) (CC)
252 Intermediate Japanese II (5) (See Asian Languages 252.) (CC)
313 Japanese Literature in English Translation (3) (See Asian Languages 313.)
314 Japanese Literature in English Translation (3) (See Asian Languages 314.)
321 Japanese Graphic Novels and Animation (3) (See Asian Languages 321.)
351 Advanced Japanese I (4) (See Asian Languages 351.)
352 Advanced Japanese II (4) (See Asian Languages 352.)
413 Topics in Japanese Literature (3) (See Asian Languages 413.)
451 Readings in Pre-Modern Japanese Literature (3) (See Asian Languages 451.)
452 Readings in Modern Japanese Literature (3) (See Asian Languages 452.)

Journalism and Electronic Media (592)

Contact Hour Distribution: Lecture and lab.
(RE) Prerequisite(s): English 102 and Communication and Information 150.

201 Writing for Mass Media (3) Principles and practice of news writing for print and electronic media. Comprehensive overview of the major forms of writing for the mass media. (WC)
Credit Restriction(s): Credit not available for majors in the College of Communication and Information.
(RE) Prerequisite(s): English 102.

Contact Hour Distribution: Lecture and lab.
(RE) Prerequisite: 200.

236 Foundations of Video Production (3) A foundational course designed to introduce the process of writing and producing video programs. Includes lectures and lab hours in both studio and field production. Students are introduced to writing and aesthetics while working hands-on with all studio and field equipment in the electronic video process from conception through production to post-production. As part of this class, students will provide production support for on-going cable television programs produced for the campus cable channel.
Contact Hour Distribution: Lecture and lab.
(RE) Prerequisite(s): 200 and 275.

275 Introduction to Journalism and Electronic Media (3) Overview of print and electronic media, including content selection, delivery methods, economic and ownership structures, and media effects.
Contact Hour Distribution: Lecture and lab.

280 Communication Graphics (3) Principles and practice in the visual aspect of communication. Emphasis on graphic design, typography, illustration and photography, printing and production techniques and publication design.
Contact Hour Distribution: Lecture and lab.
(RE) Prerequisite(s): 200 or 201.

290 Photojournalism (3) Principles and practice of photography as a creative tool of communication. Basic camera technique, digital photography, historical and contemporary photojournalism.
Contact Hour Distribution: Lecture and lab.

302 Readership and Audience Analysis (3) Measurement and analysis of readership/audience. Broad overview of methods used for newspaper, magazine, radio, television, cable, and the Internet. Applications to both internal decision-making and external communication in media.
(RE) Prerequisite(s): 275.

311 Electronic News Writing and Reporting (3) Writing and reporting for electronic news media (radio, television/cable, and the Internet). Lecture and lab course with writing emphasis. Introduction to Computer Assisted Reporting (CAR).
Contact Hour Distribution: Lecture and lab.
(RE) Prerequisite(s): 200 and 275.

315 Print/Web News Writing and Reporting (3) Gathering and writing news for publication in magazines and newspapers.
(RE) Prerequisite(s): 200.

320 Mass Media Commercial Writing and Promotion (3) Study of media (print, radio, television, cable, and the Internet) commercial writing and promotion with an emphasis on writing persuasive messages. Analysis of markets and research data. Planning promotional campaigns.
(RE) Prerequisite(s): 200 and 275.

333 Print/Web Editing (3) Methods and practice in judging news, editing copy, writing headlines and designing newspapers and magazines. Emphasis on precise word use and news display.
Contact Hour Distribution: Lecture and lab.
(RE) Prerequisite: 315 or Public Relations 320.

336 Intermediate Video Production (3) Emphasis on concepts related to message design, development, field acquisition, writing, digital videography, producing, and directing video productions. Students are introduced to nonlinear digital editing. As part of the class, students provide production support for on-going programs produced for digital cable television channel.
Contact Hour Distribution: Lecture and lab.
(RE) Prerequisite: 236.

360 Electronic Media Performance (3) Development of vocal, visual, and performance skills for announcers, interviewees, newscasters, and reporters.
Contact Hour Distribution: Lecture and lab.
(RE) Prerequisite(s): 200.

365 Sports Broadcasting (3) Introduction to the skills needed to perform as a radio or TV sportscaster. Includes voice and diction training, interviewing athletes, radio and TV sportscasting, and play-by-play techniques.
Contact Hour Distribution: Lecture and lab.
(RE) Prerequisite(s): 200 and 275.


375 Sports Reporting Across the Media (3) An introductory course in gathering, writing, and presenting sports news in a variety of formats, including print, photography, radio, television, and the Web.
Contact Hour Distribution: Lecture and lab.

400 Mass Communication Law and Ethics (3) Emphasis on legal issues affecting print and electronic media, including libel, privacy, copyright, free press-fair trial, governmental regulations of advertising, electronic media, and public relations. Also includes ethical standards and practices.

411 Electronic News Gathering (3) Writing, reporting, shooting, editing, and producing for the electronic news media. Lecture and lab course providing students with experience as reporters/producers for a television and cable news program. Includes an overview of electronic news-gathering equipment, as well as non-linear video editing.
Contact Hour Distribution: Lecture and lab.

412 Opinion Writing (3) Analysis of editorial positions and practices. Writing editorials/columns for newspapers, magazines, corporate publications, and electronic media (radio, television, cable, Internet), with emphasis upon study and use of rhetorical devices and logic.

414 Magazine and Feature Writing (3) Techniques of writing features and in-depth articles for mass circulation and specialized magazines or newspapers. Organizing and presenting material with attention to problems in areas such as business, science, agriculture, and the humanities. (WC)
(RE) Prerequisite(s): 333.

415 Magazine Industry Workshop (3) Introduction to the magazine industry including management, design, writing and editing, and interactivity. Analysis of print and electronic format magazines. Planning new products for the marketplace.
Contact Hour Distribution: Lecture and lab.
(RE) Prerequisite(s): 414.

420 Media Sales (3) Problems and practices of newspaper, radio, television, cable, and Internet advertising sales. Practical experience in radio and television sales. Use of ratings and new technology in sales presentations.
(RE) Prerequisite(s): 302 and 320.
Contact Hour Distribution: Lecture and lab. 
(RE) Prerequisite: 222.

430 Public Affairs Reporting (3) Reporting (including database reporting) and writing about courts, government, and public agencies. Event and issue-oriented journalism of politics and public affairs. 
(RE) Prerequisite: 333.

433 Editing and Layout for Print/Web (3) Editing and layout for newspapers, magazines, and online publishing. 
Contact Hour Distribution: Lecture and lab. 
(RE) Prerequisite: 333.

436 Advanced Video Production (3) Students are actively involved in the program development process, including conceiving, writing, and producing original video productions, as well as maintenance of existing shows airing weekly on the university's digital cable channel. Advanced post-production techniques, including non-linear digital editing. 
Contact Hour Distribution: Lecture and lab. 
(RE) Prerequisite: 336.

444 Journalism as Literature (3) Study of writers from the 17th century to the modern era whose works have endured as both journalism and literature. An emerging genre called literary journalism will be examined as a means of cultural reporting with a personal narrative style. (WC)

446 Video Capstone (3) Overview of production management. The course will be taught in conjunction with visiting professionals from a variety of corporate and commercial video production facilities. In-depth session on production management, including budgeting, planning, staffing, producing, directing, and evaluating video projects. Students are involved in managing productions produced for digital cable channel. 
(RE) Prerequisite: 436.

450 Writing about Science and Medicine (3) Writing workshop to analyze examples of successful science writing and write series of articles for the general public based on scientific journals, news conferences, technical meetings, and interviews. (Same as Information Sciences 450.) (WC)

451 Environmental Writing (3) Writing for news media (including the Internet) on such environmental issues as sprawl, forests, air pollution, energy, and invasive species. Students hear presentations from and interview experts in environmental science and reporting. Exemplary environmental writing is analyzed. (WC)

456 Science Writing as Literature (3) Survey of important science writing for the general public across the spectrum of science, engineering, and medicine. Works by authors such as Arthur C. Clarke, Stephen J. Gould, and Richard Selzer will be analyzed for literary qualities in a quest to understand why some science writing succeeds. (WC)

457 Media and Society (3) Media processes and effects on society. Major theories/research are introduced and applied to current issues. 
(RE) Prerequisite(s): 200 and 275.

460 Electronic News Operations (3) Production of news programs for television, cable, and the Internet. Advanced course in electronic news gathering, reporting, digital videography, non-linear editing, and producing. Computerized newsroom and studio are utilized. 
Contact Hour Distribution: Lecture and lab. 
(RE) Prerequisite(s): 411.

465 Media and Diversity (3) Major theories/research are introduced regarding media effects on public perceptions and attitudes toward various social groups (e.g., groups based on gender, class, race/ethnicity, and sexual orientation). Discussion of historical and legal implications of media effects. (Same as Women's Studies 465.) 
(RE) Prerequisite(s): 200 and 275. 
Registration permission: Consent of instructor.

470 Cable, Broadcast, and Interactive Digital Media (3) History and structure of cable television and other broadcast delivery systems (DBS, Internet, etc.), Development of digital broadcasting, interactive television, and other broadband media systems and digital technologies. Regulatory, policy, programming, and management issues arising from new media and digital technologies. 
(RE) Prerequisite(s): 275.

475 Sports Writing (3) Writing sports stories, features, and columns. Sports writing is considered from the standpoint of sports reporters, sports information specialists, and others with an interest in writing about sports.

(RE) Prerequisite(s): 275.

485 Media Management (3) Business policies and practices of newspaper, broadcast, cable, and Internet operations. Departmental functions, cost and income analysis, and leadership styles and techniques with an emphasis on mid- and senior-level management. Job-hunting guidelines provided.

Contact Hour Distribution: Lecture and lab. 
(RE) Prerequisite(s): 290.

491 Foreign Study (1-15) Repeatability: May be repeated. Maximum 15 hours. 
Comment(s): Approval of hours and topics by advisor required.

492 Practicum (1-2) Work and learning experience at newspaper, radio, television, cable, Web, or other non-broadcast facilities. Final written report required. 
Grading Restriction: Satisfactory/No Credit grading only. 
Repeatability: May be repeated. Maximum 2 hours. 
Registration Restriction(s): Minimum student level – senior.

493 Independent Study (3) Repeatability: May be repeated. Maximum 6 hours.

494 Special Topics (3) Topics vary. Repeatability: May be repeated. Maximum 6 hours.

498 Internship (3) Full-time (30-40 hours per week) work experience in news, production, or sales and management with non-university professional organization. Educational experience beyond that available at the university. Final term paper. 
Credit Restriction(s): No retroactive credit for previous work experience. 
Registration Restriction(s): Minimum student level – senior.

Judaic Studies (595)

311 Ancient Hebraic Religious Traditions (3) (See Religious Studies 311.)

312 Religious Aspects of Biblical and Classical Literature (3) (See Religious Studies 312.)

320 Women and Religion (3) (See Religious Studies 320.)

322 Medieval Philosophy (3) (See Philosophy 322.) (WC)

350 German-Jewish Topics in Literature and Culture (3) (See German 350.)

369 History of the Middle East (3) (See History 369.)

370 History of the Middle East (3) (See History 370.)

381 Introduction to Judaism (3) (See Religious Studies 381.)

383 History of Jewish Civilization I (3) (See History 383.)

384 History of Jewish Civilization II (3) (See History 384.)

385 Contemporary Jewish Thinkers (3) (See Religious Studies 385.)

386 Voices of the Holocaust (3) (See Religious Studies 386.)

395 The Crusades and the Medieval Christian-Muslim Relations (3) (See History 395.)

405 Modern Jewish Thought (3) (See Religious Studies 405.)

425 Early Christian and Byzantine Art to 1350 (3) (See Art History 425.)

431 Medieval Art of the West 800-1400 (3) (See Art History 431.)

484 Studies in Jewish History (3) (See History 484.)

Latin American Studies (600)

251 Introduction to Latin American Studies (3) (See History 255.) (CC)

252 Introduction to Latin American Studies (3) (See History 256.) (CC)

303 Highlights of Brazilian Civilization (3) (See Portuguese 303.)

313 Peoples and Cultures of Mesoamerica (3) (See Anthropology 313.)

314 Peoples and Cultures of South America (3) (See Anthropology 316.)

315 Aspects of Luso-Brazilian Literature (3) (See Portuguese 315.)

319 Caribbean Cultures and Societies (3) (See Anthropology 319.)

326 Brazilian Cinema (3) (See Portuguese 326.)
COURSES OF INSTRUCTION

331 Introduction to Hispanic Culture (3) (See Spanish 331.)
333 Survey of Spanish-American Literature: 1700 to Present (3) (See Spanish 333.)
334 Survey of Hispanic Literatures: Beginnings-1700 (3) (See Spanish 334.)
360 History of Latin America (3) (See History 360.)
361 History of Latin America (3) (See History 361.)
373 Geography of South America (3) (See Geography 373.)
401 Cultural Plurality and Institutional Changes in Latin America (3) (See Spanish 401.)
402 Latin American Studies Seminar (3) (See Spanish 402.)
431 Topics in Hispanic Linguistics (3) (See Spanish 430.)
432 Special Topics in Literature and Culture of the Portuguese-speaking World (3) (See Portuguese 432.)
456 Latin American Government and Politics I (3) (See Political Science 456.)
460 History of Brazil (3) (See History 460.)
462 History of Mexico (3) (See History 462.)
465 Latin American Film and Culture (3) (See Spanish 465.)
475 Studies in Latin American History (3) (See History 475.)
479 Disenchanted Texts in Hispanic Literature (3) (See Spanish 479.)
491 Foreign Study (1-15)
   Repeatability: May be repeated. Maximum 15 hours.
492 Off-Campus Study (1-15)
   Repeatability: May be repeated. Maximum 15 hours.
493 Independent Study (1-15)
   Repeatability: May be repeated. Maximum 15 hours.

Linguistics (623)

200 Language, Linguistics, and Society (3) Introduction to linguistics with focus on language development and use of language by individuals and groups.
   (DE) Prerequisite(s): English 102 or 118 or 132.
321 Introduction to Old English (3) (See English 321.)
371 Foundations of the English Language (3) (See English 371.)
372 The Structure of Modern English (3) (See English 372.)
400 Topics in Linguistics (3)
   Repeatability: May be repeated. Maximum 6 hours.
411 Linguistic Anthropology (3) (See Anthropology 411.)
423 The Development of Diachronic and Synchronic Linguistics (3) Development of western linguistic thought from the Hebrews and Greeks through modern times. Readings from Boas, Sapir, Bloomfield, and others.
   Recommended Background: 9 hours of courses (300 or above) required for linguistics concentration.
425 Introduction to Descriptive Linguistics (3) (See French 425.)
426 Methods of Historical Linguistics (3) (See German 426.)
431 Topics in Hispanic Linguistics (3) (See Spanish 430.)
435 Structure of the German Language (3) (See German 435.)
436 History of the German Language (3) (See German 436.)
471 Sociolinguistics (3) (See English 471.)
472 American English (3) (See English 472.)
474 Teaching English as a Second or Foreign Language I (3) (See English 474.)
476 Second Language Acquisition (3) (See English 476.)
477 Pedagogical Grammar for ESL Teachers (3) (See English 477.)
485 Special Topics in Language (3) (See English 485.)
490 Language and Law (3) (See English 490.)
491 Foreign Study (1-15)
   Repeatability: May be repeated. Maximum 15 hours.
492 Off-Campus Study (1-15)
   Repeatability: May be repeated. Maximum 15 hours.

493 Independent Study (1-15)
   Repeatability: May be repeated. Maximum 15 hours.

Logistics (626)

310 Intermediate Logistics (3) The concepts, principles, and methods used to plan, organize, and manage logistics activities in a global environment. Activities covered include customer service, order fulfillment, inventory, materials and distribution planning, transportation, warehousing, and network design.
   (RE) Prerequisite(s): Business Administration 331.
   Registration Restriction(s): Majors in the College of Business Administration.
411 Logistics Analytical Methods I (3) Introduction to the principal analytical tools and models that are used in logistics. Application of the analytical tools to logistics problems. Use of these techniques to support negotiations in a global business world.
   (RE) Prerequisite(s): 310.
   Registration Restriction(s): Majors in the College of Business Administration.
412 Logistics Analytical Methods II (3) Advanced analytical tools and techniques used to solve strategic, tactical, and operational global supply chain problems. Managing the use of quantitative analytical tools in logistics.
   (RE) Prerequisite(s): 310.
   (RE) Corequisite(s): 411.
   Registration Restriction(s): Majors in the College of Business Administration.
413 Logistics Operations Management (3) Analysis of logistics operations and management techniques applied to warehousing/distribution center operations, purchasing and operation of transportation services, and logistics personnel management.
   (RE) Prerequisite(s): 310.
   (RE) Corequisite(s): 411.
   Registration Restriction(s): Majors in the College of Business Administration.
421 Procurement and Supply Management (3) Addresses the processes that facilitate the structure, development, and management of value added transactions and relationships between supplier and customer organizations in a global supply chain context. The course examines the management of the business purchasing function, including supplier selection and development, quality control, cost management, and performance measurement.
   (RE) Prerequisite(s): 411.
   Registration Restriction(s): Majors in the College of Business Administration.
460 Strategic Logistics in a Global Supply Chain Environment (3) Capstone course for logistics, with emphasis on strategic logistics from a global supply chain perspective. Integrates logistics concepts, framework, processes and tools learned in previous logistics coursework.
   (RE) Prerequisite(s): 411.
   Registration Restriction(s): Majors in the College of Business Administration.
492 Logistics Off-Campus Study (1-6)
   Grading Restriction: Satisfactory/No Credit grading only.
   Repeatability: May be repeated. Maximum 6 hours.
   Registration Restriction(s): Logistics major.
   Registration Permission: Consent of instructor.
493 Independent Study (1-6) Directed research on subject of mutual interest to student and staff member.
   Repeatability: May be repeated. Maximum 6 hours.
   Registration Restriction(s): Logistics major.
   Registration Permission: Consent of instructor.

Management (625)

300 Organizational Management (3) The study of the theories of organizations and the practice of management within them.
   (RE) Prerequisite(s): Business Administration 201.
   Comment(s): Not for majors in the College of Business Administration.
   Registration Restriction(s): Minimum student level – junior.
331 Developing Managerial Skills (3) Focuses on developing the skills to manage the dynamics of organizational behavior including motivating others, decision-making, using power and influence, resolving conflict, building teams, and leading change.
   (RE) Corequisite(s): Business Administration 331 or Business Administration 341.
   Registration Restriction(s): Majors in the College of Business Administration.
401 Business Strategy/Policy (3) Strategy and policy which affect the character and success of the total enterprise. Capstone course which integrates all functional areas in the formulation and implementation of strategy which will enable the organization to reach objectives. Major writing requirement.
   (RE) Prerequisite(s): Business Administration 353 and Business Law 301.
   Comment(s): For seniors.
   Registration Restriction(s): Majors in the College of Business Administration.
402 International Business Strategy (3) Provides an understanding of how to design and implement business and corporate strategies that will achieve sustainable competitive advantage in the international arena. Its perspective is that of the general manager who, to be successful, must balance the demands of multiple stakeholders and integrate various organizational activities and business functions into a cohesive unit. Emphasis is placed on the practical application of concepts and theories to real business situations. Credit Restriction: Students may not receive credit for Management 401 and 402. (RE) Prerequisite(s): Business Administration 353 and Business Law 301. Comment(s): Students must be in the international business collateral or dual concentration. Registration Restriction(s): Majors in the College of Business Administration.

407 Honors: International Business Strategy (3) Provides an understanding of how to design and implement business and corporate strategies that will achieve sustainable competitive advantage in the international arena. Its perspective is that of the general manager who, to be successful, must balance the demands of multiple stakeholders and integrate various organizational activities and business functions into a cohesive unit. Emphasis is placed on the practical application of concepts and theories to real business situations. (RE) Prerequisite(s): Business Administration 353 and Business Law 301. Comment(s): Admission to the College of Business Administration’s Global Leadership Scholars Program is required.

431 Personnel Management (3) Theory, methods, and issues pertaining to successful personnel management. Strategic human resource management, hiring, recruiting, job analysis, legal issues, recruiting, measurement/decision-making issues, assessing job candidates, human resource development, performance appraisal, compensation development, safety and health, labor relations, and organizational exit. (RE) Prerequisite(s): 331. Registration Restriction(s): Majors in the College of Business Administration.

440 Organizational Psychology (3) (See Psychology 440.)

451 Business Planning (3) Integration of various functional disciplines and their application to general management of new ventures within established companies and entrepreneurial enterprises. Focuses on the components necessary for the development of a business plan. (RE) Corequisite(s): 431. Registration Restriction(s): Majors in the College of Business Administration.

472 International Human Resource Management (3) Introduction to international human resource management from the perspective of the multinational firm. Topics include globalization and human resource strategy, understanding culture in the management of human resources, intercultural differences, selecting employees for international assignments, training and developing expatriate employees, and evaluation and compensation of employees in international assignments. (RE) Prerequisite(s): Business Administration 201. Comment(s): For students in language and world business concentration in the College of Arts and Sciences (not for majors in the College of Business Administration).

492 Management Off-Campus Study (1-6) Grading Restriction: Satisfactory/No Credit grading only. Repeatability: May be repeated. Maximum 6 hours. Registration Restriction(s): Management major. Registration Permission: Consent of instructor.

493 Independent Study (3) Readings, research, and special projects. Repeatability: May be repeated. Maximum 6 hours. Registration Restriction(s): Management major. Registration Permission: Consent of instructor.

Marketing (632)

300 Marketing and Supply Chain Management (3) Practical applications oriented overview of what every manager needs to know in order to effectively provide value to customers of the organization, and improve long-term performance through the systematic, strategic coordination of traditional business functions within a particular company and across businesses. (RE) Prerequisite(s): Business Administration 201. Comment(s): Not for majors in the College of Business Administration. Registration Restriction(s): Minimum student level – junior.

340 Marketing Strategy Frameworks (3) Examines the marketing strategies that customer focused organizations use to acquire and retain customers. Students learn skills needed to create and implement these strategies. Topics include market opportunity analysis, marketing strategy planning, segmentation and targeting decisions, value positioning decisions, customer focused strategies (e.g., integrated marketing communication, brand equity, customer relationship management), and translating customer learning into market strategy. (RE) Prerequisite(s): Business Administration 332. Registration Restriction(s): Majors in the College of Business Administration.

345 Marketing Analytics (2) Develops students’ analytical and decision-making skills through specific exercises and examples that apply various statistics principles to marketing-specific content. Students learn how to organize data into customer databases and how to analyze those databases through learning of statistical techniques, decision analysis techniques, and spreadsheet analysis techniques. (RE) Prerequisite(s): Business Administration 332. (RE) Corequisite(s): 340. Registration Restriction(s): Majors in the College of Business Administration.

350 Customer Value Analysis (3) Examines how organizations conceptualize, gather, analyze, and interpret data needed by managers to learn about customers in markets. Topics include selected consumer/customer behavior theories, customer value determination, and selected marketing research techniques. (RE) Prerequisite(s): 340. (DE) Prerequisite(s): 345 for marketing majors.

452 Product/Service Management (2) Examines how organizations deliver value to customers through product and service strategies. Topics in product management include new product development, product life cycle, product mix management, and brand marketing. Topics in service management include service design, service delivery, service quality/productivity, service failure/recovery, and role of technology. (RE) Prerequisite(s): 340. (DE) Prerequisite or (DE) Corequisite: 350 for marketing majors and co-concentration students. Registration Restriction(s): Majors in the College of Business Administration.

456 Integrated Marketing Communications Management (2) Examines how organizations communicate value to customers through face-to-face selling. Focuses on the development of the communication strategy. Topics include advertising management, sales promotion, publicity and public relations, sponsorship marketing, direct marketing, and e-marketing. (RE) Prerequisite(s): 340. (DE) Prerequisite or (DE) Corequisite: 350 for marketing majors and co-concentration students. Registration Restriction(s): Majors in the College of Business Administration.

458 Sales Force Management (2) Examines how organizations communicate value to customers through face-to-face selling. Focuses on the development and implementation of the sales force. Topics include the selling process, sales force organization, recruiting, motivating, forecasting, territory design, and evaluation. (RE) Prerequisite(s): 340. (DE) Prerequisite or (DE) Corequisite: 350 for marketing majors and co-concentration students. Registration Restriction(s): Majors in the College of Business Administration.

460 Global Marketing Strategy (3) Capstone course for Marketing to integrate concepts, frameworks, processes and tools presented in all prior coursework. Students examine the application of marketing knowledge and skills in a global context with particular emphasis on how organizations respond with global marketing strategies. (RE) Prerequisite(s): 350. (DE) Prerequisite(s): Any two of 452, 456, 458. Registration Restriction(s): Majors in the College of Business Administration.

492 Marketing Off-Campus Study (1-6) Grading Restriction: Satisfactory/No Credit grading only. Repeatability: May be repeated. Maximum 6 hours. Registration Restriction(s): Marketing major. Registration Permission: Consent of instructor.

493 Independent Study (1-6) Directed research on subjects of mutual interest to student and staff members. Repeatability: May be repeated. Maximum 6 hours. Registration Restriction(s): Marketing major. Registration Permission: Consent of instructor.

Materials Science and Engineering (638)

101 Advances in Materials Science and Engineering (1) Review of modern advances in materials science and engineering. Exposes students to a variety of materials science and engineering case studies to demonstrate the societal impact of the materials science and engineering profession. Grading Restriction: Satisfactory/No Credit grading only.

201 Introduction to Materials Science and Engineering (3) Correlation of atomic structure, crystal structure, and microstructure of solids with mechanical, physical, and chemical properties of engineering significance. (RE) Prerequisite(s): Chemistry 120.
220 Selection and Use of Soft Goods Manufacture (3) Study of textile products for apparel and interior furnishings. Emphasis on the selection of fibers, yarns, fabrics, finishes, and construction details to optimize properties needed for particular end uses.


Contact Hour Distribution: 3 hours lecture and 1 hour lab.
(RE) Prerequisite(s): Mathematics 142.
(RE) Corequisite(s): 201 and Mathematics 231.

260 Materials Engineering Thermodynamics (3) Thermodynamic laws, entropy, internal energy, and state functions. One-component and two-component phase equilibria. Characteristics of small and large molecular systems. Surface energy, elasticity, and material defects.
(RE) Prerequisite(s): Engineering Fundamentals 152 and Chemistry 130.
(DE) Prerequisite(s): Mathematics 142.
(RE) Corequisite(s): 201.

290 Materials Seminar (0) Professionalism, ethical considerations, safety, patents, product liability, field trips, industrial speakers, materials science in a global/societal context, teamwork, contemporary issues, and life-long learning.
Grading Restriction: Satisfactory/No Credit grading only.
Repeatability: May be repeated. Maximum 4 times.

Grading Restriction: Satisfactory/No Credit grading only.
Repeatability: May be repeated. Maximum 4 hours.

300 Materials Laboratory Procedures (1) Thermometry and sample preparation for microscopic examination. Word processing and graphics usage. Data analysis and report writing.
(RE) Prerequisite(s): 201.

302 Mechanical Behavior of Materials I (3) Fundamentals of deformation and fracture in solids, including metals, ceramics, polymers, and composites. Topics include stress and strain tensors, isotropic and anisotropic elasticity, anelastic and viscoelastic deformation, plasticity, tensile testing, mechanisms of plastic deformation in crystalline solids, basic strengthening mechanisms, and elementary fracture mechanics.
(RE) Prerequisite(s): 201.

304 Principles of Materials Laboratory (1) Laboratory assignments demonstrating fundamental principles of materials science and engineering.
(RE) Prerequisite(s): 201.
(RE) Corequisite(s): 220 and 340.
(DE) Corequisite(s): 360.

(RE) Prerequisite(s): 201 and 260.

(RE) Prerequisite(s): 201.

350 Principles of Electronic, Optical, and Magnetic Materials (3) Fundamental electronic, optical, and magnetic properties of solid state materials. Basic bonding and crystallography correlations to electronic, optical, and magnetic properties of materials. Specific subjects that will be covered include wave properties of electrons, Schrodinger’s equation, energy bands in crystals, electrical conduction in metals and semiconductors, classical and quantum mechanical treatments of optical properties, and magnetic phenomena.
(RE) Prerequisite(s): 201.

360 Principles of Ceramic Materials (3) Characterization of ceramic materials as to their crystal structure and their mechanical, electrical, and optical properties. Ceramic fabrication processes from the initial green body fabrication through the firing state.
(RE) Prerequisite(s): 201.

370 Materials Processing (3) Application of fundamentals of mass and energy balances, mechanics, heat and mass transfer, and chemical thermodynamics and kinetics to the processing of materials and manufacturing of products. A wide range of materials (metals, ceramics, polymers), geometries (bulk, fibers, films, coatings), and processes (casting, mold- ing, forming, forging, powder processing, coating techniques, etc.) are studied as examples of processing technologies. Elementary ideas of process measurement and control.
(RE) Prerequisite(s): 201 and 250.
(RE) Corequisite(s): 320.

390 Principles of Metallic Materials (3) Property control through composition, mechanical and thermal processing, ferrous and nonferrous alloys, and alloy selection.
(RE) Prerequisite(s): 201.

405 Structural Characterization of Materials (4) X-ray diffraction and fluorescence, and transmission electron microscopy, and microanalytical techniques. (WC)

(RE) Prerequisite(s): 201 and Physics 232.

421 Mechanical Behavior of Materials II (3) Description of stress and strain. Linear elastic constitutive equations. Isotropic and anisotropic moduli in various materials. Yield criteria, brittle fracture, crazing, and plastic strain constitutive equations. Forming operations and limit criteria.
(RE) Prerequisite(s): 302.

425 Welding Metallurgy (3) Welding processes; physical metallurgy of welding; phase transformations; heat flow; residual stresses; theories of hot cracking, cold cracking and porosity formation; applications to process utilization.
Registration Permission: Consent of instructor.

(RE) Prerequisite(s): 201 and 302.

432 Defects in Crystals (3) Analytical and experimental analysis of defect interactions in solids.
Registration Permission: Consent of instructor.

445 Polymer Engineering Processing and Characterization Laboratory (3) Polymer film casting, film blowing, mixing, and extrusion are operated and studied. Flow rates, temperatures, pressures, and velocity profiles are acquired and used in finite element modeling and simulation to correlate the polymer material properties and morphology. Supporting instrumentation includes linear viscoelastic rheometry, capillary viscometry, SEM, OM, FTIR, etc.
(RE) Prerequisite(s): 201.

447 Environmental Degradation of Materials (3) Mechanisms, measurement techniques, and control of environmental degradation processes in metals, polymers, ceramics, and composites. Materials selection and design considerations. Recommended for chemical engineering, mechanical engineering, and civil engineering majors.
(RE) Prerequisite(s): 201.

472 Fundamental Principles of Composite Materials (3) Physical principles basic to the design, manufacture, and application of fiber reinforced polymers, metals, and ceramics.
(RE) Prerequisite(s): 302.

474 Biomaterials (3) Metals, polymers, and ceramics utilized in orthopedic, cardiovascular, and dental surgical implant devices. Corrosion and degradation problems. Material properties of primary importance and tissue response to synthetic materials. (Same as Biomedical Engineering 474).
(RE) Prerequisite(s): 201.

(RE) Prerequisite(s): 201.

Registration Restriction(s): Minimum student level – junior.

Introduction to Maintainability Engineering (3) (See Nuclear Engineering 484.)

Advanced Biomaterials: Biological Application of Nanomaterials (3) 0-d, 1-d and 2-d nanomaterials synthesis and characterization with emphasis on surface properties. Chemical and biological functionalization of nanomaterials and nano-bio interfaces. Biological and biomedical application of nanomaterials. (Same as Biomedical Engineering 485.)

Registration Restriction(s): 474 or Biomedical Engineering 409.

Materials Design (3) Design projects involving materials selection and performance. (OC)

Special Project Laboratory (1-3) Group or individual investigation of problems related to materials science and engineering. Repeatability: May be repeated. Maximum 6 hours.

Registration Restriction(s): 201.

Thesis (3) Research problems in materials science and engineering with prior approval of a professor. Repeatability: May be repeated. Maximum 6 hours.

Registration Restriction(s): Minimum student level – senior.

