



Courses of Instruction

Sections of courses are listed in alphabetical order, by the **prefix of the academic discipline**. Most credit notations on the far right are in the pattern 3-0-3. The first number is the number of lecture hours (or equivalent) each week; the second number is the number of laboratory hours (or equivalent) each week; the third number, **in bold**, is the number of semester hours credit. The suffix “H” designates Honors Courses; the suffix “K” designates courses in which a laboratory is included; the suffix “L” designates a laboratory course that is separate.

ACCT: ACCOUNTING

- ACCT 2101 Principles of Accounting I** 3-0-3
An introduction to financial accounting that emphasizes accounting’s role in business and society. The course develops an understanding of the financial statements of economic entities.
- ACCT 2102 Principles of Accounting II** 3-0-3
Prerequisite: ACCT 2101 with a grade of “C” or better. An introduction to managerial accounting. Emphasis is placed on understanding internal accounting documents and analyzing these documents to render logical and economically feasible decisions.
- ACCT 3100 Introduction to Fraud Examination** 3-0-3
Prerequisite: ACCT 2101 with a grade of “C” or better; **pre- or co-requisite:** ACCT 2102. An introduction to the prevention, investigation, and detection of fraud. Topics covered include, but are not limited to, types of fraud, asset misappropriations, financial statement misstatements, consumer fraud, fraud against organizations, and internal controls. Students will analyze fraud-related cases to identify fraud prevention and detection and investigation techniques, conduct mock interviews, and write a formal fraud report.
- ACCT 3201 Intermediate Accounting I** 3-0-3
Prerequisite: ACCT 2102 with a grade of “C” or better. An examination of the conceptual tools used for financial reporting. This course examines the operation of the accounting information system, research techniques, and the application of time value of money concepts in financial reporting.
- ACCT 3202 Intermediate Accounting II** 3-0-3
Prerequisite: ACCT 3201 with a grade of “C” or better. An examination of the financial reporting issues surrounding the revenue and expense recognition, current assets, long-lived assets, and stockholders’ equity.
- ACCT 3203 External Reporting** 3-0-3
Prerequisite: ACCT 3201 with a grade of “C” or better. An examination of the financial reporting issues surrounding investments, liabilities, cash flows, and other advanced topics.
- ACCT 3250 Forensic Accounting** 3-0-3
Prerequisite: FIN 3350. Introduction, examination, and practical applications of forensic techniques in accounting. Topics include fraud detection, business valuations, income and asset valuations in divorce proceedings, expert witness rules (post Daubert), cross examination, rules of evidence and procedure.

- ACCT 3400 Cost Accounting** 3-0-3
Prerequisite: ACCT 2102 with a grade of “C” or better. A study of product cost determination. Inventory valuation, planning, control, and financial reporting are emphasized in this course.
- ACCT 3700 Internal Auditing** 3-0-3
Prerequisite: ACCT 2102 with a grade of “C” or better. Introduction to the theory and practice of internal auditing, an independent appraisal activity within firms. Topics covered include internal auditing standards, ethics, internal controls, risk assessment, evidence, documentation (including use of computer-assisted auditing techniques) , and reporting practices.
- ACCT 4400 Internal Reporting and Analysis** 3-0-3
Prerequisite: ACCT 3400 with a grade of “C” or better. An examination of product cost data with an emphasis on using those data to improve decision-making within the firm.
- ACCT 4410 Accounting Information Systems** 3-0-3
Prerequisites: ACCT 3201, ACCT 3400, and CISM 2201. A grade of “C” or better must be earned in all prerequisite classes. A student must have a declared major in accounting, finance, economics, marketing, management, or be enrolled in the Langdale College MBA program. An introduction both manual and computerized accounting information systems, including business transaction processes, business activities and documents within each process, interrelationship of these processes, the general ledger system, computer technologies that facilitate these processes, and basic computerized internal controls. This course also includes the integration and application of the knowledge and skills obtained in the prerequisite courses to create and maintain a computerized accounting information system.
- ACCT 4500 Individual Income Tax** 3-0-3
Prerequisite: ACCT 2102 with a grade of “C” or better. Introduction to federal income taxes including the elements of income, income exclusions, tax credits, capital gains and losses. Emphasis is placed on understanding the executive, legislative and judicial aspects of the tax law. Research is required.
- ACCT 4800 Auditing** 3-0-3
Prerequisite: ACCT 3202 with a grade of “C” or better. An introduction to the concepts and techniques used by the independent accountant in the audit of financial statements.
- ACCT 4980 Accounting Internship** 3 hours credit
Prerequisite: Faculty approval. Graded “Satisfactory” or “Unsatisfactory.” The application of academic accounting skills and values in an employment situation. A research project, approved by a faculty member and the employer, is required. May be taken more than once with Department Head approval.
- ACCT 4990 Directed Study in Accounting** 3 hours credit
Prerequisite: Faculty approval. A special project undertaken by the student. The project is guided by a faculty member and culminates in a research report.

ACED: ADULT AND CAREER EDUCATION

- ACED 1100 Introduction to Business** 3-0-3
 An overview of business principles and practices. Emphasis on developing an awareness of banking, marketing, finance, insurance, and organizational design. Will include ethical and human relations issues. Open to all majors.
- ACED 2000 Beginning Keyboarding** 3-0-3
 Development of basic touch keyboarding skills. This course provides an introduction to formatting letters, research papers, and miscellaneous documents. Emphasis is placed on developing straight-copy speed and accuracy. Exemption test available.

- ACED 2050 Communications for the Workplace** 3-0-3
Prerequisite: ENGL 1102. Principles of effective oral and written communications. A thorough review of grammar, sentence and paragraph construction, punctuation, and writing techniques. Emphasis on the job-getting process.
- ACED 2400 Computer Technology for the Workplace** 3-0-3
 Computer applications for development of analytical and problem-solving workplace skills. Topics include word processing, databases, spreadsheets, communications, and presentations, hardware, networks, and social and ethical concepts. Exemption test available.
- ACED 2900 Basic Theory in Adult and Career Education** 3-0-3
 Reserved for the granting of academic credit based on either successful completion of the National Occupational Competency Examination (NOCTI Examination), approved professional licensure, or experiential credit based on past work experience. Requires approval of academic advisor prior to registration.
- ACED 2940 Basic Administrative Office Technology Skills** 3-0-3
Prerequisite: Approval of academic advisor prior to registration. Graded “Satisfactory” or “Unsatisfactory.” Reserved for the granting of academic credit based on either successful completion of office administrative and technical experiential credit based on 3 years of past work experience, military service, or approved professional licensure (such as CPS or CAP).
- ACED 2950 Basic Skills in Adult and Career Education** 3-0-3
 Reserved for the granting of academic credit based on either successful completion of the National Occupational Competency Examination (NOCTI Examination), approved professional licensure, or experiential credit based on past work experience. Requires approval of academic advisor prior to registration.
- ACED 2960 Intermediate Skills in Adult and Career Education** 3-0-3
 Reserved for the granting of academic credit based on either successful completion of the National Occupational Competency Examination (NOCTI Examination), approved professional licensure, or experiential credit based on past work experience. Requires approval of academic advisor prior to registration.
- ACED 2999 Entry to the Education Profession** 0 hours credit
Graded “Satisfactory” or “Unsatisfactory.” A required non-credit course for all teacher education candidates pursuing a VSU recommendation for initial certification; must be successfully completed prior to admission to teacher education. Candidates are required to establish an electronic portfolio and provide evidence that all teacher education admission requirements have been satisfactorily met. If an “Unsatisfactory” grade is earned, the course must be repeated until a “Satisfactory” grade is received.
- ACED 3000 Intermediate Keyboarding** 3-0-3
Prerequisite: Grade of “C” or better in ACED 2000 or exemption. Continued emphasis on speed and accuracy building. Detailed coverage of business letters, memos, multiple-page reports, and miscellaneous documents. Exemption test available.
- ACED 3100 Computer Systems** 3-0-3
 A general overview of computer hardware and networks. Emphasis is placed on developing basic technological expertise and leadership in administering computer technology in the workplace.
- ACED 3101 Workplace Computerized Booking** 3-0-3
Prerequisite: ACED 2400 or CS 1000 or instructor consent, and ACCT 2101. Hands-on application of bookkeeping and computer concepts through the installation, set-up, and use of a typical integrated computerized accounting software system, including set-up and maintenance of software, management of a chart of accounts and ledgers, analysis of transactions, generation of financial reports, file and data management, and system security.

- ACED 3150 Computer Operating Systems for the Office** 3-0-3
 An introduction to operating systems, with hands-on experience in at least one operating system widely used in contemporary office settings. Topics include operating systems, their development, function, resources, memory management, processor management, user interface, and embedded software applications. This course helps prepare students to take a certification exam for a current operating system.
- ACED 3400 Applied Computer Technology** 3-0-3
Prerequisite: ACED 2400 or CS 1000 or consent of instructor. Development of intermediate and advanced skills in the use of spreadsheet, database, communication, and presentation software. Emphasis is placed on creation of computer projects appropriate to the student's major.
- ACED 3500 Beginning Adult and Career Teacher Competency Development** 3-0-3
 Reserved for the granting of academic credit based on either successful completion of the National Occupational Competency Examination (NOCTI Examination), approved professional licensure, or experiential credit based on past work experience. Requires approval of academic advisor prior to registration.
- ACED 3510 Advanced Theory in Adult and Career Education** 3-0-3
 Reserved for the granting of academic credit based on either successful completion of the National Occupational Competency Examination (NOCTI Examination), approved professional licensure, or experiential credit based on past work experience. Requires approval of academic advisor prior to registration.
- ACED 3520 Advanced Skills in Adult and Career Education** 3-0-3
 Reserved for the granting of academic credit based on either successful completion of the National Occupational Competency Examination (NOCTI Examination), approved professional licensure, or experiential credit based on past work experience. Requires approval of academic advisor prior to registration.
- ACED 3600 History and Philosophy of Career Education** 3-0-3
 Exploration of topics specific to adult and career education in industry and/or educational settings. Emphasis will be given to the examination of research, as applied to the public and private sectors.
- ACED 3610 Web Design and Multimedia** 3-0-3
Prerequisite: ACED 2400 or CS 1000, or consent of instructor. Development of the knowledge and skills necessary for utilizing web editing and graphics programs effectively. This course will focus on the design and production of web sites and other materials for use in educational and training environments.
- ACED 3650 Ethics and Liability in Adult and Career Education** 3-0-3
 Investigation of professional ethics, legal and liability issues in adult and career education settings. This course focuses on the elements of planning fair and equitable learning environments and addressing instructor and student legal responsibilities and liability issues.
- ACED 3700 Desktop Publishing** 3-0-3
Prerequisite: ACED 2400 or CS 1000 or consent of instructor. Development of desktop publishing concepts and their application to the modern office. Basic, intermediate, and advanced features of a variety of application programs for page design will be used to create various business-related documents.
- ACED 3850 Principles of Adult Education** 3-0-3
 Provides insight into the unique opportunities and challenges of the adult learner as examined in a learning setting. Concepts, theories, and practices will provide students with opportunities to manage pertinent issues, problems, and possible solutions in their work as instructors of adult learners. Emphasis is given to understanding the effect this knowledge has on the teaching-learning process in adult education.