Registration Permission: Consent of instructor.

Mathematics (641)

Intermediate Algebra (3) First degree equations and inequalities, polynomials, rational expressions, exponents, graphing, second degree equations and inequalities, systems of equations, introduction to exponential and logarithmic functions. This course is designed to prepare students for enrollment in 119, 130, 201, and 202.

Grading Restriction: A, B, C, No Credit grading.

Credit Restriction: Does not count toward the total number of hours required for graduation, nor does it fulfill any mathematics requirement.

Algebra Workshop (1) Self-paced tutorial center for students taking 119, 125, 130, or 141 who need additional help (as determined by placement exams, assessment exams, or classroom performance). Individual and computerized instruction on various pertinent algebra and trigonometry skills.

Grading Restriction: Satisfactory/No Credit grading only.

Repeatability: May be repeated. Maximum 3 hours.

Mathematical Reasoning (3) Classical and modern topics in number theory, logic, geometry, and probability with emphasis on problem solving. Consumer mathematics and other real-world applications. (QR)

Statistical Reasoning (3) An introduction to probability and statistics without calculus. (QR)

Credit Restriction: Not available for credit to students in the College of Business Administration.

Honors: Mathematical Reasoning (3) Topics will be selected from: number theory, logic, geometry, elementary topology, fractals, or probability with an emphasis on problem solving. Consumer mathematics, fair division, voting theory or other real-world applications may be included.

Recommended Background: ACT composite score 31 or SAT 1380.

College Algebra (3) A review of algebraic functions, equations, and inequalities for students who satisfy the course prerequisites for 123 or 125 but whose placement test scores indicated additional preparation is necessary.

Grading Restriction: A, B, C, No Credit grading only.

Credit Restriction: Students who receive a grade of C or better in any course numbered 123 or higher (except for 201 or 202) may not subsequently receive credit for 119.

Comment(s): Satisfactory placement test score required. This course should not be taken to remove an entrance requirement.

Finite Mathematics (3) For students not planning to major in the physical sciences, engineering, mathematics, or computer science. Exponential and logarithmic functions, interest and annuities, linear systems and matrices, optimization. (QR)

Credit Restriction: Students who receive a grade of C or better in 141 or 152 may not subsequently receive credit for 125.

(DE) Prerequisite(s): 119 or 130 or satisfactory placement test score.

Basic Calculus (3) For students not planning to major in the physical sciences, engineering, mathematics, or computer science. Calculus of algebraic, exponential, and logarithmic functions, with applications. (QR)

Credit Restriction: Students who receive a grade of C or better in 141 or 152 may not subsequently receive credit for 130.

(DE) Prerequisite(s): 119 or 130 or satisfactory placement test score.

Precalculus (4) Review of algebraic, geometric, exponential, and trigonometric functions.

Grading Restriction: A, B, C, No Credit grading only.

Credit Restriction: Students who receive a grade of C or better in 141 or 151 may not subsequently receive credit for 130.

(DE) Prerequisite(s): 119 or satisfactory placement test score.

Honors: Calculus I (4) Honors version of 141 for well-prepared students. (QR)

Credit Restriction: Credit will not be given for both 147 and 141 or 152.

Comment(s): Satisfactory placement test score required. Students having 32 Mathematics ACT, 700 Quantitative SAT scores, or permission from the instructor may enroll in 147.

Honors: Calculus II (4) Honors version of 142 for well-prepared students. (QR)

Credit Restriction: Students who receive a grade of C or better in 141 cannot subsequently receive credit for 152.

(DE) Prerequisite(s): 147.

Mathematics for the Life Sciences I (3) For students majoring in the life sciences. Does not serve as a prerequisite for 231 or 241. Topics include descriptive statistics, linear regression, discrete probability, matrix algebra, difference equations, calculus, and differential equations. Emphasis on applications in the life sciences. Includes computer projects. (QR)

Credit Restriction: Students who receive a grade of C or better in 141 cannot subsequently receive credit for 152.

(DE) Prerequisite(s): 130 or satisfactory placement test score.

Mathematics for the Life Sciences II (3) Continuation of Math 151. (QR)

Credit Restriction: Students who receive a grade of C or better in 141 cannot subsequently receive credit for 152.

(OC)

Computer Literacy for Mathematics (3) Introduction to computers, the Internet, mathematical packages, and programming for prospective mathematics majors.

(OC)

Matrix Computations (1) Introduction to matrix calculations, including determinants, eigenvalues, and eigenvectors.

Credit Restriction: Students who have received a grade of C or better in 251 may not subsequently receive credit for 200.

Comment(s): For students in the College of Engineering and statistics majors in the College of Business Administration.

Structure of the Number System (3) Problem solving, sets and relations, number systems, integers, elementary number theory, rational numbers, and decimals.

Comment(s): Satisfactory placement test score required.


Comment(s): Satisfactory placement test score required.
231 Differential Equations I (3) First course emphasizing solution techniques. Includes first-order equations and applications, theory of linear equations, equations with constant coefficients, Laplace transforms, and series solutions.

241 Calculus III (4) Calculus of functions in two or more dimensions. Includes solid analytic geometry, partial differentiation, multiple integration, and selected topics in vector calculus.

247 Honors: Calculus III (4) (RE) Prerequisite(s): 148.

251 Matrix Algebra I (3) First course in the algebra of simultaneous linear equations and matrices. Includes Gaussian elimination, determinants, vector spaces, linear transformations, eigenvalues, and eigenvectors.

257 Honors: Matrix Algebra I (3) (RE) Prerequisite(s): 148.

299 Studies in Mathematics (1-3)
Repeatability: May be repeated. Maximum 9 hours.

300 Introduction to Abstract Mathematics (3) Algebra of sets, functions, relations, and mathematical induction. Algebraic structure of the real number system, order properties, and completeness.

307 Honors: Introduction to Abstract Mathematics (3) Honors version of 300.

309 Putnam Preparation Seminar (1) Problem-solving activities designed to prepare students for the annual Putnam Exam. Grading Restriction: Satisfactory/No Credit grading only. Repeatability: May be repeated. Maximum 4 hours. Registration Permission: Permission of instructor.


341 Analysis I (3) Introduction to the theory of the real number system. Limits of sequences and functions of a real variable.

351 Algebra I (3) Introduction to abstract algebra emphasizing integers and polynomial rings.


399 Studies in Mathematics (1-3)
Repeatability: May be repeated. Maximum 9 hours.

400 History of Mathematics (3) Development of major ideas in mathematics from ancient to modern times and the influence of these ideas in science, technology, philosophy, art, and other areas. Includes at least one in-class examination and 3,000 words of writing outside the classroom. Writing-emphasis course.

403 Mathematical Methods for Engineers and Scientists (3) Matrix computations, numerical methods, partial differential equations, Sturm-Liouville Theory and special functions as used in engineering and science. Credit Restriction: Does not satisfy requirements for the mathematics major.

404 Applied Vector Calculus (3) Topics from multivariable and vector calculus, including line and surface integrals, the divergence theorem, and the theorems of Gauss and Stokes.

405 Models in Biology (3) Difference and differential equation models of biological systems.

411 Mathematical Modeling (3) Construction and analysis of mathematical models used in science and industry. Projects emphasized. Writing-emphasis course.

421 Combinatorics (3) Introduction to problems of construction and enumeration for discrete structures, such as sequences, partitions, graphs, finite fields and geometries, and experimental designs.

423 Probability (3) Axiomatic probability, univariate and multivariate distributions, conditional distributions and expectations, moment generating functions, laws of large numbers and central limit theorem.

424 Stochastic Processes (3) Markov chains, Poisson processes and Brownian motion. Other topics as selected by instructor.

425 Statistics (3) Standard statistical distributions, independence of mean and variance for a Gaussian sample, basic limit theorems; point and interval estimation, tests of statistical hypotheses, Neyman-Pearson theorem; likelihood ratio and other parametric and nonparametric tests.


435 Partial Differential Equations (3) Separation of variables, Fourier series, solution of Laplace, wave, and heat equations.

443 Complex Variables (3) Introduction to the theory of functions of a complex variable, including residue theory and contour integrals.

445 Advanced Calculus I (3) Introduction to the theory of sequences, series, differentiation, and Riemann integration of functions of one or more variables.

446 Advanced Calculus II (3) Continuation of 445.

455 Abstract Algebra I (3) Axiomatic and historical development of neutral, Euclidean, and hyperbolic geometry stressing proof technique and critical reasoning. Models of Non-Euclidean geometries.

456 Abstract Algebra II (3) Continuation of 455.

457 Honors: Abstract Algebra I (3) Honors version of 455.

458 Honors: Abstract Algebra II (3) Continuation of 447.

459 Matrix Algebra II (3) Advanced topics in matrix theory, including the Jordan canonical form.

465 Advanced Calculus II (3) Continuation of 447.

466 Differential Geometry (3) Classical differential geometry of curves and surfaces: Frenet frames, first and second fundamental forms, Gauss curvature and mean curvature, geodesics and parallel transport, the Gauss-Bonnet theorem, geometry of the hyperbolic plane.

467 Honors: Topology (3) Includes topology of line and plane, separation properties, compactness, connectedness, continuous functions, homeomorphisms, continua, and topological invariants.
471 Numerical Analysis (3) Introduction to computation, instabilities, and rounding. Interpolation and approximation by polynomials and piecewise polynomials. Quadrature and numerical solution of initial and boundary value problems of ordinary differential equations, including stiff systems. (Same as Computer Science 471.)

472 Numerical Algebra (3) Direct and iterative methods for systems of linear equations. Solution of a single nonlinear equation and nonlinear systems. Orthogonal decomposition, least squares, and the algebraic eigenvalue problem. (Same as Computer Science 472.)

475 Industrial Mathematics (3) Modeling, analysis, and computation applied to scientific/technical/industrial problems.

490 Readings in Mathematics (1-3) Open to superior students. Independent study with faculty guidance. Repeatability: May be repeated. Maximum 9 hours. Comment(s): Consent of faculty mentor to supervise independent work required. Registration Permission: Consent of department head.

497 Undergraduate Honors Seminar (2) Forum for presentation of student theses and other undergraduate research projects. Grading Restriction: Satisfactory/No Credit grading only. Repeatability: May be repeated. Maximum 8 hours. Registration Restriction(s): Students in honors mathematics concentration only. Comment(s): Other students may register with permission of the instructor.

498 Senior Honors Thesis (1-3) Students in the mathematics honors program work individually under the direction of a faculty member to write an honors thesis. The thesis must be approved by the departmental honors committee. Repeatability: May be repeated. Maximum 6 hours.

499 Seminar in Mathematics (1-3) Topics vary. Requires out-of-class projects and in-class presentations by students. Students must register for the number of credit hours announced for a particular seminar. Repeatability: May be repeated. Maximum 9 hours. Registration Permission: Consent of instructor.

Mathematics Education (642)

485 Teaching of Mathematics, Grades 7-12 (3) Preparation of teaching plans, evaluation, and materials for teaching mathematics. Teaching simulation and directed observation in schools.

Registration Restriction(s): Qualification – admission to teacher education.

Mechanical Engineering (650)

202 Engineering Mechanics (2) Review of vector algebra.Statics of two-dimensional trusses and frames, including methods of joints and sections. Geometric properties of cross sections, including first and second moments and location of centroid. Inertial properties of rigid bodies, including moment of inertia and location of mass center. (RE Corequisite(s): Engineering Fundamentals 152 and Mathematics 142.


321 Mechanics of Materials (3) Concepts of stress and strain; stress-strain relations; applications including axially loaded members, torsion of circular shafts, and bending of beams. (RE Prerequisite(s): 202 and Mathematics 142.


345 Mechanical Engineering Instrumentation and Measurement (3) Fundamentals of measurement systems. Standards, dynamic characteristics of instruments, and statistical data treatment. Transducers, signal conditioning, strain, pressure, and temperature and flow measurements. (RE Prerequisite(s); Aerospace Engineering 341 and Electrical and Computer Engineering 301.

363 System Dynamics (3) Free and forced vibrations of damped and undamped lumped parameter systems. Transient and frequency response of lumped parameter systems. Introduction to feedback control systems. (RE Prerequisite(s): 231 and Mathematics 231.

365 Mechanisms (3) Kinematics and dynamics of mechanical linkages, gears, and cams. Balancing of multicylinder engines. (RE Prerequisite(s): 231.

366 Manufacturing Processes (3) Processes related to design of machine parts. Casting, hot and cold forming, metal removal, and welding. Manufacturing tolerances and surface finishes. (RE Prerequisite(s): Materials Science and Engineering 201.

391 Engineering Analysis (3) Numerical and analytical techniques are developed for problems arising in mechanical and aerospace engineering. Numerical methods address root finding, direct and indirect techniques for linear and nonlinear systems, interpolation, curve fitting, quadrature, and solutions to ordinary- and partial-differential equations. Analytic methods include Fourier series, solutions to linear systems of differential equations, and separation of variables. Computer projects are assigned for reinforcing classroom developments. (RE Prerequisite(s): Engineering Fundamentals 152 and Mathematics 231.

405 Microcomputer-Based Control of Electromechanical Systems (3) Application of microcomputers to control electromechanical devices. Application and theory – dynamics of machine control, assembly language programming, microcontroller architecture, stepping and DC motors, photoelectric devices, A/D, D/A, and integrated circuits. (RE Prerequisite(s): Electrical and Computer Engineering 305.


410 Professional Topics (2) Topics relating to professional responsibility and communications, and organization. Requires a formal oral presentation by each student on an engineering topic chosen by the student and approved by the instructor. (OC) Registration Restriction(s): Minimum student level – senior.

449 Mechanical Engineering Laboratory (3) Designing, conducting, and reporting results of experimental exercises. Test standards and specifications. Analysis of data and formation of conclusions. Contact Hour Distribution: 3 hours lab per week. (RE Prerequisite(s): 344 and 345. (RE Corequisite(s): 475.

450 Mechanical Engineering Design I (1-4) Design process, synthesis, and design studies. Registration Restriction(s): Qualification – admission to teacher education.

455 Control Systems (3) Analysis and design of feedback control systems using transient and frequency response techniques. Stability analysis in the time and frequency domain. (RE Prerequisite(s): 363.

452 Finite Element Analysis (3) Conversion of fundamental conservation principles in mechanics to simulation form via finite element implementation. Applications in heat transfer, solid mechanics, mechanical vibrations, fluid mechanics, and heat/mass transport. Extensive computer lab experiments using Matlab-based and commercial software systems. (RE Prerequisite(s): 321 and 344. (DE) Prerequisite(s): 363.

457 Engineering Entrepreneurship (3) Technology and innovation, technology transfer, and patent protection. Legal formation and intellectual property, knowledge management, generation, and transmission. Creating a business plan and a marketing plan, launching a technology-based business. Sources of capital, small business growth and operation. Registration Permission: Consent of instructor.

460 Mechanical Engineering Design II (1-4) Synthesis and design of a complete mechanical engineering system. Participation in team design effort, including formal oral presentations and written design report. Repeatability: Not repeatable for credit. May be taken once for 1-4 hours. (RE Prerequisite(s): 450.

463 Mechanical Vibration (3) Free and forced response of systems with multiple degrees of freedom. Response to arbitrary excitation. Lagrange’s equations. Introduction to continuous systems. Vibration absorbers and rotor balancing. (RE Prerequisite(s): 363.
466 Elements of Machine Design II (3) Application of strength and properties of materials. Design factors and theories of failure to design of machine elements. Mini-design experiences.
(Re) Prerequisite(s): 321 and Materials Science and Engineering 201.

467 Smart Structures and Materials (3) Fundamentals of electromechanical properties of ferroelectric materials (piezoelectric and electrostrictive), shape memory alloys, and other electrically and magnetically activated materials with application. Course includes a semester project.
(Re) Prerequisite(s): 231 and 321.

475 Thermal Engineering (3) Thermal systems with emphasis on turbo-machinery, heat exchangers, gas-vapor mixtures, psychrometry, and fuels and combustion. Chemical equilibrium and system analysis and design.
(Re) Prerequisite(s): 344.

480 Introduction to Hybrid Electric Vehicles (3) Steady-state HEV force and power modeling. Introduction to internal combustion engines, motors, energy storage systems, and control strategies. Powertrain design and analysis using various computer simulation tools.
(Re) Corequisite(s): 475.

483 Introduction to Reliability Engineering (3) See Nuclear Engineering 483.

484 Introduction to Maintainability Engineering (3) See Nuclear Engineering 484.

494 Selected Topics in Mechanical Engineering (1-4) Problems and topics related to developments and practice in mechanical engineering.
Repeatability: Not repeatable for credit. May be taken once for 1-4 hours.
Registration Permission: Consent of instructor.

495 Selected Topics in Mechanical Engineering (1-4) Problems and topics related to developments and practice in mechanical engineering.
Repeatability: Not repeatable for credit. May be taken once for 1-4 hours.
Registration Permission: Consent of instructor.

Medieval Studies (674)

201 Medieval Civilization (3) Introduction to basic themes in the medieval experience approached from interdisciplinary points of view and including philosophy and religion, art and architecture, language and literature, and social and political history. Writing-emphasis course. (CC)

202 Medieval Civilization (3) Introduction to basic themes in the medieval experience approached from interdisciplinary points of view and including philosophy and religion, art and architecture, language and literature, and social and political history. Writing-emphasis course. (CC)

261 Medieval Culture: Readings from the Early Middle Ages, 500-1000 (3) Critical analysis and interpretation of selected works from the early medieval period. Focuses on major types of literature produced during the period 500-1000 AD, e.g., cultural, religious, rhetorical, lyric, epic, biographical. Includes Augustine’s Confessions, Boethius’ Consolation, St. Gregory’s Life of St. Benedict, The Life of Charlemagne, etc. Writing-emphasis course.

262 Medieval Culture: Readings from the Later Middle Ages, 1000-1500 (3) Critical analysis and interpretation of selected works from the later medieval period. Focuses on romantic, allegorical, and mystical writings from the high and later Middle Ages, e.g., the Song of the Nibelungen, the Romance of the Rose, St. Bernard’s Commentary on the Songs of Songs, Peter Abelard’s History of My Calamities. Writing-emphasis course.
(Re) Prerequisite(s): 261.

312 Medieval History (3) See History 312.
313 Medieval History (3) See History 313.
322 Medieval Philosophy (3) See Philosophy 322. (WC)
401 Dante and Medieval Culture (3) See Italian 401.
402 Petrarch and Boccaccio (3) See Italian 402.
403 Seminar in Medieval Studies (3) Interdisciplinary treatment of selected topics. Content varies. Writing-emphasis course.
Repeatability: May be repeated. Maximum 6 hours.
405 Medieval Literature (3) See English 401.
406 Chaucer (3) See English 402.
410 Medieval French Literature (3) See French 410.
431 Medieval Art of the West, 800-1400 (3) See Art History 431.
441 Northern European Painting, 1350-1600 (3) See Art History 441.
451 The Art of Italy, 1250-1450 (3) See Art History 451.

475 Ancient and Medieval Political Thought (3) See Political Science 475.

491 Foreign Study (1-15) Repeatability: May be repeated. Maximum 15 hours.
492 Off-Campus Study (1-15) Repeatability: May be repeated. Maximum 15 hours.
493 Independent Study (1-15) Repeatability: May be repeated. Maximum 15 hours.

Microbiology (684)

209 Global Medicine and Emerging Infectious Diseases (3) Investigation into the biology, microbiology, geography, economics, and politics of international health with an emphasis on emerging infectious diseases.
Registration Restriction(s): Minimum student level – sophomore.

210 General Microbiology (3) General properties of bacteria and viruses, including physiology, metabolism, genetics of bacteria, replication and expression of viral genes, bacterial and viral pathogenicity, and mechanisms of resistance to disease.
(Re) Prerequisite(s): Biology 140.
(Re) Corequisite(s): Biology 240.

319 Introductory Microbiology Laboratory (2) Basic techniques for the examination, cultivation, and identification of microorganisms.
(Re) Corequisite(s): 310.

320 Advanced Microbiology (3) Cell and molecular biology of microorganisms. Principles and applications in modern technological society. Intended for students in the microbiology concentration.
(Re) Prerequisite(s): 310.

329 Advanced Microbiology Laboratory (2) Laboratory exercises designed to accompany 320.
(Re) Prerequisite(s): 319.
(Re) Corequisite(s): 320.

400 Laboratory Problems in Microbiology (2-4) Research projects under the direction of a faculty member.
Grading Restriction: Satisfactory/No Credit grading only.
Repeatability: May be repeated. Maximum 9 hours.
Credit Restriction: May not be applied toward the major.
Registration Permission: Consent of instructor.

401 Undergraduate Research in Microbiology (3) Research experience in laboratory of faculty member with faculty committee guidance.
(De) Prerequisite(s): 310, 319, 320, and 329.
Registration Restriction(s): Minimum student level – junior.
Registration Permission: Consent of instructor and department head.

402 Advanced Undergraduate Research in Microbiology (4) Supervised research. May be taken to satisfy honors thesis.
(De) Prerequisite(s): 401.
Registration Restriction(s): Minimum student level – junior.
Registration Permission: Consent of instructor and department head.

410 Microbial Physiology (3) Examination of concepts in microbial physiology and the structure and function of microbial cells.
(De) Prerequisite(s): 310.
(De) Corequisite(s): Biochemistry and Cellular and Molecular Biology 401.

(De) Prerequisite(s): 310.

420 Microbial Pathogenesis (3) A broad survey of host-pathogen relationships including the biochemical, cellular, genetic, genomic and evolutionary factors which play a role in microbial pathogenesis.
(De) Prerequisite(s): 310.

429 Medical Microbiology Laboratory (2) Laboratory exercises in medically important areas of microbiology including microorganisms, pathogenesis, and immunology.
(De) Prerequisite(s): 319 and 430.
(Re) Corequisite(s): 420.

430 Immunology (3) Principles of inflammation and immunity, immunoglobulin structure, and theories of formation and diversity. Complement, hypersensitivities, cell cooperation and recognition in immune mechanisms; and soluble factors.
(Re) Prerequisite(s): Biology 240.

440 Virology (3) Pathogenesis and molecular biology of viruses.
(Re) Prerequisite(s): 310.
470 Microbial Ecology (3) Physiological diversity and taxonomy of microorganisms from natural environments. Emphasis on the functional role of microorganisms in natural and simulated ecosystems. 
(Re) Prerequisite(s): 310.

480 Genomics and Bioinformatics (3) Fundamentals of a new scientific discipline based on sequencing genomes (entire DNA) of individual organisms. Goals, principles, and types of genome analysis are covered in a traditional lecture format. Computer tools for genome analysis (bioinformatics) are presented in both lecture and hands-on (computer laboratory) settings. Credit Restriction: Students may not receive credit for both 480 and 540. 
(Re) Prerequisite(s): Biology 240.

491 Foreign Study (1-9) Repeatability: May be repeated. Maximum 9 hours.

492 Off-Campus Study (1-9) Repeatability: May be repeated. Maximum 9 hours.

493 Independent Study (1-9) Repeatability: May be repeated. Maximum 9 hours.

495 Senior Seminar (3) In-depth consideration of microbiological problems of current interest requiring an integration of two or more disciplines. Emphasis on original literature and the experimental basis of current knowledge. Historical background, impact on society, predictions of the future, and the basis of moral and ethical judgments. Written reports are required. A capstone course. 
Repeatability: May be repeated. Maximum 6 hours. Credit Restriction(s): Maximum of 3 hours may be applied toward the major. 
(Re) Prerequisite(s): 320. 
Registration Restriction(s): Minimum student level – senior.

Military Science and Leadership (689)

101 Leadership and Personal Development (2) Introduces cadets to the personal challenges and competencies that are critical for effective leadership. Cadets learn how the personal development of life skills such as critical thinking, goal setting, time management, physical fitness, and stress management relate to leadership, officership, and the Army profession. Grading Restriction: Letter grade only.

102 Introduction to Tactical Leadership (2) Overviews leadership fundamentals such as setting direction, problem-solving, listening, presenting briefs, providing feedback, and using effective writing skills. Cadets explore dimensions of leadership values, attributes, skills, and actions in the context of practical, hands-on, and interactive exercises. Grading Restriction: Letter grade only.

103 Army ROTC Fitness Program (1) Develops individual muscular strength, muscular endurance, and cardio-respiratory endurance. Classes are divided into groups based on ability and exercises are geared toward personal improvement. Primary evaluation is the Army Physical Fitness Test which consists of pushups, sit-ups and a two-mile run. Repeatability: May be repeated. Maximum 8 hours.

200 Leader’s Training Course (4) A 28-day leadership practicum at Fort Knox, Kentucky. Familiarizes students with Army physical fitness, land navigation, rifle marksmanship, and military problem-solving/decision-making.

201 Innovative Team Leadership (3) Explores the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and two historical leadership theories that form the basis of the Army leadership framework (trait and behavior theories). Cadets practice aspects of personal motivation and team building in the context of planning, executing, and assessing team exercises and participating in leadership labs. Grading Restriction: Letter grade only.

202 Foundations of Tactical Leadership (3) Examines the challenges of leading tactical teams in the complex contemporary operating environment (COE). The course highlights dimensions of terrain analysis, patrolling, and operation orders. Further study of the theoretical basis of the Army leadership framework explores the dynamics of adaptive leadership in the context of military operations. Grading Restriction: Letter grade only.

301 Adaptive Tactical Leadership (4) Challenges cadets to study, practice, and evaluate adaptive leadership skills as they are presented with challenging scenarios related to squad tactical operations. Cadets receive systematic and specific feedback on their leadership attributes and actions. Based on such feedback, as well as their own self-evaluations, cadets continue to develop their leadership and critical thinking abilities. Contact Hour Distribution: 3 hours and 1 lab. Grading Restriction: Letter grade only. 
(Re) Prerequisite(s): 101 and 102. 
(DE) Prerequisite(s): 201, 202, or 200. 
Registration Restriction(s): 2.00 GPA.

302 Leadership in Changing Environments (4) Increasingly intense situational leadership challenges to build cadet awareness and skills in leading tactical operations up to platoon level. Cadets review aspects of combat, stability, and support operations. They also conduct military briefings and develop proficiency in garrison operation orders. Grading Restriction: Letter grade only. 
(Re) Prerequisite(s): 301.

303 Leadership in Military History (3) Introduces learners to the American military experience and the development of the profession of arms. The importance of historical study is highlighted by noting personal and military examples of changes made as a result of lessons learned from history. Accounts from the major wars and battles throughout U.S. history are described with a focus on how leadership decisions affected the success or failure of military operations. Grading Restriction: Letter grade only.

400 National Advanced Leadership Camp (4) A 31-day leadership practicum held at Fort Lewis, Washington. Students are evaluated in varied leadership positions, rifle marksmanship, land navigation, field leadership reaction course, and tactical small unit leadership. Grading Restriction: Letter grade only. 
(Re) Prerequisite(s): 301 and 302.

401 Developing Adaptive Leaders (4) Develops cadet proficiency in planning, executing, and assessing complex operations, functioning as a member of a staff, and providing performance feedback to subordinates. Cadets assess risk, make ethical decisions, and lead fellow ROTC cadets. Lessons on military justice and personnel processes prepare cadets to make the transition to Army officers. Contact Hour Distribution: 3 hours and 1-hour lab. Grading Restriction: Letter grade only. 
(Re) Prerequisite(s): 301 and 302.

402 Leadership in a Complex World (4) Explores the dynamics of leading in the complex situations of current military operations in the contemporary operating environment (COE). Cadets examine differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. They also explore aspects of interacting with non-government organizations, civilians on the battlefield and host nation support. Contact Hour Distribution: 3 hours and 1-hour lab. Grading Restriction: Letter grade only. 
(Re) Prerequisite(s): 301 and 302. 
(DE) Prerequisite(s): 401.

430 U.S. Military History, 1754 to the present (3) (See History 451.)

493 Military Leadership Topics (1) Topics on principles and styles of military leadership. Students conduct in-depth profile of a contemporary or historic military leader. Grading Restriction: Letter grade only. 
Repeatability: May be repeated. Maximum 4 hours. Registration Permission: Consent of instructor.

Modern Foreign Languages and Literatures (686)

199 Language and World Business (2) Examines the importance of foreign trade at the local, state, and national levels. Interdisciplinary faculty from the Colleges of Business Administration and Arts and Sciences provide an overview of the value of language study and international cultural awareness in the program in world business. See Director for further information.

482 Special Topics in Global Cinema (3) Content varies. Focus from global perspectives on directors, stars, film genres, national and regional cinema movements or other topics. Taught in English. Writing emphasis course. (Same as Cinema Studies 482; Global Studies 482.) Repeatability: May be repeated. Maximum 6 hours.

Music Education (707)

200 Conducting Laboratory (1) A laboratory course designed to afford conducting opportunities for student conductors and to acquaint students with a variety of music literature. Grading Restriction: Letter grade only. 
Repeatability: May be repeated. Maximum 3 hours. Credit Restriction: May be taken as elective credit by any student except those registered for 310, 320.

201 Field Experience in General Music (1) Observing and assisting in an approved academic or middle school classroom. Grading Restriction: Satisfactory/No Credit grading only. Repeatability: May be repeated. Maximum 3 hours.