- ACED 3860 Program Development in Adult and Continuing Education** 3-0-3
Insight into, and working knowledge of, the field of adult and continuing education programming. Emphasis is given to understanding the practical and theoretical foundations upon which adult program formation is based, and reflects the needs and interests of the individual, recreation leisure community, and industry.
- ACED 3940 Intermediate Administrative Office Technology Skills 1 to 6 credit hours**
Prerequisites: ACED 2940 and approval of academic advisor. Graded “Satisfactory” or “Unsatisfactory.” One credit per year of valid, verifiable employment experience beyond 3 years. Reserved for the granting of academic credit based on either successful completion of office administrative and technical experiential credit based on 4 to 9 years of past work experience, military service, or approved professional licensure (such as CPS or CAP).
- ACED 4020 Virtual Office Technology** 3-0-3
Prerequisites: ACED 2400 or CS 1000 or consent of instructor and overall GPA of 2.3. Overview of skills needed to perform as a virtual office assistant, with emphasis on the use of time and information management applications and increased knowledge of the role of online meetings, Internet telephone communication software, Internet research, social networking tools, e-commerce, and mobile devices in the modern office. This course helps prepare students to take a certification exam for a current communication software program.
- ACED 4050 Workforce Development and Management** 3-0-3
Prerequisite: Overall GPA of 2.3. Fundamentals of organizational behavior, management, and training examined through the applied context of business education, office administration, technology, and training. Topics include functions of management, education, legislation, personnel, supervision, and training.
- ACED 4070 Office Applications** 3-0-3
Prerequisites: Grade of “C” or better in ACED 2050 and ACED 3000; overall GPA of 2.3; restricted to OAT and BE majors. Focus on three major aspects of office administration—business calculations, machine transcription, and records management. Emphasis in the course is on solving business mathematics problems using the electronic calculator, keying a variety of business documents from machine transcription, and completing a records management simulation.
- ACED 4160 Administrative Office Procedures** 3-0-3
Prerequisites: Grade of “C” or better in ACED 2050, ACED 3000, and ACED 3400; overall GPA of 2.3; restricted to OAT and BE majors. Development of increased awareness of the role and scope of the administrative assistant position. This course will focus on basic and expanded job responsibilities, professionalism, and the performance of simulated office activities.
- ACED 4300 Practicum in Adult and Career Education** 3 hours credit
Prerequisite: Senior Standing and major in appropriate specialization; permission of the advisor must be obtained before registration.
- ACED 4310 Practicum in Adult and Career Education** 3 hours credit
Prerequisite: Senior Standing and major in appropriate specialization; permission of the advisor must be obtained before registration.
- ACED 4320 Practicum in Adult and Career Education** 3 hours credit
Prerequisite: Senior Standing and major in appropriate specialization; permission of the advisor must be obtained before registration. Graded “Satisfactory” or “Unsatisfactory.”
- ACED 4400 Methods and Media for Teaching Accounting and Basic Business Subjects** 3-0-3
Prerequisites: ACED 2999, ACCT 2101, BUSA 2106, ECON 1500. This is a check-point course, and check-point requirements must be met. Methods, materials, and evaluative procedures for teaching effectively in accounting and in the basic business subjects. Field experiences required.

- ACED 4410 New Teacher Institute** 3-0-3
Basic instructional and management skills for new secondary career education teachers. Emphasis is on survival skills related to teaching methodology and curriculum implementation that will help them to be successful during their first or second year of teaching.
- ACED 4430 Advanced New Teacher Institute** 3-0-3
Prerequisite or corequisite: ACED 4410. Advanced instructional and management skills for new secondary career education teachers. Emphasis is on improvement of skills related to teaching methodology and curriculum implementation that will help them to be more successful as career education practitioners.
- ACED 4500 Methods and Media for Teaching Business Skill Subjects** 3-0-3
Prerequisite: ACED 2999; ACED 4400 with a grade of “C” or better. Methods, materials, and evaluative procedures for teaching effectively in keyboarding, information processing, office education, and cooperative business education. Field experiences required.
- ACED 4510 Curriculum Development in Adult and Career Education** 3-0-3
Principles and procedures for analyzing, describing, and classifying occupations; selecting and sequencing program objectives, units, and tasks, and specifying instructional outcomes. Emphasis is placed on actual occupational analysis and breakdown of responsibilities.
- ACED 4550 Health and Safety in the Work Environment** 3-0-3
Acquaints students with health and safety issues in technical occupations. Emphasis will be on safety regulations, agencies, codes, health issues, environmental concerns in industry, and ergonomic environmental factors in the workplace.
- ACED 4560 Safety and Health in the Career Education Classroom** 3-0-3
Investigation of safety and health issues in a classroom/laboratory setting, the need for appropriate safety programs, planning a safe environment, and addressing health and environmental concerns. Emphasis is placed on planning programs that employ accident prevention methodology and developing health awareness.
- ACED 4600 Directed Study in Adult and Career Education** 1-0-1 to 3-0-3
Prerequisite: Consent of the department head. An opportunity for intensive individual study on an approved topic.
- ACED 4670 Techniques of Student Evaluation in Adult and Career Education** 3-0-3
Principles and methods of measurement and evaluation in adult and career education programs, emphasizing the administration, scoring, and interpretation of written and performance tests.
- ACED 4680 Instructional Materials Development in Adult and Career Education** 3-0-3
Principles and procedures for planning and developing both print-based and non-print instructional materials for use in the Technical, Trade and Industrial classroom and laboratory.
- ACED 4690 Methods of Instruction in Adult and Career Education** 3-0-3
Methods of effective teaching in the Technical, Trade and Industrial classroom and laboratory. Emphasis is placed on the instructor’s role in the classroom and the delivery of content.
- ACED 4710 Classroom and Laboratory Management** 3-0-3
Principles and strategies for managing the classroom and instructional laboratory. Emphasis is placed on establishing an effective learning environment, minimizing disruptive student behavior, and responding properly to discipline problems.
- ACED 4780 Internship in Teaching Career Education** 6 hours credit each
Prerequisite: Completion of appropriate methods and curriculum classes. Graded “Satisfactory” or “Unsatisfactory.” Six hours per semester for a maximum of two semesters.
- ACED 4790 Student Teaching in Business/Career Education** 10 hours credit
Prerequisite: Completion of all coursework. Corequisite: ACED 4800.
- ACED 4800 Professional Practices Seminar** 2-0-2
Prerequisite: Completion of all coursework. Corequisite: ACED 4790. Reflection on educational practices and refinement of concepts emanating from the student teaching experience.

- ACED 4810 Contemporary Skills for the Workplace** 3-0-3
 Analysis of the workplace skills needed in a rapidly changing technological society. Emphasis is on communication skills, employee motivation, change management, delegation, team building, and career planning. Students are required to build a career plan and to design a change management project.
- ACED 4820 Project Management for Technical Professionals** 3-0-3
 Provides an introduction to the process of project management. Focus is on building the students' understanding of the tools and strategies available to facilitate the management of multiple on-going projects within a technical environment. Topics include: planning systems, strategic and operational planning, mission and vision statements, performance objectives, time and course estimation, diagraming techniques, and performance monitoring through control systems.
- ACED 4900 Special Topics in Adult and Career Education** 3-0-3
Prerequisite: Consent of the department head. Study of a topic relevant to business, adult, or career education.

AFAM: AFRICAN AMERICAN STUDIES

- AFAM 2020 Race, Class, and Gender** 3-0-3
Also offered as WMST 2020. This 2000 level course is a core course, not an elective for the AFA minor. An exploration of social class, gender, and racial/ethnic relations as distinct, but linked dimensions of social inequality. Includes an examination of the historic underpinnings of discrimination by race, class, and gender and the present status of these issues.
- AFAM 3000 Introduction to African American Studies** 3-0-3
 An introduction to key concepts, thematic concerns, and the theoretical and philosophical bases for African American Studies. To include perspectives and strategies for the analysis and understanding of the impact of African Americans on the socio-economic, cultural, political, and religious developments of America.
- AFAM 3070 Health Care Issues of Vulnerable Populations in the U.S.** 3-0-3
Also offered as NURS 3070. Prerequisite: SOCI 1101 or SOCI 1160 or permission of the instructor. Course is open to all majors. An examination of the historical, cultural, social, and political issues that render certain populations in the U.S. vulnerable to ill health. The course utilizes appropriate theories to study these issues, with emphasis on ameliorating the health of vulnerable populations. It will examine issues related to health care access and policies and program developed to reduce risks of disease and injury. It is also designed to raise an awareness of the disparities in health among certain groups, including the poor, ethnic minorities, high-risk women and children, the homeless, and uninsured and underinsured, among others.
- AFAM 3090 Africa: Inequalities Past and Present** 3-0-3
Also Offered as ANTH 3090. Prerequisite: ANTH 1102 or permission of instructor. The study and problems of social stratification in Africa from pre-colonial to modern times. Special attention will be paid to both intranational institutions (e.g., kinship, class, and ethnicity) and international political economy.
- AFAM 3220 Studies in African American Literature** 3-0-3
Also offered as ENGL 3220. Prerequisite: ENGL 2110 or 2110H, 2120 or 2120H, 2130 or 2130H, 2060, or 2140. A study of selected topics in African American literature. May be repeated, but only 3 hours may be counted toward distribution requirements for the AFAM minor.

- AFAM 3225 Introduction to African American Literary Criticism** 3-0-3
Also offered as ENGL 3225. Prerequisites: ENGLISH 2110 or 2110H, ENGL 2120 or 2110H, ENGL 2130 or 2130H, , ENGL 2060, or permission of the instructor. A study of major voices in African American literary theory. This course emphasizes the development of interpretive frameworks for examining the literature from an African American cultural perspective.
- AFAM 3230 Special Topics in African American Literature** 3-0-3
Also offered as ENGL 3230. Prerequisites: ENGLISH 2110 or 2110H, ENGL 2120 or 2110H, ENGL 2130 or 2130H, , ENGL 2060, or permission of the instructor. Studies in African American literature, focusing on selected topics.
- AFAM 3600 Special Topics in African American Studies** 3-0-3
 An in-depth study of selected special topics in African American Studies. May be repeated for credit, but only six hours may be counted toward the AFAM minor.
- AFAM 3320 Studies in African Literature** 3-0-3
Also offered as ENGL 3320. Prerequisite: Prerequisite: ENGL 2110 or 2110H, 2120 or 2120H, 2130 or 2130H, 2060, or 2140.. A study of selected topics in African literature. May be repeated, but only 3 hours may be counted toward distribution requirements for the AFA minor.
- AFAM 4231 African American History to 1865** 3-0-3
Also offered as HIST 4231. The history of the African Americans from their origin in Africa to the end of slavery in the U.S., with emphasis on their economic life and social thought.
- AFAM 4232 African American History Since 1865** 3-0-3
Also offered as HIST 4232. The history of the African American struggle for equality after emancipation, with special focus on the problems of black leadership from Frederick Douglass to the Black Panthers.
- AFAM 4511 Precolonial Africa** 3-0-3
Also offered as HIST 4511. An analysis of the 8000-year-old cultures of the Nile Valley, including Egypt, Nubia, and Kush; West Africa and its contacts with the Middle East and Europe; the East African city-states and their contacts with India.
- AFAM 4512 Modern Africa** 3-0-3
Also offered as HIST 4512. Explores the European colonization of Africa and the African response. The course also examines the emergence of African nationalism and the problems of creating new states.
- AFAM 4700 African American Studies Seminar** 3-0-3
Prerequisite: AFAM 3000 and at least two AFAM 3000 level course electives. An interdisciplinary seminar on selected topics, providing a capstone experience.

ANTH: ANTHROPOLOGY

- ANTH 1102 Introduction to Anthropology** 3-0-3
 An introduction to the origins, evolution, and present-day adaptations of the world's peoples. Emphasis on the study of fossils, archaeological remains, and culturally diverse life ways.
- ANTH 1102H Introduction to Anthropology, Honors** 3-0-3
 Fundamentals of anthropology, with particular focus on such disciplinary subfields as physical anthropology, archaeology, and cultural anthropology. Emphasis is on the employment of the anthropological perspective, and the application of anthropological concepts and models to contemporary issues and problems.
- ANTH 3010 Physical Anthropology** 3-0-3
Prerequisites: ANTH 1102 or permission of instructor. The study of the biological origins of the human species. An emphasis is placed on human evolution, genetics, primatology, and the interaction between culture and biology.

- ANTH 3020 Culture and Personality** 3-0-3
Prerequisites: ANTH 1102 or permission of instructor. A cross-cultural survey of the relationship between culture and personality. Attention is directed to the interplay of cultural and social variables in the development of identity. Specific foci include mental illness, aggression, altered states of consciousness, and individual adaptation to social change.
- ANTH 3030 Archaeological Techniques** 0-8-3
Prerequisite: ANTH 1102 or permission of instructor. An introduction to the theory and techniques of archaeology as well as their practical application. Students will participate in fieldwork, including archaeological survey, excavation, and laboratory analysis.
- ANTH 3040 Cultural Anthropology** 3-0-3
Prerequisite: ANTH 1102 or permission of instructor. An introduction to the nature of cultural anthropology through a cross-cultural analysis of cultural systems and social organizations. Specific theoretical approaches are applied to case materials from cultural systems around the world including those within our society.
- ANTH 3070 Magic, Religion, and Witchcraft** 3-0-3
Prerequisite: ANTH 1102 or permission of instructor. A cross-cultural survey of varieties of religious expression. Emphasis is placed on ritual, mythic, and symbolic dimensions of religion and the way religion interrelates with other social institutions.
- ANTH 3090 Africa: Inequality Past and Present** 3-0-3
Also Offered as AFAM 3090. Prerequisite: ANTH 1102 or permission of instructor. The study and problems of social stratification in Africa from pre-colonial to modern times. Special attention will be paid to both intranational institutions (e.g., kinship, class, and ethnicity) and international political economy.
- ANTH 3120 Archaeology of Eastern North America** 3-0-3
Prerequisites: ANTH 1102 or permission of instructor. A study of cultural development in eastern North America, employing archaeological, ethnohistorical, and historical perspectives. The temporal boundaries are the arrival of humans in the region until the nineteenth century. Native American and Euroamerican culture history will be explored.
- ANTH 3130 Indians of North America** 3-0-3
Prerequisites: ANTH 1102 or permission of instructor. A survey of the lifestyles of North American Indians following contact with Europeans. Groups from all regions of North America are included, and the course examines native lifestyles at particular points in time. Primary emphasis is on environmental adaptation and economy of each group; in addition, social and political organization, religion, material culture, arts, and other aspects of culture are discussed.
- ANTH 3160 Experimental Archaeology** 1-4-3
Prerequisite: ANTH 1102 or permission of the instructor. An introduction to primitive technology with an emphasis on recreating past tools and utensils in an attempt to understand past lifeways. Lab fee required.
- ANTH 3500 Anthropological Theory** 3-0-3
Prerequisites: SOCI 3000. An historical survey of the development of anthropological theory, with a primary focus on the anthropological perspective and including an introduction to general social science. Students will develop a competent review of literature in an area of anthropology.