210 Class Woodwind Methods I (1) Structure, use, and techniques of playing. Care and repair of the clarinet in school instrumental organizations. Emphasis on techniques necessary for basic understanding and effective teaching of the instruments. Practical use of current instructional materials. Grading Restriction: Letter grade only.
211 Class Woodwind Methods II (1) Structure, use, and techniques of playing. Care and repair of the flute and saxophone in school instrumental organizations. Emphasis on techniques necessary for basic understanding and effective teaching of the instruments. Practical use of current instructional materials.
Grading Restriction: Letter grade only.
212 Class Woodwind Methods III (1) Structure, use, and techniques of playing. Care and repair of the oboe and bassoon in school instrumental organizations. Emphasis on techniques necessary for basic understanding and effective teaching of the instruments. Practical use of current instructional materials.
Grading Restriction: Letter grade only.
220 Class Brass Methods (1) Structure, use, and techniques of playing. Care and repair of the upper brass instruments in school instrumental organizations. Emphasis on techniques necessary for basic understanding and effective teaching of the instruments. Practical use of current instructional materials.
Grading Restriction: Letter grade only.
221 Class Brass Methods II (1) Structure, use, and techniques of playing. Care and repair of the lower brass instruments in school instrumental organizations. Emphasis on techniques necessary for basic understanding and effective teaching of the instruments. Practical use of current instructional materials.
Grading Restriction: Letter grade only.
230 Class Percussion Methods I (1) Structure, use, and techniques of playing. Care and repair of principal instruments in school instrumental organizations. Emphasis on techniques necessary for basic understanding and effective teaching of the instruments. Practical use of current instructional materials.
Grading Restriction: Letter grade only.
240 Class String Methods I (1) Structure, use, and techniques of playing. Care and repair of upper string instruments in school instrumental organizations. Emphasis on techniques necessary for basic understanding and effective teaching of the instruments. Practical use of current instructional materials.
Grading Restriction: Letter grade only.
241 Class String Methods II (1) Structure, use, and techniques of playing. Care and repair of lower string instruments in school instrumental organizations. Emphasis on techniques necessary for basic understanding and effective teaching of the instruments. Practical use of current instructional materials.
Grading Restriction: Letter grade only.
250 Functional Piano for Teachers (1) Practical piano skills for the general/vocal teacher who does not have a keyboard instrument as the applied principal. Transposition, improvisation, reading open vocal scores, and simple accompaniments.
Repeatability: May be repeated. Maximum 2 hours.
251 Functional Piano for Teachers II (1) Application of skills and techniques acquired in Music Education 250 to playing and transposing familiar school songs, choral accompaniments, and open scores. Creation of accompaniments for singing and movement exercises, listening activities, and playing instruments in various styles.
(Re) Prerequisite(s): 250.
260 Eurhythmics (1) Principles and practice of eurhythmics as developed by Emile Jaques-Dalcroze.
Grading Restriction: Letter grade only.
Repeatability: May be repeated. Maximum 2 hours.
Grading Restriction: Letter grade only.
(Re) Prerequisite(s): Music Theory 220.
320 Conducting II (2) Developing advanced baton technique. Multiple rhythms, modern beat patterns and their variations. Studying, analyzing, and interpretation of the full score. Achieving complete physical control. Rehearsal techniques. Conducting live groups in advanced works.
Grading Restriction: Letter grade only.
(Re) Prerequisite(s): 310.
330 Music Methods for the Elementary School (3) Methods and materials for teaching music in the elementary grades.
Grading Restriction: Letter grade only.
Registration Restriction(s): Qualification – admission to teacher education.
340 General/Vocal Music Methods (3) School methods and materials for teaching music in the elementary, middle, and high schools.
Grading Restriction: Letter grade only.
Registration Restriction(s): Qualification – admission to teacher education.
345 Field Experience in Music Education (1)
Grading Restriction: Satisfactory/No Credit grading only.
Repeatability: May be repeated. Maximum 3 hours.
Registration Restriction(s): Qualification – admission to teacher education.
Registration Permission: Consent of instructor.
400 Student Teaching in Music (12) Full-time teaching practicum in an approved public school.
(Re) Corequisite(s): 401.
Recommended Background: Completion of all music education courses required for the Bachelor of Music – music major/music education concentration (4-year alternative).
Registration Permission: Consent of instructor.
401 Senior Seminar (0) Issues related to the music teaching profession as experienced in student teaching.
(Re) Corequisite(s): 400.
Registration Permission: Consent of instructor.
420 Music Methods for the Junior High School and Middle School (3) Methods and materials for teaching vocal, instrumental, and general music at the junior high school or middle school level.
Grading Restriction: Letter grade only.
Registration Restriction(s): Qualification – admission to teacher education.
Registration Permission: Consent of instructor.
430 Music Methods for High School (3) Methods and materials for vocal and instrumental music at the high school level, including charting for the marching band. (WC)
Grading Restriction: Letter grade only.
Registration Permission: Consent of instructor.
Registration Restriction(s): Qualification – admission to teacher education.
431 Marching Band Techniques (2) Functions, organization, and direction of a school marching band.
Grading Restriction: Letter grade only.
Registration Restriction(s): Qualification – admission to teacher education.
441 String Orchestra Pedagogy and Rehearsal Techniques (2) Function, organization, and direction of a school orchestra program.
Grading Restriction: Letter grade only.
Registration Restriction(s): Qualification – admission to teacher education.
482 Internship II: Grades K-12 (3-6) Demonstration of professional competence in planning, instruction, and classroom management. Internship is completed in local public schools.
Grading Restriction: Satisfactory/No Credit grading only.
Repeatability: May be repeated. Maximum 12 hours.
Registration Permission: Consent of instructor.
490 Special Topics in Music Education (1-3)
Grading Restriction: Letter grade only.
Registration Restriction(s): Qualification – admission to teacher education.
493 Independent Study in Music Education (1-5)
Grading Restriction: Letter grade only.
Repeatability: May be repeated. Maximum 9 hours.
Registration Permission: Consent of instructor.
Music Ensemble (708)
301 Woodwind Choir (1)
Repeatability: May be repeated. Maximum 14 hours.
Comment(s): Audition or consent of instructor required.
303 Small Jazz Ensemble (1)
Repeatability: May be repeated. Maximum 12 hours.
Comment(s): Audition or consent of instructor required.
304 Jazz Ensemble (1)
Repeatability: May be repeated. Maximum 14 hours.
Comment(s): Audition or consent of instructor required.
305 Studio Orchestra (1)
Repeatability: May be repeated. Maximum 12 hours.
Comment(s): Audition or consent of instructor required.
306 Trombone Choir (1)
Repeatability: May be repeated. Maximum 14 hours.
Comment(s): Audition or consent of instructor required.
309 Tuba Ensemble (1)
Repeatability: May be repeated. Maximum 14 hours.
Comment(s): Audition or consent of instructor required.
310 Percussion Ensemble (1)
Repeatability: May be repeated. Maximum 14 hours.
Comment(s): Audition or consent of instructor required.
311 Marimba Choir (1)
Repeatability: May be repeated. Maximum 14 hours.
Comment(s): Audition or consent of instructor required.
315 Chamber Music Ensemble (1)
Repeatability: May be repeated. Maximum 14 hours.
Comment(s): May be repeated. Maximum 14 hours.
Comment(s): Audition or consent of instructor required.

320 UT Singers (1)
Repeatability: May be repeated. Maximum 14 hours.
Comment(s): Audition or consent of instructor required.

330 Chamber Singers (1)
Repeatability: May be repeated. Maximum 14 hours.
Comment(s): Audition or consent of instructor required.

340 Opera Theatre (1)
Repeatability: May be repeated. Maximum 14 hours.
Comment(s): Audition or consent of instructor required.

350 Concert Band (1)
Repeatability: May be repeated. Maximum 14 hours.
Comment(s): Audition or consent of instructor required.

352 Symphonic Band (1)
Repeatability: May be repeated. Maximum 14 hours.
Comment(s): Audition or consent of instructor required.

353 Wind Ensemble (1)
Repeatability: May be repeated. Maximum 14 hours.
Comment(s): Audition or consent of instructor required.

354 Pep Band (1)
Repeatability: May be repeated. Maximum 14 hours.
Comment(s): Audition or consent of instructor required.

359 Marching Band (1)
Repeatability: May be repeated. Maximum 14 hours.
Comment(s): Audition or consent of instructor required.

370 Symphony Orchestra (1)
Repeatability: May be repeated. Maximum 14 hours.
Comment(s): Audition or consent of instructor required.

380 Concert Choir (1)
Repeatability: May be repeated. Maximum 14 hours.
Comment(s): Audition or consent of instructor required.

383 Men’s Chorale (1)
Repeatability: May be repeated. Maximum 14 hours.
Comment(s): Audition or consent of instructor required.

389 Women’s Chorale (1)
Repeatability: May be repeated. Maximum 14 hours.
Comment(s): Audition or consent of instructor required.

399 Accompanying (1)
Repeatability: May be repeated. Maximum 14 hours.
Comment(s): Audition or consent of instructor required.

Music General (698)

101 Fundamentals of Performance (1-2) Private instrumental or vocal study, one or two half lessons per week. This course is designed to prepare students for enrollment in Music Performance 103-195. Requires payment of applied music fees.
Grading Restriction: A, B, C. No Credit grading.
Repeatability: May be repeated. Maximum 12 hours.
Credit Restriction: Cannot be used to satisfy applied music requirements at the advanced level.

200 Solo Class (0)
Repeatability: May be repeated. Maximum 14 times.
Grading Restriction: Satisfactory/No Credit grading only.

301 Junior Recital (0)
Repeatability: Not repeatable.
(Re) Corequisite(s): Music Theory 140.
Recommended Background: 300-level (or above) music performance course.

310 Practical Experience in Arts Management (3) Arts management practicum with approved arts organization. Individualized work with music instructor in conjunction with supervised experience in arts organization.
Repeatability: May be repeated. Maximum 6 hours.
Comment(s): For music majors only.

401 Senior Recital (0)
Repeatability: Not repeatable.
(Re) Prerequisite(s): Music Theory 220 and Musicology 220.
(Re) Corequisite(s): Music Theory 240.
Recommended Background: 400-level music performance course.

411 Lecture Recital (0)
Repeatability: Not repeatable.
(Re) Prerequisite(s): Music Theory 120 and Musicology 200.
Recommended Background: 200-level (or above) music performance course.

421 Special Topics in Performance (1-3)
Repeatability: May be repeated. Maximum 14 hours.
Registration Permission: Consent of department head.

431 Special Topics in Pedagogy (1-3)
Repeatability: May be repeated. Maximum 4 hours.
Registration Permission: Consent of department head.

493 Independent Study (1-3)
Repeatability: May be repeated. Maximum 30 hours.
Registration Permission: Consent of instructor.

495 Sacred Music Internship (3) Observation, participation, and supervised leadership experience in the music program of an approved local church.
Grading Restriction: Satisfactory/No Credit grading only.
Registration Restriction(s): Bachelor of Music – music major/sacred music concentration; minimum student level – senior.

Music Instrumental (710)

310 Brass Literature and Pedagogy (3) Survey of brass solo and ensemble literature, including instructional materials and methods. Application of pedagogical procedures to individual instruction and performance. Demonstration lessons by applied brass faculty and class members.
Registration Permission: Consent of instructor.

320 Woodwind Literature and Pedagogy (3) Survey of woodwind solo and ensemble literature, including instructional materials and methods. Application of pedagogical procedures to individual instruction and performance. Demonstration lessons by applied woodwind faculty and class members.
Registration Permission: Consent of instructor.

330 Percussion Literature and Pedagogy (3) Survey of percussion solo and ensemble literature, including instructional materials and methods. Application of pedagogical procedures to individual instruction and performance. Demonstration lessons by applied percussion faculty and class members.
Registration Permission: Consent of instructor.

340 String Literature and Pedagogy I (3) Survey of string techniques, issues, research, and pedagogies. Topical presentations by the applied string faculty and guests.

(Re) Prerequisite(s): 340.
Comment(s): 300-level (or above) music performance course required.

360 Orchestral Repertoire (1) An intensive weekly master class focused on the performance of standard orchestral repertoire used in most orchestral auditions.
Registration Permission: Consent of instructor.

490 Instrumental Conducting (3) Knowledge and skills in instrumental conducting. Various periods and composers and relationship of different styles to the conductor’s art. Musical analysis and practice in conducting.
(Re) Prerequisite(s): Music Education 320.

493 Independent Study (1-3)
Repeatability: May be repeated. Maximum 30 hours.
Registration Permission: Consent of instructor.

Music Jazz (711)

110 Jazz Theory (2) Fundamentals of the jazz language, including terminology, chord symbols, chord/scales, and chord progressions, plus ear training lab.
(Re) Prerequisite(s): Music Theory 110.

120 Analysis of Jazz Styles (2) Individual improvisatory styles through analysis of their transcribed solos. Training and function of the ear in music. Transcription of solos from recordings and preparation of analysis.
(Re) Prerequisite(s): 110.

130 Jazz Piano I (1) Harmonic language of jazz. Interpretation of chord symbols, formulae for voicing chords, chord progressions, and fundamental melody-playing and improvisation for right hand.

140 Jazz Piano II (1) Harmonic language of jazz. Interpretation of chord symbols, formulae for voicing chords, chord progressions, and construction of bass lines.
(Re) Prerequisite(s): 130.
210 Jazz Improvisation I (2) Study of application and principles of improvisation, including nomenclature, chord progressions, chord-scales, patterns, melodic development, and tune styles.  
(RE) Prerequisite(s): 110.

220 Jazz Improvisation II (2) Study of application and principles of improvisation, including nomenclature, chord progressions, chord-scales, patterns, melodic development, and solo transcription.  
(RE) Prerequisite(s): 210.

310 Jazz Composition and Arranging (2) Composing and arranging in the jazz idiom.  
Registration Permission: Consent of instructor.

320 Jazz Band Arranging (2) Arranging and scoring for the Big Jazz Band.  
(RE) Prerequisite(s): Music Technology 340.

410 Advanced Improvisation (3) Development of individual skills and solving individual problems in jazz improvisation.  
(RE) Prerequisite(s): 220.  
Registration Restriction(s): Bachelor of Music – music major/studio music and jazz concentration.

420 Jazz Pedagogy (1) Methods and materials relating to teaching of jazz, designing and administering jazz programs, and rehearsal techniques for jazz ensembles.  
Registration Restriction: Bachelor of Music – music major/studio music and jazz concentration.

493 Independent Study (1-3)  
Repeatability: May be repeated. Maximum 30 hours.  
Registration Permission: Consent of instructor.

Music Keyboard (712)  
110 Class Piano I (1) Development of keyboard skills in keyboard reading, improvisation, harmonization, transposition, technique, and repertoire.  
Registration Restriction: Bachelor of Music – music major or Bachelor of Arts – music major.

120 Class Piano II (1) Keyboard skills in reading two keyboard textures, improvisation, harmonization, transposition, technique, and accompaniments.  
(RE) Prerequisite(s): 110.

210 Class Piano III (1) Keyboard skills in reading hymn text, improvisation, harmonizing with secondary dominants, transposition, and accompaniments for major instrument.  
(RE) Prerequisite(s): 120.

220 Class Piano IV (1) Completes the piano competency requirement. Open score reading, 203 accompaniments for the major instrument.  
(RE) Prerequisite(s): 210.

230 Keyboard Harmony (1) Melody harmonization, figured bass realization, and improvisation.  
(RE) Prerequisite(s): Music Theory 120.

340 Piano Pedagogy I (3) Survey of elementary pedagogical methods and materials with emphasis on learning styles for motivation and reading both lead sheet and notation systems. Collaborative teaching experience.

350 Piano Pedagogy II (3) Survey of intermediate pedagogical materials and methods with emphasis on how to empower the student to play musically, to improvise, and to read in several keyboard textures. Collaborative teaching experience.  
(RE) Prerequisite(s): 340.

360 Piano Pedagogy III (3) Intermediate to advanced methods and materials related to the development of principals of learning.  
(RE) Prerequisite(s): 350.

370 Piano Pedagogy IV (3) Discussion of problems and experiences in teaching practicum. Observation of teaching of all ages. Overview of the business aspects of private teaching.  
(RE) Prerequisite(s): 360.

410 Organ Practicum (1) Improvisation, hymn playing, and accompanying on the organ.  
Repeatability: May be repeated. Maximum 3 hours.  
Recommended Background: Organ proficiency at the 200 level.

420 Piano Literature I (3) From 1750 to the middle 19th century.

430 Piano Literature II (3) Middle 19th century to the present.

460 The Organ and Its Literature I (3) Development of the organ and organ literature from the Middle Ages to approximately 1750. Problems of style and interpretation. Pedagogical literature and methods.  
(RE) Corequisite(s): Musicology 110.  
Registration Permission: Consent of instructor.

470 The Organ and Its Literature II (3) Development of the organ and organ literature from 1750 to the present. Problems of style and interpretation. Pedagogical literature and methods.  
(RE) Corequisite(s): Musicology 110.

480 Teaching Class Piano (3) Historical survey and evaluation of teaching materials and methodology for college and/or adult beginning piano classes with collateral teaching experience.  
Registration Permission: Consent of instructor.

485 Suzuki Piano Method I (2) Study of the philosophy, procedures, and literature of the Suzuki Piano Method Books 1 and 2.  
Registration Permission: Consent of instructor.

490 Internship (2) Opportunity for pedagogy students to gain experience in teaching beginning students under the supervision of experienced instructors.  
Contact Hour Distribution: Includes weekly discussion seminars.

491 Internship (2) Opportunity for pedagogy students to gain experience in teaching beginning students under the supervision of experienced instructors.  
Contact Hour Distribution: Includes weekly discussion seminars.

493 Independent Study (1-3)  
Repeatability: May be repeated. Maximum 30 hours.  
Registration Permission: Consent of instructor.

495 Suzuki Piano Method II (2) Study of procedures and literature of the Suzuki Piano Method Books 3 and above.  
(RE) Prerequisite(s): 485.

Music Performance (713)  
103 Flute (1-3)  
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.  
(DE) Prerequisite(s): Music General 101.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition and registration for ensemble appropriate to degree program.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

104 Flute (1-3)  
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 103.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

105 Oboe (1-3)  
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.  
(DE) Prerequisite(s): Music General 101.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition and registration for ensemble appropriate to degree program.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

106 Oboe (1-3)  
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.  
(RE) Corequisite(s): 105.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition and registration for ensemble appropriate to degree program.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

110 Bassoon (1-3)  
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.  
(DE) Prerequisite(s): Music General 101.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition and registration for ensemble appropriate to degree program, and C or higher in 110.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

111 Bassoon (1-3)  
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.  
(RE) Prerequisite(s): 110.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 111.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.
115 Clarinet (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(DE) Prerequisite(s): Music General 101.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition and registration for ensemble appropriate to degree program.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

116 Clarinet (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(RE) Prerequisite(s): 115.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 115.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

120 Saxophone (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(DE) Prerequisite(s): Music General 101.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition and registration for ensemble appropriate to degree program.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

121 Saxophone (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(RE) Prerequisite(s): 120.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 120.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

125 Horn (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(DE) Prerequisite(s): Music General 101.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition and registration for ensemble appropriate to degree program.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

126 Horn (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(RE) Prerequisite(s): 125.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

130 Trumpet (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(DE) Prerequisite(s): Music General 101.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition and registration for ensemble appropriate to degree program.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

131 Trumpet (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(RE) Prerequisite(s): 130.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 130.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

135 Trombone (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(RE) Prerequisite(s): Music General 101.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

136 Trombone (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(RE) Prerequisite(s): 135.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 135.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

140 Euphonium (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(DE) Prerequisite(s): Music General 101.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition and registration for ensemble appropriate to degree program.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

141 Euphonium (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(RE) Prerequisite(s): 140.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 140.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

145 Tuba (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(DE) Prerequisite(s): Music General 101.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition and registration for ensemble appropriate to degree program.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

146 Tuba (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(RE) Prerequisite(s): 145.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 145.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

150 Percussion (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(DE) Prerequisite(s): Music General 101.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition and registration for ensemble appropriate to degree program.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

151 Percussion (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(RE) Prerequisite(s): 150.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 150.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

155 Voice (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(DE) Prerequisite(s): Music General 101.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition and registration for ensemble appropriate to degree program.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

156 Voice (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(RE) Prerequisite(s): 155.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 155.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

160 Violin (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(DE) Prerequisite(s): Music General 101.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition and registration for ensemble appropriate to degree program.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

161 Violin (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(RE) Prerequisite(s): 160.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition and registration for ensemble appropriate to degree program.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.
165 Viola (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(DE) Prerequisite(s): Music General 101.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition and registration for ensemble appropriate to degree program.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

166 Viola (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(RE) Prerequisite(s): 165.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 165.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

170 Cello (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(DE) Prerequisite(s): Music General 101.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition and registration for ensemble appropriate to degree program.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

171 Cello (1-3)
 Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(RE) Prerequisite(s): 170.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 170.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

172 Electric Bass (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(DE) Prerequisite(s): Music General 101.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition and registration for ensemble appropriate to degree program.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

173 Electric Bass (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(RE) Prerequisite(s): 172.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 172.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

174 String Bass (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(DE) Prerequisite(s): Music General 101.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition and registration for ensemble appropriate to degree program.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

175 String Bass (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(RE) Prerequisite(s): 174.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 174.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

180 Piano (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(DE) Prerequisite(s): Music General 101.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition and registration for ensemble appropriate to degree program.

181 Piano (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(RE) Prerequisite(s): 180.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 180.

183 Guitar (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(DE) Prerequisite(s): Music General 101.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition and registration for ensemble appropriate to degree program.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

184 Guitar (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(RE) Prerequisite(s): 183.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 183.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

185 Harpsichord (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(DE) Prerequisite(s): Music General 101.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition and registration for ensemble appropriate to degree program.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

186 Harpsichord (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(RE) Prerequisite(s): 185.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 185.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

189 Organ (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(DE) Prerequisite(s): Music General 101.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition and registration for ensemble appropriate to degree program.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

190 Organ (1-3)
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.
(RE) Prerequisite(s): 189.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 189.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

203 Flute (1-3)
Repeatability: May be repeated by non-BM students. Maximum 8 hours.
(RE) Prerequisite(s): 104.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 104.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

204 Flute (1-3)
Repeatability: May be repeated by non-BM students. Maximum 8 hours.
(RE) Prerequisite(s): 203.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 203.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

205 Oboe (1-3)
Repeatability: May be repeated by non-BM students. Maximum 8 hours.
(RE) Prerequisite(s): 106.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 106.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

206 Oboe (1-3)
Repeatability: May be repeated by non-BM students. Maximum 8 hours.
(RE) Prerequisite(s): 205.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 205.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.
<table>
<thead>
<tr>
<th>COURSES OF INSTRUCTION</th>
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| 210 Bassoon (1-3)     | Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 111.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 111.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major. |
| 211 Bassoon (1-3)     | Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 210.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 210.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major. |
| 215 Clarinet (1-3)    | Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 116.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 116.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major. |
| 216 Clarinet (1-3)    | Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 215.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 215.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major. |
| 220 Saxophone (1-3)   | Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 121.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 121.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major. |
| 221 Saxophone (1-3)   | Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 220.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 220.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major. |
| 225 Horn (1-3)        | Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 126.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 126.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major. |
| 226 Horn (1-3)        | Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 225.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 225.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major. |
| 230 Trumpet (1-3)     | Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 131.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 131.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major. |
| 231 Trumpet (1-3)     | Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 230.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 230.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major. |
| 235 Trombone (1-3)    | Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 136.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 136.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major. |
| 236 Trombone (1-3)    | Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 235.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 235.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major. |
| 240 Euphonium (1-3)   | Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 141.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 141.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major. |
| 241 Euphonium (1-3)   | Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 240.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 240.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major. |
| 245 Tuba (1-3)        | Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 146.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 146.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major. |
| 246 Tuba (1-3)        | Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 245.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 245.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major. |
| 250 Percussion (1-3)  | Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 151.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 151.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major. |
| 251 Percussion (1-3)  | Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 250.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 250.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major. |
| 255 Voice (1-3)       | Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 156.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 156.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major. |
| 256 Voice (1-3)       | Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 255.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 255.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major. |
260 Violin (1-3)  
Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 161.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 161.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

261 Violin (1-3)  
Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 260.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 260.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

265 Viola (1-3)  
Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 166.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 166.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

266 Viola (1-3)  
Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 265.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 265.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

270 Cello (1-3)  
Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 171.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 171.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

271 Cello (1-3)  
Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 270.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 270.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

272 Electric Bass (1-3)  
Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 173.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 173.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

273 Electric Bass (1-3)  
Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 272.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 272.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

274 String Bass (1-3)  
Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 175.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 175.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

275 String Bass (1-3)  
Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 274.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 274.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

280 Piano (1-3)  
Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 181.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 181.

281 Piano (1-3)  
Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 280.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 280.

283 Guitar (1-3)  
Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 184.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 184.  
Registration Restriction(s): Bachelor of Music – music major/studio music and jazz concentration.

284 Guitar (1-3)  
Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 283.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 283.

285 Harpsichord (1-3)  
Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 186.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 186.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

286 Harpsichord (1-3)  
Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 285.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 285.

289 Organ (1-3)  
Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 190.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 190.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

290 Organ (1-3)  
Repeatability: May be repeated by non-BM students. Maximum 8 hours.  
(RE) Prerequisite(s): 289.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 289.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

294 Composition (1-3)  
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.  
(RE) Prerequisite(s): Music Theory 210 and Music Theory 230.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in Music Theory 210 and Music Theory 230.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

295 Composition (1-3)  
Repeatability: Not repeatable for credit. May be taken once for 1-3 hours.  
(RE) Prerequisite(s): 294.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 294.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.
303 Flute (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(Re) Prerequisite(s): 204.
(Re) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 204.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

304 Flute (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(Re) Prerequisite(s): 203.
(Re) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 304.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

305 Oboe (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(Re) Prerequisite(s): 206.
(Re) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 206.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

306 Oboe (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(Re) Prerequisite(s): 305.
(Re) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 306.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

310 Bassoon (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(Re) Prerequisite(s): 211.
(Re) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 211.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

311 Bassoon (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(Re) Prerequisite(s): 310.
(Re) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 310.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

315 Clarinet (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(Re) Prerequisite(s): 216.
(Re) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 216.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

316 Clarinet (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(Re) Prerequisite(s): 315.
(Re) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 315.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

320 Saxophone (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(Re) Prerequisite(s): 221.
(Re) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 221.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

321 Saxophone (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(Re) Prerequisite(s): 320.
(Re) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 320.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

325 Horn (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(Re) Prerequisite(s): 226.
(Re) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 226.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

326 Horn (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(Re) Prerequisite(s): 325.
(Re) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 325.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

330 Trumpet (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(Re) Prerequisite(s): 231.
(Re) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 231.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

331 Trumpet (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(Re) Prerequisite(s): 330.
(Re) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 330.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

335 Trombone (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(Re) Prerequisite(s): 236.
(Re) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 236.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

336 Trombone (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(Re) Prerequisite(s): 335.
(Re) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 335.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

340 Euphonium (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(Re) Prerequisite(s): 241.
(Re) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 241.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

341 Euphonium (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(Re) Prerequisite(s): 340.
(Re) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 340.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

345 Tuba (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(Re) Prerequisite(s): 246.
(Re) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 246.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

346 Tuba (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(Re) Prerequisite(s): 345.
(Re) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 345.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisite(s)</th>
<th>Corequisite(s)</th>
<th>Repeatability</th>
<th>Comment(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>350 Percussion (1-3)</td>
<td>Repeatability: May be repeated. Maximum 8 hours.</td>
<td>251.</td>
<td>Music General 200.</td>
<td>Requires audition, registration for ensemble appropriate to degree program, and C or higher in 251.</td>
<td>Requires audition, registration for ensemble appropriate to degree program, and C or higher in 251.</td>
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<tr>
<td>351 Percussion (1-3)</td>
<td>Repeatability: May be repeated. Maximum 8 hours.</td>
<td>350.</td>
<td>Music General 200.</td>
<td>Requires audition, registration for ensemble appropriate to degree program, and C or higher in 350.</td>
<td>Requires audition, registration for ensemble appropriate to degree program, and C or higher in 350.</td>
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<tr>
<td>355 Voice (1-3)</td>
<td>Repeatability: May be repeated. Maximum 8 hours.</td>
<td>256.</td>
<td>Music General 200.</td>
<td>Requires audition, registration for ensemble appropriate to degree program, and C or higher in 256.</td>
<td>Requires audition, registration for ensemble appropriate to degree program, and C or higher in 256.</td>
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<tr>
<td>356 Voice (1-3)</td>
<td>Repeatability: May be repeated. Maximum 8 hours.</td>
<td>355.</td>
<td>Music General 200.</td>
<td>Requires audition, registration for ensemble appropriate to degree program, and C or higher in 355.</td>
<td>Requires audition, registration for ensemble appropriate to degree program, and C or higher in 355.</td>
</tr>
<tr>
<td>360 Violin (1-3)</td>
<td>Repeatability: May be repeated. Maximum 8 hours.</td>
<td>261.</td>
<td>Music General 200.</td>
<td>Requires audition, registration for ensemble appropriate to degree program, and C or higher in 261.</td>
<td>Requires audition, registration for ensemble appropriate to degree program, and C or higher in 261.</td>
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<tr>
<td>361 Violin (1-3)</td>
<td>Repeatability: May be repeated. Maximum 8 hours.</td>
<td>360.</td>
<td>Music General 200.</td>
<td>Requires audition, registration for ensemble appropriate to degree program, and C or higher in 360.</td>
<td>Requires audition, registration for ensemble appropriate to degree program, and C or higher in 360.</td>
</tr>
<tr>
<td>365 Viola (1-3)</td>
<td>Repeatability: May be repeated. Maximum 8 hours.</td>
<td>266.</td>
<td>Music General 200.</td>
<td>Requires audition, registration for ensemble appropriate to degree program, and C or higher in 266.</td>
<td>Requires audition, registration for ensemble appropriate to degree program, and C or higher in 266.</td>
</tr>
<tr>
<td>366 Viola (1-3)</td>
<td>Repeatability: May be repeated. Maximum 8 hours.</td>
<td>365.</td>
<td>Music General 200.</td>
<td>Requires audition, registration for ensemble appropriate to degree program, and C or higher in 365.</td>
<td>Requires audition, registration for ensemble appropriate to degree program, and C or higher in 365.</td>
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<tr>
<td>370 Cello (1-3)</td>
<td>Repeatability: May be repeated. Maximum 8 hours.</td>
<td>271.</td>
<td>Music General 200.</td>
<td>Requires audition, registration for ensemble appropriate to degree program, and C or higher in 271.</td>
<td>Requires audition, registration for ensemble appropriate to degree program, and C or higher in 271.</td>
</tr>
<tr>
<td>371 Cello (1-3)</td>
<td>Repeatability: May be repeated. Maximum 8 hours.</td>
<td>370.</td>
<td>Music General 200.</td>
<td>Requires audition, registration for ensemble appropriate to degree program, and C or higher in 370.</td>
<td>Requires audition, registration for ensemble appropriate to degree program, and C or higher in 370.</td>
</tr>
</tbody>
</table>
389 Organ (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 290.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 290.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

390 Organ (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 389.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 389.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

394 Composition (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 295.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 295.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

395 Composition (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 394.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 394.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

396 Composition with Electronic Media
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): Music Theory 210 and Music Theory 230.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in Music Theory 210 and Music Theory 230.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

403 Flute (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 304.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 304.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

404 Flute (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 403.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 403.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

405 Oboe (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 306.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 306.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

406 Oboe (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 405.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 405.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

410 Bassoon (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 311.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 311.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

411 Bassoon (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 410.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 410.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

415 Clarinet (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 389.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 316.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

416 Clarinet (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 415.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 415.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

420 Saxophone (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 321.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 321.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

421 Saxophone (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 420.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 420.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

425 Horn (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 326.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 326.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

426 Horn (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 425.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 425.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

430 Trumpet (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 331.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 331.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

431 Trumpet (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 430.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 430.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

435 Trombone (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 336.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 336.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.
436 Trombone (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 435.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 435.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

440 Euphonium (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 341.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 341.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

441 Euphonium (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 440.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 440.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

445 Tuba (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 346.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 346.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

446 Tuba (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 445.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 445.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

450 Percussion (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 351.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 351.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

451 Percussion (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 450.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 450.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

455 Voice (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 356.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 356.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

456 Voice (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 455.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 455.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

460 Violin (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 361.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 361.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

461 Violin (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 460.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 460.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

465 Viola (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 366.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 366.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

466 Viola (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 465.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 465.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

470 Cello (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 371.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 371.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

471 Cello (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 470.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 470.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

472 Electric Bass (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 373.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 373.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

473 Electric Bass (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 472.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 472.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

474 String Bass (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 375.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 375.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

475 String Bass (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 474.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 474.
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

480 Piano (1-3)
Repeatability: May be repeated. Maximum 8 hours.
(RE) Prerequisite(s): 381.
(RE) Corequisite(s): Music General 200.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 381.
481 Piano (1-3)  
Repeatability: May be repeated. Maximum 8 hours.  
(RE) Prerequisite(s): 480.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 480.

483 Guitar (1-3)  
Repeatability: May be repeated. Maximum 8 hours.  
(RE) Prerequisite(s): 384.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 384.  
Registration Restriction(s): Bachelor of Music – music major/studio music and jazz concentration.

484 Guitar (1-3)  
Repeatability: May be repeated. Maximum 8 hours.  
(RE) Prerequisite(s): 483.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 483.  
Registration Restriction(s): Bachelor of Music – music major/studio music and jazz concentration.

486 Harpsichord (1-3)  
Repeatability: May be repeated. Maximum 8 hours.  
(RE) Prerequisite(s): 485.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 485.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

489 Organ (1-3)  
Repeatability: May be repeated. Maximum 8 hours.  
(RE) Prerequisite(s): 390.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 390.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

490 Organ (1-3)  
Repeatability: May be repeated. Maximum 8 hours.  
(RE) Prerequisite(s): 489.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 489.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

493 Independent Study (1-3)  
Repeatability: May be repeated. Maximum 30 hours.  
Registration Permission: Consent of instructor.

494 Composition (1-3)  
Repeatability: May be repeated. Maximum 8 hours.  
(RE) Prerequisite(s): 394.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 394.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

495 Composition (1-3)  
Repeatability: May be repeated. Maximum 8 hours.  
(RE) Prerequisite(s): 395.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 395.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

496 Composition with Electronic Media (1-3)  
Repeatability: May be repeated. Maximum 8 hours.  
(RE) Prerequisite(s): 396.  
(RE) Corequisite(s): Music General 200.  
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 396.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

499 Improvisation (1-2)  
Repeatability: May be repeated. Maximum 4 times.  
Credit Restriction(s): May not be used to satisfy applied music requirement.  
Registration Permission: Consent of instructor.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

Music Technology (717)

290 Sound Recording Techniques (3)  
Theory and applications of tape recording's sound reproduction and reinforcement systems. Topics include room acoustics, audio measurements, microphones, studio and real-time processing, noise reduction, mixing, editing, monitors, system wiring, and maintenance. (QR)

340 Introduction to Computer Music Transcription (3)  
Exercise in notation, playback, and publishing incorporating elements of word processing, graphic design, sequencing, and page layout. Study of Music Instrument Digital Interface protocol as it applies to computer music work station design.  
Registration Permission: Consent of instructor.

390 Sound Synthesis Techniques (3)  
Studio and real-time applications of synthesizers. Historical background, theoretical concepts, equipment interface and usage, analysis of sounds and compositions.  
(DE) Prerequisite(s): 290.

493 Independent Study (1-3)  
Repeatability: May be repeated. Maximum 30 hours.  
Registration Permission: Consent of instructor.

Music Theory (714)

100 Fundamentals of Music (3)  
Theory and practice of basic elements of music.  
Comment(s): For non-music majors.

105 Introduction to Music Theory (3)  
Materials of music, including scales and modes, key signatures, intervals, triads, diatonic analysis, and an introduction to part-writing.  
Registration Restriction(s): Bachelor of Music – music major or Bachelor of Arts – music major.

110 Theory I (3)  
Materials of music, including basic elements through non-chord tones and 6/4 chords. Exercises in analysis, composition, and improvisation of music with emphasis on common practice.  
Recommended Background: Successful completion of music theory placement test.

120 Theory II (3)  
Materials of music through secondary dominants and modulation. Exercises in analysis, composition, and improvisation of music with emphasis on common practice.  
(RE) Prerequisite(s): 110.  
Comment(s): Grade of C or higher in 110 is required.

130 Ear Training I (1)  
Development of proficiency in sight singing short melodies and identifying melodic intervals, scales, triads, and the dictation of short diatonic melodic models.  
Contact Hour Distribution: Includes lab hours.  
Grading Restriction: A, B, C, No Credit grading.  
(RE) Prerequisite(s): 100 or 105.  
Comment(s): Grade of C or higher in 100 or 105 is required.

140 Ear Training II (1)  
Development of proficiency in sight singing longer melodies and identifying harmonic intervals, triads, cadence types, and the dictation of longer diatonic melodic models.  
Contact Hour Distribution: Includes lab hours.  
(RE) Prerequisite(s): 130.  
Comment(s): Grade of C or higher in 130 is required.

210 Theory III (3)  
Materials of music through chromatic harmony and modulation. Exercises in analysis, composition, and improvisation of music with emphasis on common practice.  
(RE) Prerequisite(s): 120.  
Comment(s): Grade of C or higher in 120 is required.

220 Theory IV (3)  
Materials of music from the dissolution of functional harmony to contemporary compositional techniques. Exercises in analysis, composition, and improvisation of music.  
(RE) Prerequisite(s): 210.  
Comment(s): Grade of C or higher in 210 is required.

230 Advanced Ear Training III (1)  
Development of proficiency in sight singing melodies, and identifying seventh chords. Dictation of diatonic harmonic progressions and diatonic melodic models.  
Contact Hour Distribution: Includes lab hours.  
(RE) Prerequisite(s): 140.  
Comment(s): Grade of C or higher in 140 is required.

240 Advanced Ear Training IV (1)  
Development of proficiency in sight singing melodies. Dictation of diatonic harmonic progressions and melodic models.  
Contact Hour Distribution: Includes lab hours.  
(RE) Prerequisite(s): 230.  
Comment(s): Grade of C or higher in 230 is required.
310 Form and Analysis (3) Study and practice in analysis of forms of music from smallest structural units to large compound forms. (RE) Prerequisite(s): 210 and 240.

320 Instrumentation (2) Basic techniques in scoring for voice, brass, woodwind and string choirs, and percussion. (RE) Prerequisite(s): 210 and 230. Comment(s): For students in the studio music and jazz and music education concentrations.

400 Survey of Music Theory (3) Emphasis on harmonic practice of Baroque, Classic, and Romantic periods. Exercises in writing and analysis. Comment(s): Recommended as a review course for graduate students. Registration Permission: Consent of instructor.

410 Ear Training Review (1) Review and application of harmonic and melodic dictation skills. Grading Restriction: Satisfactory/No Credit grading only. Recommended Background: 240. Comment(s): For graduate and advanced undergraduate students. Registration Permission: Consent of instructor.

420 Orchestration (3) Advanced techniques in instrumental writing with emphasis on scoring for the concert orchestra. (RE) Prerequisite(s): 210 and 230. Comment(s): For students in the theory/composition concentration.

430 Counterpoint I (3) Study of species counterpoint in modal and tonal styles with emphasis on works of Palestrina and J.S. Bach. (RE) Prerequisite(s): 210 and 230.

440 Counterpoint II (3) Writing of contrapuntal forms of the 18th century and fugue analysis of works from the 18th through the 20th centuries. (RE) Prerequisite(s): 430.

450 Choral Arranging (2) Analysis of scores and writing of arrangements for choruses. (RE) Prerequisite(s): 210 and 240.

493 Independent Study in Music Theory (1-15) Repeatability: May be repeated. Maximum 15 hours. Registration Permission: Consent of department head.

Music Voice (715)

110 Class Voice I (1) Development of basic vocal skills. Repeatability: May be repeated. Maximum 2 hours. Registration Permission: Consent of instructor.

230 Acting for Singers (1) Advanced work on song presentation and interpretation; scene study and characterization. Repeatability: May be repeated. Maximum 4 hours. Registration Permission: Consent of instructor.


250 Diction II (2) Sounds by phonetic symbols. Opera and art songs used for examples. Emphasis placed on German, French, and Latin diction. Performance practice.

330 Opera Production (1-3) Supervised work on opera productions. Repeatability: May be repeated. Maximum 12 hours. Registration Permission: Consent of instructor.

410 Song Literature I (2) German songs.

420 Song Literature II (2) French, Italian, Russian, Scandinavian, Czechoslovakian, British, and American art songs.


450 Pedagogy I (2) Concepts and approaches to teaching singing, past and present, for all ages of voices. Registration Permission: Consent of instructor.

460 Pedagogy II (1) Vocal teaching materials. Includes collateral teaching experiences. (RE) Prerequisite(s): 450.

493 Independent Study (1-3) Repeatability: May be repeated. Maximum 30 hours. Registration Permission: Consent of instructor.

Musicology (706)

110 Introduction to Music in Western Culture (3) The study of style periods of Western European art music and related issues of cultural and social history. Develops listening skills and ability to respond to music articulately. Writing-emphasis course. (AH) Credit Restriction: Students who receive a grade of C or better in 200 may not receive credit for 110.

115 Music in the United States (3) Explores musical traditions of the United States. Writing-emphasis course. (AH)

120 History of Rock (3) Study and appreciation of rock music, its origins in blues and rock and roll, and its development and cultural dimensions to the present. Writing-emphasis course. (AH)

125 Jazz in American Culture (3) The historical study of jazz as part of American culture, including its styles, key performers, and musical practices. Writing-emphasis course. (AH)

200 Introduction to Music Literature (3) Basic forms of music and accepted masterworks through chronological approach. Comment(s): For music majors and minors only.

210 History of Western Music, Ancient to the Baroque (3) Historical study of musical styles, practices, theories, and context of European art music to 1750. Develops skills in independent research, critical thinking, and expository writing. Writing-emphasis course. (AH) (WC) (RE) Prerequisite(s): 110. Registration Permission: Consent of instructor.

220 History of Western Music, Classical to the Present (3) Historical study of musical styles, practices, theories, and context of European art music from 1750 to present. Develops skills in independent research, critical thinking, and expository writing. Writing-emphasis course. (AH) (RE) Prerequisite(s): 110. Registration Permission: Consent of instructor.

290 Soundscapes: Exploring Music in a Changing World (3) An introduction to music within expressive culture and as a part of peoples' daily lives around the world. Focuses on music as sound, its role in concepts of identity, migration and global social processes, personal and community memory, and politics and power. (AH)

310 Introduction to African-American Music (3) History of African music, blues, gospel music, and jazz with emphasis on black artists and their contributions. (Same as Africana Studies 310.)

330 Women in Music (3) Interdisciplinary survey of music as a gendered construct in varying cultural contexts, including western European art music, American popular music, and others. Explores gendered roles in composition, performance, and social and musical institutions from the point of view of historical, cultural, feminist, and queer interpretations. (Same as Women’s Studies 330.) (WC)

340 Contemporary Trends in American Church Music I (2) The history and analysis of popular, contemporary sacred music with an emphasis on theory and keyboard harmony. (RE) Prerequisite(s): Music Theory 220.

341 Contemporary Trends in American Church Music II (2) Continuation of the history and analysis of popular, contemporary sacred music with an emphasis on composition and arranging. (RE) Prerequisite(s): 340.

350 History of Jazz (3) Origin, development, and styles of jazz music and its exponents. Cultivation of special listening techniques. Writing-emphasis course.

380 Music in World Cultures (3) Examines music from an ethnomusicalological perspective focusing on musical performance and the interrelationships of music, culture, and daily life. The course surveys music from a variety of cultures through a series of case studies. (WC) (RE) Prerequisite(s): 210 and 220.

400 Music History Survey (3) Condensed survey of the history of western European musical traditions from the medieval era to the present, including socio-political events that shape musical practice. Explores musical genres and styles, as well as key themes in musicological research. Recommended Background: 100-level musicology course. Comment(s): Recommended as a review course for graduate students. Does not count for graduate credit.

410 Studies in Genre (3) Historical, cultural, analytical, and musicological issues related to a single musical genre, style, or repertory. Topics vary. Repeatability. May be repeated. Maximum 6 hours. Recommended Background: 100-level musicology course.
420 History of Opera (3) The development of opera from its inception to the present. Readings and discussion focus on an understanding of the historical trajectory of opera, both as a musico-theatrical work and as a cultural practice.
Recommended Background: 100-level musicology course.
Registration Permission: Consent of instructor.

430 History of the Symphony (3) Overview of orchestral repertories from 1600 to the present.
Recommended Background: 100-level musicology course.
Registration Permission: Consent of instructor.

450 Composer Seminar (3) Biographical, historical, and cultural study of a composer or a group of related composers. Topics vary.
Repeatability: May be repeated. Maximum 6 hours.
Recommended Background: 100-level musicology course.

460 Music Aesthetics (3) Nature of music and musical experience, sense perception and emotions, music, and the role of artist in society. Aesthetic viewpoint of individuals and historical eras through selected writings. Writing-emphasis course.
Recommended Background: 100-level musicology course.

480 Music in Christian Worship (3) Hymnody, liturgies, and liturgical music.
Recommended Background: 100-level musicology course.

493 Independent Study (1-15)
Repeatability: May be repeated. Maximum 15 hours.
Registration Permission: Consent of department head.

Nuclear Engineering (716)

200 Introduction to Nuclear and Radiological Engineering (1) Topics related to nuclear and radiological engineering.
Grading Restriction: Satisfactory/No Credit grading only.

203 Thermodynamics I (3) First law analysis of open and closed systems. Properties of ideal gases and real fluids. Introduction to second law and concept of entropy. Rankine cycle.
(RE) Prerequisite(s): Mathematics 142.

301 Fundamentals of Nuclear and Radiological Engineering (3) Nuclear systems, radiation interactions and decay, health physics, cross sections, basic nuclear reactor theory concepts, and introduction to FORTRAN programming.
(RE) Prerequisite(s): Physics 232 and Mathematics 231.

304 Nuclear and Radiological Engineering Laboratory I (3) Radiation detection and counting instrumentation, counting statistics, half-life and decay schemes, gamma spectroscopy, and heat transfer experiments. (WC)
(DE) Prerequisite(s): 342.
(RE) Corequisite(s): 470.

(DE) Prerequisite(s): 203 or Mechanical Engineering 331.

351 Nuclear System Dynamics and Control (3) System modeling and time-domain response, transfer functions, frequency-domain response, stability, state-space methods, and control design. Nuclear reactor kinetics, nodal modeling of core heat transfer, reactor control systems, and nuclear plant transient response are discussed. System simulation and control using PC-based software and toolboxes.
(RE) Prerequisite(s): 351.

360 Reactor Systems and Safety (3) Safety and operating limits of nuclear steam supply system components. NRC regulations. Accident analysis and mitigation.
(RE) Prerequisite(s): 342.

400 Senior Seminar (1) Current topics related to nuclear and radiological engineering including ethics, contemporary issues, and commitment to life-long learning. (OC)
Grading Restriction: Satisfactory/No Credit grading only.
Registration Restriction(s): Minimum student level – senior.

403 Nuclear and Radiological Engineering Laboratory II (3) Cross section measurements, diffusion properties of neutrons, shielding, dynamics and controls, alpha and beta spectroscopy, radiation fields and dosimetry. (WC)
(RE) Prerequisite(s): 304.

404 Nuclear Fuel Cycle (3) Topics relative to nuclear fuel cycle including, mining, milling, fabrication, in-core management, reprocessing, waste disposal, Regulatory and radiation health issues and requirements.
(RE) Prerequisite(s): 470.

406 Radiation Shielding (3) Types of radiation sources, fundamentals of gamma ray and neutron attenuation, biological effects, approximate methods of shield design, discrete ordinates, and Monte Carlo.
(RE) Prerequisite(s): Physics 232.

(RE) Prerequisite(s): 301.

431 Radiation Protection (3) External and internal dosimetry, biological effects of radiation, radiation detection, and radiation risk assessment.
(RE) Prerequisite(s): 301.

(RE) Prerequisite(s): 301.

472 Nuclear System Design (4) First order design and analysis of a nuclear system. Interface with nonnuclear aspects of system design, including system reliability and economics. Class project.
(RE) Prerequisite(s): 470.

483 Introduction to Reliability Engineering (3) Probabilistic failure models and parameter estimation (maximum likelihood, Bayes techniques). Model identification and comparison, accelerated life tests, failure prediction, system reliability, preventive maintenance, and warranties. (Same as Chemical Engineering 483; Industrial Engineering 483; Mechanical Engineering 483.)
Registration Restriction(s): Minimum student level – senior.

484 Introduction to Maintainability Engineering (3) Principles of maintainability and reliability engineering and maintenance management. Topics include information extraction from machinery measurements, rotating machinery diagnostics, nondestructive testing, life prediction, failure models, lubrication oil analysis, establishing a predictive maintenance program, and computerized maintenance management systems. (Same as Chemical Engineering 484; Industrial Engineering 484; Materials Science and Engineering 484; Mechanical Engineering 484.)
Registration Restriction(s): Minimum student level – senior.
Registration Permission: Consent of instructor.

494 Special Topics in Nuclear Engineering (3) Problems related to recent developments and practice.
Repeatability: May be repeated. Maximum 6 hours.
Registration Restriction(s): Minimum student level – senior.
Registration Permission: Consent of instructor.

495 Special Topics in Radiological Engineering (3) Problems related to recent developments and practice.
Repeatability: May be repeated. Maximum 6 hours.
Registration Restriction(s): Minimum student level – senior.

498 Research (1-3) Research related to recent developments in nuclear and radiological engineering.
Grading Restriction: Satisfactory/No Credit grading only.
Repeatability: May be repeated. Maximum 3 hours.

Nuclear Medicine Technology (718)

410 Physics for Nuclear Medicine I (3) Nuclear physics, mathematics, and statistics. Survey of historic and current concepts in atomic and nuclear structure, interrelationships between matter and energy, nuclear reactions, nuclear stability, production of radionuclides, radionuclide generators, decay schemes, and charts used in nuclide identification and behavior prediction. Mathematics and statistics topics include basic arithmetic theories, mathematical manipulations, and applied technical mathematics for use in radio active decay equations, dose calculations and concentration, volume and shielding determinations. Graphing, counting statistics, and other physical and chemical applications of mathematics to nuclear medicine are included.
Comment(s): May not be substituted for Physics 471 or 472.
Registration Restriction(s): Pre-professional programs major/nuclear medicine technology concentration.

411 Nuclear Instrumentation (3) Course concerns non-imaging, imaging, and instrument quality assurance. Non-imaging topics include basic radiation detectors, their applications, functions, and limitations with overview of basic electronics, gas-filled detectors, statistics and counting, solid and liquid scintillation detection systems, semiconductor and instrument stabilization, and quality control. Imaging topics are instrumentation of imaging devices, introduction of basic functions, and application of principles, and quality control. Quality assurance unit emphasizes function and maintenance requirements of nuclear instrumentation, radiation safety practices, and statistical analysis of quality control data.
Registration Restriction(s): Pre-professional programs major/nuclear medicine technology concentration.
412 Radiopharmacy (2) Emphasis on basic chemistry and radiochemistry in nuclear radiopharmacy. Topics include radiopharmaceutical preparation and quality assurance, radionuclide production, and basic photographic film chemistry. Kinetics, biodistribution, and mechanisms of localization are also included, plus guidelines and regulations governing radiopharmacy management and operation.

Registration Restriction(s): Pre-professional programs major/nuclear medicine technology concentration.

415 Physics for Nuclear Medicine II (3) Continuation of 410 with focus on radiobiology and radiation safety. Radiobiology topics include interactions of radiation and matter, cellular and systemic responses to radiation, early and late somatic and genetic effects, biological effects of low level radiation, critical organ and dose calculations, and benefit versus risk factor. Radiation safety topics include exposure terminology, dose limit recommendations, ALARA philosophy, federal and state regulations, radiation monitoring equipment, and methods and techniques for safe practice of nuclear medicine.

Registration Restriction(s): Pre-professional programs major/nuclear medicine technology concentration.

420 Clinical Nuclear Medicine I (4) Theories and applications of nuclear medicine methodologies. Patient care, central nervous system, endocrine system, respiratory system, and digestive system.

Registration Restriction(s): Pre-professional programs major/nuclear medicine technology concentration.

425 Computer Applications in Nuclear Medicine (3) Computer systems, applications, and components in quantitation in nuclear medicine. Topics include acquisition modes and limitations, image processing modes and limitations, and image quantitation with some attention to machine and language architecture and numbering systems.

Registration Restriction(s): Pre-professional programs major/nuclear medicine technology concentration.

430 Clinical Nuclear Medicine II (4) Theories and applications of nuclear medicine methodologies. Hepatic and hepatobiliary system, genitourinary system, musculoskeletal system, non-organ/tumor/inflammatory imaging, cardiovascular imaging, and non-imaging nuclear medicine.

Registration Restriction(s): Pre-professional programs major/nuclear medicine technology concentration.

440 Clinical Nuclear Medicine III (4) Theories and applications of nuclear medicine methodologies. Single photon emission tomography, positron emission tomography, clinical quality assurance, pediatric nuclear medicine, radionuclide therapy, and management and administration of nuclear medicine programs.

Registration Restriction(s): Pre-professional programs major/nuclear medicine technology concentration.

450 Clinical Practicum I (4) Clinical instruction in routine nuclear medicine procedures conducted at UTMCK and other clinical sites. Clinical instruction activities in imaging, instrumentation, radiotherapy, dose administration, radiation safety and protection, non-imaging procedures, patient care and preparation, computer applications, radionuclide therapy, and basic administrative and management procedures.

Registration Restriction(s): Pre-professional programs major/nuclear medicine technology concentration.

460 Clinical Practicum II (6) Clinical instruction in routine nuclear medicine procedures conducted at UTMCK and other clinical sites. Clinical instruction activities in imaging, instrumentation, radiotherapy, dose administration, radiation safety and protection, non-imaging procedures, patient care and preparation, computer applications, radionuclide therapy, and basic administrative and management procedures.

Registration Restriction(s): Pre-professional programs major/nuclear medicine technology concentration.

470 Clinical Practicum III (6) Clinical instruction in routine nuclear medicine procedures conducted at UTMCK and other clinical sites. Clinical instruction activities, and imaging, instrumentation, radiotherapy, dose administration, radiation safety and protection, non-imaging procedures, patient care and preparation, computer applications, radionuclide therapy, and basic administrative and management procedures.

Registration Restriction(s): Pre-professional programs major/nuclear medicine technology concentration.

475 Nuclear Medicine Registry Review (2) Preparation for National Registry Examination with special emphasis on film interpretation and reporting in technical critique sessions.

Registration Restriction(s): Pre-professional programs major/nuclear medicine technology concentration.

Nursing (720)

201 Introduction to Nursing (2) History, philosophy, and scope of nursing practice with emphasis on the holism of persons, standards for professional practice, and an overview of the nursing process and nursing theories.

Registration Restriction(s): Lower-division students - College of Nursing; minimum student level - sophomore.

305 Transitions to Professional Nursing (4) Builds on the knowledge base and experience of RNs in transition to professional nursing. Focuses on the conceptual foundations of nursing practice and issues in health care delivery.

Contact Hour Distribution: 3 lecture and 1 lab.

Comment(s): For RNs only.

Registration Restriction(s): Bachelor of Science in Nursing – nursing major.

310 Essentials of Nursing Practice (3) History, philosophy, and scope of nursing practice with emphasis on the holism of persons, standards for professional practice, assessing for health risk factors, patient centered care, therapeutic interventions, and critical thinking as key elements in the use of the nursing process. Clinical laboratory experiences provide opportunity for the application of these processes in the care of adults in selected health care settings.

Contact Hour Distribution: 2 didactic and 1 clinical.

(OC) Corequisite(s): 319 and 333.

Registration Restriction(s): Bachelor of Science in Nursing – nursing major.

319 Pathophysiology of Health Deviations (4) Application of physiological concepts to health promotion, maintenance, deviations, and restoration. Introduction to psychoneuroimmunology. Emphasis on interactions of body systems, and impact of disease processes on the human body.

Registration Restriction(s): Bachelor of Science in Nursing – nursing major or Master of Science in Nursing – nursing major; minimum student level – junior.

333 Health Assessment (3) Theory and laboratory practice in the systematic assessment of health status including history taking and performance of physical assessment skills.

Contact Hour Distribution: 2 lecture and 1 lab.

Comment(s): For RNs, this course is prerequisite to any clinical course beyond 305.

Registration Restriction(s): Bachelor of Science in Nursing – nursing major or Master of Science in Nursing – nursing major; minimum student level – junior.

341 Transcultural Nursing (2) Focus on cultural perspectives in health and illness. Discussion of diversity in and influence of culture on health promotion, maintenance, and restoration across the lifespan and in selected nursing specialties, ethnic populations, and religious denominations.

Registration Restriction(s): Bachelor of Science in Nursing – nursing major; minimum student level – junior.

342 Transcultural Issues (2) Focus on cultural perspectives in health and illness. Discussion of diversity in and influence of culture on health promotion, maintenance, and restoration across the lifespan and in selected nursing specialties, ethnic populations, and religious denominations.

Registration Restriction(s): Bachelor of Science in Nursing – nursing major; minimum student level – junior.


(OC) Prerequisite(s): Chemistry 110 and Nursing 319.

Contact Hour Distribution: 3 lecture and 1 lab.

(OC) Corequisite(s): 311 and 319.

(OC) Corequisite(s): 333.

(OC) Corequisite(s): 351.

Comment(s): For non-nurse MSN students only.

361 Health Maintenance and Restoration: Adult (5) Focus on health maintenance and restoration of adults experiencing commonly occurring acute or chronic illness. Presentation of illnesses and critical indicators of underlying conditions will be identified for the younger adult as compared to the older adult.

Contact Hour Distribution: 3 lecture and 2 lab.

(OC) Prerequisite(s): 311 and 319.

(OC) Prerequisite(s): 333.

(OC) Corequisite(s): 351.

Comment(s): RNs are exempt from 311.

Registration Restriction(s): Bachelor of Science in Nursing – nursing major or Master of Science in Nursing – nursing major.
381 Professional Development in Nursing (2) Emphasis on development of personal attributes necessary for professional practice such as: emotional intelligence, caring, critical thinking, decision making, problem solving, motivation and management of time, stress, and anger. The course content also includes theories and principles of interpersonal capacities and strategies used in any health care setting such as communication, delegation, and management of teams, conflicts, and changes. 

(RE) Prerequisite(s): 311 and 341.
Registration Restriction(s): Bachelor of Science in Nursing – nursing major.

382 Health Promotion and Maintenance in the Community (5) Focus on nursing care of at-risk populations in the community and national health promotion objectives. Analysis of community health needs. Design and implementation of nursing interventions to promote and maintain health.
Contact Hour Distribution: 3 lecture and 2 lab.
(RE) Prerequisite(s): 311 and 319.
(DE) Prerequisite(s): 333.
(Re) Corequisite(s): 351 and 361.
Registration Restriction(s): Bachelor of Science in Nursing – nursing major.

400 Aging and Society (3) An examination of the health and social effects of longevity and the aging process including societal and personal attitudes about old age. Resources, trends, issues, and potentials of aging are explored. Volunteer community service, a service learning component, is required.
Comment(s): Open to undergraduate students in all colleges.

402 Gerontology Practicum (3) Off-campus supervised experience in gerontology. Offered as part of the gerontology minor.
Comment(s): Open to students in all colleges.
Registration Permission: Consent of instructor.

403 Health Promotion and Maintenance in Childbearing Families (5) Nursing practice for promotion, maintenance, and restoration of reproductive health. Emphasis on therapeutic relationships with childbearing families for long-term positive impact on health care and lifestyle. (WC)
Contact Hour Distribution: 3 lecture and 2 lab.
(RE) Prerequisite(s): 381 and 382.
(DE) Prerequisite(s) or Corequisite(s): 406.
Registration Restriction(s): Bachelor of Science in Nursing – nursing major.

404 Health Promotion, Maintenance, and Restoration in Children, Adolescents, and their Families (5) A family-centered approach to the nursing care of children and adolescents. The nursing process is used as the basis for promoting, maintaining, and restoring health and facilitating adaptation in the child-rearing family. Clinical experiences in selected agencies provide experience with children and adolescents in both community and acute care facilities.
Contact Hour Distribution: 3 lecture and 2 lab.
(RE) Prerequisite(s): 361 and 382.
(DE) Prerequisite(s) or Corequisite(s): 406.
Registration Restriction(s): Bachelor of Science in Nursing – nursing major.

406 Pharmacology II (2) Continuation of 351 with emphasis on nursing responsibilities in the safe and effective use of therapeutic drugs, recognition and reporting of side effects, and critical aspects of patient education.
(RE) Prerequisite(s): 351.

409 Genetic Disorders, Vulnerable Families, and Health Advocacy (3) Examination of health and social implications of Human Genome Project with an emphasis on genetic disorders that result in chronic illness or disability. Strategies for building collaborative partnerships to effect health advocacy for vulnerable populations.
Registration Restriction(s): Bachelor of Science in Nursing – nursing major or Master of Science in Nursing – nursing major; minimum student level – junior.

415 Nursing the Childbearing Family (4) Application of the nursing process to individuals, families, and groups in the childbearing/rearing stages of development. Clinical experiences are provided in a variety of hospital and community settings.
Contact Hour Distribution: 2 lecture and 2 lab.
Comment(s): For non-nurse MSN students.
Registration Restriction(s): Master of Science in Nursing – nursing major.

421 Mental Health Maintenance and Restoration (5) Nursing to support and care for persons with mental health needs. Emphasis on the self as therapeutic agent with individuals, groups, and families. Developing nursing strategies for mental health maintenance and restoration.
Contact Hour Distribution: 3 lecture and 2 lab.
(RE) Prerequisite(s): 361 and 382.
(DE) Prerequisite(s) or Corequisite(s): 406.
Registration Restriction(s): Bachelor of Science in Nursing – nursing major or Master of Science in Nursing – nursing major.

432 Health Promotion and Maintenance Strategies in the Community (3) Focus on nursing care of at risk individuals, communities, and populations. Assessment of sociocultural values, environmental factors, health education, and community resources. Design of interventions to promote and maintain health through the use of epidemiological process. Clinical practicum experience in the community health setting.
Contact Hour Distribution: 2 lecture and 1 lab.
Comment(s): For non-nurse MSN students only or permission of instructor.
Registration Restriction(s): Master of Science in Nursing – nursing major.

444 Care of Children, Adolescents, and their Families (3) A family-centered approach to the nursing care of children and adolescents. The nursing process is used as the basis for promoting, maintaining, and restoring health and facilitating adaptation in the child-rearing family.
Contact Hour Distribution: 2 lecture and 1 lab.
(RE) Prerequisite(s): 361.
Comment(s): For non-nurse MSN students only.
Registration Restriction(s): Master of Science in Nursing – nursing major.

451 Interpersonal Management Skills in Nursing (2) Focus on concepts and strategies for leadership as a professional nurse. Application of common workplace issues that affect nursing practice.
(RE) Prerequisite(s): 381.
Registration Restriction(s): Bachelor of Science in Nursing – nursing major; minimum student level – senior.

452 Professional and Workplace Issues (1) Focus on nursing ethics and moral development. Use of scenarios from everyday practice.
(RE) Prerequisite(s): 451.
Registration Restriction(s): Bachelor of Science in Nursing – nursing major; minimum student level – senior.

454 Professional Leadership Issues (2) Survey of issues and trends that influence the practice of professional nursing. Focus on concepts and strategies for leadership as a professional nurse. Emphasis on personal development and interpersonal skills. (OC)
Recommended Background: RN status or MSN.
Registration Restriction(s): Bachelor of Science in Nursing – nursing major or Master of Science in Nursing – nursing major.

Contact Hour Distribution: 2 lecture and 2 lab.
(RE) Prerequisite(s): 361 and 382.
(DE) Prerequisite(s) or Corequisite(s): 406.
Registration Restriction(s): Bachelor of Science in Nursing – nursing major or Master of Science in Nursing – nursing major.

470 Special Topics (1-3) In-depth study of selected nursing topics, problems, or issues not covered in other courses. Topics determined by faculty and student interest.
Repeatability: May be repeated. Maximum 6 hours.
Registration Restriction(s): Bachelor of Science in Nursing – nursing major or Master of Science in Nursing – nursing major.
Registration Permission: Consent of instructor.

471 Nursing Research (3) Introduction to research, design, and methodologies. Critique of selected research studies for application to evidence-based nursing practice.
Comment(s): Also open to RNs.
Registration Restriction(s): Bachelor of Science in Nursing – nursing major; minimum student level – senior.

477 Honors Nursing Research (3) Introduction to research design and methodologies. Critique of nursing research studies for application to evidence-based nursing practice. Includes a substantial, scholarly senior project to be conducted with approval of an advisor within the department. Students in the Chancellor’s Honors Program are required to share their senior project in a public forum.
Registration Restriction(s): Nursing major; minimum student level – senior; qualification – admission to Chancellor’s Honors Program.

490 Specialty Preceptorship (4) In-depth practicum to develop knowledge and skill in a selected specialty area under direct guidance of clinical preceptor. Knowledge development in specialty area under guidance of faculty.
Contact Hour Distribution: 1 lecture and 3 lab.
(RE) Prerequisite(s): 406 and 451.
(DE) Prerequisite(s) or (DE) Corequisite(s): 403, 404, 421, and 461.
Registration Restriction(s): Bachelor of Science in Nursing – nursing major.

491 International Studies (1-3) Participation in selected health and nursing care in foreign countries.
Repeatability: May be repeated. Maximum 6 hours.
Registration Restriction(s): Bachelor of Science in Nursing – nursing major or Master of Science in Nursing – nursing major.
Registration Permission: Consent of instructor.
493 Independent Study (1-3) Nursing or health-related topic not covered in other nursing courses.  
Repeatability: May be repeated. Maximum 6 hours.  
Registration Restriction(s): Bachelor of Science in Nursing – nursing major or Master of Science in Nursing – nursing major.  
Registration Permission: Consent of instructor.

494 Alternative Preceptorship (4) An alternative to 490 for the registered nurse student. For experienced nurses, the practicum portion of the course can be met through preparation of a portfolio and documentation of course objectives having been met through professional practice.  
(WC)  
Contact hour distribution: 2 lecture and 2 lab.  
(RE) Prerequisite(s): 305 and 333.  
Comment(s): For RN-BSN students who have successfully completed all ACE proficiencies or the comparable course work.  
Registration Restriction(s): Bachelor of Science in Nursing – nursing major.

Nutrition (726)

100 Introductory Nutrition (3) Nutritional concepts, current consumer issues in nutrition, nutritional needs through life cycle, and international nutrition concerns and/or issues. (NS)

104 Sports Nutrition for Athletes (1) Nutritional concepts focusing on the optimal training diet; balancing energy with activity; positive fueling before, during, and after sports events; and sorting out nutritional supplements.

201 Careers in Nutrition (1) Overview of nutrition-related careers. Routes to meeting academic, registration, and experience requirements.

302 Life Span Nutrition (3) Physiological development and psychosocial factors that influence nutrient needs and nutrition behaviors of individuals across the life span. Nutrition education strategies for various age groups.  
(RE) Prerequisite(s): 100.