Most credit notations on the far right are in the pattern 3-0-3. The first number is the number of lecture hours (or equivalent) each week; the second number is the number of laboratory hours (or equivalent) each week; the third number, **in bold**, is the number of semester hours credit.

- ANTH 3510 Anthropological Research** 3-0-3
Prerequisites: SOCI 3000. An introduction to the concepts and methods of anthropological research. The emphasis is on developing familiarity with the various research strategies employed by cultural anthropologists and their application. Course work culminates with the design of a research proposal.
- ANTH 3910 Anthropology of Law** 3-0-3
Prerequisite: ANTH 1102 or permission of instructor. The study of legal systems and conflict resolution styles in nonWestern societies. The varieties of legal understandings and procedures are explored, and characteristics of specific legal processes are related to other institutional spheres, such as economics, kinship, and religion.
- ANTH 4040 Sociocultural Change** 3-0-3
Prerequisite: ANTH 1102 or permission of instructor. An examination of sociocultural changes occurring in tribal and peasant societies in response to modernization. Particular attention is focussed on the articulation of these societies with the larger national and global systems, the resulting inequalities, types of social and cultural disruptions experienced, and the range of responses to change.
- ANTH 4540 Internship in Anthropology** 1-0-1 to 3-0-3
Prerequisites: Permission of advisor and Internship Coordinator. **Must be taken concurrently with SOCI 4990 Senior Capstone. Graded “Satisfactory” or “Unsatisfactory.”** Supervised, practical experience in an appropriate community agency; an opportunity for students of demonstrated maturity and judgment to discover the integration between theory and practice and make applications.
- ANTH 4900 Special Topics in Anthropology** 1-0-1 to 3-0-3
Prerequisites: ANTH 1102 or permission of instructor. Topics vary. Designed to provide an intensive study in a current topic relevant to anthropology. May be repeated for credit.
- ANTH 4980 Directed Study in Anthropology** 1-0-1 to 3-0-3
Prerequisites: ANTH 1102 or permission of instructor. Study in an area or subject not normally found in established courses offered by the department; may also allow the student to explore in more detail a topic which is normally covered by the department. May be repeated for credit.

ARED: ART EDUCATION

- ARED 2020 Art For Teachers** 3-0-3
The study of creative art education philosophies, goals, content, media, materials, and methods for children. Not open to art majors.
- ARED 2999 Entry to the Education Profession** 0 hours credit
Graded “Satisfactory” or “Unsatisfactory.” A required non-credit course for all teacher education candidates pursuing a VSU recommendation for initial certification; must be successfully completed prior to admission to teacher education. Candidates are required to establish an electronic portfolio and provide evidence that all teacher education admission requirements have been satisfactorily met. If an “Unsatisfactory” grade is earned, the course must be repeated until a “Satisfactory” grade is received.
- ARED 3000 Issues and Trends in Contemporary Art Education** 3-0-3
Prerequisite: ARED 2999. The study of curricular frameworks, course content, and pedagogical strategies associated with best practices in the field of art education.
- ARED 3010 Elementary Art Methods** 1-4-3
Prerequisites: ARED 3000. Instructional methods; curricular and programmatic structures; assessment strategies; and the appropriate and safe use of tools, media, materials, and equipment in elementary art education programs.

- ARED 3012 Secondary Art Methods** 1-4-3
Prerequisite: ARED 3000. Instructional methods; curricular and programmatic structures; assessment strategies; and the appropriate and safe use of tools, media, materials, and equipment in middle and high school art education programs.
- ARED 4070 Seminar in Art Education (P-12)** 2-0-2
Prerequisite: Completion of all other academic course work. Must be taken in conjunction with ARED 4090. Graded “Satisfactory” or “Unsatisfactory.” Emphasis on professional expectations, instructional and curricular issues, and problems found in the school environment.
- ARED 4080 Internship in Art Education** 6 hours credit each
Prerequisite: Permission of the Department Head. Graded “Satisfactory” or “Unsatisfactory.” A supervised teaching experience for degreed students seeking certification. Must be taken for two consecutive semesters, for a total of 12 semester credit hours.
- ARED 4090 Student Teaching in Art Education** 10 hours credit
Prerequisite: Completion of the professional education sequence. Graded “Satisfactory” or “Unsatisfactory.” The culminating professional experience scheduled during the final semester of University enrollment. The student is provided with a supervised teaching experience in any one of three settings, elementary school, middle school, or senior high school.

ARID: INTERIOR DESIGN

- ARID 1120 Fundamental Concepts in Interior Design** 3-0-3
Restricted to interior design majors. An introductory course focusing on understanding elements and principles of interior design and art, with an emphasis on relationships among behavior, the built environment, sustainability, and green design.
- ARID 2111 Interior Design Studio I** 0-6-3
Prerequisite: ART 1030, ART 1011 and ARID 1120 or permission of Department Head.
Corequisite: ARID 2310. An introduction to residential design processes and space planning developed through manual architectural drafting skills. Field trips and site visits may be required.
- ARID 2112 Interior Design Studio II** 0-6-3
Prerequisite: ARID 2111. Further development of the fundamentals of interior design as applied to designing residential settings. Emphasis is placed on graphic presentation and oral communication. Site visits and field trips may be required.
- ARID 2310 Interior Design Graphics and Presentation** 0-6-3
Prerequisite: ART1030, ART 1011. **Corequisite:** ARID 2111. Freehand sketching, rendering techniques, axonometric projection, one-point and two-point perspective, color and black & white media applied to the needs of interior design communication.
- ARID 3111 Interior Design Studio III** 0-6-3
Prerequisite: ARID 2112 and portfolio review. Introduces topics and spaces of increasing scale and complexity in terms of function, aesthetics, needs and user satisfaction. Emphasis on communication of ideas through varied graphic formats: freehand sketches, technical drawings, computer applications, etc. Includes application of building codes, principles of universal design, and use of materials from sustainable sources. A variety of non-residential spaces are explored through projects. Residential spaces limited to institutional and hospitality applications.
- ARID 3112 Interior Design Studio IV** 0-6-3
Prerequisite: ARID 3111. Focus on large-scale spaces and more diverse and complex interior design issues, including relevant building codes and regulations. Site visits and field trips may be required.

- ARID 3211 History of Interiors I** 3-0-3
Prerequisite: ARID 1120. The historical examination of the formal and structural characteristics found in architecture, interior design, and furniture in significant periods. The course examines the relationship between human behavior and the built environment. Emphasis is placed on writing and the application of design terminology.
- ARID 3212 History of Interiors II** 3-0-3
Prerequisite: ARID 3211. Exploration of architecture, interior design, and furniture of the 19th and 20th centuries, with emphasis placed on characteristics of various design styles and movements.
- ARID 3320 Materials for Interior Design** 3-0-3
Prerequisite: ARED 2112, ARID 2310. Materials and methods used in the fabrication of interior furnishing and spaces. Knowledge of applications of varied materials and the creation of a reference notebook are required. Research and field trips may be required.
- ARID 3350 Lighting and Building Systems** 2-2-3
Prerequisite: ARID 2112. Introduction to aesthetic and technical considerations of lighting and other building systems required for interior spaces. The course content also addresses plumbing, HVAC, green and sustainable design, varied new products, and systems from domestic and international sources. Case studies, computations, site visits, and research are required.
- ARID 3411 Computers for Interior Design** 0-6-3
Prerequisite: ART 2030 AND ARID 2111. Introduction of computer-aided design and drafting, varied software and applications for 3D visualization and design communication. Emphasis is placed on gaining skill in the use of the computer in creating and communicating design solutions. Work may be linked to design studio projects.
- ARID 4000 Special Topics** 0-4-2 to 0-6-3
 A course for relevant topics not included in the official interior design curriculum. Format may vary.
- ARID 4010 Interior Design Internship** 0-0-3
Prerequisite: Junior standing in interior design and ARID 3112. A course designed to involve the student in the actual activities and processes of a professional interior design atmosphere. Interviews may be required. Assessment reviews are completed by student, internship supervisor and field supervisor. Written documentation and a journal are required.
- ARID 4111 Interior Design Studio V** 0-6-3
Prerequisite: ARID 3112. Design processes and solutions with issues relating to large-scale spaces. Emphasis is placed on creative and critical thinking, research, graphic and oral presentation skills. Site visits and field trips may be required.
- ARID 4112 Interior Design Studio VI** 0-6-3
Prerequisite: ARID 4111. Culmination of studio work examining large spaces with intricate criteria to explore, document, and incorporate into the design process. Communication is documented through varied media and methods. In-depth exploration of selected topics is included. Design and documentation of custom furnishings and casework are required. Field trips and site visits may be required.
- ARID 4310 Advanced Graphics and Creative Techniques** 0-6-3
Prerequisites: ARID 2310 and ARID 3111. Advanced problems in rendering, perspective drawing, and visual presentation of interior spaces. Methods of presentation are developed, including completed interior design projects with rendered perspectives and presentation boards.
- ARID 4610 Professional Practice** 2-2-3
Prerequisite: ARID 3112. Relationships among the business of interior design, professional practice, project management practices, planning a career path, achieving professional certification, and developing a professional portfolio. Field trips and site visits may be required.

ART: ART STUDIO AND ART APPRECIATION

- ART 1010 Drawing I** 0-6-3
An introductory drawing course in which the concepts of composition, figure/ground, line, value, contour, gesture, linear and aerial perspective are studied using a variety of drawing techniques and media.
- ART 1011 Drawing II** 0-6-3
Prerequisite: ART 1010 A continuation of Drawing I. This course will include further development of drawing techniques and rendering methods. The relationship between perception and conception in form will be explored as it pertains to representation and abstraction.
- ART 1020 Two Dimensional Design** 0-6-3
A two-dimensional foundation design course in which the formal elements of art, principles of design, and color theory are introduced.
- ART 1030 3-Dimensional Design** 0-6-3
A three-dimensional foundation design course in which the formal elements of design are introduced along with the methods and safety procedures associated with the use of power equipment. All students must pass examination on power tool usage and safety before access to power tools and shop.
- ART 1100 Introduction To The Visual Arts** 3-0-3
An introductory survey of world art from prehistory to the contemporary period. Credit for this course may not be used to satisfy requirements for area F or senior curriculum requirements for ART or ARED majors.
- ART 1100H Honors Introduction To The Visual Arts** 3-0-3
An introductory survey of world art, at the Honors level, from prehistoric to the contemporary period, set in the context of historical, political, economic, and social events.
- ART 2030 Computers In Art** 0-6-3
Prerequisite: ART 1020 An introductory course to develop basic skills in computer applications for the visual arts including: design, page layout, word processing, illustration, web access, web design, historical and critical methods, and information management.
- ART 3023 Figure Drawing** 0-6-3
Prerequisite: ART 1011. Interpreting the human figure through the use of a variety of media and techniques.
- ART 3041 Painting I** 0-6-3
Prerequisites: ART 1011 and ART 1020 or permission of the Department Head. An introduction to oil and acrylic painting techniques.
- ART 3051 Printmaking I** 0-6-3
Prerequisite: ART 1010 and ART 1020. An introduction to basic printmaking processes and techniques, including historical background and significance.
- ART 3061 Ceramics I** 0-6-3
Prerequisite: ART 1030 or permission of the Department Head. A beginning level course including coil and slab construction, wheel throwing techniques, glazing processes, and kiln firing methods.
- ART 3071 Black and White Photography** 0-6-3
An introductory course with emphasis on the technical and aesthetic foundations of black and white photography including camera functions, darkroom processing procedures, and presentation of work. A 35mm camera with manual controls is required.
- ART 3072 Digital Photography** 0-6-3
An introductory course with emphasis on the technical and aesthetic foundations of digital photography, including camera functions, composition, and presentation of work. A digital camera is required.