303 Foodservice Systems Management (3) Assessment of managerial, organizational, and operational structures in foodservice systems with a focus on markets related to dietetic practice, human resource policies, and strategies applied to foodservice systems management.

310 Physiological Chemistry (4) (See Biochemistry and Cellular and Molecular Biology 310.)

313 Vitamins and Minerals (3) Functional properties and interrelationships among vitamins and minerals as they apply to human nutrition.  
(RE) Prerequisite(s): Chemistry 350 and Biochemistry and Cellular and Molecular Biology 310.

314 Energy Metabolism and Metabolic Integration (3) Integration of carbohydrate, fat, and protein metabolism as applied to nutrient utilization and requirements in humans.  
(RE) Prerequisite(s): Biochemistry and Cellular and Molecular Biology 310 and Chemistry 350.

Registration Restriction(s): Minimum student level – senior.

412 Food and Nutrition in the Community (3) Influence of health characteristics, geographic, social, economic, educational, and cultural factors on food and nutrition programming. Relationship of community food and nutrition problems to programs and services for families and communities with particular attention to disease prevention and public policy.  
(WC)  
(RE) Prerequisite(s): 302 and 415.

415 Clinical Nutrition I (3) Pathophysiological basis and nutritional assessment and intervention in chronic diseases in humans.  
(RE) Prerequisite(s): 313 and 314.

416 Clinical Nutrition II (3) Pathophysiological basis and nutritional assessment and intervention in acute disease and other critical care conditions.  
(RE) Prerequisite(s): 415.

420 Food and Nutritional Analysis (4) Principles, procedures, and instrumentation for analysis of food and body fluids. Interpretation of chemical, dietary, and anthropometric data analysis in nutrition research.  
(RE) Prerequisite(s): 100 and Biochemistry and Cellular and Molecular Biology 310.

450 Special Topics: Nutrition (1-3) Developments, issues, and problems in nutrition. Topics will vary.  
Repeatability: May be repeated. Maximum 3 hours.  
Registration Restriction(s): Nutrition major; minimum student level – junior.  
Registration Permission: Consent of instructor.

490 Introduction to the Dietetic Internship (3) Applications of clinical, food service, and management theories to dietetic practice.  
Comment(s): Restricted to dietetic intern students.

492 Field Experience: Nutrition (1-3)  
Grading Restriction: Satisfactory/No Credit grading only.  
Repeatability: May be repeated. Maximum 6 hours.  
Registration Permission: Consent of instructor.

493 Directed Study: Nutrition (1-3) Individual student/faculty experience.  
Grading Restriction: Letter grade only.  
Repeatability: May be repeated. Maximum 6 hours.  
Registration Permission: Consent of instructor.

Operations and Management Science (738)

341 Operations Management I (3) Design of operations systems. Process and methods analysis and measurement, location and layout, project management, and operational forecasting.  
(RE) Prerequisite(s): Business Administration 341.  
Registration Restriction(s): Majors in the College of Business Administration.

410 Management Science (3) Introduction to quantitative decision models and their integration into microcomputer-based decision support systems. Topics include linear, dynamic and network programming, as well as decision analysis, Markov, inventory, and queueing models.  
(RE) Prerequisite(s): Mathematics 123 and Statistics 201.

421 Total Quality Management (3) Successful quality improvements characterized by four main principles – customer focus, continuous improvement, leadership, and teamwork. This course focuses on the managerial perspective that is necessary to successfully implement and integrate quality improvements initiatives. The quality improvement tools are also presented.  
(RE) Prerequisite(s): Business Administration 341.  
Registration Restriction(s): Majors in the College of Business Administration.

441 Operations Management II (3) Planning and control of operations systems. Aggregate planning, scheduling systems, and materials management.  
(RE) Prerequisite(s): 341.  
Registration Restriction(s): Majors in the College of Business Administration.

Persian (744)

161 Elementary Persian I (4) (See Asian Studies 161.)

162 Elementary Persian II (4) (See Asian Studies 162.)

261 Intermediate Persian I (4) (See Asian Studies 261.) (CC)

262 Intermediate Persian II (4) (See Asian Studies 262.) (CC)

Philosophy (745)

110 The Human Condition: Values and Reality (3) The meaning of life, the existence of God, freedom of the will, and human nature and values. Writing-emphasis course. (AH)

111 The Human Condition: Knowledge and Reality (3) The place of mind in a material universe and the nature and possibilities of human knowledge. Writing-emphasis course. (AH)  
Comment(s): May be taken before 110.

117 Honors: Introduction to Philosophy I (3) Honors version of 110. (AH)  
Comment(s): May be taken before 117.

118 Honors: Introduction to Philosophy II (3) Honors version of 111. (AH)  
Comment(s): May be taken before 117.

130 Critical Thinking (3) An introduction to practical reasoning in natural language. Designed to enhance skills in recognizing, analyzing, evaluating, and constructing arguments.

135 Formal Logic (3) Introduction to formal deductive systems – propositional and predicate logic.

200 Special Topics (3)  
Repeatability: May be repeated if topic differs. Maximum 6 hours.

241 Engineering Ethics (3) Ethical issues in engineering at the intersection of science, business, and society. Topics such as international concerns; risk, safety, and the environment; employee loyalties and professional responsibility; and professional organizations and codes of conduct. Writing-emphasis course. (AH) (WC)

242 Contemporary Moral Issues (3) Issues such as euthanasia, capital punishment, reproductive technologies, sexual ethics, diversity, war, world poverty, employment practices, and the environment, in light of philosophical analysis and ethical theory. Writing-emphasis course. (AH) (OC)

243 Business Ethics (3) The proper roles of ethics in business in general and such specific issues as the meaning and value of work, employee rights and responsibilities, marketing, finance, the environment, information technology, diversity and discrimination, international business, economic globalization, and ethical business cultures. Readings include philosophical essays and contemporary case studies. Writing-emphasis course. (AH) (WC)
244 Professional Responsibility (3) Critical analysis of selected classic texts from philosophy, religious studies, and social sciences dealing with responsibility and the nature of professionalism. Theoretical principles and analytical skills applied to selected case studies and other detailed descriptions of professional practice from engineering/architecture, business/accounting, and at least one of law/politics, the helping professions (social work, human services, ministry), or teaching. Writing-emphasis course. (Same as Religious Studies 244.) (AH) (OC)

245 Environmental Ethics (3) Issues concerning the nature of the environment and the place of humanity within it. Writing-emphasis course. (AH)

246 Bioethics (3) Ethical issues in health care such as abortion, euthanasia, human experimentation, fairness in health care delivery, and the doctor-patient relationship. Writing-emphasis course. (AH) (WC)

290 Social and Political Philosophy (3) Issues such as the obligation to obey the law, liberty, oppression, equality, rights, democracy, and the just society. Writing-emphasis course. (AH) (WC)

300 Special Topics (3)
Repeatability: May be repeated. Maximum 6 hours.

320 Ancient Western Philosophy (3) Writing-emphasis course. (WC)

322 Medieval Philosophy (3) Development of medieval thought from St. Augustine to William of Occam. Secondary and primary sources. Writing-emphasis course. (Same as Judaic Studies 322; Medieval Studies 322.) (WC)

324 17th- and 18th-Century Philosophy (3) Writing-emphasis course. (WC)

326 19th- and 20th-Century Philosophy (3) Writing-emphasis course. (WC)

327 Honors: Ancient Western Philosophy (3) Honors version of 320. Writing-emphasis course. (WC)

328 Honors: 17th- and 18th-Century Philosophy (3) Honors version of 324. Writing-emphasis course. (WC)

340 Ethics (3) Theories of ethical values. Writing-emphasis course. (WC)

347 Honors: Ethics (3) Honors version of 340. Writing-emphasis course. (WC)

350 Aesthetics (3) Philosophical discussion of art. Writing-emphasis course.

353 Philosophy and Literature (3) Nature of literature and philosophical assumptions in literary works. Writing-emphasis course.

360 Philosophy of Science (3) An introduction to major problems in the philosophy of science. Specific issues vary but may include the nature of causality; the relationship between experiments, theories, and scientific practice; how theories change and how scientific disputes get settled; the role played by social organization in science (e.g., gender and race issues); and others. Writing-emphasis course.

370 Philosophy of Religion (3) Analysis of basic issues in the philosophy of religion. (Same as Religious Studies 370.)

374 Philosophy and Religion of India (3) (See Religious Studies 374.)

376 Buddhist Philosophy and Religion (3) (See Religious Studies 376.)

379 Religion and Philosophy in China (3) (See Religious Studies 379.)

382 Philosophy of Feminism (3) Various feminist theories and their application to social issues of concern to women today. Writing-emphasis course. (Same as Women’s Studies 382.) (WC)

390 Philosophical Foundations of Democracy (3) Philosophical problems relating to the nature and justification of the central values, principles, and concepts of democratic society. Writing-emphasis course. (WC)

392 Philosophy of Law (3) A course in analytic and normative jurisprudence. Such topics as the nature of legal systems as normative social practices, the relationships between law and morality, theories of adjudication and legal reasoning, the justification of punishment, theories of legal responsibility, law and economics, and feminist and neo-Marxist critiques of law. Writing-emphasis course.

393 Global Justice and Human Rights (3) Issues such as justice between distinct and diverse political communities; universal human rights; and moral issues in environment, trade, and development. Writing-emphasis course. (Same as Global Studies 393.)

395 Existentialism (3) Themes related to freedom and finitude in the tradition that begins with Kierkegaard and Nietzsche and extends to Heidegger and Jaspers, and Sartre and Merleau-Ponty.

400 Special Topics (3)
Repeatability: May be repeated if topic differs. Maximum 6 hours.

407 Honors: Thesis (1-3)
Repeatability: May be repeated. Maximum 3 hours.

420 Topics in History of Philosophy (3) One or more figures or movements from antiquity through mid-20th century. Repeatability: May be repeated if topic differs. Maximum 9 hours. Recommended Background: 6 hours of philosophy courses.

435 Intermediate Formal Logic (3) Metatheory of formal logic and philosophy of logic. (RE) Prerequisite(s): 135.

440 Contemporary Ethical Theory (3) Topics in meta-ethics or ethics. Repeatability: May be repeated if topic differs. Maximum 6 hours. (DE) Prerequisite(s): One of the following — 241, 242, 243, 244, 245, 246, 340.

445 Advanced Environmental Ethics (3) Advanced topics in environmental ethics. Repeatability: May be repeated if topic differs. Maximum 6 hours. (DE) Prerequisite(s): One of the following — 241, 242, 243, 244, 245, 246, 340.

446 Advanced Bioethics (3) Advanced topics in bioethics. Repeatability: May be repeated if topic differs. Maximum 6 hours. (DE) Prerequisite(s): One of the following — 241, 242, 243, 244, 245, 246, 340.

460 Topics in Philosophy of Science (3) Repeatability: May be repeated if topic differs. Maximum 6 hours. Recommended Background: 6 hours of philosophy courses.

473 Philosophy of Mind (3) Problems of mind and body in relation to consciousness and personal identity. Recommended Background: 6 hours of philosophy courses.

480 Topics in Metaphysics and Epistemology (3) Repeatability: May be repeated if topic differs. Maximum 6 hours. Recommended Background: 6 hours of philosophy courses.

491 Foreign Study (1-15)
Repeatability: May be repeated. Maximum 15 hours.

492 Off-Campus Study (1-15)
Repeatability: May be repeated. Maximum 15 hours.

493 Independent Study (1-15)
Repeatability: May be repeated. Maximum 15 hours.

Physical Education (764)

200 Special Topics (1-2) Selected topics in various activities not covered in the regular program. Repeatability: May be repeated if topic differs. Maximum 6 hours.

202 Badminton (1) Fundamental badminton technique, game strategy, and rules for singles and doubles play.

206 Bowling (1) Introduction to ball selection, approach, spot bowling, rules, scoring, etiquette, and basic terminology necessary for enjoyable recreational bowling.

211 Golf (1) Introduction to chipping, putting, full swing, rules, etiquette, and scoring necessary for enjoyable recreational play.

213 Ice Skating (1) Beginning skills and etiquette in ice skating. Grading Restriction: Satisfactory/No Credit grading only.

216 Martial Arts (Special Topics) (2) Selected topics in various forms of martial arts, including but not limited to jiu jitsu, judo, karate, and tai chi. Repeatability: May be repeated if topic differs. Maximum 6 hours.

224 Physical Fitness: Conditioning (1) Program of flexibility, strength, and cardiovascular endurance through exposure to various exercise forms.

225 Physical Fitness: Exercise to Music (1) Total body workout to music with lecture emphasis on basic fitness components of flexibility, strength, and cardiovascular fitness.

226 Exercise and Weight Control (1) Fitness activities and basic fundamentals of nutrition for students interested in losing weight. Includes body composition assessment and instruction on achieving a goal weight.

229 Physical Fitness: Jogging (1) General factors on physical fitness with emphasis on the improvement of cardiovascular fitness through jogging.

230 Physical Fitness: Swimming (1) Introductory course outlining basic principles of fitness, evaluation, and workout design in the aquatic environment.

231 Physical Fitness: Walking (1) Course for those wishing to begin a fitness program. Includes measurement and interpretation of fitness components, including body composition, cardiorespiratory fitness, low back function and nutrition.

232 Racquetball I (1) Pass, kill, ceiling shots, and basic serves. Singles and doubles strategy necessary for recreational play.
Introduction to forehand, backhand, serve, volley, rules, side stroke, back crawl, breast stroke, entries, and turns. Scoring, and simple strategy.

Magnetism, and optics.

136 Introduction to Physics for Physical Science and Mathematics Calculus-based physics of electricity, magnetism, and optics. (NS) 
(Re) Prerequisite(s): Mathematics 141. Recommended Background: High school calculus and physics. 
Comment(s): For physics and engineering physics majors and qualified students from other majors. 
Registration Permission: Consent of department.

138 Honors: Fundamentals of Physics for Physics Majors II (5) 
Calculus-based physics of electricity, magnetism, and optics. (NS) 
(Re) Prerequisite(s): Mathematics 142. Recommended Background: High school calculus and physics. 
Comment(s): For physics and engineering physics majors and qualified students from other majors. 
Registration Permission: Consent of department.

161 Elements of Physics for Architects and Interior Design Students (3) 
Chosen topics in physics for architecture and interior design students. Course emphasizes material development by logic and lecture demonstrations. (NS) 
Recommended Background: High school intermediate algebra and geometry.

221 Elements of Physics (4) Basic physical principles and applications required in pre-medical, pre-dental, pre-pharmacy and pre-veterinary programs. Mechanics, heat, wave motion, and optics. (NS) 
Contact Hour Distribution: 3 hours lecture and 3 hours lab. 
(Re) Prerequisite(s): Mathematics 130 or Mathematics 141. 
Comments: Any calculus course is also an appropriate prerequisite.

254 Yoga and Relaxation (1) 
Introduction to yoga and various forms of relaxation with the majority of class time spent learning and refining the postures. 
Grading Restriction: Satisfactory/No Credit grading only.

261 Scuba Diving (2) 
Introduction and developmental scuba diving skills, as well as the theory, safety skills, and practical application of skills to open water scuba diving. 
Grading Restriction: Satisfactory/No Credit grading only.

Physics (773)

101 How Things Work I (3) 
Examines familiar objects of everyday experience and leads to an understanding of the physical principles that make them work. Laws of motion, mechanical objects, fluids, and heat. (NS) 
Comment(s): For students with majors outside science. Physics 101 is not a prerequisite for Physics 102.

102 How Things Work II (3) 
Examines familiar objects of everyday experience and leads to an understanding of the physical principles that make them work. Electric and magnetic forces, electronics, lights and optics, and an introduction to modern physics. (NS) 
Comment(s): For students with majors outside science. Physics 102 is not a prerequisite for Physics 102.

135 Introduction to Physics for Physical Science and Mathematics Majors I (4) 
Calculus-based physics of mechanics and waves. (NS) 
Contact Hour Distribution: 3 hours lecture and 2 hours lab. 
(Re) Corequisite(s): Mathematics 141. 
Comment(s): Alternative to 137 for physics majors.

136 Introduction to Physics for Physical Science and Mathematics Majors II (4) 
Calculus-based physics of thermodynamics, electricity, magnetism, and optics. (NS) 
Contact Hour Distribution: 3 hours lecture and 2 hours lab. 
(Re) Corequisite(s): Mathematics 142. 
Comment(s): Alternative to 138 for physics majors.
362 Electronics Laboratory (3) Electronic devices and instrumentation techniques in the physics laboratory. Advanced instrumentation techniques applied to the study of electronic circuits as dynamic physical systems, feedback and stability, noise, discrete sampling, Fourier analysis and synthesis, and nonlinear circuit dynamics. Contact Hour Distribution: 6 hours lab per week. (DE) Prerequisite(s): 138 or 136 or 232.

380 Intermediate Physics I (3) Integrated topics in special relativity, classical mechanics, thermodynamics, statistical mechanics, electricity and magnetism, and quantum mechanics. (RE) Prerequisite(s): 250.

381 Intermediate Physics II (3) Integrated topics in special relativity, classical mechanics, thermodynamics, statistical mechanics, electricity and magnetism, and quantum mechanics. (RE) Prerequisite(s): 380.

382 Intermediate Physics III (3) Integrated topics in special relativity, classical mechanics, thermodynamics, statistical mechanics, electricity and magnetism, and quantum mechanics. (RE) Prerequisite(s): 381.

401 A Survey of Physics (3) A survey of physics from earliest times to the present, emphasizing the unifying philosophical and mathematical principles. Classical theories of gravitation, electromagnetism, and relativity. Various forms of quantum mechanics, quantum electrodynamics, and recent theories of particles, fields, and their interactions. Consideration of the effects of physics on modern society and the practice of physics from a value-oriented perspective. Written reports on important original papers, thoughts on covoking problems combining different fields of classical physics, and a final oral and written report on some independent study. Registration Restriction(s): Physics major; minimum student level – senior. Registration Permission: Consent of instructor.

411 Introduction to Quantum Mechanics (3) Fundamental principles of quantum mechanics and methods of calculation. Solution of the Schrodinger equation for simple systems. Application to atomic, molecular, nuclear, and condensed matter physics. (RE) Prerequisite(s): 240 and Mathematics 435.

412 Introduction to Quantum Mechanics (3) Fundamental principles of quantum mechanics and methods of calculation. Solution of the Schrodinger equation for simple systems. Application to atomic, molecular, nuclear, and condensed matter physics. (RE) Prerequisite(s): 411.

421 Modern Optics (4) Transmission of light in uniform, isotropic media, reflection and transmission at interfaces. Mathematics of wave motion and interference effects. Rudiments of Fourier optics and holography. Contact Hour Distribution: 3 hours lecture and 3 hours lab. (DE) Prerequisite(s): 138 or 136 or 431 or 232. Registration Permission: Consent of instructor.

431 Electricity and Magnetism (3) Electrostatics, magnetostatics, and coupled electric and magnetic fields, Maxwell's Equations, and electromagnetic waves and radiation. (DE) Prerequisite(s): 138 or 136 or 232.

432 Electricity and Magnetism (3) Electrostatics, magnetostatics, coupled electric and magnetic fields, Maxwell's Equations, and electromagnetic waves and radiation. (RE) Prerequisite(s): 431.

441 Contemporary Physics I (3) An introduction to the major fields of contemporary physics – quantum mechanics, atomic and molecular physics, electromagnetic radiation, lasers, and quantum fluids. (RE) Prerequisite(s): 240 and 312. (DE) Prerequisite(s): 321.

442 Contemporary Physics II (3) An introduction to the major fields of contemporary physics – solid state physics, magnetism, nuclear physics, medical imaging, particle physics, and cosmology. (RE) Prerequisite(s): 441.

453 Team Research Project I (3) Student teams select the topic in consultation with the instructor and develop a plan for the project. Each team carries out the project with regular oral and written progress reports. Culminating in a final report. (RE) Prerequisite(s): 361 and 461.

454 Team Research Project II (3) Student teams will carry out major experimental or computational projects that were planned and begun in 453. Regular oral and written progress reports culminate in a final report. (RE) Prerequisite(s): 453.

461 Modern Physics Laboratory (3) Introduction to fundamental and modern techniques in experimental physics and to the theory and practice of measurement and data analysis. Selected experiments in nuclear, atomic, molecular and solid state physics, and modern optics. Contact Hour Distribution: 6 hours lab per week. (RE) Prerequisite(s): 240 or 411.

462 Modern Physics Laboratory (3) Advanced experiments and experimental techniques in modern physics. Experimental team work. Thorough quantum mechanical interpretation of the results and preparation of scientific reports. Contact Hour Distribution: 6 hours lab per week. (RE) Prerequisite(s): 461.

490 Senior Seminar (1-3) Topics of current interest. Repeatability: May be repeated with consent of department. Maximum 6 hours.

491 Foreign Study (3-15) Repeatability: May be repeated. Maximum 15 hours.

492 Off-Campus Study (3-15) Repeatability: May be repeated. Maximum 15 hours.

493 Research and Independent Study (1-3) Research and study in field of particular interest with faculty guidance. Repeatability: May be repeated. Maximum 6 hours. Registration Permission: Consent of department.

Plants Sciences (791)

115 Plants for Health, Aesthetics, and Recreation (3) Introduction to the wide variety of plants used in society to enhance health, beautify surroundings and facilitate recreational activities. Exploration of how cultures value their trees, flowers, vegetables, fruits, herbs and grasses, with emphasis on landscaping, people/plant interactions, sports turf, organic gardening and nutrition.


220 Basic Landscape Plants (3) Identification, classification, adaptation, and culture and landscape design uses of basic ornamental trees, shrubs, and vines. Contact Hour Distribution: 2 hours and 1 lab.

226 Public Horticulture (3) Study of the public horticulture profession. Attention given to the diversity of public horticulture institutions, career opportunities, and research. Discussion of current topics and issues.

230 Interior Plantscaping (3) History and introduction of the interior plantscape and industry. Identification, culture, propagation, and use of plants for the commercial interior plantscape. Management of the interior environment including light, humidity, growing media, insects, and diseases. Commercial use of containers, planters, water features, and artificial plants.

240 Turfgrass Management (3) Practical turfgrass management. Cultivar selection, identification, and establishment. Basic fertility programs, mowing, irrigation practices, and thatch removal and compaction control. Pest identification and basic controls. Contact Hour Distribution: 2 hours lecture. Comment(s): Students in turfgrass science and management concentration must also register for 241.

241 Turfgrass Management Lab (1) Laboratory addressing topics presented in 240. Contact Hour Distribution: 2-hour lab. (RE) Corequisite(s): 240.

250 World Food and Fiber Plant Production (3) Introduction to important world crops and production systems. Emphasis on plant terminology, origin, distribution and use, world agro-ecosystems, environmental and economic sustainability, current technology in crop production.

280 Fundamentals of Landscape Design (3) History of landscape design as it relates to contemporary applications. Awareness and sensitivity to the landscape. Basic graphic skills and design theory with an emphasis on residential landscape planning. Introduction to landform, landscape materials, and planting design. Contact Hour Distribution: 1 hour and 2 labs.
282 COURSES OF INSTRUCTION

290 Fall Herbaceous Ornamental Plants (3) Identification, culture, and landscape use of late summer and fall herbaceous ornamental plants including annuals, perennials, herbs, and ornamental grasses. Basic gardening practices and design elements using such herbaceous ornamental plants.

291 Spring Herbaceous Ornamental Plants (3) Identification, culture, and landscape use of spring and early summer herbaceous ornamental plants including annuals, perennials, herbs, bulbs, and wildflowers. Basic gardening practices and design elements using such herbaceous ornamental plants.

328 Conservatories: Management, Operations, and Display (1) Study of the history, value, and role of public garden conservatories. Management, operations, and display of plants in controlled environments for research, conservation, and public education and entertainment.

(Re) Prerequisite(s): 226.

329 Horticultural Interpretation: Educational Programming for Adults and Children (1) Strategic planning, programming, and budgeting for adult and youth education within a public garden.

(Re) Prerequisite(s): 226.

330 Plant Propagation (2) Physiology, methodology, and environmental requirements for propagation.

Contact Hour Distribution: 2 hours and 1 lab.

(De) Prerequisite(s): 210 and Biology 112.

(De) Prerequisite(s): Biology 111.

331 Interpreting Research Findings (1) Basic statistical concepts required for understanding and evaluating research findings.

Recommended Background: 2 mathematics courses.

Registration Restriction(s): Minimum student level – junior.

341 Integrated Turfgrass Management and Environmental Benefits (2) Utilization of resources available to the turfgrass manager (e.g., extension, research, professional associations). Benefits of turfgrass in the environment, including bioremediation, urban greening, and carbon sequestration.

(Re) Prerequisite(s): 240 and Biology 112.

(De) Prerequisite(s): Biology 111.

343 Turfgrass Entomology (1) Biological study and collection of arthropods that challenge maintenance of healthy grasses, turf, and sod.

Review and discussion of sampling/monitoring strategies and decision-making guidelines to help manage turfgrass pests.

(Re) Prerequisite(s): 240 and Biology 112.

(De) Prerequisite(s): Biology 111.

348 Landscape Plant Physiology (2) Physiological principles as they relate to landscape design and construction, turfgrass management, and public horticulture – photosynthesis and transpiration, respiration, water and hormonal relations, mineral nutrition, plant development, and response to the environment.

(Re) Prerequisite(s): Biology 112.

(De) Prerequisite(s): Biology 111.

Registration Restriction(s): 2.25 GPA.

350 Basic Landscape Construction (3) Basic materials and detailing. Introduction to the landscape construction and contracting industry. Application of landscape materials, wood, concrete and masonry construction. Site drainage and landscape grading.

Contact Hour Distribution: 2 hours and 1 lab.

(Re) Prerequisite(s): 290.

353 Plant Biotechnology, Genetics and Breeding (3) Genetic principles and techniques used in plant modification. Principles of molecular and transmission genetics as applied to plant biotechnology and crop improvement.

(Re) Prerequisite(s): Biology 111 and Biology 112.

360 Practicum in Landscape Construction (3) Practical experience in implementation of landscape development projects. Directed lab and field instruction in planting operations and basic landscape construction including interpreting and implementing landscape design drawings and specifications.

Contact Hour Distribution: Two 3-hour labs.

(Re) Corequisite(s): 350.

370 Grounds Maintenance (3) Identification and understanding of maintenance tasks, transplanting, soil amendments, growth control, irrigation, climate protection, and pest control. Maintenance and use of equipment; management practices.

Contact Hour Distribution: 2 hours and 1 lab.

(Re) Prerequisite(s): 210.

380 Supplemental Landscape Design Graphics (3) Refinement of graphic skills. Sketches, elevations, sections, isometric projections, and perspectives. Lettering, plan graphics, color rendering, and other visual presentation media.

Contact Hour Distribution: Two 2-hour labs.

(Re) Prerequisite(s): 280.

410 Nursery Management and Production (3) Management methods as applied to retail and wholesale nurseries and landscape contracting firms. Methods of producing liners, container and field-grown woody liners, containers and field-grown ornamental plants.

(Re) Prerequisites(s): 330 and Environmental and Soil Sciences 210.

(De) Prerequisite(s): 220.

421 Native Plants in the Landscape (3) Native plants and plant communities as a basis for landscaping and environmental restoration. Weekly lecture coupled with either an outing or service practicum of invasive exotic plant removals or planting of natives. Study and work sites will primarily be demonstration projects of the University of Tennessee Environmental Landscape Design Lab. They include local schoolyard habitats, greenways, wetlands, streambanks, and shorelines.

Contact Hour Distribution: One 1.5-hour lecture, one 4-hour lab.

(Re) Prerequisite(s): 220 or Ecology and Evolutionary Biology 330.

(De) Prerequisite(s): 210.

427 Management and Administration of Public Horticulture Institutions (2) Management of resources in non-profit institutions, support organizations, and communities. Theoretical framework and institutional mission, strategic planning and programming, financial accounting and budgeting, development and fund raising, personnel policies, volunteer development, marketing and publicity, legal issues, relationships between staff and governing boards, the use of information technology in management and governance systems, and conservation/preservation roles in community development.

(Re) Prerequisite(s): 226 and 210.

429 Field Study of Public Horticulture Institutions (2) Extended 10-12 day field study of various public horticulture institutions such as botanical gardens, arboreta, historical gardens, zoos, conservatories, cemeteries, and nature preserves. Application and travel fee required.


Contact Hour Distribution: 2 hours lecture and one 2-hour lab.

(Re) Prerequisite(s): Agriculture and Natural Resources 290 or Computer Science 100.

434 Fruit and Vegetable Crops (3) Botanical description, geographical distribution, general cultural practices of warm and cool season vegetables, small fruits, and deciduous tree fruits. A Saturday field trip is required.

Contact Hour Distribution: 2 hours lecture and one 2-hour lab.

(Re) Prerequisite(s): 210 and Biology 112.

(De) Prerequisite(s): Biology 111.

435 Field and Forage Crops (3) Agronomic principles of crop production and management. Crop improvement, cropping systems, tillage, fertilization, pest management, and harvest and utilization of major field and forage crops.

(De) Prerequisite(s): 250.

436 Plant and Garden Photography (3) Principles and techniques of photography as they relate to plants and gardens. Study of equipment options and field shooting under various weather conditions and in different seasons.

Registration Restriction(s): Minimum student level – senior.

437 Public Garden Operations and Management (2) An analysis of year-round operations and management of public gardens. Case studies involving time and labor management, budget development and management, implementation of volunteer programs, information dissemination methods for public outreach, and management of grounds and facilities using the University of Tennessee Institute of Agriculture Gardens as a model.

(Re) Prerequisite(s): 226 and 210.

439 Botanic Garden Practicum (1-3) Experiences in active public horticulture projects in the UT Gardens under supervision of staff members. Student should make arrangements for practicum with a faculty mentor prior to enrollment.

Repeatability: May be repeated. Maximum 3 hours.

Registration Restriction(s): Minimum student level – junior.

Registration Permission: Consent of instructor.

441 Advanced Turfgrass Management (2) Principles and scientific basis of turfgrass culture. Adaptation, ecology, physiology, climatic influences on grass culture. Clipping, water management, and design.

Contact Hour Distribution: 1-hour lecture and one 1-hour lab.

(Re) Prerequisite(s): 240 and Biology 112.

(De) Prerequisite(s): Biology 111.
442 Turf Root-zone Construction (2) Construction and management of root-zones for home lawns, golf courses, and athletic fields. (RE Prerequisite(s): 240 and Biology 112. (DE Prerequisite(s): Biology 111.

446 Horticultural Therapy (3) Introduction to the application of horticulture as therapy for treatment, rehabilitation, and/or training of individuals with disabilities. (RE Prerequisite(s): 210 and 226. Registration Restriction(s): Minimum student level – senior.

448 Horticultural Internet Technology (3) Creation and management of information resources for the Internet with a focus on development of visual and oral communications skills through a series of individual and team exercises in writing, graphics, and public speaking. (WC) (DE Prerequisite(s): Communication Studies 210 or 240. Registration Restriction(s): Minimum student level – senior.

449 Advanced Turf Practicum (1-3) Experiences in active turf projects in the UT turfgrass sciences and management program under supervision of staff members. Student should make arrangements for practicum with a faculty mentor prior to enrollment. Repeatability: May be repeated. Maximum 3 hours. (RE Prerequisite(s): 240. Registration Restriction(s): Minimum student level – junior. Registration Permission: Consent of instructor.

450 Specialty Landscape Construction (3) Methods of design, materials, and construction techniques for specialized components of the landscape industry. Irrigation systems, outdoor lighting, garden ponds, and water features. 533 or Biology 240.

451 Plant Tissue Culture (3) (See Entomology and Plant Pathology 451.) Lectures will discuss recombinant DNA technology, molecular assisted breeding of economically important crops, gene cloning and transformation technologies. Examples will be given of food and ornamental crops, pharmaceuticals, and renewable energy sources produced using biotechnology, as well as potential risks of this technology. Labs will include electrophoresis, tissue culture, plasmid preps, genomic DNA preps, PCR, plant transformation, and genomic techniques. Contact Hour Distribution: 1 hour lecture and one 3-hour lab. Credit Restriction: Students may not receive credit for both 454 and 554. (RE Prerequisite(s): 353 or Biology 240.