- ART 3081 Sculpture I** 0-6-3
Prerequisite: ART 1030 or permission of Department Head. An introduction to additive, subtractive, replacement, and modeling sculpture techniques and methods. Attention will be given to three dimensional studies of human anatomy.
- ART 3091 Graphic Design I** 0-6-3
Prerequisite: ART 1020 and ART 2030. Introduction to aesthetic and technical problem solving. Emphasis is placed on contemporary commercial art production techniques.
- ART 3092 Graphic Design II** 0-6-3
Prerequisite: ART 3091. A continuation of Graphic Design I with emphasis on typography, package design, and preparation of portfolio comprehensives. May be repeated for up to 9 hours of credit.
- ART 3101 Jewelrymaking I** 0-6-3
Prerequisites: ART 1030. Introduction to the design and production of jewelry and small metals, emphasis is placed on techniques employing casting and fabrication processes. Students must pass a safety test on the use of equipment and materials.
- ART 3111 Aqueous Media I** 0-6-3
Prerequisite: ART 1010 and ART 1020. The introduction to the technical aspects of aqueous painting media featuring traditional and contemporary methods and techniques.
- ART 4024 Advanced Drawing** 0-6-3
Prerequisite: ART 3023. Advanced use of drawing tools and techniques sufficient to work from concept to finished product. This includes mastery of the traditional technical and conceptual approaches to drawing. May be repeated for up to 9 hours of credit.
- ART 4042 Painting II** 0-6-3
Prerequisite: ART 3041. An advanced course in painting using a variety of media and techniques. The emphasis is on the development of personal style. May be repeated for up to 9 hours of credit.
- ART 4052 Printmaking II** 0-6-3
Prerequisite: ART 3051. An advanced course which gives the student an opportunity for further expressive development and experimentation with a variety of printmaking processes. May be repeated for up to 9 hours of credit.
- ART 4062 Ceramics II** 0-6-3
Prerequisites: ART 3061 or permission of the Department Head. An advanced course including sculptural construction methods and functional approaches. May be repeated for up to 9 hours of credit.
- ART 4072 Advanced Photography** 0-6-3
Prerequisite: ART 3071 and ART 3072. An advanced course in digital and black and white photography with emphasis on image manipulation and experimental processes. Both a digital and a 35mm camera with manual controls are required. May be repeated for up to 9 hours of credit.
- ART 4082 Sculpture II** 0-6-3
Prerequisite: ART 3081 or permission of Department Head. Intermediate work in additive, subtractive, replacement, and modeling sculpture techniques and methods. May be repeated for up to 9 hours of credit.
- ART 4093 Graphic Design III** 0-6-3
Prerequisite: ART 3091. An advanced course in graphic design with emphasis on illustration and preparation of portfolio comprehensives. May be repeated for up to 9 hours of credit.
- ART 4094 Computer Animation** 0-6-3
Prerequisite: ART 3091. An advanced computer graphics course that concentrates on three-dimensional modeling and computer animation. May be repeated for up to 9 hours of credit.

- ART 4102 Jewelrymaking II** 0-6-3
Prerequisite: ART 3101. Advanced techniques and further exploration of jewelry and small metals design. May be repeated for up to 9 hours of credit.
- ART 4112 Aqueous Media II** 0-6-3
Prerequisite: ART 3111 or permission of the Department Head. Advanced aqueous media techniques and methods emphasizing continued development of personal expressive and communicative style. May be repeated for up to 9 hours of credit.
- ART 4140 Technical Problems in Art** 0-2-1 to 0-6-3
Prerequisite: Junior or senior level standing in art. Designed for the advanced student capable of independent study for the purpose of solving studio problems and conducting creative research. Purchase of materials may be required. May be repeated for up to 9 hours of credit.
- ART 4150 Directed Study in Art** 0-2-1 to 0-6-3
Prerequisite: Approval of the supervising faculty member and Department Head. Students are provided the opportunity to explore individual problems in art. Purchase of art materials may be required. May be repeated for up to 9 hours of credit.
- ART 4160 Internship in Art** 3 hours credit
Prerequisite: Art Major and permission of the department head. Supervised work experience through cooperatively planned practical job related to the student's degree. May be repeated for credit.
- ART 4170 Professional Preparation** 0-2-1
Prerequisites: ART 2030. The assembly of a portfolio and résumé acceptable for professional use in art-related careers.
- ART 4171 Senior Exhibition Seminar** 2-0-2
Prerequisite: ART 4170. A capstone course for the preparing of works for exhibition, learning of gallery procedures, planning for and participating in the Senior Exhibition. The submission of a final portfolio and an oral presentation are required.
- ART 4180 Workshop in Art** 0-2-1 to 0-6-3
Selected topics presented in an intensive workshop setting. Purchase of art materials may be required. May be repeated for up to 9 hours of credit.
- ART 4190 Special Topics in Art Studio** 0-6-3
Prerequisite: Junior- or Senior-level standing in art. Selected topics in studio art areas designed to develop advanced skills in a particular medium and allow students the opportunity for further expressive development. May be repeated for up to 9 hours of credit.

ARTH: ART HISTORY

- ARTH 1120 Fundamental Concepts in the Visual Arts** 3-0-3
Restricted to ART and ARED majors and ART minors only. A course focusing on the historical context of contemporary art, art issues, disciplines, and professional practices.
- ARTH 3120 Special Topics in Art History** 3-0-3
Prerequisite: ART 1100, ARTH 1120, or ARID 1120. The study of unique or special content in the visual arts. May be repeated under different topics for a maximum of 9 hours.
- ARTH 3121 Western Art History Survey** 3-0-3
Prerequisite: ARTH 1120 or ARID 1120. A survey of western world art from prehistory to the modern period
- ARTH 3122 20th Century Art Survey** 3-0-3
Prerequisite: ARTH 1120 or ARID 1120, and ARTH 3121. A survey of world history of art from the late 19th century through the present.

- ARTH 3123 Special Topics in Art History** 3-0-3
Prerequisite: ART 1100, ARTH 1120, or ARID 1120. The study of unique or special content in the visual arts. May be repeated under different topics for a maximum of 9 hours.
- ARTH 4120 Issues in Art Criticism** 3-0-3
Prerequisite: ARTH 3122. Selected issues from the discipline of art criticism.
- ARTH 4130 Women Artists** 3-0-3
Prerequisite: ARTH 3122. The study of art created by women artists in western and non-western cultures.
- ARTH 4140 African American Art** 3-0-3
Prerequisite: ART 1100, ARTH 1120, or ARID 1120. The study of the arts created by African American artists from the late 18th century up to the present.
- ARTH 4150 Contemporary Art History** 3-0-3
Prerequisite: ARTH 3122. The in-depth study of contemporary art.
- ARTH 4160 Directed Study in Art History** 1-0-1 to 3-0-3
Prerequisite: ARTH 3122. An exploration of individual topics in art history, with supervised research on a chosen topic and weekly conferences between instructor and student. The course may be repeated for up to 9 hours of credit if topics are different.
- ARTH 4170 Prehistoric Through Historic Native American Art** 3-0-3
Prerequisite: ART 1100, ARTH1120, ARID 1120, or permission of Department Head. Study of art of Prehistoric through Historic era North American cultures. Arts traditions of the Southeast and Plains cultures of the Pre-Columbian, Proto-Historic, and Historic periods will be examined.
- ARTH 4180 Modern and Contemporary Native American Art** 3-0-3
Prerequisite: ART 1100, ARTH1120, ARID 1120, or permission of Department Head. Study of art of Modern and Contemporary Native North American artists and the development of the Native American Fine Arts Movement.

AS: AEROSPACE STUDIES

- AS 1000 Leadership Laboratory** 0-2-0 to 0-2-1
Graded “Satisfactory” or “Unsatisfactory.” Practices in both followership and leadership. A study of Air Force customs and courtesies, drill ceremonies, military commands, and Air Force opportunities (for 1000- and 2000-level AS students). Advanced leadership experiences in planning, organizing, and executing cadet training activities; preparing and presenting briefings and other oral and written communications (for 3000- and 4000-level AS students). The leadership laboratory is required of AS students each semester, but total credit is limited to 3 hours.
- AS 1001 Foundations of the U.S. Air Force I** 1-0-1
Co-requisite: AS 1000. A survey course designed to introduce students to the United States Air Force and Air Force Reserve Officer Training Corps.
- AS 1002 Foundations of the U.S. Air Force II** 1-0-1
Co-requisite: AS 1000. A survey course designed to continue the student’s introduction to the United States Air Force and Air Force Reserve Officer Training Corps.
- AS 2001 The Evolution of U.S. Air and Space Power I** 1-0-1
Co-requisite: AS 1000. Examines general aspects of the air and space power from a historical perspective. The course covers a time period from the first balloons and dirigibles to the Korean War.
- AS 2002 The Evolution of U.S. Air and Space Power II** 1-0-1
Co-requisite: AS 1000. Examines general aspects of air and space power from a historical perspective. The course covers a time period from the Vietnam War to present operations.

- AS 3001 Leadership Studies I** 3-0-3
Co-requisite: AS 1000. A study of leadership, management fundamentals, professional knowledge, Air Force personnel and evaluations systems, leadership ethics, and communication skills required of an Air Force junior officer.
- AS 3002 Leadership Studies II** 3-0-3
Co-requisite: AS 1000. Continues the study of leadership, management fundamentals, professional knowledge, Air Force personnel and evaluations systems, leadership ethics, and communication skills required of an Air Force junior officer.
- AS 4001 National Security** 3-0-3
Co-requisite: AS 1000. Examines the national security process, regional studies, advanced leadership ethics, and Air Force doctrine.
- AS 4002 Preparation for Active Duty** 3-0-3
Co-requisite: AS 1000. The final step in preparing an officer candidate for active duty. This course examines the military as a profession, officership, military justice, and civilian control of the military.

ASLS: AMERICAN SIGN LANGUAGE STUDIES

- ASLS 2110 American Sign Language I** 3-0-3
 The first in a series of courses based on American Sign Language concepts and principles. This course presents introductory components of ASL, including signs, fingerspelling, mime, body language, and facial expression. Information about the history of sign language and its existence in society today is also included. Skill focus is on recognition and recall of American Sign Language.
- ASLS 2120 American Sign Language II** 3-0-3
Prerequisite: ASLS 2110. The second in a series of courses based on American Sign Language concepts and principles. This course presents additional components of ASL, including signs, fingerspelling, mime, body language, and facial expression. Skill focus is on recognition and recall of American Sign Language with emphasis on increasing speed and fluency.
- ASLS 3140 Linguistics of American Sign Language** 3-0-3
Prerequisite: INTF 2999 and ASLS 3130 or permission of the instructor. An overview of structural linguistics, sociolinguistics, and pragmatics of American Sign Languages (ASL). Linguistic theories will be applied to both spoken English and ASL, with other examples being drawn from various languages. Special attention will be paid to phonological (including the application of phonological rules), morphological, lexical, syntactical, and discourse structures of ASL, as well as language variation and language change.
- ASLS 3170 American Sign Language III** 3-2-4
Prerequisite: ASLS 2120. The third in a series of courses based on American Sign Language concepts and principles. This course is designed to increase recognition and recall skills in dialogue communication. American Sign Language idioms are also included as well as a deeper understanding of the grammar, syntax, and complexities within the language.
- ASLS 3180 American Sign Language IV** 3-2-4
Prerequisite: ASLS 3170. The fourth in a series of courses based on American Sign Language concepts and principles. This class is an advanced course in American Sign Language for students who have completed previous coursework in ASL. Emphasis is placed on the production of non-voiced, conversational, spontaneous, signed sentences. Continued attention is given to the development of recognition as well as recall skills. Sociolinguistics with specific reference to syntax and the role of non-manual markers and idioms are explored as well as the interplay between language and culture within the deaf community.