454 Plant Biotechniques (3) Lectures will discuss recombinant DNA technology, molecular assisted breeding of economically important crops, gene cloning and transformation technologies. Examples will be given of food and ornamental crops, pharmaceuticals, and renewable energy sources produced using biotechnology, as well as potential risks of this technology. Labs will include electrophoresis, tissue culture, plasmid preps, genomic DNA preps, PCR, plant transformation, and genomic techniques. Contact Hour Distribution: 1 hour lecture and one 3-hour lab. Credit Restriction: Students may not receive credit for both 454 and 554. (RE Prerequisite(s): 353 or Biology 240.

457 Weed Management (2) Principles of weed interference, integrated management, and herbicide selectivity and behavior. Specific recommendations for various crop and non-crop situations. (RE Prerequisite(s): Environmental and Soil Sciences 210.

458 Turf Weed Management Lab (1) Laboratory addressing practices and principles presented in 457 from the standpoint of turf. (RE Prerequisite(s): Environmental and Soil Sciences 210. (RE) Corequisite(s): 457.

459 Agronomy Weed Management Lab (1) Laboratory addressing practices and principles presented in 457 from the standpoint of agronomy. (RE Prerequisite(s): Environmental and Soil Sciences 210. (RE) Corequisite(s): 457.

460 Professional Practices in Landscape Construction and Management (3) Professionalism, salesmanship, proposals, bidding, estimating, specifications, and contract management in the landscape services industry. Computer technology applicable to landscape construction and contracting industry. Includes presentations by industry representatives. (RE Prerequisite(s): 350.

461 Statistics for Biological Research (3) Application of statistics to interpretation of biological research. Notation, descriptive statistics, probability, distributions, confidence intervals, t- and chi-square tests. Analysis of variance, mean separation procedures, and linear regression and correlation. Credit Restriction: Students may not receive credit for both 461 and 561. (RE Prerequisite(s): Mathematics 125 or Mathematics 152.

465 Biofuel Crop Ecology (2) Studies of the fundamental ecological, biochemical, functional, and agronomic aspects of bioenergy feedstocks, in the context of three distinct systems: ethanol from simple sugars, ethanol from structural carbohydrates, and diesel from oil crops. Special attention will be given to current technological paradigms in biotechnology and molecular biology. May involve preparation of lectures and teaching aids, preparation and supervision of laboratory exercises, evaluation of student performance. Repeatability: May be repeated. Maximum 2 hours. Registration Restriction(s): Minimum student level – junior. Registration Permission: Consent of instructor.

467 Professional Practices for the Green Industry (3) Professionalism, sales, sales proposals, budgeting, managerial skills, estimating, specifications, and contract management in the turf, public horticulture, and plantscaping professions. (RE Prerequisite(s): 210. (DE Prerequisite(s): 226 or 230 or 240. Registration Restriction(s): Minimum student level – senior.

475 Professional Issues in Bioenergy (3) Study and discussion of professional issues and practices in the bioenergy field, including economics, policy, engineering, processing, agronomy, biotechnology. Registration Restriction(s): Minimum student level – junior.

480 Advanced Landscape Design (4) Comprehensive application of landscape design skills to a variety of project experiences with an emphasis on landscape planning and analysis, planting design, and materials estimating. Contact Hour Distribution: Two 3-hour labs. (RE Prerequisite(s): 280 and 380.

485 Computer Aided Landscape Design (3) Overview of Computer Aided Design (CAD) as it relates to landscape design and construction. Repeatability: May be repeated. Maximum 6 hours. Registration Permission: Consent of instructor.

492 Internship in Horticultural and Plant Sciences (1-3) Supervised work experience with a departmentally-approved employer within the ornamental horticulture, turfgrass, production horticulture, or field crop science industry. Grading Restriction: Satisfactory/No Credit grading only. Repeatability: May be repeated. Maximum 6 hours. Registration Restriction(s): 2.25 GPA. Registration Permission: Consent of instructor.

494 Professional Horticultural Communications (3) Communication for public horticulturists through written, oral, and visual media. Emphasis on communication skills using proper writing techniques and grammar for print media, brochure design using desktop publishing, slide show development, oral presentations, and video use for educational and informational presentations in ornamental horticulture. Registration Restriction(s): Minimum student level – senior.

497 Undergraduate Research Participation (1-3) Experiences in active research projects under supervision of staff members. Student should make arrangements for research project with instructor prior to enrollment. Repeatability: May be repeated. Maximum 6 hours. (RE Restriction(s): Restriction(s): 3.00 GPA. Registration Permission: Consent of instructor.

Political Science (801)

101 United States Government and Politics (3) Introduction to fundamental institutions and processes of American national politics including the Constitution, voting, the Presidency, the Congress and the courts.

102 Introduction to Political Science (3) Introduction to politics and political systems emphasizing government in a cross-national and global perspective. Focus on the knowledge and principal concerns of political science as a social science. (SS)

107 Honors: United States Government and Politics (3) Analysis and exploration of the American political system for students with superior ability. Comment(s): 3.25 GPA required for current students: 29 ACT composite or 1250 SAT composite required for incoming students.

300 Introduction to Political Philosophy (3) An introduction to the concepts, enduring questions, and significant thinkers associated with political philosophy with specific attention to differing conceptions of human nature, politics, the state, civic obligation and rights, freedom, justice, and democracy.

311 Contemporary Issues in American Public Policy (3) Selected public policy issues confronting the nation, including the background, nature, and effects of present policies, and options for the future. Writing- emphasis course.

312 Popular Culture and American Politics (3) Popular culture related to American politics and government focusing on the role of film, television, fiction, music, drama, art, and sports. Writing-emphasis course. (Same as American Studies 312; Cinema Studies 312.)

315 Tennessee Government and Politics (3) Major elements in Tennessee government and politics.

COURSES OF INSTRUCTION
320 State Government and Politics (3) Setting, institutions, and processes of government in the 50 states. Generalizations and comparisons with emphasis on federalism and intergovernmental relations.


330 Law in American Society (3) Law as a process through which social problems are addressed in the United States. Examples from case law, legislation, and administrative regulation. Writing-emphasis course.

340 Introduction to Public Administration and Public Policy (3) Public agencies, their organization, personnel, financial management, and administrative responsibility. The policy-making process and political environment.

341 Judicial Process and Policymaking (3) Courts as components of political systems and public policy-making through judicial decision-making.

350 Political Change in Developing Areas (3) Characteristics and problems of political changes with primary focus on developing areas. Writing-emphasis course.

361 Politics in Western Democracies (3) Political culture patterns and institutions of western democratic systems. Writing-emphasis course.

365 Introduction to International Relations (3) Resource availability, international economics, international security and peace (imperialism, war, diplomacy, the balance of power, international law, and international organization). Writing-emphasis course.

366 United States Foreign Policy Process (3) Processes whereby United States foreign policies are made and implemented, focusing on interaction within federal bureaucracy and roles of the President, Congress, the press, and public opinion.

370 Contemporary International Problems (3) Analysis of current international events.

374 American Political Thought (3) Major themes and ideas in American political thought related to the development of American political institutions, values, and practices. Writing-emphasis course.

387 Junior Honors Seminar (3) Required of students in honors concentration.

Registration Permission: Consent of department.

388 Junior Honors Seminar (3) Required of students in honors concentration.

Registration Permission: Consent of department.

401 Political Analysis (3) Nature, character, and functions of research design, data collection, and statistical techniques used in the study of politics.


410 Special Topics in Political Science (3)
Repeatability: May be repeated. Maximum 6 hours.


420 Political Attitudes and Behavior (3) Systematic examination of political attitudes, public opinion, and political behavior. (Same as American Studies 420.)

421 Political Parties and Interest Groups (3) Analysis of political parties, interest groups, campaigns, and elections.

425 Media and Politics (3) Examines the interrelationship between the political system and the media from a political science perspective.

430 United States Constitutional Law: Sources of Power and Restraint (3) Judicial review, constitutional powers of the President and Congress, federalism, sources of regulatory authority, and constitutional protection of political and economic rights.

431 United States Constitutional Law: Civil Rights and Liberties (3) Current issues in civil rights and liberties, including first amendment freedoms, equal protection, privacy, and the rights of the accused.

435 Criminal Law and Procedure (3) An overview of substantive and procedural law in the criminal justice field with emphasis on constitutional questions and public policy issues.

440 Public Management and Human Resources (3) Semester long simulation of a public organization in which student groups plan, organize, direct, teach, and evaluate within a tightly-structured framework.

441 Public Budgeting (3) The process, participants, and politics of government budgeting with emphasis on federal government budgeting. Includes an overview of budget reform measures and their effectiveness.

442 Administrative Law and Regulatory Policymaking (3) Legal and political dimensions of rulemaking, enforcement and adjudication by executive agencies.

445 Administration of Justice (3) Administration and processes of justice system, including judicial administration and decision making in trial and appellate courts.

446 Housing (3) Nature and demand for housing in the U.S. and abroad. U.S. experience. Private market processes and public influences. Problems of change in housing supply, impact of new technology, and governmental programs to increase supply and quality of housing.

451 Ethnic Conflict in Foreign Countries (3) Examines political and violent conflict among ethnic and national groups and the challenges these conflicts pose for democratic and democratizing states.

452 Black African Politics (3) Recent evolution and current political environment of black African nations. Writing-emphasis course. (Same as Africana Studies 452.)

454 Government and Politics of China and Japan (3) Political setting, structure, and political processes in China and Japan. Writing-emphasis course.

456 Latin American Government and Politics (3) Introduction to the political development of Latin America with an emphasis on contemporary politics. Writing-emphasis course. (Same as Latin American Studies 456.)

459 Government and Politics of Russia and Eastern Europe (3) System transformation, political processes, and governmental structure in Russia and Eastern European countries. Writing-emphasis course.

461 Policy Making in Democracies (3) Comparative approach to theory and process of making public policies.

463 Contemporary Middle East Politics (3) Governments and movements in the Middle East, their characteristics, bases, and interrelationships.

470 International Law (3) Nature and development of international law and compliance with it. Particular attention to function of international law in the context of international conflict.

471 International Political Economy (3) The politics of international economics. Topics include globalization, development, trade, crime, the IMF, the WTO, the environment, and challenges to the status quo.

473 Negotiation, Bargaining, and Diplomacy (3) Diplomacy, negotiation, and foreign policy decision-making. Theories of diplomacy and negotiation are applied in a simulation focusing on issues from international crime and global economic stability to world health and the environment.

474 International Organization (3) Constitutional framework and key functions of the United Nations. Topics include collective security, peacekeeping, human rights, development, regional organizations, and the role of the Secretary-General.

475 Ancient and Medieval Political Thought (3) Major western political thinkers from Socrates to Marsilio of Padua. (Same as Medieval Studies 475.)

476 Modern Political Thought (3) Major western political thinkers from Machiavelli to Marx.

487 Senior Honors: Thesis and Seminar (3) Required of students in honors concentration.

Registration Permission: Consent of department.

488 Senior Honors: Thesis and Seminar (3) Required of students in honors concentration.

Registration Permission: Consent of department.

491 Foreign Study (1-15)
Repeatability: May be repeated. Maximum 15 hours.

492 Off-Campus Study (1-15)
Repeatability: May be repeated. Maximum 15 hours.

493 Independent Study (1-15)
Repeatability: May be repeated. Maximum 15 hours.
494 Internship (1-6)
Grading Restriction: Satisfactory/No Credit grading only.
Repeatability: May be repeated. Maximum 6 hours.
Credit Restriction: May not be applied toward the political science major or minor.

499 Service Learning in Political Science (1) Provides framework for participation in service to community. Students assist classes at local schools or perform supervised service to local public service organizations or government institutions.
Grading Restriction: Satisfactory/No Credit grading only.
Repeatability: May be repeated. Maximum 3 hours.
Comment(s): Course can only be taken in conjunction with a section of an undergraduate political science course numbered 300 or above that is designated by instructor as having a service-learning component.
Registration Permission: Consent of department head.

Portuguese (811)

111 Elementary Portuguese (3) Introduction to Portuguese. Language laboratory required.

112 Elementary Portuguese (3) Introduction to Portuguese. Language laboratory required.
(RE) Prerequisite(s): 111.

211 Intermediate Portuguese (3) Stresses reading, writing, listening, and speaking of Portuguese to prepare for upper-division courses in the language. Language laboratory required. (CC)
(RE) Prerequisite(s): 112.

212 Intermediate Portuguese (3) Stresses reading, writing, listening, and speaking of Portuguese to prepare for upper-division courses in the language. Language laboratory required. (CC)
(RE) Prerequisite(s): 211.

301 Cultural Readings in Portuguese (3) Emphasis on key areas of the language, literature, and other cultural aspects of the Portuguese-speaking world. Taught in Portuguese. Recommended Background: 212 or 400.

303 Highlights of Brazilian Civilization (3) Survey of Brazilian civilization with special attention to geographical features, historical events and popular culture. Topics may vary. Taught in Portuguese. Writing-emphasis course. (Same as Latin American Studies 303.)
Repeatability: May be repeated if content varies. Maximum 6 hours.
Recommended Background: 212 or 400.

309 Intermediate Conversation and Composition (3) Designed to improve proficiency in oral and written communication in Portuguese. (RE) Prerequisite(s): 212 or 400.

315 Aspects of Luso-Brazilian Literature (3) Selected writers, trends, and artistic movements set against a broad background of cultural, socio-political and historical developments. Taught in English. Writing-emphasis course. (Same as Latin American Studies 315.)
Repeatability: May be repeated if topic differs. Maximum 6 hours.
Comment(s): Open to non-majors. Portuguese majors and minors will read texts and write papers in Portuguese.

326 Brazilian Cinema (3) A study of Brazilian cinema in light of political, cultural, and social contexts. Films and documentaries are shown in Portuguese with English subtitles. Topics may vary. Writing-emphasis course. (Same as Cinema Studies 326; Latin American Studies 326.)
Repeatability: May be repeated. Maximum 6 hours.
Comment(s): Open to non-majors. Majors will read texts and write papers in Portuguese.

400 Portuguese for Speakers of Another Romance Language (3) Accelerated class for beginning students of Portuguese with a strong background in another Romance language. Introduction to grammar, reading, and culture of Portugal and Brazil. Recommended Background: 3 hours at the 300 level in another Romance language.

409 Advanced Conversation and Composition (3) Informal and structured conversation on contemporary topics (business, politics, economics, religion, culture) and formal writing practice at an advanced level. Recommended Background: 3 hours at the 300 level in Portuguese.

430 Contemporary Brazilian Studies (3) Current Brazilian cultural, political and racial issues placed in a historical perspective with a comparative emphasis. Topics may vary. Writing-emphasis course. (Same as Latin American Studies 430.)
Repeatability: May be repeated. Maximum 12 hours.
Comment(s): Open to non-majors. Majors will write papers in Portuguese.

432 Topics in the Literature and Culture of the Portuguese-speaking World (3) Examination of the socio-political environment, literary works, and other important cultural practices of the Portuguese-speaking world. Topics may vary. Writing-emphasis course. (Same as Latin American Studies 432.)
Repeatability: May be repeated. Maximum 12 hours.

490 Internship (1-15) Career-related experiences in the United States or abroad.
Grading Restriction: Satisfactory/No Credit grading only.
Repeatability: May be repeated. Maximum 15 hours.
Registration Restriction(s): Language and world business (Portuguese) concentration.

491 Foreign Study (1-15) Repeatability: May be repeated. Maximum 15 hours.

493 Independent Study (1-15) Repeatability: May be repeated. Maximum 15 hours.
Registration Permission: Consent of instructor.

Psychology (830)

110 General Psychology (3) Introduction to primary approaches to the study of human behavior and experience. (SS)

117 Honors: General Psychology (3) (SS) Recommended Background: Chancellor's Honors Program participant.
Registration Permission: Consent of instructor.

210 Biological Basis of Behavior (3) Survey of theories and research concerning the role of genetic factors, nervous and endocrine systems, and other biological influences on behavior. (RE) Prerequisite(s): 110 or 117.

220 Behavior and Experience: Humanistic Psychology (3) Behavioral and phenomenological analysis of individuals and their development in natural environments. (RE) Prerequisite(s): 110 or 117.

295 Research Analysis in Psychology (3) An introduction to the research methods and data analyses used in psychological research. This course should be taken as soon as possible after declaring a major in psychology. (RE) Prerequisite(s): 110 or 117.

300 Child Psychology (3) The normal child from conception through infancy, childhood, and adolescence. Physical, cognitive, social, and emotional development. (RE) Prerequisite(s): 110 or 117.

310 Learning and Thinking (3) Survey of theory and findings of research concerning both humans and non-humans. (RE) Prerequisite(s): 110 or 117.

320 Motivation (3) Survey of theories and related research. Discussion of applications. (RE) Prerequisite(s): 110 or 117.


347 Honors Seminar (1) Classic works in psychology. Professional and ethical issues in psychology. Presentations of faculty scholarship and honors students' projects. Meets weekly. Repeatability: May be repeated. Maximum 8 hours. (RE) Prerequisite(s): 110 or 117.

360 Social Psychology (3) Theories, methods, and findings of research concerning individual behavior in a social context. (RE) Prerequisite(s): 110 or 117.

367 Psychology Honors Project (3) Independent studies course which leads to the honors thesis. Student must have plan of study approved by mentor prior to enrollment. Grading Restriction: Satisfactory/No Credit grading only.
Repeatability: May be repeated. Maximum 15 hours. (RE) Prerequisite(s): 110 or 117.

370 Ethology and Sociobiology (3) (See Ecology and Evolutionary Biology 370.)

382 Contemporary Topics in Psychology (3) Current issues or problem, such as architectural psychology, impact of technology, artificial intelligence, or stereotypes. Different topic each semester. Repeatability: May be repeated. Maximum 9 hours.
Credit Restriction: Maximum of 6 hours may be applied toward major. (RE) Prerequisite(s): 110 or 117.
385 Statistics in Psychology (3) Descriptive statistics. Logic of hypothesis-testing and statistical inference. Basic parametric and nonparametric tests. (RE) Prerequisite(s): 110 or 117.

395 Methods of Research in Psychology (3) Fundamentals in the design, conduct, and interpretation of research, including systematic observation, experiments, quasi-experiments, and program evaluations. Focus on both laboratory and natural settings. (RE) Prerequisite(s): 385 or Mathematics 115. Registration Restriction(s): Minimum student level – junior.

399 Supervised Research and Field Work (1-3) Field experience in community-based research and service settings. Repeatability: May be repeated. Maximum 6 hours. Credit Restriction: Any combination of 6 hours of 399, 489, 491, 492, 493 may be used in major. An additional 6 hours may be used as electives. (RE) Prerequisite(s): 110 or 117.


409 Group Facilitation (3) Study of theory and technique through supervised experience in small groups. Repeatability: May be repeated. Maximum 6 hours. (RE) Prerequisite(s): 110 or 117. Registration Restriction(s): Minimum student level – junior.

410 Sensory Processes and Perception (3) Physiological and psychological theories of perception. Emphasis on audition and vision. (RE) Prerequisite(s): 110 or 117. Registration Restriction(s): Minimum student level – junior.

415 Psychology of Religion (3) History of the psychology of religion with an examination of various philosophical and empirical orientations. Exploration of the psychological function of religion for individuals and society. (Same as Religious Studies 415.) (RE) Prerequisite(s): 110 or 117. Registration Restriction(s): Minimum student level – junior.

420 History and Systems of Psychology (3) History of psychological thought. Classical approaches and recent developments. (RE) Prerequisite(s): 110 or 117. Registration Restriction(s): Minimum student level – junior.

424 Psychology and the Law (3) Psychological aspects of legal systems. (RE) Prerequisite(s): 110 or 117. Registration Restriction(s): Minimum student level – junior.

430 Health Psychology (3) Psychological factors related to health and illness, including stress, personality, and environment. Applications of psychological treatments to physical illness. (RE) Prerequisite(s): 110 or 117. Registration Restriction(s): Minimum student level – junior.

431 Psychology of Adjustment (3) Current psychosocial trends and their influence on personal adjustment and mental health. From scientist-practitioner perspectives of theory, research, and application. (RE) Prerequisite(s): 110 or 117.

434 Psychology of Gender (3) Biological, psychological, and social factors in gender. Importance of gender roles and stereotypes for behavior and experience. (Same as Women’s Studies 434.) (RE) Prerequisite(s): 110 or 117. Registration Restriction(s): Minimum student level – junior.

435 Multicultural Psychology (3) Issues of race, ethnicity, socioeconomic status, gender, spirituality, sexual orientation, and ability level as related to the theory, research, and practice of psychology will be examined. Focus will be on increasing personal self-awareness and knowledge of multicultural issues. (RE) Prerequisite(s): 110.

440 Organizational Psychology (3) Social-psychological analysis of organizations emphasizing role-theory and systems theory. (Same as Management 440.) (RE) Prerequisite(s): 110 or 117. Registration Restriction(s): Minimum student level – junior.


450 Comparative Animal Behavior (3) (See Ecology and Evolutionary Biology 450.)

459 Comparative Animal Behavior Laboratory (3) (See Ecology and Evolutionary Biology 459.)

461 Physiological Psychology (3) Nervous system and physiological correlates of behavior. Biological basis of emotion, learning, memory, and stress. (RE) Prerequisite(s): 110.

467 Psychology Honors Thesis (3) Independent study for writing and oral defense of honors thesis. Grading Restriction: Satisfactory/No Credit grading only.

470 Theories of Personality (3) Major theories of human personality and their development. (RE) Prerequisite(s): 110 or 117. Registration Restriction(s): Minimum student level – junior.

475 Adolescent Development (3) Theoretical perspectives and empirical research findings pertinent to adolescent development. (RE) Prerequisite(s): 110 or 117. Registration Restriction(s): Minimum student level – junior.

480 Theories of Learning (3) Classical and current approaches to learning and cognition. (RE) Prerequisite(s): 110 or 117. Registration Restriction(s): Minimum student level – junior.

482 Topics in Psychology (3) Intensive analysis of special topics, such as African-American psychology or evaluation of programs in the community. Repeatability: May be repeated. Maximum 6 hours. Credit Restriction: Any combination of 6 hours of 399, 489, 491, 492, or 493 may be used in major. An additional 6 hours may be used as electives. (RE) Prerequisite(s): 110 or 117. Registration Restriction(s): Minimum student level – junior.

489 Supervised Research (1-9) Repeatability: May be repeated. Maximum 12 hours. Credit Restriction: Any combination of 6 hours of 399, 489, 491, 492, or 493 may be used in major. An additional 6 hours may be used as electives. (RE) Prerequisite(s): 110 or 117.

491 Foreign Study (1-15) Repeatability: May be repeated. Maximum 15 hours. Credit Restriction: Any combination of 6 hours of 399, 489, 491, 492, or 493 may be applied toward the major. An additional 6 hours may be used as electives. (RE) Prerequisite(s): 110 or 117.

492 Off-Campus Study (1-15) Repeatability: May be repeated. Maximum 15 hours. Credit Restriction: Maximum 12 hours in 399, 489, 492, and 493 may be applied toward major. Any combination of 6 hours of 399, 489, 491, 492, or 493 may be applied toward the major. An additional 6 hours may be used as electives. (RE) Prerequisite(s): 110 or 117.

493 Independent Study (1-15) Repeatability: May be repeated. Maximum 15 hours. Credit Restriction: Any combination of 6 hours of 399, 489, 491, 492, or 493 may be applied toward the major. An additional 6 hours may be used as electives. (RE) Prerequisite(s): 110 or 117.

496 Senior Seminar: Great Ideas in Psychology (3) Key ideas that have shaped conceptions of humankind. Exploration of historical development, scientific evolution, and larger social context. Writing-emphasis course. (RE) Prerequisite(s): 110 or 117. Registration Restriction(s): Minimum student level – senior.

Public Health (839)

300 Introduction to Public Health (3) Aspects of public health including discussion of contemporary and controversial health issues.

305 Disease Epidemiology, Prevention, and Control (3) Foundations of epidemiology applied to infectious, acute, and chronic diseases. Emphasis on the applications of public health prevention and control initiatives throughout the disease cycle. (RE) Prerequisite(s): Biochemistry and Cellular and Molecular Biology 230.

400 Consumer Health (3) (See Health 400.)

493 Directed Independent Study (1-3) Individual study of selected issues. Repeatability: May be repeated. Maximum 6 hours. Registration Permission: Consent of instructor.
Public Relations (841)
270 Public Relations Principles (3) Theories and principles of public relations. Overview of public relations in management of business, government, institutions and organizations. Brief case studies and public relations projects.
320 Public Relations Communication (3) Mechanics of effective writing for various media to achieve organizational goals. Overview of governing communication and persuasion theories. Focus on implementation of research-based, planned, and managed techniques in a lab setting.
130 Practicum in Recreation and Leisure Studies (2) Supervised focus on the application and practice of theories of leadership and professional practices in leisure service industries. The required lab focusing on understanding concepts, philosophy, career opportunities, Methods of communication and persuasion.
470 Public Relations Campaigns (3) Research, planning, and communication and evaluation of major public relations campaigns. Oral and written presentation of a public relations project from inception to completion. Requires extensive out-of-class work.
490 Special Topics (3) Topics vary. Repeatability: May be repeated. Maximum 6 hours.
491 Foreign Study (1-15) Approval of hours and topic by advisor required prior to registration. Repeatability: May be repeated. Maximum 15 hours.
492 Field Experience (1-2) Approved internships and other supervised practice in public relations. Grading Restriction: Satisfactory/No Credit grading only. Repeatability: May be repeated. Maximum 4 hours.
493 Independent Study (3) Repeatability: May be repeated. Maximum 6 hours.

Reading Education (847)
430 Elementary and Middle School Developmental Reading Instruction (2) Word recognition (including phonics), comprehension, evaluation, and materials. Registration Restriction(s): Qualification – admission to teacher education.
461 Developing Reading Skills in Content Fields (3) Teaching reading and study skills in content areas of the school program. Extensive assessment of textbooks. Emphasis on middle school and high school.

Recreation and Leisure Studies (853)
100 Orientation to Recreation and Leisure Studies (1) Overview of discipline and professional areas for incoming recreation and leisure studies majors.
201 Foundations of Recreation and Leisure and Principles of Leadership (4) Introduction to the recreation and leisure profession focusing on understanding concepts, philosophy, career opportunities, and professional practices in leisure service industries. The required lab focuses on the application and practice of theories of leadership.
290 Practicum in Recreation and Leisure Studies (2) Supervised practice in approved agencies offering programs in recreation and leisure services. Each hour of credit requires 50 clock-hours of work.
310 Development and Evaluation of Recreation and Leisure Programs (3) Essential elements and principles in the organization, administration, marketing, and evaluation of various types of recreation programs. Emphasis on development of program objectives. Practical and comprehensive program designs and evaluation for population and facility within student’s area of interest.
320 Therapeutic Recreation and Special Populations (3) Principles, concepts, historical development of recreation, therapeutic recreation, and leisure services for special population. Discussion and explanation of legislation, attitudes, barriers to participation, inclusion and advocacy as related to leisure fulfillment. Discussion of various disabilities, illnesses, and conditions that impact one’s lifestyle.
325 Therapeutic Recreation and Lifestyle Planning (3) Emphasis on how therapeutic recreation specialists can use the application of healthy lifestyle principles as a treatment modality. Importance and role of recreation/leisure participation (humor, stress-management, self-responsibility, fitness) in the planning and delivery of therapeutic recreation service for individuals with disabilities. Introduction to specific facilitation techniques, e.g., values clarification, etc., that may be applicable to therapeutic recreation.
390 Practicum in Recreation and Leisure Studies (2) Supervised practice in approved agencies offering programs in recreation and leisure services. Each hour of credit requires 50 clock-hours of work.
410 Management Concepts of Recreation, Leisure, and Sport Programs (3) Principles for operationalizing recreation and leisure and sport-related programs. Units address utilizing research as a management tool, assessing program cost, facility utilization and evaluation, and contemporary management concepts.
415 Development of Recreation, Leisure, and Athletic Facilities (3) Principles of designing, planning, equipping, and operating various facilities. Elements of risk management and safety are incorporated into the design process.
420 Principles of Therapeutic Recreation (3) Principles and practices in therapeutic recreation, including activity analysis, activity and program selection. Also, individual and program assessment, developing treatment plans, proper documentation and professional issues will be discussed.
425 Therapeutic Recreation Programming (3) Principles and practices of therapeutic recreation programming for individuals with multiple disabilities. Focus is on the social, interpersonal, and behavioral aspects of working with children and young adults with disabilities in recreational environments.
430 Organization and Administration of Leisure Services (3) Principles of administration applied to provision of leisure services offered by public, private, non-profit, and/or commercial enterprises. Organizational structures, human resource management, diversity, evaluation, legal authority, introduction to budgeting and fiscal procedures, professional responsibility, and career management.
440 Dimensions of Commercial Recreation and Leisure Enterprises (3) Organizational structures, delivery systems, financing private enterprises, and operating selected profit centers in a variety of settings. Special attention is given to market performance and economic impact.
450 Special Topics in Recreation and Leisure Studies (1-6) Development of special topics in recreation/therapeutic recreation and leisure.

Registration Restriction(s): 2.30 GPA.
Registration Restriction(s): Public relations major.
(Re) Prerequisite(s): 201.
Registration Restriction(s): 320.
Grading Restriction: Satisfactory/No Credit grading only.
Grading Restriction: Satisfactory/No Credit grading only.
(Re) Prerequisite(s): 320.
Registration Restriction(s): Public relations major.
Grading Restriction: Satisfactory/No Credit grading only.
Grading Restriction: Satisfactory/No Credit grading only.
(Re) Prerequisite(s): 320 and 370.
(Re) Prerequisite(s): 320.
(Re) Prerequisite(s): 320.
(Re) Prerequisite(s): Advertising 310 and 340.
Grading Restriction: Satisfactory/No Credit grading only.
(Re) Prerequisite(s): Advertising 310 and 340.
(Re) Prerequisite(s): 270 and Advertising 310.
Registration Restriction(s): Public relations major.
Registration Restriction(s): Public relations major.
(Re) Prerequisite(s): Advertising 310 and 340.
Registration Restriction(s): Public relations major.
(Re) Prerequisite(s): Advertising 310 and 340.
Grading Restriction: Satisfactory/No Credit grading only.
(Re) Prerequisite(s): Advertising 310 and 340.
Grading Restriction: Satisfactory/No Credit grading only.
(Re) Prerequisite(s): Advertising 310 and 340.
Registration Restriction(s): Public relations major.
Religious Studies (863)

101 World Religions in History (3) Introduction to religion in culture and society, including examination of religious traditions from China, India, and the Mediterranean world. Writing-emphasis course. (CC)

102 The Comparison of World Religions (3) Introduction to religion in culture and society, focusing on cross-cultural interpretation and the treatment of common problems and themes within religious traditions. Writing-emphasis course. (CC)

107 Honors: World Religions in History (3) Introduction to religion in culture and society, including examination of religious traditions from China, India, and the Mediterranean world. Writing-emphasis course. (CC)

232 Varieties of Religious Community (3) How different forms of religious communities (cults, tribes, sects, monastic orders, denominations, familial, etc.) have sought to reject, reinforce, transform, ignore, or dominate their culture and society. (Same as Sociology 232.)

244 Professional Responsibility (3) (See Philosophy 244.) (AH) (OC)

300 Ways of Understanding Religion (3) Sources and methods used in the study of religion and religions. Analysis of approaches to the study of religion. Writing-emphasis course.

301 Religious Myth, Symbol, and Ritual (3) Distinctive modes of religious expression and analysis of theoretical approaches appropriate to their particular social and cultural functions in religions.

302 Anthropology of Religion (3) Religions of selected non-literate peoples. Role of religion in their social and cultural systems. (Same as Anthropology 302.)

305 Modern Religious Thought (3) Major themes, issues, and thinkers of 19th- and/or 20th-century religion. Repeatability: May be repeated. Maximum 6 hours.

309 Elementary Classical Hebrew (3) Basic elements of Hebrew phonology, script, morphology, and syntax. Introduction to basic elements of text, form, and literary criticism.

310 Elementary Classical Hebrew (3) Basic elements of Hebrew phonology, script, morphology, and syntax. Introduction to basic elements of text, form, and literary criticism.