ASTRONOMY

- ASTR 1000 Introduction to the Universe** 3-0-3
A survey of the universe, examining the historical origins of astronomy; the motions and physical properties of the Sun, Moon, and planets; the formation, evolution, and death of stars; and the structure of galaxies and the expansion of the Universe.
- ASTR 1010K Astronomy of the Solar System** 3-2.5-4
Astronomy from early ideas of the cosmos to modern observational techniques. The solar system planets, satellites, and minor bodies. The origin and evolution of the solar system. Three lectures and one night laboratory session per week.
- ASTR 1020K Stellar and Galactic Astronomy** 3-2.5-4
The study of the Sun and stars, their physical properties and evolution, interstellar matter, star clusters, our Galaxy and other galaxies, the origin and evolution of the Universe. Three lectures and one night laboratory session per week.
- ASTR 2010 Tools of Astronomy** 0-2-1
An introduction to observational techniques for the beginning astronomy major. Completion of this course will enable the student to use the campus observatory without direct supervision. The student will be given instruction in the use of the observatory and its associated equipment. Includes laboratory safety, research methods, exploration of resources (library and Internet), and an outline of the discipline.
- ASTR 2020 The Planetarium** 0-2-1
Prerequisites: ASTR 1000, ASTR 1010K, ASTR 1020K, or permission of instructor. Instruction in the operation of the campus planetarium and delivery of planetarium programs. Completion of this course will qualify the student to prepare and give planetarium programs to visiting groups.
- ASTR 3220 Cosmology** 3-0-3
Prerequisite: ASTR 1020K and PHIL 2010 or PHIL 2010H or consent of the instructor. A scientific and philosophical study of our perception of the universe, including the world views of Ptolemy, Copernicus, and Einstein.
- ASTR 3400 Planetary Geology** 3-0-3
Also offered as GEOL 3400. Prerequisite: ASTR 1010 or GEOL 1121 or GEOG 1113. **Prerequisite or co-requisite:** PHSC 1100 or PHYS 1111 or PHYS 2211. A study of the geology of the terrestrial planets and solid-surface moons, asteroids, comets, and meteorites. The course will focus on comparative planetary geology, with emphasis on geologic processes on the surface, planetary interiors, and data collection methods such as remote sensing and image analysis.
- ASTR 3800 Astrobiology** 3-0-3
Prerequisites: Any one of the following: ASTR 1000, ASTR 1010K, ASTR 1020K, BIOL 1010, BIOL 1030, BIOL 2010, CHEM 1151K, CHEM 1211, PHYS 1111K, PHYS 2211K; and either MATH 1113 or MATH 2261. A multidisciplinary science course examining the possibility of extraterrestrial life in the solar system and the universe. Emphasis is on the definition of life from the perspectives of biology, chemistry, and physics, and the requirements for lifeforms. Extreme habitats where lifeforms might evolve will be explored in context with NASA's on-going exploration of the solar system and the search for intelligent life in the galaxy.
- ASTR 4101 Observational Techniques I** 3-2-4
Prerequisites: PHYS 2212K, ASTR 1010K, ASTR 1020K. Aspects of observational astronomy. Topics include spectroscopy, photometry, imaging, astrometry, and operation of the observatory.
- ASTR 4102 Observational Techniques II** 2-2-3
Prerequisite: ASTR 4101. Aspects of observational astronomy. Topics include radio astronomy, ultraviolet and x-ray astronomy, and data reduction techniques.

- ASTR 4400 Physics of the Solar System** 3-0-3
 Celestial mechanics; physical features of the Sun, planets, moons, and other material in the solar system.
- ASTR 4410 Astrophysics** 3-0-3
Pre- or corequisite: PHYS 4411. Radiative transfer in the stellar atmosphere, the interior structure of stars, stellar evolution, physical processes in gaseous nebulae and cosmology.
- ASTR 4800 Internship in Astronomy** 3 to 6 hours credit
 Active participation in research in astronomy, or in some field of science closely allied with astronomy, or work with a planetarium or museum which involves planetarium operations and programs. A daily log of activities, a report on the work done, and a research paper relating the work done to the field of astronomy are required.
- ASTR 4900 Special Topics in Astronomy** 1-0-1 to 4-4-6
Prerequisite: Consent of advisor and instructor. Topics to be assigned by instructor; may be taken more than once if topics are different; up to a total of 6 credit hours.
- ASTR 4950 Directed Study in Astronomy** 1-0-1 to 4-4-6
Prerequisites: Consent of advisor, instructor, and department head. Study in area or subject not normally found in established courses offered by the department; may also allow students to explore in more detail and/or depth an area or subject covered by the department in astronomy; up to a maximum of 6 credit hours.

BIOLOGY

- BIOL 1010 Introduction to Biology: The Evolution and Diversity of Life** 3-0-3
Co-requisite: BIOL 1020L. This course cannot be taken for credit toward the major in biology. An introduction to the diversity of life on Earth with a special emphasis on ecological and evolutionary processes and relationships.
- BIOL 1020L Biodiversity Lab** 0-2-1
Co-requisite: BIOL 1010. This course cannot be taken for credit toward the major in biology. A laboratory course to accompany Biology 1010 emphasizing the diversity of life.
- BIOL 1030 Introduction to Biology: Organismal Biology** 3-0-3
Co-requisite: BIOL 1040L. This course cannot be taken for credit toward the major in biology. An introduction to modern biology for the non-major with special emphasis on the processes involved in the development and maintenance of complex multicellular organisms.
- BIOL 1040L Organismal Biology Lab** 0-2-1
Co-requisite: BIOL 1030. This course cannot be taken for credit toward the major in biology. A laboratory course to accompany Biology 1030, emphasizing the structure of multicellular organisms.
- BIOL 1050 Human Biology** 3-0-3
 An introduction to the processes underlying the interactions of humans and the natural world. The topics to be covered include: physiological processes and their relationship to diseases; human genetics and biotechnology; the evolutionary basis of human structure and behavior, and the impact of humans on natural communities.
- BIOL 1060 Introduction to Marine Biology** 3-0-3
 A non-technical study of marine and estuarine habitats emphasizing habitat types and biological community diversity. Topics of study will include, but are not limited to: organismal adaptations to a marine environment, bio-diversity and taxonomy of major groups of marine organisms, ecosystem types and characteristics and oceanic scale processes. Some voluntary overnight, weekend field trips with emphasis on collecting coastal fauna and study of Georgia coastal habitats.

- BIOL 1065 Plants and Human Affairs** 3-0-3
 Designed for non-science majors. A broad study of economically important plants, their influence on society, and their evolution and manipulations by humans. Uses of plants in the production of foods, beverages, spices, herbs, perfumes, drugs, dyes, wood, and fibers, and in the aesthetic enhancement of human life.
- BIOL 1070 Microbes and Humans** 3-0-3
 The study of microbes and humans with an emphasis upon infectious diseases and the role of microbes in food production, bioengineering, and industrial processes.
- BIOL 1080 Conservation Biology** 3-0-3
 Basic biology underlying current issues in the conservation of rare species, native ecosystems, and biological diversity in general. Exploration of the nature and geographic distribution of biodiversity and threats to it, discussed in the context of ecological and population-genetic principles as well as socio-economic and political realities. Theory and case studies of different modes of preserving biodiversity (zoos and gardens vs. natural preserves) will be presented. The U.S. Endangered Species Act and Wilderness Preservation Act and C.I.T.E.S., among others, will be critically evaluated as models for government involvement in conservation. Prescriptions for sustainable development that does not further erode biodiversity will be discussed in light of current knowledge of genetics, population dynamics, and community and landscape ecology.
- BIOL 1090 Genetics and Human Affairs** 3-0-3
 Genetics and its human implications, past, present and future. A review of the basic patterns of inheritance using human traits. Emphasis will be given to calculation of recurrence risks by pedigree analysis, the human chromosome aberrations, the molecular aspects of inborn errors of metabolism, the human genome project, recombinant DNA technology and its application to gene therapy. Extensive use of computer technology and auto-tutorials will be made in the course.
- BIOL 1100 Biology Freshman Seminar–Introduction to Biological Sciences** 1-0-1
Pre- or co-requisite for biology majors: BIOL 1107. An introduction to college-level science and specifically the field of the biological sciences. Topics covered will include strategies for success, basic descriptive statistics and data analysis, exposure to possible careers within the field, professional ethics, and resource and library use. Some evening sessions will be required during the semester.
- BIOL 1107 Principles of Biology I** 3-3-4
Co-requisite for biology majors: BIOL 1100. An introduction to the principles of biology for science majors, with an emphasis on the cellular nature of life. Concepts covered include the origin and early evolution of cellular life; cell structure, function, metabolism, and reproduction; cell signaling; and gene regulation in bacteria and eukaryotes.
- BIOL 1108 Principles of Biology II** 3-3-4
Prerequisite: BIOL 1107 or permission of the instructor. An introduction to physiological processes in plants and animals. Structure, nutrition, transport, coordination, reproduction, and development will be addressed.
- BIOL 1200 History of the Life Sciences** 3-0-3
 An introduction to the history and philosophy of biology and related sciences. The development and evolution of major theories and techniques of science and interactions between science and culture will be emphasized.
- BIOL 1951H Honors Biology: Cellular Processes** 3-2-4
 An introduction to the fundamental principles of cell and molecular biology. Prokaryotic and eukaryotic development will focus on the relationship of structure and function. Cellular solutions to fundamental problems such as cell recognition, energy acquisition and conversion, genetic transmission, and cellular reproduction will be discussed. Taught in an enriched, discussion, and project-oriented classroom environment.

- BIOL 1952H Honors Biology: The Evolution and Diversity of Life** 3-2-4
Introduction to modern biology with an emphasis on the diversity of life on Earth and a close examination of ecological and evolutionary processes and relationships. Taught in an enriched, discussion and project-oriented classroom environment.
- BIOL 2230 General Botany** 3-3-4
Prerequisite: BIOL 2010 with a grade of “C” or higher or consent of the instructor.
Survey of plants, emphasizing evolution, homologous variation, and reproductive cycles of the major groups and development, structure, and function as represented by the seed plants.
- BIOL 2270 General Zoology** 3-3-4
Prerequisite: BIOL 2010 with a grade of “C” or higher or consent of the instructor.
Survey of the animal kingdom.
- BIOL 2651 Human Anatomy and Physiology I** 3-2-4
Introduction to human anatomy and general physiological principles with emphasis on the following: cell and tissue organization, plus skeletal, muscular, nervous, and endocrine systems.
- BIOL 2652 Human Anatomy and Physiology II** 3-2-4
Prerequisite: BIOL 2651. A continuation of human anatomy and general physiological principles with emphasis on endocrine, cardiovascular, lymphatic, respiratory, digestive, excretory, and reproductive systems; and development.
- BIOL 2900 Microbiology in Health and Disease** 3-3-4
Corequisite: CHEM 1152K. An introductory microbiology course with emphasis upon the role played by microorganisms in health and disease. Open to students who plan to enter the health or allied health fields without a major in biology. Two 1.5 hour laboratory periods per week.
- BIOL 3000 Biostatistics** 2-4-4
Prerequisite: MATH 1113, BIOL 2230 and BIOL 2270. An introduction to univariate and multivariate analysis of data. Laboratory work will allow students to collect data typical of the diverse disciplines in biology and subject those data to appropriate biometrical analyses, using a calculator or computer. Students will be required to keep a detailed lab notebook of the statistical methods studied and also complete a term project and a scientific report. Two 2-hour laboratory periods per week.
- BIOL 3100 Microbiology** 3-3-4
Prerequisites: BIOL 2010, BIOL 2230, BIOL 2270, CHEM 1212/1212L. **Recommended:** CHEM 3402. Survey of microbiology covering eubacteria, archaeobacteria, protozoa, fungi, algae, and viruses. Includes fundamental techniques, microbial physiology and genetics, biotechnology, medical applications, and applied microbiology. Two 1.5 hour laboratory periods per week.
- BIOL 3200 Introductory Genetics** 3-0-3
Prerequisite: MATH 1113, BIOL 1107, BIOL 1108, or permission of instructor. A survey of modern genetics, including Mendelian modes of heredity, extensions and variations on Mendelian genetics, chromosomal inheritance and variation, molecular properties of genes, and basic quantification of genetic diversity at the population level.
- BIOL 3250 Ecology and Evolution** 3-3-4
Prerequisite: BIOL 1100, BIOL 1107, BIOL 1108, and BIOL 3200, each with a grade of “C” or higher, or permission of instructor. An introduction to major topics in ecology and evolution, including population, community, and ecosystem ecology; Darwinian theory of evolution through natural selection; microevolution and macroevolution. Computer and field labs will provide exposure to both evolutionary theory and field ecology.

- BIOL 3300 Ecology** 3-3-4
Prerequisite: BIOL 2230, BIOL 2270, CHEM 1212/1212L, with a grade of “C” or better. **Corequisite:** BIOL 3200 or consent of instructor. Basic ecological principles including behavior of individuals, populations, and communities in the context of their physical and biotic environments. Reviews population genetics and basic evolution; emphasizes scientific method, including the role of theory, hypothesis testing, statistical analysis and scientific writing. Observation and data collection mostly in the field within a variety of local ecosystems. One weekend field trip required.
- BIOL 3350 Environmental Science** 3-0-3
Prerequisites: BIOL 1107, 1108, 3200, 3250, CHEM 1211/1211L and 1212/1212L; or completion of Area D in core; or permission of instructor. An overview of relevant environmental issues. Topics discussed will include environmental pollution, global climate change, threatened and endangered species, introduced and invasive species, and sustainability.
- BIOL 3400 Plant Physiology** 3-3-4
Prerequisites: BIOL 2230, BIOL 2270, CHEM 1211/1211L. An introduction to basic principles of plant function including physical processes occurring in plants, water relations in whole plants and plant tissues, cell physiology and biochemistry, and growth and development.
- BIOL 3450 Animal Physiology** 3-3-4
Prerequisites: BIOL 2230, BIOL 2270, and CHEM 1212, or permission of instructor. A study of animal physiology with an emphasis on mammalian organ systems. The molecular and cellular aspects of physiology as they relate to these systems are considered.
- BIOL 3460 Human Physiology** 3-3-4
Prerequisites: BIOL 3250 and CHEM 1211/1211L or permission of instructor. Human physiological principles, from cells to systems, with emphasis on the regulation and integration of organ systems.
- BIOL 3500 Mycology** 3-3-4
Prerequisites: BIOL 2230, BIOL 2270; **Recommended:** BIOL 3100. Biology of fungi with emphasis on morphology, taxonomy, physiology, and ecology, includes the roles of fungi as both beneficial organisms and as causal agents in plant and animal diseases.
- BIOL 3550 Phycology** 3-4-4
Prerequisites: BIOL 2230 and BIOL 2270. An introduction to the study of the algae, including taxonomy, phylogeny, physiology, and ecology. Laboratories will focus on the examination of live material, and will include methods for the isolation and culture of algae.
- BIOL 3600 Local Flora** 3-3-4
Prerequisites: BIOL 2230 and BIOL 2270. A field-oriented study emphasizing identification, distribution, and ecology of locally occurring seed-bearing plants. Two or three weekend field trips are routinely scheduled.
- BIOL 3610 Dendrology** 3-3-4
Prerequisite: Completion of Core Area “D.” A survey of the biology and diversity of trees and of the major forest communities. The course will emphasize species of the southeastern United States and forest communities of North America, including field identification, description and classification of forest communities, and a study of reproductive cycles, anatomy, and development of representative species. Field trips may be required.

Most credit notations on the far right are in the pattern 3-0-3. The first number is the number of lecture hours (or equivalent) each week; the second number is the number of laboratory hours (or equivalent) each week; the third number, **in bold**, is the number of semester hours credit.

- BIOL 3650 Plant Systematics** 3-3-4
Prerequisites: BIOL 2230 and BIOL 2270. A survey of the principles of plant systematics that includes identification, nomenclature, evolution, and classification within the plant kingdom, and a systematic survey of plant families, with emphasis on local representatives.
- BIOL 3700 Neuroscience** 3-0-3
Prerequisites: BIOL 2010, BIOL 2230, and BIOL 2270, or consent of the instructor. An exploration of the human nervous system based upon current experimental models. The course will be divided into four areas: neural signaling, sensory input, motor input, and modifications of neuronal circuits. The neurobiology of disease will be emphasized.
- BIOL 3800 Invertebrate Zoology** 3-3-4
Prerequisites: BIOL 2230 and BIOL 2270. A study of the morphology, phylogeny, and ecology of invertebrates.
- BIOL 3810 Introduction to Biogeography** 3-0-3
Also offered as GEOG 3810. Prerequisites: Three of the following courses: GEOG 1112, GEOG 1113, BIOL 2010, BIOL 2230, BIOL 2270. An overview of factors controlling the distribution of plants and animals on the Earth. Topics discussed include ecological and evolutionary processes, geophysical and climatic phenomena, and historical and anthropogenic events that have influenced current distributions.
- BIOL 3840 Entomology** 3-3-4
Prerequisites: BIOL 2230 and BIOL 2270. Introduction to the study of insect biology including ecology, behavior, and taxonomy. Laboratory includes field observation, sampling and identification of local fauna.
- BIOL 3870 Parasitology** 3-3-4
Prerequisites: BIOL 2230 and BIOL 2270. A study of the morphology, life cycles, and host-parasite relationships of representative protozoan and metazoan parasites. Human parasites are emphasized.
- BIOL 3900 Ichthyology** 3-3-4
Prerequisites: BIOL 2230 and BIOL 2270. A study of the taxonomy, distribution, ecology, behavior and evolution of freshwater and marine fishes. One or two overnight field trips on weekends will be scheduled, with emphasis placed on the collection and preservation of specimens and the identification of habitats occupied by various species. Other field trips scheduled during normal laboratory periods.
- BIOL 3920 Herpetology** 3-3-4
Prerequisites: BIOL 2230 and BIOL 2270. Introduction to the study of amphibians and reptiles, including anatomy, physiology, ecology, behavior, and classification coordinated with field study of local species.
- BIOL 3950 Ornithology** 3-3-4
Prerequisites: BIOL 2230 and BIOL 2270. Lectures on morphology, evolution, ecology, behavior, and distribution of birds of the world. Lab emphasizes gross anatomy and identification of local species by sight and sound; mostly in the field. Five-day field trip to south Florida required; other Saturday trips offered.
- BIOL 3960 Wildlife Biology** 3-3-4
Prerequisites: BIOL 2230 and BIOL 2270, or consent of instructor. General principles and techniques of wildlife conservation, ecology, and management, with an emphasis on life histories and taxonomy of game species of the southeastern United States.
- BIOL 3970 Wildlife Diseases** 3-0-3
Prerequisites: BIOL 3250 or permission of instructor. An introduction to the field of wildlife disease biology. Topics examined will include specific avian, mammalian, reptilian, and amphibian diseases as well as methods to survey for, recognize, and diagnose diseases. Information concerning biosafety, biosecurity, proper permitting, and working with the public will be presented.

- BIOL 3980 Mammalogy** 3-3-4
Prerequisites: BIOL 2230 and BIOL 2270. Lectures emphasize morphology, evolution, ecology, zoogeography and classification of mammals of the world. Lab emphasizes gross anatomy and identification of mammal specimens, especially those found in North America. Four-day field trip to Blue Ridge Mountains (NC) required; Manatee dive (FL) offered.
- BIOL 4000 Topics in Biology I** 3-0-3
Prerequisite: BIOL 2230, BIOL 2270 or equivalent. Selected topics in the biological sciences. May be repeated if the topic is different. This course does not include a laboratory
- BIOL 4010 Topics in Biology II** 3-3-4
Prerequisites: BIOL 2230, BIOL 2270 or equivalent. Selected topics in the biological sciences. May be repeated if the topic is different. This course includes a laboratory.
- BIOL 4020 Topics in Conservation Biology** 2-3 – 0-3 – 2-4
 Conservation issues and practices involving various taxonomic groups, habitats, or ecosystems. Topics covered may include specific taxa, habitats, or ecosystems negatively impacted by anthropogenic and environmental processes, as well as conservation practices and legislation designed to protect them. Course may be offered with or without a laboratory component.
- BIOL 4100 Morphology of Land Plants** 3-3-4
Prerequisites: BIOL 2230 and BIOL 2270. Study of vegetative organization and reproductive cycles of bryophytes, pteridophytes and seed plants, which incorporates phylogenetic and ecological relationships.
- BIOL 4200 Plant Anatomy** 3-3-4
Prerequisites: BIOL 2230 and BIOL 2270. Origin and development of tissues and organs of vascular plants. The laboratory stresses microtechnique including preparation of plant tissues in paraffin and plastic resins, sectioning, staining for specific components of plant tissues, and use of different optical methods.
- BIOL 4300 Comparative Vertebrate Anatomy** 3-3-4
Prerequisites: BIOL 2230 and BIOL 2270, or approval of instructor. Anatomical and phylogenetic survey of representative vertebrate animals.
- BIOL 4350 Developmental Biology** 3-3-4
Prerequisites: BIOL 2230 and BIOL 2270. A study of development from fertilization through embryological stages, with an emphasis placed on experimental embryology and molecular genetic mechanisms in selected model organisms.
- BIOL 4400 Vertebrate Histology** 3-4-4
Prerequisites: BIOL 2230 and BIOL 2270, and 8 semester hours of senior college biology courses. Study of vertebrate histology with emphasis on the four primary tissues (epithelium, connective, muscle, and nerve). Laboratory work consists primarily of detailed microscopic study and drawings of tissues from prepared slides. Two 2-hour laboratory periods per week.
- BIOL 4450 Theory and Practice of Scanning Electron Microscopy** 2-4-4
Prerequisites: BIOL 3200 and 3250 or consent of the instructor. General principles of scanning electron microscopy operation and theory, with comparison to light optics in a laboratory-intensive environment. Topics include fixation and preparation of samples for standard, low voltage, low vacuum, and high resolution SEM.
- BIOL 4500 Cell Biology** 3-3-4
Prerequisites: BIOL 2230, BIOL 2270, CHEM 3601. The organization and function of cellular structures in animal, plant, and microbial systems. Emphasis on the molecular basis of metabolism, transport, mobility, nerve conduction, and the cell cycle.

- BIOL 4510 Virology** 3-0-3
Prerequisites: BIOL 3100 or consent of instructor. An introduction to viruses and other non-cellular infectious agents. Topics include the structure and composition of these agents, their replication, effects on their host, and host responses. Methods for studying these agents, their origins and evolution, and their uses in biotechnology will also be discussed.
- BIOL 4520 Molecular Biophysics** 3-0-3
Prerequisites: MATH 2261, BIOL 1107, BIOL 1108, BIOL 3200, BIOL 3250, CHEM 1211, CHEM 1212, and either PHYS 1111 or PHYS 2211, or consent of the instructor. Introduction to thermodynamics, kinetics, and their applications to biological systems.
- BIOL 4550 Immunology** 3-3-4
Prerequisites: BIOL 2230, BIOL 2270, BIOL 3100. Basic concepts of immunology, including antigen and antibody structure, the generation of diversity, the nature of T cell and B cell receptors, cellular cooperation, and the down regulation of immune responses.
- BIOL 4580 Molecular Genetics** 3-3-4
Prerequisite: BIOL 3200. The study of the molecular nature of eukaryotic genomes, with emphasis on biotechnology. The lecture will focus on using modern molecular genetic techniques as a means to understanding complex eukaryotic genomes. Emphasis will be placed on reading current, relevant scientific literature. The laboratory will involve hands-on experience in which the student will learn the latest technology of molecular genetic analysis and manipulation.
- BIOL 4600 Evolution** 3-0-3
Prerequisites: BIOL 2230, BIOL 2270, BIOL 3200. Study of the theoretical aspects and the patterns and processes of micro- and macro-evolutionary change.
- BIOL 4650 Animal Behavior** 3-3-4
Prerequisites: BIOL 2230 and BIOL 2270. Introduction to the major concepts of causation, development, evolution, and ecology of animal behavior, emphasizing the behavior of social animals.
- BIOL 4700 Limnology** 3-3-4
Prerequisites: BIOL 2230, BIOL 2270, BIOL 3300. A study of the physical, chemical, and biological aspects of fresh waters.
- BIOL 4710 Aquatic Toxicology** 3-3-4
Prerequisites: BIOL 1107, BIOL 1108, BIOL 3200, BIOL 3250, CHEM 1211/1211L, and CHEM 1212/1212L or permission of instructor. An examination of different classes of contaminants in aquatic environments and their interactions with aquatic organisms. Methods of toxicity testing, contaminant effects at different levels of biological organization, and environmental regulations will be discussed. The students will use the knowledge they acquire in lecture to conduct toxicity experiments with several different organisms, following EPA protocols. Statistical methods will be used to analyze collected data, and the results will be interpreted.
- BIOL 4750 Population Biology** 3-0-3
Prerequisite: MATH 1112, MATH 1113, OR MATH 1113H. **Prerequisite or corequisite:** BIOL 3300. A review of the theory and applications of population biology, including single-species population growth models (exponential, geometric, logistic, life tables, state and age-structured matrix models, metapopulation models), population genetics models, and multi-species interaction models (competition, predator-prey, succession, and parasite-host). Integrated computer exercises will allow students to manipulate model parameters and understand model predictions and dynamics.
- BIOL 4800 Protein Biochemistry** 3-3-4
Prerequisites: BIOL 2230, BIOL 2270, CHEM 1212. The structure and function of proteins, with emphasis on properties of amino acids, protein folding, protein-protein and protein-ligand interactions, enzyme kinetics, and enzyme regulation.