311 Ancient Hebrew Religious Traditions (3) Development of ancient Israelite and early Jewish traditions with emphasis on those concerning the Exodus, Davidic kingship, and Zion in historical, prophetic, and apocalyptic material. Writing-emphasis course. (Same as Judaic Studies 311.)

312 Religious Aspects of Biblical and Classical Literature (3) Ways in which contemporary modes of literary study enhance appreciation of biblical and classical material. Ways in which the western literary tradition has appropriated and recast the biblical and classical heritage. Writing-emphasis course. (Same as Judaic Studies 312.)

313 Religious Aspects of Modern Literature (3) Issues raised for religious inquiry in contemporary literature. Relation of religious and moral considerations to problems of literary analysis. Relation between religious language and forms of human expression (symbol, metaphor, myth, image) identified in study of literature. Writing-emphasis course.

315 Reformation Europe, 1500-1650 (3) (See History 315.)
379 Religion and Philosophy in China (3) Traditional thought and religion of China in its cultural setting as basis for understanding modern China. Writing-emphasis course. (Same as Philosophy 379.)

380 East Asian Buddhism in Asia and North America (3) An overview of the distinctive forms of Buddhism that arose in China, Japan, and Korea, as well as an introduction to their offshoots in North America.

381 Introduction to Judaism (3) History, traditions, philosophy, and religion of the Jewish people grounded in the ancient period, but includes diaspora, emancipation and haskalah. Writing-emphasis course. (Same as Judaic Studies 381.)

382 Religion and Culture in Southeast Asia (3) Historical study of the major religions in Southeast Asia, including indigenous traditions, Hinduism, Buddhism, Islam and Christianity. Focus will be on the historical interplay between religion, culture, and society and the expression of these traditions.

383 Religion in Japan (3) Traditional religious heritage and contemporary expressions of religion in Japan with attention to relationships of persons to nature, self-mastery and spontaneity, individual and community, and secular to sacred. Writing-emphasis course.

384 Zen Buddhism (3) Historical, philosophical, and meditational aspects of Zen. Special emphasis on motifs of emptiness, no-mind, and enlightenment and on practices of meditation and the use of the koan. Recommended Background: 376 or 379 or 383.

385 Contemporary Jewish Thinkers (3) Renewal trends in 19th and 20th-century Judaism. Writing-emphasis course. (Same as Judaic Studies 385.) Repeatability: May be repeated. Maximum 6 hours.

386 Voices of the Holocaust (3) Historical underpinnings of Nazi genocides such as that of the Jewish people, gypsies, and homosexuals. The economic, religious, social, and philosophical trends supporting massive genocide. (Same as Judaic Studies 386.)

389 Literature of the English Bible (3) (See English 389.)

401 Texts and the Study of Texts (3) Systematic introduction to the nature and function of (primarily, but not exclusively, oral and written) texts and textual traditions in the study of religion. How texts are made and used historically, how they are recovered and created by scholars, and how they are interpreted by religious communities and scholars.

405 Modern Jewish Thought (3) History, culture, and geography of the modern state of Israel in 1948 and the political complexities of the Middle East. Israeli culture and literature. Writing-emphasis course. (Same as Judaic Studies 405.)

415 Psychology of Religion (3) (See Psychology 415.)

425 Seminar in Western Religions (3) Selected figures, themes, movements, and problems. Repeatability: May be repeated. Maximum 6 hours. Registration Permission: Consent of instructor.

430 Seminar in American Religion (3) Selected figures, themes, movements, and problems. Repeatability: May be repeated. Maximum 6 hours. Registration Permission: Consent of instructor.

440 Seminar in Comparative Religion (3) Selected figures, themes, movements, and problems. Repeatability: May be repeated. Maximum 6 hours. Registration Permission: Consent of instructor.

474 Modern and Contemporary South Asian Religion (3) Religion in India during the Islamic and European colonial periods and in independent India. May include such topics as the development of vernacular forms of Hinduism; Hindu interactions with other religions; the Indian Freedom Movement and Gandhi; women and tradition; religion, secularism, and politics in independent India; and religion and caste in the new India. Writing-emphasis course. (RE) Corequisite(s): 374.

490 Readings and Research in Religious Studies (3) Repeatability: May be repeated. Maximum 6 hours. Registration Permission: Consent of instructor.

491 Foreign Study (1-15) Repeatability: May be repeated. Maximum 15 hours.

492 Off-Campus Study (1-15) Repeatability: May be repeated. Maximum 15 hours.

493 Independent Study (1-15) Repeatability: May be repeated. Maximum 15 hours.

499 Proseminar in Religious Studies (3) For advanced students in religious studies, required for majors. Selected topics, e.g., nature and function of myth in religion, problem of evil, transcendence, theories of religion, hermeneutics, integrating various disciplines involved in study of religion. Repeatability: May be repeated. Maximum 6 hours. Registration Permission: Consent of instructor.

Retail and Consumer Sciences (865)

210 Introduction to Retail Management (3) Development and overview of retailing, related businesses and industries, and the activities involved in the delivery of goods and services to the consumer.

310 Retail Buying and Planning (4) Analysis of the merchandise buying function within different types of retail organizations and structures. Application of principles associated with retail buying, planning, and allocation. Computer simulations with emphasis on Excel.

311 Human Resources Management in Hospitality and Retailing (3) (See Hotel, Restaurant, and Tourism 311.)

320 Apparel Product Development (3) Concepts of apparel product development from the retailer’s perspective. Understanding of basic textile and design principles, specification writing, line building, and brand management to develop apparel products for target markets.

341 Consumers in the Marketplace (3) Understanding of behavior of individual and family, demographics, family life cycle, family dynamics and roles, cultural and ethnic influences, and individual and family decision making.

346 Retail Operations Management (3) Analysis of retail operations in terms of organizational structure, logistics and distribution, growth opportunities and productivity.

360 Issues and Trends in Consumer Service (3) Building competencies in providing outstanding customer service in retail organizations. This course will create a unified approach to customer service, recognizing the importance of store environment planning, organizational policies, and internal marketing that will lead to increased business by attracting and retaining desired customers. (Same as Hotel, Restaurant, and Tourism 360.)

376 Strategies for Growth (3) Issues concerning achievement of business growth with focus upon the consumer, operational, and financial dimensions of the service industry. (RE) Prerequisite(s): 310 and Marketing 300. (DE) Prerequisite(s): 341.

390 Professional Development (3) (See Hotel, Restaurant, and Tourism 390.) (WC)

410 Strategic Retail Planning (3) Retail management from a strategic planning perspective. Development and implementation of retail strategy from financial, operational, and customer orientation. (RE) Prerequisite(s): 376 and 422.


412 e-Retailing (3) Issues concerning the use of the Internet and related technologies to improve and/or transform retail businesses. Emphasizes analysis of consumers and product/service types in online retailing and the effective management of online catalogs. Also direct retailing methods that involve technology such as interactive TV and m-commerce (mobile). (RE) Prerequisite(s): 210 and 341. (DE) Prerequisite(s): Marketing 300.

415 Retail Promotion (3) In-store promotional activities. Development of retail promotion strategies. Evaluation of retail promotions. Supplementary focus on advertising and other methods to communicate in-store promotions. (RE) Prerequisite(s): 210 and 341. (DE) Prerequisite(s): Marketing 300.

421 International Retailing (3) The study and analysis of retailing in an international and global setting. Retail processes and practices and issues within international environments – cultural, economic, social, political, legal, and business. (RE) Prerequisite(s): 210 and 341. (DE) Prerequisite(s): Marketing 300.
422 Professional Experience in Retail and Consumer Sciences (6) Supervised educational experiences in selected retail and consumer sciences service operations.  
(RE) Prerequisite(s): 310 and Hotel, Restaurant, and Tourism 390.  
Registration Restriction(s): Retail and consumer sciences major.

480 Retail Market Planning and Execution (1-3) Exposes students to the process of planning and executing a market trip. Involves off-campus experience at a major market center.  
Repeatability: May be repeated. Maximum 6 hours.  
(RE) Prerequisite(s): 310.  
Registration Permission: Consent of instructor.

482 Professional Experience in Retailing II (6) Supervised professional experience in selected retail operations that build upon first professional experience.  
(RE) Prerequisite(s): 410 and 422.

484 International Retail Industry Study Tour (3) Group study abroad involving academic research and field investigation.  
Repeatability: May be repeated. Maximum 6 hours.  
Recommended Background: 210.  
Registration Permission: Consent of instructor.

493 Directed Study (1-3) Individual problems for junior and senior students with special interests in retail and consumer sciences.  
Repeatability: May be repeated. Maximum 6 hours.  
Recommended Background: Minimum student level – junior.  
Registration Permission: Consent of instructor.

495 Special Topics (3) Topics in retail and consumer sciences.  
Repeatability: May be repeated. Maximum 9 hours.  
Recommended Background: Minimum student level – junior.  
Registration Permission: Consent of instructor.

497 Honors: Retail and Consumer Sciences (1-3) Individual problems for junior and senior students showing special ability and interest in retail and consumer sciences.  
Repeatability: May be repeated. Maximum 6 hours.  
Recommended Background: Minimum student level – junior.  
Registration Permission: Consent of instructor.

498 Honors: Retail and Consumer Sciences (1-3) Individual problems for junior and senior students showing special ability and interest in retail and consumer sciences.  
Repeatability: May be repeated. Maximum 6 hours.  
Recommended Background: Minimum student level – junior.  
Registration Permission: Consent of instructor.

Rural Sociology (880)

380 Rural Sociology (3) Topics include the analysis of U.S. land tenure systems, agricultural regions, rural minorities, Amish, farmer organizations, rural institutions, community decision-making, local government, rural policy issues, rural industrialization, food policy, and cross-cultural analysis.

Russian (886)

101 Elementary Russian (4)  
102 Elementary Russian (4)  
(RE) Prerequisite(s): 101.

201 Intermediate Russian (4) (CC)  
(RE) Prerequisite(s): 102.

202 Intermediate Russian (4) (CC)  
(RE) Prerequisite(s): 201.

221 Rebels, Dreamers, and Fools: The Outcast in 19th Century Russian Literature (3) Texts in English translation. Writing-emphasis course.  
(AH) (WC)  
Credit Restriction: No foreign language credit.

222 Heaven or Hell: Utopias and Dystopias in 20th-Century Russian Literature (3) Texts in English translation. Writing-emphasis course.  
(AH)  
Credit Restriction: No foreign language credit.

311 Russian Composition and Conversation (3) Practice in writing and speaking. Grammar review and vocabulary building.  
(RE) Prerequisite(s): 202.

312 Russian Composition and Conversation (3) Practice in writing and speaking. Grammar review and vocabulary building.  
(RE) Prerequisite(s): 311.

325 Russian Film (3) A study of the Russian cinema from the earliest days to the present. Writing-emphasis course.  
(Same as Cinema Studies 325.)

371 Martyrs, Mobs, and Madmen in Russian Culture: 988-1861 (3) Explores various aspects of Russian music, art, and literature, emphasizing violent cultural clashes that produced extreme artistic reactions. Texts in English translation. Writing-emphasis course.

372 Modern Russian Culture through Readings and Dramatic Production (3) A survey of Russian culture from the era of great reforms of the 1860s through modern times, supplemented by participation in a dramatic production. Texts in English translation. Some texts in Russian for Russian majors. Writing-emphasis course.

401 Advanced Grammar, Conversation, and Composition (3)  
(RE) Prerequisite(s): 312.

402 Advanced Grammar, Conversation, and Composition (3)  
(RE) Prerequisite(s): 401.

424 Nabokov’s Novels and Stories (3) An intensive course covering several novels and stories, the memoir, and some scientific writings of the prolific Russian-American author. Particular attention given to the author’s philosophical views and the contact between his science and his art. In English with readings in Russian for majors. Writing-emphasis course.

425 Introduction to Descriptive Linguistics (3) (See French 425.)

426 Methods of Historical Linguistics (3) (See German 426.)

430 Selected Topics in Russian Literature (3) Writing-emphasis course.  
Repeatability: May be repeated if topic differs. Maximum 9 hours.

451 Senior Seminar (3) Intensive study of language, literary style, and literary criticism based on selected major novels.  
(RE) Prerequisite(s): 312.  
Comment(s): For students majoring in Russian; minors admitted at the discretion of the instructor.

452 Senior Seminar (3) Intensive study of language, literary style, and literary criticism based on selected major novels.  
(RE) Prerequisite(s): 312.  
Comment(s): For students majoring in Russian; minors admitted at the discretion of the instructor.

490 Internship (1-15) Career-related experiences in the United States or abroad.  
Grading Restriction: Satisfactory/No Credit grading only.  
Repeatability: May be repeated. Maximum 15 hours.  
Registration Restriction(s): Russian major/language and world business concentration.

491 Foreign Study (1-15)  
Repeatability: May be repeated. Maximum 15 hours.

493 Independent Study (1-15)  
Repeatability: May be repeated. Maximum 15 hours.

Safety (890)

406 Death, Dying and Bereavement (3) (See Health 406.)

Contact Hour Distribution: 3 hours and 2 labs.

452 Safety Principles and Practices (3) An introduction to the general principles, practices, and procedures in occupational and community safety. A survey of historical and present safety issues, problems, and practices addressing safety of individuals and groups in work-site, school, community, transportation, and industrial settings.  
Registration Restriction(s): Minimum student level – junior.

460 Fire Risk Management (3) Provides the knowledge and skills necessary to develop, implement, and manage a comprehensive fire safety program. Incorporates basic fire risk management concepts, interpretation of codes, and an exposure to basic fire analysis techniques.  
Registration Restriction(s): Minimum student level – senior.

Science Education (899)

496 Teaching Science Grades 7-12 (3) Methods, materials, recent trends in science and environmental education programs for secondary schools.  
Registration Restriction(s): Qualification – admission to teacher education.
Social Science Education (900)

454 Teaching Strategies and Issues in Social Studies Education (3)

Registration Restriction(s): Qualification — admission to teacher education.

Social Work (905)

200 Introduction to Social Work (3)
Emergence of the social work profession. Professional mission, knowledge, skills, and values. Practice settings, client groups, helping services, career patterns, and practice methods. Designed to assist students to consider their ability for careers in social work.

250 Social Welfare (3)
Development, structure, and function of the social welfare institution. Analysis of social welfare programs and impact of the institution on society.

312 Interviewing Skills and the Helping Relationship in Social Work Practice (3) Knowledge, values, and skills for entry-level generalist practice in a variety of settings. The social work problem-solving process, difference size client systems, ethnic-sensitive assumptions, and the worker's regard for person-environment configuration. Concurrent skills laboratory.

Comment(s): Progression required. Social work majors only.

313 Social Work Practice with Individuals and Families (3)
In-depth study of generalist practice with individuals and families. Practice roles, value dilemmas, and working with people of diverse backgrounds. Concurrent skills laboratory.

(RE) Prerequisite(s): 312.

Comment(s): Progression required. Social work majors only.

314 Human Behavior and the Social Environment (3)
Interrelatedness of biological, social, cultural, environmental, and psychological factors in human behavior. Person-in-environment over the life span with special attention to diversity, impact of racism, sexism, and other sociocultural factors. Integration of knowledge into a social work practice perspective.

(WC) Prerequisite(s): English 101 and English 102.

Comment(s): Progression or consent of instructor required.

315 Social Work Practice with Groups, Organizations and Communities (3)
Generalist practice with emphasis on groups, organizations and communities, including treatment theories, techniques, and issues.

(RE) Prerequisite(s): 312.

Comment(s): Progression or consent required. Social work majors only.

316 Understanding Diversity in a Global Society (3)
Exploring race, ethnicity, gender, class, and sexual orientations from a social work perspective. Students develop self-awareness of their own culture and the culture of others and acquire knowledge and understanding of the impact of oppression on diverse groups.

Comment(s): Progression or consent of instructor required.

380 Field Practice in Social Work I (3)
Eight-hour-per-week, supervised practice experience with practice situations for developing professional skills, values, and attitudes. Concurrent seminar focuses on integration of knowledge with practice experiences.

(RE) Prerequisite(s): 312.

Comment(s): Progression required. Social work majors only.

410 Social Work Research (3)
Scientific method and research strategies to evaluate one's practice and/or social service delivery. Knowledge of statistical techniques required.

(RE) Prerequisite(s): Mathematics 115 or Psychology 385.

(RE) Corequisite(s): 480.

Comment(s): Progression required. Social work majors only.

416 Social Welfare Policies and Issues (3)
Policy formulation processes, policymakers in systems, and policy-related role expectations. Emphasis on utilizing an analytical framework and social change efforts.

Comment(s): Progression or consent of instructor required.

460 Integrative Seminar (3)
Social work content for entry-level professional practice and current issues influencing the profession. Includes development of a portfolio reflecting BSW competencies and research development and presentation.

(RE) Prerequisite(s): 410 and 480.

(RE) Corequisite(s): 481.

Comment(s): Progression required. Social work majors only.

461 Child Welfare I: History, Programs, and Policies (3)
Study of the child welfare system examining history, policies, and programs, both state and federal, pertinent to child maltreatment and juvenile justice.

462 Child Welfare II: Skills and Practice Methods (3)
Emphasis on the special challenges, needed skills, and different strategies and interventions in the provision of culturally responsive child welfare services.

Comment(s): Progression or consent of instructor required.

480 Field Practice in Social Work II (6)
Sixteen-hour-per-week supervised agency field practicum for integration of theory and practice and critical examination of oneself as a professional helping person. Concurrent field seminar on integration of knowledge with practice experiences.

(RE) Prerequisite(s): 380.

(RE) Corequisite(s): 410 and 480.

Comment(s): Progression required. Social work majors only.

481 Field Practice in Social Work III (6)
Sixteen-hour-per-week supervised agency field practicum for integration of theory and practice and critical examination of oneself as a professional helping person. Concurrent field seminar on integration of knowledge with practice experiences.

(RE) Prerequisite(s): 410 and 480.

(RE) Corequisite(s): 460.

Comment(s): Progression required. Social work majors only.

491 International Study (1-15)
Repeatability: May be repeated. Maximum 15 hours.

Registration Permission: Consent of instructor.

492 Off-Campus Study (1-15)
Repeatability: May be repeated. Maximum 15 hours.

Registration Permission: Consent of instructor.

493 Independent Study (1-15)
Repeatability: May be repeated. Maximum 15 hours.

Registration Permission: Consent of instructor.

Sociology (915)

110 Social Justice and Social Change (3)
Problems of deviance, crime, and victimization, inequalities in exposure to environmental risks, and inequities in power and participation within the context of social change. Assessment of control strategies and redress of injustices.

117 Honors: Social Justice and Social Change (3) (SS)
Comment(s): 3.00 GPA required for first-year students; 28 ACT composite or 1200 SAT required for incoming students.

120 General Sociology (3)
Major concepts and theoretical approaches of sociology with emphasis on culture, socialization, social organization, and social stratification.

127 Honors: General Sociology (3) (SS)
Comment(s): 3.00 GPA required for first-year students; 28 ACT composite or 1200 SAT required for incoming students.

232 Varieties of Religious Community (3) (See Religious Studies 232.)

250 Introduction to Global Studies (3)
Exploration of how globalization is fostering change in culture, politics, economics, philosophy, and the environment. Uses interdisciplinary perspectives to understand the relationship between historic processes and the contemporary world and the reciprocal influences of local dynamics and global change. (Same as Global Studies 250.)

260 Introduction to the Study of Environmental Issues (2)
Examination of selected environmental issues and their significance in contemporary societies. Demonstrates the utility of combining sociological and humanistic perspectives of the environment with the more traditional biophysical perspectives. Writing-emphasis course.

280 Social Justice and Social Change (3)
Institutional organization of contemporary American society with particular attention to major social values. Writing-emphasis course.

311 Family (3)
Theoretical frameworks and methodological approaches and their application in the sociological study of past and present family forms.

321 Sociological Theory (3)
Survey of contemporary issues and problems in sociological theory with an emphasis on their historical development and their importance for the field. Students are required to form critical appraisals of the topics addressed.

(RE) Prerequisite(s): 110 or 120.

Comment(s): C or higher in 110 or 120 required.

331 Sociological Research (3)
Selected issues in philosophy of social science, research design, sampling, methods of data collection, and interpretation.

(RE) Prerequisite(s): Statistics 201.

Comment(s): C or higher in 110 or 120 required.

340 Class Structure (3)

343 Race and Ethnicity (3)
Social sources of racial and ethnic cleavages and social, economic, and political consequences. Emphasis on race and ethnicity in the United States. Writing-emphasis course. (Same as Africana Studies 343; American Studies 343.)
344 Power and Society (3) Sociological analysis of the formation and application of national state policies. Examination of who gets what, why, and how. Emphasis on contrasting explanations of the control of the state and the relative autonomy of the state.

345 Collective Behavior and Social Movements (3) Collective phenomena leading to social change. Response to disaster, popular crazes, and social protests and development, organization, and function of social movements. Emphasis on American cases. (Same as American Studies 345.)

350 Criminology (3) Systematic inquiry into how crime is defined, measured, and explained. Implications for criminal justice policy.

351 Juvenile Delinquency and Social Policy (3) This course examines the historical and contemporary nature and social contexts of juvenile delinquency, as well as theoretical explanations of and social reactions to delinquency in American society.

352 Deviance and Social Control (3) Deviants, their lifestyles, social organization, and social control.

360 Environment and Resources (3) Relationship between scarcity of natural resources and changes in societal beliefs and social structure. Topics include social and physical limits to growth and collective action problems. Writing-emphasis course.

370 Social Psychology (3) Social psychological analysis of social behavior emphasizing its acquisition, its enactment, and its dynamic nature.

375 Gender in Society (3) Exploration of gender in society utilizing various sociological perspectives with special focus on the relationships between social structures, social roles, and gender identities. (Same as Women's Studies 375.)

400 Special Topics (3) Variable topics. Scope of subject matter determined by students and instructor with consent of department. Repeatability: May be repeated. Maximum 6 hours.

422 Comparative Poverty and Development (3) A critical examination of patterns of poverty and inequality in developing areas of the world, along with a review of major sociological theories which attempt to explain differences in patterns of development. Writing-emphasis course. (Same as Africana Studies 442.)

446 The Modern World System (3) Critical examination of the capitalist world-system as a social system, its coherence, boundaries, regions, member groups, cleavages, and patterns of conflict. Analysis of who gets what, why, and how in the global political economy. Writing-emphasis course.

451 Criminal Justice (3) A critical assessment of the criminal justice apparatus and its components. Brief examination of the police, with most of the emphasis on the criminal courts and institutions and programs such as the prison, probation, and parole. Analysis of their operation and impacts.

452 Race, Ethnicity, Crime, and Justice (3) Examines racial/ethnic disparities in criminal offending and victimization, as well as different experiences with law enforcement, judicial, and correctional agencies. Emphasis on social justice.

453 Gender and Crime (3) Probes the gendered nature of offending, victimization, and criminal justice. Examines the different experiences of males and females, and theories that attempt to explain these differences. (Same as Women's Studies 454.)

455 Society and Law (3) How laws and legal processes are affected by social change, the social impact of legal sanctions, and relations between law and social justice. Writing-emphasis course.

459 White-Collar Crime (3) The distinctive nature and dynamics of white-collar crime, victims and costs of white-collar crime, organizations as white-collar offenders, causal theories, and the dynamics of responses to white-collar crime by private and public parties.


463 Community Sociology (3) The environment shapes human interactions and human interactions shape the construction of environments. This course explores how individuals construct and participate in communities.

464 Urban Ecology (3) The relation of humans to their urban environment with emphasis on conservation and the use of appropriate technology.

465 Social Values and the Environment (3) Human dimensions of ecosystem management and public policy. An applied focus on how social values are activated within specific biophysical and social settings. Writing-emphasis course.

491 Foreign Study (1-15) Repeatability: May be repeated. Maximum 15 hours.

492 Off-Campus Study (1-15) Repeatability: May be repeated. Maximum 15 hours.

493 Independent Study (1-15) Repeatability: May be repeated. Maximum 15 hours.

495 Social Justice and Community Service (3) Examines social stratification, inequalities, and social justice. Service learning component offers supervised internships in the community with service agencies and non-profit organizations. (WC) Comment(s): For sociology majors with senior standing.

Spanish (924)

111 Elementary Spanish (3) Language laboratory required. Credit Restriction: Not available to students eligible for 150.

112 Elementary Spanish (3) Language laboratory required. Credit Restriction: Not available to students eligible for 150. (RE) Prerequisite(s): 111.

150 Intermediate Spanish Transition (3) This course is designed to prepare students for enrollment in 211.

211 Intermediate Spanish (3) (CC)

(Re) Prerequisite(s): 112 or 150 or departmental placement exam.

Comment(s): Students who place in 200-level courses from high school will receive 6 hours of elementary Spanish credit.

212 Intermediate Spanish (3) (CC)

(Re) Prerequisite(s): 211 or 217.

Comment(s): Students who place in 200-level courses from high school will receive 6 hours of elementary Spanish credit.

217 Honors: Intermediate Spanish (3) Honors course for students of superior ability in Spanish. Students follow enriched program with continuing emphasis upon speaking ability and with an introduction to reading literary selections. (CC) Comment(s): Departmental placement test required.

218 Honors: Intermediate Spanish (3) Honors course for students of superior ability in Spanish. Students follow enriched program with continuing emphasis upon speaking ability and with an introduction to reading literary selections. (CC) (RE) Prerequisite(s): 217.

Comment(s): Incoming freshmen are admitted on the basis of a diagnostic test, high school average and performance on the ACT. Students who earn an A or B in 218 receive credit for 300.

300 Transition: Composition and Grammar through Reading (3) Provides preparation in writing skills and exercise in key elements of grammar through the development of reading comprehension, vocabulary acquisition, and compositions on assigned topics.

(Re) Prerequisite(s): 212 or 218 or departmental placement exam.

Comment(s): Available to non-native or non-bilingual students of Spanish only.

305 Conversation and Aural Comprehension (3) Develops speaking and listening comprehension skills through a variety of in-class and extra-class activities.

Credit Restriction: Not available for credit for students whose level of proficiency in Spanish is superior as defined by the ACTFL Proficiency Guidelines.

(Re) Prerequisite(s): 300 or 218.

323 Upper-level Grammar and Composition (3) Study of the more challenging grammatical issues in Spanish with practical application in composition assignments. Any review of basics covered in previous courses is to introduce finer points. Writing-emphasis course.

Credit Restriction: Not available for credit for students whose level of proficiency in Spanish is superior as defined by the ACTFL Proficiency Guidelines.

(Re) Prerequisite(s): 218 or 300.
330 Textual Analysis (3) Introduction to the art of reading and interpreting literary texts and the writing of critical essays, with attention to language structures, literary terminology, theory and concepts such as romance, tragedy, comedy, irony, narrative voice, symbol, metaphor, etc. with application to works such as short stories, one-act plays, essays, and letters. Writing-emphasis course. (RE) Prerequisite(s): 323.

331 Introduction to Hispanic Culture (3) Introduction to the fundamental historical, political, and demographic developments that led to the creation, geographic distribution, and distinctive character of Hispanic cultures with attention to those qualities that distinguish Hispanic culture from other cultures, as well as to ethnic and linguistic components of the Hispanic world in the present day. Writing-emphasis course. (Same as Latin American Studies 331.) (RE) Prerequisite(s): 323.

332 Survey of Spanish Literature: 1700-Present (3) Main writers, trends, stylistic periods, and artistic movements in Spanish America since 1700 set against a broad background of cultural, socio-political and historical developments. Emphasis on neo-classicism, the romantics, the realists of the 19th century, the Generation of ‘98, the avant-garde of the 1920s and 1930s, social realism, women writers, and contemporary developments. Writing-emphasis course. (RE) Prerequisite(s): 323. (RE) Corequisite(s): 330.

333 Survey of Spanish-American Literature: 1700-Present (3) Main writers, trends, stylistic periods and artistic movements in Spanish America since 1700 set against a broad background of cultural, socio-political and historical developments. Emphasis on neo-classicism, the romantics, modernismo, the avant-garde of the 1920s and 1930s, social realism, magical realism, the Latin American boom, women writers, and contemporary developments. Writing-emphasis course. (Same as Latin American Studies 333.) (RE) Prerequisite(s): 323. (RE) Corequisite(s): 330.

334 Survey of Hispanic Literatures: Beginnings-1700 (3) Main writers, trends, stylistic periods and artistic movements in Spain and Spanish America up to 1700 set against a broad background of cultural, socio-political and historical developments. Writing-emphasis course. (Same as Latin American Studies 334.) (RE) Prerequisite(s): 323. (RE) Corequisite(s): 330.

345 Language and Culture of the Hispanic Business World (3) Commercial vocabulary, business letters, import-export, marketing, Hispanic social management culture, and the global significance of economic and political developments in Spanish-speaking countries. (RE) Prerequisite(s): 323.

346 Language and Culture of the Hispanic Business World (3) Commercial vocabulary, business letters, import-export, marketing, Hispanic social management culture, and the global significance of economic and political developments in Spanish-speaking countries. (RE) Prerequisite(s): 323.

401 Cultural Plurality and Institutional Changes in Latin America (3) Value systems, behavioral patterns, political parties, role of the military, the church, educational institutions, dictatorship and nationalism. Writing-emphasis course. (Same as Latin American Studies 401.) Credit Restriction: May not be applied toward the Spanish major. Recommended Background: 6 hours of coursework in Latin American studies.

402 Latin American Studies Seminar (3) Selected topics in Latin American studies. Writing-emphasis course. (Same as Latin American Studies 402.) Repeatability: May be repeated. Maximum 6 hours. Recommended Background: 6 hours of 300- or 400-level coursework in Latin American studies.

420 Applied Linguistics (3) Introduction to applied linguistics, with a special emphasis on the theoretical and practical aspects of the teaching of Spanish as a foreign language. Fundamental concepts in linguistics within the context of Spanish grammar and their use in the study of second language acquisition, foreign language learning and foreign language teaching. Conducted in Spanish with readings in both English and Spanish. (RE) Prerequisite(s): 323.

421 Phonetics (3) (RE) Prerequisite(s): 323.
482 Trends in Hispanic Thought (3) Intellectual/philosophical currents represented in literary works, selected thinkers, or movements from historical periods of Spain and Latin American countries. Writing-emphasis course.

- Repeatability: May be repeated with consent of department. Maximum 6 hours.
- (RE) Prerequisite(s): 323.
- (RE) Corequisite(s): 330.
- Comment(s): Requires completion of major or minor requirements in 332, 333, 334.

484 Race, Ethnicity, and Nation in Hispanic Literature (3) Close reading and analysis of literary texts that deal with issues of race and ethnicity in the Hispanic world, especially with regard to identity and concepts of nationhood. Among possible course topics – mestizaje; conceptual distinctions between race and ethnicity in Latin America; indigenismo; afrocentrism; issues of monarchy and empire; and relationship between Jews, Christians, and Moors in Spain. Writing-emphasis course.

- Repeatability: May be repeated with consent of department. Maximum 6 hours.
- (RE) Prerequisite(s): 323.
- (RE) Corequisite(s): 330.
- Comment(s): Requires completion of major or minor requirements in 332, 333, 334.

486 Literary and Artistic Movements in the Hispanic World (3) Examination of relationships (thematic, cultural, socio-political, aesthetic, philosophical, etc.) between specific trends in literature and other artistic media in light of historical contexts in which those relationships emerged. Writing-emphasis course.

- Repeatability: May be repeated with consent of department. Maximum 6 hours.
- (RE) Prerequisite(s): 323.
- (RE) Corequisite(s): 330.
- Comment(s): Requires completion of major or minor requirements in 332, 333, 334.

489 Topics in Hispanic Civilization (3) Analysis of major trends, issues and/or movements in the civilizations of Spain and Spanish America. Political, literary, and cultural perspectives dealing with topics from the Middle Ages to the present day may be explored. Writing-emphasis course.

- Repeatability: May be repeated with consent of department. Maximum 6 hours.
- (RE) Prerequisite(s): 323.
- (RE) Corequisite(s): 330.
- Comment(s): Requires completion of major or minor requirements in 332, 333, 334.

490 Internship (1-15) Career-related experiences in the United States or abroad.

- Grading Restriction: Satisfactory/No Credit grading only.
- Repeatability: May be repeated. Maximum 15 hours.
- Registration Restriction(s): Spanish major/language and world business concentration.

491 Foreign Study (1-15)

- Repeatability: May be repeated. Maximum 15 hours.

493 Independent Study (1-15)

- Repeatability: May be repeated. Maximum 15 hours.

494 Spanish Community Service Practicum (1) Supervised community service with local agencies that assist Hispanic community or supervised activities with local cultural organizations that promote awareness of Hispanic culture among the general public. Each credit hour requires 40 semester hours of off-campus supervised work and a weekly one-hour tutorial with a faculty member.

- Grading Restriction: Satisfactory/No Credit grading only.
- Repeatability: May be repeated. Maximum 3 hours. Maximum 1 hour credit per semester.
- Credit Restriction: May not be applied toward the Spanish major.
- (RE) Prerequisite(s): 323.
- (RE) Corequisite(s): 330.
- Comment(s): Requires completion of 18 hours of upper-division Spanish.
- Registration Permission: Consent of instructor.

Special Education (932)

402 Professional Studies: Special Education and Diverse Learners (3) Characteristics and needs of students with disabilities and diverse learners with emphasis on educational implications. Techniques, strategies and resources for teaching and assessing students with diverse learning, behavioral, medical and/or sociocultural characteristics, and the requirements of special education and other relevant laws.

- (RE) Prerequisite(s): Educational Psychology 210.
- Registration Restriction(s): Qualification – admission to teacher education.

410 Early Childhood Special Education Foundations (3) Introduction to the field of early childhood special education, including the nature of disabling conditions, theoretical perspectives in the field, legislation, and policies and procedures used in the field.

- Registration Restriction(s): Qualification – admission to teacher education.

419 Psychology and Education of Students with Mild Disabilities (6) Nature and characteristics of persons with mild handicaps and the educational strategies appropriate for these persons.

- (RE) Prerequisite(s): 402.
- (RE) Corequisite(s): 420.
- Registration Restriction(s): Qualification – admission to teacher education.

420 Field Experience in Special Education Programs (3) Practicum in teaching special education programs. Planning, developing, implementing, and evaluating instruction.

- Grading Restriction: Satisfactory/No Credit grading only.
- (RE) Prerequisite(s): 402.
- (RE) Corequisite(s): 419.
- Registration Restriction(s): Qualification – admission to teacher education.

430 Practicum in Applied Behavior Analysis (3) Emphasizes the application of applied behavior analysis principles including the study of designing, implementing, and evaluating behavior analytic interventions relevant to alleviating significant problem behaviors in the classroom setting. Learners examine topics in the use of applied behavior analysis such as direct instruction, behavior reduction, functional analysis, positive behavioral supports, and ethical issues in the use of various procedures.

- Registration Restriction(s): Qualification - admission to teacher education.

431 Field Experience in Comprehensive Programs (3) On-site teaching experience with moderately and severely handicapped children and youth.

- Grading Restriction: Satisfactory/No Credit grading only.
- (RE) Prerequisite(s): 402.
- (RE) Corequisite(s): 431.
- Registration Restriction(s): Qualification – admission to teacher education.

432 Psychology and Education of Students with Moderate/Severe Disabilities (6) Nature and characteristics of persons with moderate/severe disabilities and the educational strategies appropriate for those persons.

- (RE) Prerequisite(s): 402.
- (RE) Corequisite(s): 432.
- Registration Restriction(s): Qualification – admission to teacher education.

456 Speech and Language Basis of Learning Disabilities in the Classroom (3) Normal communication development. Understanding of speech and language impairments in school-age students. Integration of oral/written communication skills into existing curriculum, especially for high incidence special education students.

459 Neuromuscular and Health Disorders: Educational Implications (3) Neurodevelopmental impairments, physical disabilities, sensory impairments and special health conditions, including genetic disorders and autism. Investigation of instructional techniques and adaptations and implementation of universal precautions.

- Registration Restriction(s): Qualification - admission to teacher education.

470 Psychology of the Exceptional Child (3) General characteristics and educational needs of exceptional children. Implications of developmental variations for functioning as adults.

- Comment(s): Non-education majors only.

471 Early Childhood Special Education (6) Assessment, curriculum planning and development, and teaching approaches used in early childhood special education.

- Registration Restriction(s): Qualification – admission to teacher education.

472 Field Experience in Early Childhood Special Education (2-5) Placement in educational settings serving young children with special needs. Provides experience in assessment, curriculum planning and teaching.

- Grading Restriction: Satisfactory/No Credit grading only.
- Repeatability: May be repeated. Maximum 5 hours.
- Registration Restriction(s): Qualification – admission to teacher education.

Sport Management (957)

100 Orientation to Sport Management (1) Overview of the sports industry and sport management major. To be taken the first semester as a pre-major.

250 Foundations of Sport Management (3) An introduction to the scope of the sport enterprise including why business is involved in sport and an overall evaluation of sport management as a profession.

- (RE) Prerequisite(s): 100.

290 Practicum 1 (3) Supervised part-time field experience (minimum of 120 clock hours) at an approved site for the purpose of clarifying career goals.

- Grading Restriction: Satisfactory/No Credit grading only.
- Registration Restriction(s): Sport management major.
330 Sport Communication (3) An introduction to the communication industry and its relationship with sport. Students will explore cultural issues, such as gender and ethnicity, and their relationship to sport and media. The course will also provide students opportunities to develop practical communication skills and learn how media and sport interact. 

Registration Restriction(s): Sport management major.

340 Sport Finance (3) This course enables students to understand the importance of budgeting and finance in the sports industry. Students will understand how financing works in the sports industry and how corporate values are valued. Students will also be introduced to the basic fundamentals of investing and accounting, and how they relate to the sport industry.

Registration Restriction: Sport management major.

350 Sport Management: Theory to Practice (3) Overview of managerial theories and applications including responsibilities and practices associated with broad perspectives of sport enterprise.

Registration Restriction(s): Sport management major.

360 Sport Governance (3) The primary focus is the organizational structure, authority, and functions of governing bodies. Special emphasis is given to the role of the National Collegiate Athletic Association in collegiate athletics.

Registration Restriction(s): Sport management major.

370 Event Management (3) Study of the various principles involved in the organization, promotion, and management of special events. Students will combine theory and practice through experience with assigned special events.

Registration Restriction(s): Sport management major.

380 Special Topics (1-3) Study in selected disciplinary or professional areas of sport management.

Repeatability: May be repeated. Maximum 6 hours.

Registration Restriction(s): Sport management major.

390 Practicum II (3) Supervised part-time experience (minimum of 120 clock hours) at an approved site offering sport management opportunities.

Grading Restriction: Satisfactory/No Credit grading only.

(RE) Prerequisite(s): 290.

Registration Restriction(s): Sport management major.

440 Sport Marketing (3) Application of fundamental marketing concepts to the sport industry. Marketing research, promotions, fund raising, advertising, and assessment of marketing programs specific to sport will be covered. The historical development of sport marketing will be included.

(RE) Prerequisite(s): Marketing 300.

Registration Restriction(s): Sport management major.

450 Legal Aspects of Sport (3) Identification and application of various areas of law to sport industry. Includes how constitutional law, contract law, antitrust law, and tort law impact sport management decisions. Special emphasis placed on discrimination in sport (e.g., race, gender, ethnicity, and disability).

Registration Restriction(s): Sport management major.

460 Development and Revenue Generation in Sport (3) Designed to provide overview of theories, strategies, and techniques used in the production of revenue for sport organizations and through sporting events. Emphasis on developing balanced, multifaceted programs that target a variety of constituencies in the sport industry.

490 Sport Management Internship (5-12) Supervised work experience (minimum of 480 clock hours) at an approved site offering sport management opportunities. Emphasis on managerial tasks and administrative procedures.

Grading Restriction: Satisfactory/No Credit grading only.

Repeatability: May be repeated. Maximum 12 hours.

(RE) Prerequisite(s): 350 and 390.

Comment(s): Enrollment for 2 semesters (6 hours each) or 1 semester (12 hours). Total of 12 hours required.

Registration Restriction(s): Sport management major. 2.50 GPA; minimum student level – senior.

493 Directed Independent Studies (1-3) Independent study in a specialized area of sport management.

Repeatability: May be repeated. Maximum 9 hours.

Registration Restriction(s): Sport management major.

### Sport Studies (959)

231 Introduction to Sport Psychology (3) Introduction to the psychology of sport and exercise. Includes the scientific study of people and their behaviors in these contexts and the practical application of that knowledge. Topics include personality, motivation, anxiety, competition and cooperation, group and team dynamics, leadership, goal-setting, self-confidence, injury, moral and ethical considerations, and unhealthy behaviors.

290 Principles of Movement Control and Skill Learning (3) Theories and principles explaining the performance and learning of skilled actions. Emphasis placed on the consideration of how factors related to the learner, the task, and the performance context influence instructional decisions.

Registration Restriction(s): Minimum student level – sophomore; exercise science or recreation and leisure studies majors.

335 Socio-Cultural Foundations of Sport and Leisure (3) An overview of the sociological, historical, and philosophical foundations of sport and leisure in American society. Various forms of sport and leisure are explored within a social justice framework based on a cultural studies perspective. Students explore sport and leisure as global phenomena in social, historical, and philosophical contexts.

336 Social Issues in Sport (3) An exploration of power relations and cultural ideologies as they impact participation opportunities in sport. Students use in-depth critical thinking analysis to identify and explore social justice issues linked to the major spheres of social life. In addition, moral decision-making and ethical dilemmas in sport, leisure, and exercise are addressed.

380 Special Topics (1-3) Study in selected disciplinary or professional areas of sport studies.

Repeatability: May be repeated. Maximum 9 hours.

490 Psychology of Coaching (3) Major topics and theories dealing with the social-psychological factors affecting the performance of athletes and teams, with practical suggestions for enhancing the effectiveness of teachers and coaches.

493 Directed Independent Studies (1-3) Independent study in a specialized area within sport studies.

Repeatability: May be repeated. Maximum 9 hours.

### Statistics (962)


(RE) Prerequisite(s): Mathematics 125 or Mathematics 141.

207 Honors: Introduction to Statistics (3) Intended as an alternative to 201 for higher GPA students.

Contact Hour Distribution: Two 50-minute lectures and one 110-minute lab per week.

(RE) Prerequisite(s): Mathematics 125 or Mathematics 141.

Recommended Background: 28 composite ACT or 1250 composite SAT.


(RE) Prerequisite(s): Mathematics 142 or Mathematics 148.

320 Regression and Correlation Methods (3) Simple linear regression and correlation analysis, time series analysis, multiple regression, variable selection, regression diagnostics, partial correlation, and categorical data analysis techniques. Use of statistical computing software. Applied course appropriate for a general audience.

(RE) Prerequisite(s): 201 or 251.

330 Experimental Methods (3) Strategies of experimentation: randomization, blocking, sequential experimentation, replication. Design and analysis of experiments to collect nominal data (paired comparison, triangle tests), ordinal data (rating and ranking experiments) and numerical data (single and multiple factor experiments, fractional factorials). Use of statistical computing software. Applied course for a general audience.

(RE) Prerequisite(s): 201 or 251.
263 Fundamentals of Lighting Design and Technology (3) Introduction to the elements of theater lighting design, basic technology and the design process. Hands-on and lab-intensive.

300 Play Analysis (3) Study of methods and tools used in script analysis for the purpose of play production. (WC) (RE) Prerequisite(s): 100.

320 Advanced Acting I (3) Character study and scene study in 20th-century American plays. (RE) Prerequisite(s): 221.


323 Stage Movement (3) Introduction to movement/kinesthetic awareness techniques and their application to performance. (RE) Prerequisite(s): 221.

325 Fundamentals of Musical Theatre (3) Introduction to musical theatre, including reading music, singing techniques, basic dance, and an overview of musical theatre styles. (RE) Prerequisite(s): 220.

326 Advanced Voice and Speech (3) Breath-centered voice production. Exploration and control of shaping sound. IPA and text work. Geared toward acting for the stage. (RE) Prerequisite(s): 221.

340 Costume Design I (3) Development of research, rendering, and conceptualization skills. (RE) Prerequisite(s): 330.

345 Costume Construction (3) Techniques in the construction of costumes for the theatre. (RE) Prerequisite(s): 229.

355 Scenic Design I (3) Designing a set by combining the elements and principles of design composition with dramaturgical research.

362 Lighting Design I (3) in-depth lighting design practice and principles of design composition with dramaturgical research.

410 Special Studies in History, Literature, and Criticism (3) Concentrated study in a given period or area of theatre history, literature or criticism. Content varies. Repeatability: May be repeated. Maximum 6 hours.

411 Theatre History I (3) Antiquity to 1700. Major historical periods and diverse cultural traditions in world theatre history. (RE) Prerequisite(s): 300.

412 Theatre History II (3) 1700 to contemporary theatre. Major historical periods and diverse cultural traditions in world theatre history. (RE) Prerequisite(s): 300.

420 Special Studies in Acting (3) Exercises in selected concentrated areas such as styles, techniques, approaches, e.g., Shakespeare, movement, humor. Content varies. Repeatability: May be repeated. Maximum 9 hours. (DE) Prerequisite(s): 361. Registration Permission: Consent of instructor.

421 Ensemble (4) Intensive studio work for students interested in the performance aspect of the major. Content varies. Repeatability: May be repeated. Maximum 12 hours. (RE) Prerequisite(s): 320. Comment(s): An audition or consent of the instructor is required.

425 Advanced Musical Theatre (3) Study and practice of musical theatre material including both dance and vocal work. (RE) Prerequisite(s): 325.

430 Principles of Play Directing (3) Problems in composition, picturization, rhythm, and movement. (RE) Prerequisite(s): 220.

431 Principles of Play Directing (3) Problems in composition, picturization, rhythm, and movement. (RE) Prerequisite(s): 430.

446 Costume Patterning (3) Draping patterns for period costumes. Includes corsetry and the study of historic patterns 1500-1900.

450 Special Topics in Design and Technology (1-3) Content varies. Repeatability: May be repeated. Maximum 9 hours. Registration Permission: Consent of instructor.
452 Entertainment Technology II (3) Automation systems in live entertainment, including advanced rigging and flying for stage and film.

464 Computer Aided Drafting for the Theatre (3) Introduction to entertainment drafting. Emphasis on 2-D graphical standards, drafting techniques, and drawing layout and presentation.

470 Playwriting (3) Advanced instruction in the writing of plays. Registration Permission: Consent of instructor.

481 Applied Theatre (1) Laboratory in applied theatre techniques for departmental productions. Repeatability: May be repeated. Maximum 6 hours. Registration Permission: Consent of instructor.

484 Photography for the Theatre (3) Digital photography techniques for shooting live performance events under challenging lighting environments. Registration Permission: Consent of instructor.

491 Foreign Study (1-15) Repeatability: May be repeated. Maximum 15 hours.

492 Off-Campus Study (1-15) Repeatability: May be repeated. Maximum 15 hours.

493 Independent Study (1-15) Repeatability: May be repeated. Maximum 15 hours.

Theory and Practice in Teacher Education (978)

203 Field Study in Education (1-3) Problems of persons in active service in the field. Includes methods of teaching, curriculum materials, school-community relationships, and school organizations. Repeatability: May be repeated. Maximum 6 hours.

352 Field Experiences in Teaching: Secondary I (1) Field experiences in tasks related to teaching and teacher roles. Grading Restriction: Satisfactory/No Credit grading only. Registration Restriction(s): Qualification – admission to teacher education.

353 Field Experience in Teaching: Secondary II (1) Field experiences in tasks related to teaching and to teacher roles. Grading Restriction: Satisfactory/No Credit grading only. (RE) Prerequisite(s): 352. Registration Restriction(s): Qualification – admission to teacher education.

355 Introduction to Secondary Schools (3) Aspects of teaching in grades 7-12, including curricular program and roles and responsibilities of secondary school teachers and administrators. Registration Restriction(s): Qualification – admission to teacher education.

491 Directed Independent Study (1-3) Tutorial and specialized area. Grading Restriction: Satisfactory/No Credit grading only. (RE) Prerequisite(s): 352. Registration Restriction(s): Qualification – admission to teacher education.

493 Independent Study (1-3) Topics to be assigned. Repeatability: May be repeated. Maximum 12 hours.

494 Supervised Readings (1-3) Topics to be assigned. Repeatability: May be repeated. Maximum 12 hours.

495 Special Topics (1-3) Topics to be assigned. Repeatability: May be repeated. Maximum 12 hours.

University Honors (983)

See Chancellor’s Honors Program for Honors-by-Contract information.

100 Chancellor’s Honors First-Year Seminar (1) Required of and limited to freshmen students in the Chancellor’s Honors Program. Introductory seminar focused on a topic within an academic discipline. Topics vary. Grading Restriction: A, B, C. No Credit grading.

257 Special Topics in the Arts and Humanities (3) Examination of a selected issue in the arts and/or humanities from a multi-disciplinary perspective. Topics vary. (AH) Repeatability: May be repeated if topic differs. Maximum 6 hours. (RE) Prerequisite(s): English 102 or English 118.

267 Special Topics in the Social Sciences (3) Examination of a selected issue in the social sciences from a multi-disciplinary perspective. Topics vary. (SS) Repeatability: May be repeated if topic differs. Maximum 6 hours. (RE) Prerequisite(s): English 102 or English 118.

277 Special Topics in Cultures and Civilizations (3) Examination of a selected global or cultural issue from a multi-disciplinary perspective. Topics vary. (CC) Repeatability: May be repeated if topic differs. Maximum 6 hours. (RE) Prerequisite(s): English 102 or English 118.

287 Special Topics in the Natural Sciences (3) Examination of a selected issue in the natural sciences from a multi-disciplinary perspective. Topics vary. Repeatability: May be repeated if topic differs. Maximum 6 hours. (RE) Prerequisite(s): English 102 or English 118.

337 Honors: Concentration in the Humanities (3) Small group studies of selected topics, issues, or problems with a concentration in the humanistic disciplines. Topics vary. Repeatability: May be repeated if topic differs. Maximum 6 hours. Comment(s): Open to all students with a GPA of 3.25 or greater.

347 Honors: Concentration in the Social Sciences (3) Small group studies of selected topics, issues, or problems with a concentration in the social sciences. Topics vary. Repeatability: May be repeated if topic differs. Maximum 6 hours. Comment(s): Open to all students with a GPA of 3.25 or greater.

357 Honors: Concentration in the Natural and Applied Sciences (3) Small group studies of selected topics, issues, or problems with a concentration in the natural and applied sciences. Topics vary. Repeatability: May be repeated if topic differs. Maximum 6 hours. Comment(s): Open to all students with a GPA of 3.25 or greater.

349 Honors: Independent Study (1-15) Open to any undergraduate honors student. Proposals must be approved in advance. Contact the director for information. Repeatability: May be repeated. Maximum 15 hours.

491 Honors: Off-Campus Study (1-15) Open to any undergraduate honors student. Proposals must be approved in advance. Contact the director for information. Repeatability: May be repeated. Maximum 15 hours.

493 Honors: Independent Study (1-9) Open to any undergraduate honors student. Proposals must be approved in advance by Chancellor’s Honors Program. Grading Restriction: Letter grade only. Repeatability: May be repeated. Maximum 9 hours.

499 Senior Honors Project (3) Substantial scholarly, scientific, or artistic endeavor representing the capstone of a student’s undergraduate education. Required of all Chancellor’s Honors Program students not completing an equivalent senior project for an academic department or program.

University Studies (984)

210 Special Topics in University Studies (1-9) Interdisciplinary approaches to selected topics for lower-division students. Small group discussion of varying topics that transcend the boundaries of a single discipline. Writing-intensive and team-taught. Repeatability: May be repeated. Maximum 9 hours. Registration Permission: Consent of instructor.

220 Special Topics in University Studies (1-9) Interdisciplinary approaches to selected topics for lower-division students. Small group discussion of varying topics that transcend the boundaries of a single discipline. Writing-intensive and team-taught. Repeatability: May be repeated. Maximum 9 hours. Registration Permission: Consent of instructor.

227 Honors: Topics in University Studies (3) Interdisciplinary approach to a significant scholarly or social issue for lower division students. Small group discussion of varying topics that transcend the boundaries of a single discipline. Writing-intensive. Repeatability: May be repeated. Maximum 9 hours. Registration Permission: Consent of instructor.

310 Special Topics in University Studies (3) Interdisciplinary approaches to issues transcending the boundaries of a single discipline. Topics may be initiated by faculty or students through arrangements with the University Studies Program. Taught by faculty from throughout the university (often team-taught). Discussion-based and writing-intensive. Repeatability: May be repeated. Maximum 9 hours.

311 AIDS and Society (3) Speakers from across the state speak about scientific, social, medical, emotional, and financial aspects of acquired immunodeficiency syndrome. Students are required to participate in some AIDS-related community activity and to describe that activity in writing.

317 Honors: Special Topics in University Studies (3) Honors course utilizing an interdisciplinary approach to a significant scholarly or social issue. Topics change every semester. Consult Timetable for current offerings. Discussion-based and writing-intensive. Repeatability: May be repeated. Maximum 9 hours. Registration Permission: Consent of instructor.
230 Special Topics in University Studies (3) Interdisciplinary approaches to issues transcending the boundaries of a single discipline. Topics may be initiated by faculty or students through arrangements with the University Studies Program. Taught by faculty from throughout the university (often team-taught). Discussion-based and writing-intensive. Repeatability: May be repeated. Maximum 9 hours.

410 Advanced Topics in University Studies (1-9) Interdisciplinary research approaches to major issues transcending the boundaries of a single discipline. Topics may be initiated by faculty or students through arrangements with the University Studies Program. Taught by faculty from throughout the university (often team-taught). Discussion-based and writing-intensive. Repeatability: May be repeated. Maximum 9 hours.

413 Art and Organism - Integrative Biology of Aesthetic Experience (3) (See Ecology and Evolutionary Biology 413.)

417 Honors: Advanced Topics in University Studies (3) Honors course utilizing an in-depth interdisciplinary research approach to a significant scholarly or social issue. Topics change every semester. Consult Timetable for current offering. Discussion-based and writing-intensive. Repeatability: May be repeated. Maximum 9 hours.

420 Advanced Topics in University Studies (1-9) Interdisciplinary research approaches to major issues transcending the boundaries of a single discipline. Topics may be initiated by faculty or students through arrangements with the University Studies Program. Taught by faculty from throughout the university (often team-taught). Discussion-based and writing-intensive. Repeatability: May be repeated. Maximum 9 hours.

491 Foreign Study (1-15) Repeatability: May be repeated. Maximum 15 hours.

492 Off-Campus Study (1-15) Repeatability: May be repeated. Maximum 15 hours.

493 Independent Study (1-15) Repeatability: May be repeated. Maximum 15 hours.

495 Research Experience (1-12) The course provides pre-professional experience in research, scholarship, and creative activity under the supervision of a faculty member.

Registration Restriction: Satisfactory/No Credit only. Repeatability: May be repeated. Maximum 12 hours.

Comment(s): Students should identify a prospective faculty supervisor and secure permission in advance of registration. Registration Restriction(s): Minimum 2.00 GPA. Registration Permission: Consent of instructor.

Wildlife and Fisheries Science (993)

101 Current Topics in Wildlife Health (1) All aspects of wildlife health, including current topics, emerging diseases, and impact of diseases on wildlife populations, general disease mechanisms, and career opportunities in the wildlife profession.

295 Practicum in Wildlife and Fisheries Sciences (1-3) Designed to give students practical, hands-on wildlife and/or fisheries experience working with a state, federal, or private natural resources organization. Provides credit for approved employment in natural resources management or research, 1 hour credit for every 160 hours of work. Students may find work on their own or with faculty assistance. Students must submit an approved work plan to their advisor, keep a daily log submitted every 2 weeks and prepare a final written report.

Repeatability: May be repeated. Maximum 6 hours. Comment(s): Restricted to forestry and wildlife and fisheries science majors.


305 Prescribed Fire Management (2) Prescribed fire ecology, use, and management in forest stands. (RE) Prerequisite(s): Forestry, Wildlife and Fisheries 212. (RE) Corequisite(s): 323 and 341.

323 Human Dimensions of Wildlife and Fisheries (1) Examination of the linkages between people, institutions, and society at large to natural resource management practices. Case studies and application of basic skills of group communication and collaborative problem-solving and planning will be emphasized. Overnight field trips required. (RE) Corequisite(s): 305 and 341.

340 Wetlands Ecology and Management (2) Ecology, restoration, and management of wetland ecosystems, including benthic and abiotic processes, functions, and wildlife considerations. (RE) Prerequisite(s): Forestry, Wildlife and Fisheries 317. (RE) Corequisite(s): 305 and 332.

341 Law Enforcement and Public Relations (2) Fundamentals and general principles of local, state, and federal laws and regulations governing natural resources and their management. Principles and practices of interacting with the public. (RE) Prerequisite(s): English 102 and Communication Studies 210. (RE) Corequisite(s): 305 and 332.

350 Wildlife Damage Management (2) Principles and methods for wildlife damage management, including biological, regulatory, practical, and social considerations. Weekend field trips (2) required. Contact Hour Distribution: 2 hours lab and 1 lab or field. (RE) Prerequisite(s): Forestry, Wildlife and Fisheries 317. (RE) Corequisite(s): 305 and 332.

431 Wildlife Physiology and Nutrition (3) An introduction and overview of the physiological and nutritional mechanisms important behind the regulation of wild animal populations (primarily wild birds and mammals). Wildlife responses to seasonal changes in habitat are critical for understanding management options. Discussion of use of chemical immobilization options, physiological indicators, and genetic analysis of wild animal population dynamics. Credit Restriction: Students may not receive credit for both 431 and 531.

433 Amphibian Ecology and Conservation (3) In-depth examination of amphibian life-history strategies, community interactions, and hypothesized mechanisms of amphibian declines. Also covers amphibian monitoring, conservation, and management. Credit Restriction: Student cannot receive credit for both 433 and 533. (RE) Prerequisite(s): Forestry 215 or Biology 250.

440 Wildlife Techniques (3) Methods in wildlife damage control, forest, farmland, wetland wildlife habitat management, identification of wildlife field sign, wildlife capturing techniques, and management plan preparation. Weekend field trips (2) required. Contact Hour Distribution: 1 hour and 1 lab or field. (RE) Prerequisite(s): Forestry, Wildlife and Fisheries 317. (RE) Corequisite(s): 305 and 332.

442 Fisheries Techniques (3) Active and passive sampling techniques for fish and aquatic organisms. Population estimation methods, fish handling and transport, food habits analysis, and marking and tagging techniques. Age determination and incremental growth analysis. Stream assessment. Equipment and instrumentation usage and maintenance. Safety in sampling methods. Weekend field trip may be required. Contact Hour Distribution: 1 hour and 1 lab or field. (RE) Prerequisite(s): Forestry, Wildlife and Fisheries 317. (RE) Corequisite(s): 305 and 332.

443 Fisheries Science (3) Quantification and management of freshwater fisheries, including population estimation, age and growth, biological assessment, and stocking. Contact Hour Distribution: 2 hours and 1 lab. (RE) Prerequisite(s): Forestry, Wildlife and Fisheries 317.

444 Ecology and Management of Wild Mammals (3) Biological and ecological characteristics of game mammals and endangered mammals. Current principles and practices of wild mammal management. Weekend field trip required. Contact Hour Distribution: 2 hours and 1 lab. (RE) Prerequisite(s): Forestry, Wildlife and Fisheries 317.

445 Ecology and Management of Wild Birds (3) Biological and ecological characteristics of game birds, endangered birds, and bird pests. Current principles and practices of wild bird management. Weekend field trip required. Contact Hour Distribution: 2 hours and 1 lab. (RE) Prerequisite(s): Forestry, Wildlife and Fisheries 317.

450 Fish Physiology (3) Mechanisms of gas transfer, circulation, excretion, osmoregulation, locomotion, and neural/hormonal control of these systems in fishes. Comparisons and contrasts with physiology of terrestrial animals. Practical applications of fish physiology to aquaculture, pollution assessment, and fisheries management. Registration Restriction(s): Minimum student level — senior.

455 Fish Culture (3) Principles, concepts, and techniques of culturing economically important fish and shellfish species. Contact Hour Distribution: 2 hours and 1 lab. Credit Restriction: Students cannot receive credit for both 455 and 555. Registration Restriction(s): Minimum student level — senior.
456 Recirculating Aquaculture (3) Growing fish in intensive, indoor systems with reconditioned water. Techniques of solids removal, nitrification, and gas balance. Practical experience with operating system. 
Credit Restriction: Students cannot receive credit for both 456 and 556. 
Registration Restriction(s): Minimum student level – senior.

493 Independent Study in Wildlife and Fisheries Science (1-15) Special research or individual problem in wildlife and fisheries science. 
Repeatability: May be repeated. Maximum 15 hours. 
Registration Permission: Consent of instructor.

496 Internship in Wildlife and Fisheries Science (3) Supervised experience at departmental-approved employment location arranged by the student. Internship learning objectives must be pre-approved by the advisor/instructor and the field supervisor. Daily log, supervisor evaluations, and final report required. One credit per two weeks of full-time supervised field experience maximum. Up to 3 credits may be used for science elective. 
Repeatability: May be repeated. Maximum 6 hours. 
Registration Restriction(s): Minimum student level – junior.

Women's Studies (994)

210 Images of Women in Literature: Biography and Autobiography (3) Introduction to women's journals, diaries, biographies, and autobiographies. Writing-emphasis course.

215 Images of Women in Literature: Fiction, Poetry, Drama (3) Introduction to the study of women through the roles and stereotypes portrayed in a variety of literary genres (fiction, poetry, and drama), including works from diverse historical periods and cultures. Writing-emphasis course.

220 Women in Society (3) Role played by women in various societies during different historical periods. Factors which have limited women's participation in society. Social scientists' assumptions about women.

230 Marriage and Family: Roles and Relationships (3) (See Child and Family Studies 220.) (SS)

310 Emergence of the Modern American Woman (3) Role of women in the development of American civilization and values. Major topics include women's legal and political status, the emergence and development of feminism, women and the creative arts, and women's roles in industrial and post-industrial American society. Writing-emphasis course.

320 Women and Religion (3) (See Religious Studies 320.)

330 Women in Music (3) (See Musicology 330.) (WC)

332 Women in American Literature (3) (See English 332.)

340 Women, Politics, and the Law (3) An examination of recent changes in the laws affecting women and a study of the role of women in contemporary American politics. Writing-emphasis course.

360 Women in Cross-Cultural Perspective (3) A study of the changing role of women in various contemporary cultures – industrial democracies, developing nations, and communist countries. A team-taught course with guest lectures and slide presentations. Writing-emphasis course.

375 Gender in Society (3) (See Sociology 375.)

382 Philosophy of Feminism (3) (See Philosophy 382.) (WC)

383 Women in the Greek and Roman World (3) (See Classics 383.)

400 Topics in Women's Studies (3) Content varies. 
Repeatability: May be repeated. Maximum 6 hours.

410 Sex Role Development: Implications for Education and Counseling (3) (See Counselor Education 410.)

422 Women Writers in Britain (3) (See English 422.)

425 Women's Health (3) (See Health 425.)

432 Women in European History (3) (See History 432.)

433 French and Francophone Women Writers (3) (See French 433.)

434 Psychology of Gender (3) (See Psychology 434.)

453 Women in American History (3) (See History 453.)

454 Gender and Crime (3) (See Sociology 453.)

465 Media and Diversity (3) (See Journalism and Electronic Media 465.)

466 Rhetoric of the Woman's Rights Movement to 1930 (3) (See Communication Studies 466.)

469 Sexuality and Cinema (3) Explores issues surrounding sexuality, gender, and cinema from points of view of feminist film criticism. Writing-emphasis course. (Same as Cinema Studies 469.)

476 Rhetoric of the Contemporary Feminist Movement (3) (See Communication Studies 476.)

484 African-American Women in American Society (3) (See Africana Studies 484.)

491 Foreign Study (1-6) 
Repeatability: May be repeated. Maximum 6 hours.

492 Off-Campus Study (1-6) 
Repeatability: May be repeated. Maximum 6 hours.

493 Independent Study (1-6) 
Repeatability: May be repeated. Maximum 6 hours. 
Registration Permission: Consent of chair of Women's Studies.