- BIOL 4830 Laboratory Practicum I** **1 hour credit**
Prerequisite: 12 hours of upper division biology and a GPA of 3.0. Graded “Satisfactory” or “Unsatisfactory.” Individualized instruction and practice in assisting with the operation of biology laboratory exercises in classes that have one laboratory period per week. The student is assigned to one class section for one semester and is expected to assist with all class laboratories. The practicum is directed by the instructor of the class to which the student is assigned. Credits may not be used as biology electives.
- BIOL 4840 Laboratory Practicum II** **2 hours credit**
Prerequisite: 12 hours of upper division biology and a GPA of 3.0. Graded “Satisfactory” or “Unsatisfactory.” Individualized instruction and practice in assisting with the operation of biology laboratory exercises in classes that have two or more laboratory periods per week. The student is assigned to one class section for one semester and is expected to assist with all class laboratories. The practicum is directed by the instructor of the class to which the student is assigned. Credits may not be used as biology electives.
- BIOL 4850 Biology Internship** **3 hours credit**
Graded “Satisfactory” or “Unsatisfactory.” Open to students who qualify for internship programs in the biological sciences. Credit hours and internship hours granted are agreed on cooperatively by the Biology Department and the internship supervisor and are dependent on the nature of the program and academic work experience. Approval forms must be completed before registration. Grade (Satisfactory/Unsatisfactory) is assigned after submission of written report detailing the work done along with conclusion and evaluation. Only hours of internship credit may be applied toward graduation requirements. Credits may not be used as biology electives.
- BIOL 4860 Pathologist’s Assistant Internship** **4 hours credit**
Prerequisites: Completion of 60 hours of credit to include BIOL 2010, BIOL 2239, BIOL 2270; CHEM 1211/1211L; MATH 1112, MATH 1113 or MATH 1113H, MATH 2261 or MATH 2261H, or MATH 2620; and acceptance into the Pathologist’s Assistant Program with Doctors Laboratory, Inc. Graded “Satisfactory” or “Unsatisfactory.” Admission to this course and credit hours granted are agreed on cooperatively by the Biology Department and Internship Supervisor, dependent on the nature of the program and academic work experience. Approval forms must be completed before registration. Grade is assigned after submission of a written reporting detailing the work done, along with conclusion and evaluation. Internship credit maybe used only as general elective credit and may not be used as biology electives in the major. In order to qualify for certification, students must be enrolled in this course during each full semester of the junior and senior years. Course may be taken four times.
- BIOL 4900 Senior Seminar** **0-3-1**
Pre- or Corequisite: Completion of all required courses in the senior curriculum for the biology major. Graded “Satisfactory” or “Unsatisfactory.” The capstone course in biology. Students are required to attend outside lectures chosen by the instructor. This course assesses students’ ability to research independently topics in biology, assimilate the information, and disseminate the information in an organized and understandable fashion in both written and oral forms. Besides demonstrating comprehension of their topic and competence in communication skills, students take the ETS Major Field test in biology and complete the departmental Senior Exit Questionnaire for successful course completion.
- BIOL 4950 Directed Study** **1 to 4 hours credit**
Prerequisite: completion of at least 11 hours of upper-division biology courses with the consent of the instructor and the Department Head. Supervised investigation of a specific problem and preparation of a final report agreed upon by student and instructor. A maximum of three hours of credit may be applied toward the upper-division biology electives requirements; additional credits may count as free electives.

BUSA: BUSINESS ADMINISTRATION

- BUSA 2000 Introduction to Business** 1-0-1
Overview of the types of business organizations and business procedures. Topics include the economic environment, businesses and their role in the economy, business management and leadership, the global economy, the role of consumers, accounting, and personal financial management.
- BUSA 2100 Applied Business Statistics** 3-0-3
Prerequisite: MATH 1111 or equivalent. Applications of basic statistical concepts to business environments. Topics include data analysis, measures of central tendency and spread, probability applications, applications of selected distributions, regression, confidence intervals, and hypothesis testing. Business examples and applications are the foundation of instruction. Statistical software is used to analyze results.
- BUSA 2106 The Environment of Business** 3-0-3
Ethical, social, political, legal, and regulatory issues in the business environment. Topics focus on the conflicting rights and duties of individuals, organizations, and other factions in a domestic and global society that lead to the development of ethical awareness, social responsibility, and law.
- BUSA 2106H The Environment of Business** 3-0-3
Ethical, social, political, legal, and regulatory issues in the business environment. Topics focus on the conflicting rights and duties of individuals, organizations, and other factions in a domestic and global society that lead to the development of ethical awareness, social responsibility, and law. This honors course requires written analysis of current issues.
- BUSA 3110 Business Law** 3-0-3
Prerequisite: BUSA 2106. An overview of the laws surrounding business transactions in the areas of contracts, sales, commercial paper, and secured transactions. Additional topics include agency, sole proprietorship, partnership, corporate law, consumer transactions, securities regulation, and property law.
- BUSA 3200 Practicum in Free Enterprise** 3 hours credit
Required for Students In Free Enterprise (SIFE) certification but open to all majors. Supervised practical application of the principles of entrepreneurship and free enterprise. This course is designed to enhance team building, leadership, and communication skills by creating, organizing, and executing projects in the local and regional communities. This course provides opportunities for networking with community and business leaders.
- BUSA 4900 Business Policy** 3-0-3
Prerequisites: BUSA 2106, MKTG 3050, MGNT 3250, FIN 3350, and Senior Standing (within 30 semester hours of graduation). Capstone course required of business administration majors. Uses strategic management concepts to integrate functions of business. Emphasis on analysis of business situations, diagnosis of business problems and opportunities, and application of functional and strategic concepts to increase organization effectiveness.

CHEM: CHEMISTRY

- CHEM 1010 Chemistry for World Citizens** 3-2-4
A chemistry course with a focus on real-world societal issues. Students will develop critical thinking skills and an appreciation for the theoretical and practical aspects of chemistry while learning the fundamentals of chemistry. Chemical knowledge will be developed on a need-to-know basis in decision making activities. The course is designed for non-science majors seeking a laboratory science course.

- CHEM 1110K Introduction to General, Organic, and Biological Chemistry** 3-2-4
 An introduction to the fundamental principles of chemistry, emphasizing modern atomic theory, the structure and behavior of atoms, the properties and states of matter, energy relations, periodicity, mole concepts, and the preparation and reactions of organic compounds in light of modern theories of molecular structure. Study will also include the chemistry of living systems, structure of biological molecules, metabolism, and molecular genetics. Laboratory experiments supplement the study of the listed topics.
- CHEM 1151K Survey of Chemistry I** 3-2-4
 A study of the fundamental principles of chemistry emphasizing modern atomic theory, the structure and behavior of atoms, the properties and states of matter, energy relations, periodicity and mole concepts. Laboratory experiments supplement the study of the listed topics.
- CHEM 1152K Survey of Chemistry II** 3-2-4
Prerequisite: CHEM 1151K with a grade of “C” or better. A study of the properties, preparation, and reactions of organic compounds in light of modern theories of molecular structure. An overview of the chemistry of living systems including the structure of biological molecules, metabolism, and molecular genetics. Laboratory experiments supplement the study of the listed topics.
- CHEM 1211 Principles of Chemistry I** 3-0-3
Prerequisite or Corequisite: MATH 1111 or MATH 1113. **Corequisite:** CHEM 1211L.
 An introduction to a quantitative study of the physical and chemical behavior of matter in its several phases and a consideration of modern theories of bonding forces at the molecular level. Atomic and molecular structure, chemical nomenclature, stoichiometry, thermochemistry, the gaseous state, and properties of solutions are discussed.
- CHEM 1211L Principles of Chemistry Laboratory I** 0-3-1
Prerequisites or corequisites: MATH 1111 or MATH 1113, and CHEM 1211. Laboratory exercises to supplement material discussed in CHEM 1211.
- CHEM 1211LH Honors Principles of Chemistry Laboratory I** 0-3-1
Prerequisites or corequisites: MATH 1111 or MATH 1113, and CHEM 1211. Laboratory course to emphasize the experimental nature of chemical science. Students are guided in work on basic chemical concepts and experimental methods in an enriched environment.
- CHEM 1212 Principles of Chemistry II** 3-0-3
Prerequisites: MATH 1111 or MATH 1113, and CHEM 1211 and CHEM 1211L, each with a grade of “C” or better. **Corequisite:** CHEM 1212L. A continuation of the quantitative study of the physical and chemical behavior of matter in its several phases and a consideration of modern theories of bonding forces at the molecular level. Reaction kinetics, chemical equilibrium, oxidation-reduction and acid-base chemistry, electrochemistry, chemical thermodynamics, nuclear chemistry, and the descriptive chemistry of selected elements and their compounds are discussed.
- CHEM 1212L Principles of Chemistry Laboratory II** 0-3-1
Prerequisites: MATH 1111 or MATH 1113, and CHEM 1211 and CHEM 1211L, each with a grade of “C” or better. **Corequisite:** CHEM 1212. Laboratory exercises to supplement material discussed in CHEM 1212.
- CHEM 2210 Sophomore Seminar** 1-0-1
 Discussion of and reports on current topics in chemistry and on topics related to the chemist as a professional. Demonstrated comprehension of topic, knowledge of pertinent literature and competence in communication skills, both oral and written, will be considered in assigning a course grade. Required of majors. One meeting per week.

- CHEM 2310 Quantitative Analysis** 3-3-4
Prerequisite: CHEM 1212/1212L with a grade of “C” or better. A study of techniques of quantitative analysis, involving volumetric, gravimetric, and instrumental methods. Theory underlying the experimental techniques, methods of recording and statistically evaluating data and calculations utilizing the data are considered. The methods discussed are applied in the laboratory to determine certain constituents in several samples.
- CHEM 3320 Environmental Chemistry** 2-3-3
Prerequisite: CHEM 1211/1211L, CHEM 1212/1212L, CHEM 3401, and CHEM 3402. Development of a general understanding of how microscopic properties of atoms and molecules can affect macroscopic changes in the environment. Basic chemical concepts, including equilibrium, oxidation-reduction, kinetics, solubility, acid-base chemistry, and thermodynamics, will be applied to complex environmental processes with heavy emphasis on current environmental problems and concerns. Field trips will be required of all students.
- CHEM 3401 Organic Chemistry I** 3-4-4
Prerequisite: CHEM 1212/1212L with a grade of “C” or better. A study of the structure, properties, preparation and reactions of organic compounds in light of modern theories of molecular structure and reaction mechanisms.
- CHEM 3402 Organic Chemistry II** 3-4-4
Prerequisite: CHEM 3401 with a grade of “C” or better. Continuation of CHEM 3401 with emphasis on spectroscopy, organic synthesis, and reaction mechanisms.
- CHEM 3510 Inorganic Chemistry** 3-3-4
Prerequisites: CHEM 1211, CHEM 1211L, CHEM 1212, CHEM 1212L, each with a grade of “C” or better. Descriptive chemistry of the inorganic elements through discussions of periodic trends, reactivity patterns, and structure. Bonding models, thermodynamics, and acid-base chemistry as they apply to the descriptive chemistry of the elements will be covered.
- CHEM 3601 Biochemistry I** 3-0-3
Prerequisites: CHEM 3401 and CHEM 3402 with a grade of “C” or better and an introductory biology course. Principles of the structure and function of biological molecules including carbohydrates, lipids, proteins, membranes, enzymes and nucleic acids. An overview of the major metabolic and biosynthetic pathways is also presented.
- CHEM 3601L Laboratory Techniques in Biochemistry** 1-3-2
Corequisite or prerequisite: CHEM 3601. Experiments to illustrate the principles and research techniques in biochemistry and molecular biology.
- CHEM 3602 Biochemistry II** 3-0-3
Prerequisite: CHEM 3601 with a grade of “C” or better. A continuation of CHEM 3601. Comprehensive discussion of regulatory, metabolic and biosynthetic pathways, advanced enzyme kinetics, regulation of gene expression and recombinant DNA technology.
- CHEM 3801 Physical Chemistry I** 3-3-4
Prerequisites: CHEM 3402, MATH 2262, and PHYS 2212K or PHYS 1112K, all with a grade of “C” or better. A theoretical and mathematical treatment of the fundamental theories and laws of chemistry with an emphasis on thermodynamics. Experimental investigations will supplement the study of phase diagrams, solution calorimetry, bomb calorimetry, thermodynamic modeling and additional solid, liquid, and gas phase energy transfer studies.
- CHEM 3802 Physical Chemistry II** 3-3-4
Prerequisites: CHEM 3402, MATH 2262, and PHYS 2212K or PHYS 1112K, all with a grade of “C” or better. A theoretical and mathematical treatment of the fundamental theories and laws of chemistry with an emphasis on quantum mechanics, kinetics, and statistical mechanics. Experimental investigations will supplement the study of quantum mechanics, kinetics, and statistical mechanics as applied to systems of interest to chemists.

- CHEM 4210 Seminar** 1-0-1
Prerequisites: Senior standing and completion of at least 15 hours of upper division chemistry courses. Discussion of and reports on current topics in chemistry. Demonstrated comprehension of topic, knowledge of pertinent literature, and competence in communication skills, both oral and written, will be considered in assigning a course grade. Required of majors during the senior year. One meeting per week.
- CHEM 4310 Instrumental Analysis** 2-6-4
Prerequisites: CHEM 2310, CHEM 3802. A study of the advantages and the limitations of the use of instruments for the solution of problems in chemical analysis. The physical and chemical processes, instrumentation, and data analysis techniques as applied to mass spectrometry, optical spectroscopy, nuclear magnetic resonance spectroscopy, separations science, electrochemistry, radiochemical analysis, surface analysis, and thermal analysis will be discussed in lecture and utilized in laboratory.
- CHEM 4420 Physical Organic Chemistry** 3-0-3
Prerequisites: CHEM 3402 and CHEM 3802. A study of the methods used to elucidate organic reaction mechanisms. Topics covered include: reaction kinetics, isotope effects; linear free energy relationships; general acid and base catalysis and the acidity functions; reactive intermediates including free radicals, carbenes, carbanions, and carbocations; symmetry controlled reactions; photochemistry.
- CHEM 4510 Advanced Inorganic Chemistry** 3-3-4
Prerequisites: CHEM 3801, CHEM 3802 with a grade of "C" or better. An advanced course concentrating on specific aspects of inorganic chemistry including discussions of atomic and molecular structure, chemical bonding, isomerism, coordination compounds and descriptive chemistry of selected elements. Three lectures and one three-hour laboratory per week.
- CHEM 4810 Computational Chemistry** 1-3-2
Prerequisite: CHEM 3802 with a grade of "C" or better. Computational and modeling software will be introduced through projects involving systems in physical chemistry and spectroscopy as well as organic chemistry, inorganic chemistry, and biochemistry. Computational predictions will be correlated with laboratory experimental results, either from literature sources or from laboratory work done by the student.
- CHEM 4910 Laboratory Problems** 0-4-1 to 0-12-3
Prerequisite: Consent of the instructor and approval of the Department Head. Experimental work in analytical, inorganic, organic, physical or biochemistry. The student should have completed at least one semester of a background course in the appropriate area in order for the research to be of an advanced nature at the undergraduate level. Although it is not possible to predict the exact time required for a research project, a student should expect to spend at least four hours per week for each credit hour awarded in this course. A report, in a format suitable for presentation to a chemical journal, shall be presented before credit is awarded.
- CHEM 4920 Special Topics** 1-0-1 to 3-0-3
Prerequisite: Consent of the instructor and approval of the Department Head. Topics and credit to be assigned. May be taken more than once if topics are different.

CISM: COMPUTER INFORMATION SYSTEMS MANAGEMENT

- CISM 2201 Fundamentals of Computer Applications** 3-0-3
An introduction to spreadsheet and database software. Topics include planning, creating, modifying, managing, and analyzing workbooks and databases.
- CISM 3450 Management Information Systems** 3-0-3
Prerequisites: MGNT 3250; CISM 2201, CS 1000, or ACED 2400. Information processing, meaning and role of information systems, information systems procedures, business functions of computers, intro to systems analysis and design, files and databases, office automation, data communication, behavioral and organizational implications, selection of hardware and software.

COMM: COMMUNICATION ARTS

- COMM 1100 Human Communication** 3-0-3
A broad approach to oral communication skills including intrapersonal, interpersonal, small group, and public speaking.
- COMM 1100H Honors Human Communication** 3-0-3
An honors-level approach to oral communication skills with emphasis on advanced theoretical and practical approaches to interpersonal communication, small group communication, and public speaking.
- COMM 1110 Public Speaking** 3-0-3
The organization of materials and the vocal and physical aspects of delivery in various speaking situations.
- COMM 2100 Introduction to Communication Theory** 3-0-3
General survey of communication theories to familiarize students with basic constructs in interpersonal, intercultural, organizational, and public communication; to demonstrate the value of theory; and to orient students to the speech communication major.
- COMM 2300 Interpersonal Communication** 3-0-3
Prerequisite: COMM 1110. The study of communication skills in interpersonal relationships.
- COMM 3000 Qualitative Communication Research Methods** 3-0-3
The study of qualitative research methods used to investigate communication.
- COMM 3071 Argumentation and Debate** 3-0-3
Prerequisite: COMM 1110. Theory and application of argumentation.
- COMM 3072 Debate and Individual Events (Forensics) Lab** 0-4-2
Research and practice in debate and individual events. Individual events include dramatic interpretation, dramatic duo interpretation, after-dinner speaking, prose, poetry, communication analysis, program oral interpretation, impromptu, extemporaneous, persuasion, and informative. Debate events include parliamentary style and Lincoln-Douglas style.
- COMM 3090 Public Speaking Lab** 0-2-1
Graded "Satisfactory" or "Unsatisfactory." Research and practice in individual presentations.
- COMM 3100 Small Group Communication** 3-0-3
Prerequisite: COMM 1110. The theory and practice of small group communication.
- COMM 3200 Contemporary Public Relations** 3-0-3
Prerequisite: COMM 2100, presentational software competency, and either COMM 1100 or COMM 1110, and speech communication major. The first course in public relations, dealing with concepts of communicating with various publics.

- COMM 3210 Electronic Public Relations Applications** 2-2-3
Prerequisite: Either ACED 2400 or CS 1000 and speech communication major. Electronic applications in public relations, including on-line media design.
- COMM 3220 Public Relations Writing** 3-0-3
Prerequisite: COMM 3200 and speech communication major. The study of writing techniques and formats for public relations applications, including radio and television public service announcements, video news releases, speech writing, media kit preparation, and print media news releases.
- COMM 3230 Public Relations Practicum** 1 hour credit
Prerequisites: COMM 3220 and COMM 3240. Skill building in public relations techniques. Course may be repeated once for credit.
- COMM 3240 Public Relations Document Layout and Design** 2-2-3
Prerequisite: COMM 3220, either ACED 2400 or CS 1000, and and speech communication major. Process of preparing and creating documents for publication in public relations.
- COMM 3310 Listening** 3-0-3
Prerequisites: COMM 2300. Study of and skill development in different types of listening.
- COMM 3320 Nonverbal Communication** 3-0-3
Prerequisites: COMM 2300. Study of types and functions of nonverbal communication.
- COMM 3330 Interviewing** 3-0-3
Prerequisites: COMM 2300. Study of and skill development in interviewing.
- COMM 3400 Organizational Communication** 3-0-3
Prerequisites: COMM 1110, COMM 2100, and speech communication major. Communication structures and processes in organizations.
- COMM 3410 Conflict Management and Leadership** 3-0-3
Prerequisite: COMM 2300 and speech communication major. Strategies of managing conflicts in organizations and the role of leadership style in negotiations.
- COMM 3500 Fundamentals of Cross-cultural Communication** 3-0-3
 Causes of cross-cultural communication conflicts and strategies for improvement.
- COMM 3550 Managing Diversity** 3-0-3
Prerequisite: Major in speech communication. An applied approach to the study of theories of diversity in the organizational setting, particularly as it applies to managing communication to achieve individual and organizational goals.
- COMM 3600 Directed Study in Communication Arts** 1 to 3 hours credit
 Individual instruction for enrichment of advanced majors in their areas of specialization.
- COMM 3670 Internship for Juniors** 3 hours credit
Prerequisite: Junior standing, recommendation of advisor, and major in appropriate specialization. Graded "Satisfactory" or "Unsatisfactory." The placement of students in apprentice and intern positions in professional environments to enlarge the students' professionalism.
- COMM 3800 Quantitative Communication Research Methods** 3-0-3
 The study of quantitative research methods used to investigate communication.
- COMM 4060 Persuasion** 3-0-3
Prerequisites: COMM 2100. Theories of persuasion.
- COMM 4120 Theories of Public Communication** 3-0-3
Prerequisite: COMM 2100. The study of selected bodies of theories of public communication, including political communication, classical theory, contemporary rhetorical theory, and mass communication theory. May be repeated for credit.
- COMM 4130 The Psychology and Semiotics of Communication** 3-0-3
Prerequisite: COMM 2100. Origin and purpose of speech, basic psychological principles and language, and the use of propaganda.

- COMM 4140 Interpersonal Communication Theory** 3-0-3
Prerequisite: COMM 2100. The study of theories of interpersonal communication and their application to human relationships.
- COMM 4160 Health Communication Theory** 3-0-3
Prerequisite: COMM 2100. The study of interpersonal, media, and public communication in health communication theory.
- COMM 4170 Rhetorical Criticism** 3-0-3
Prerequisite: COMM 2100. The study of contemporary methods of rhetorical criticism, including underlying theoretical assumptions. Application of methods in the study of discursive practices.
- COMM 4200 Public Relations Research** 3-0-3
Prerequisites: COMM 3000, COMM 3200, COMM 3800 and speech communication major. The application of theory and practice in public relations research.
- COMM 4220 Integrated Communication** 3-0-3
Prerequisites: COMM 3220 and speech communication major. Integrating the strategic communication planning process, creative use of tools, tactics, and media planning in public relations and all communication activities of organizations.
- COMM 4230 Public Relations Plans and Campaigns** 3-0-3
Prerequisites: COMM 3220, COMM 4200, and speech communication major. The development of public relations plans for organizations and campaigns for special programs within those organizations.
- COMM 4240 Public Relations Law and Ethics** 3-0-3
Prerequisites: COMM 3200 and speech communication major. Legal and ethical aspects of professional public relations practice.
- COMM 4340 Capstone in General Speech** 3-0-3
Prerequisites: COMM 2300, 3000, 3800, 4140, and 4400. The application of theories and principles studied in the general speech emphasis to meet client needs in public, academic, and interpersonal communication.
- COMM 4400 Organizational Presentation** 3-0-3
Prerequisites: COMM 1110, presentational software competency, and speech communication major. The study of advanced preparation and presentation techniques in organizations. This course will focus on the practice and understanding of professional presentations using advanced visual aids, the delivery of research reports, and the formulation of extended speeches.
- COMM 4420 Advanced Organizational Communication** 3-0-3
Prerequisites: COMM 3400, COMM 3800, and speech communication major. Communication processes and characteristics in formal organizations. Alternative theoretical perspectives and research methods to analyze communication in organizational settings are included.
- COMM 4430 Ethics in Human Communication** 3-0-3
Prerequisite: COMM 2100. A study of the ethical principles that inform human communication and the application of those principles to various settings.

Most credit notations on the far right are in the pattern 3-0-3. The first number is the number of lecture hours (or equivalent) each week; the second number is the number of laboratory hours (or equivalent) each week; the third number, **in bold**, is the number of semester hours credit.

- COMM 4440 Intercultural Training** 3-0-3
Prerequisites: COMM 3400, COMM 3500, COMM 3550, & COMM 3800. Theoretical foundations and application of practices and competencies relevant to intercultural training.
- COMM 4600 Special Topics in Communication Theory** 3-0-3
Prerequisite: COMM 2100. The study of specialized bodies of communication theories. May be repeated for credit when topics differ.
- COMM 4670 Internship** 3 to 9 hours credit
Prerequisite: Senior standing and major in appropriate specialization. Graded “Satisfactory” or “Unsatisfactory.” The placement of students in apprentice and intern positions in professional environments to enlarge the student’s professionalism.

COOP: COOPERATIVE EDUCATION

- COOP 1100 Introduction to Professional Co-op Practices** 1-0-1
 Setting personal and career goals; development of effective résumés, cover letters, interviewing skills, and job-search skills and strategies. Instruction will include legal and ethical considerations for Co-op employment.
- COOP 1101 Introduction to Parallel Cooperative Education** 1-0-1
Prerequisite: Placement in an approved cooperative education position. Incorporation of skills learned in the co-op experience in students’ personal career plans. Course activities include development of a Career Vision Statement, setting measurable performance objectives, and introduction to the Co-op Career Portfolio and networking skills.
- COOP 1102 Evaluation of the Parallel Cooperative Education Work Experience** 1-0-1
Prerequisite: COOP 1101. Assessment of students’ current co-op employment and development of a plan to assure a progression of work responsibilities consistent with their career plans. Objectives include creation of a Co-op Career Portfolio, update of the Career Vision Statement, and completion of a plan for 3rd and 4th co-op semesters.
- COOP 1103 Integration of the Parallel Cooperative Education Work Experience** 1-0-1
Prerequisite: COOP 1102. Development of a professional network, update of the Co-op Career Portfolio and the Career Vision Statement, and development of a prospectus for the COOP 4990 project.
- COOP 2300 Alternating Cooperative Education Work Experience** 0-0-0
Prerequisite: Placement in an approved alternating semester cooperative education position. Graded “Satisfactory” or “Unsatisfactory.” Incorporation of the co-op experience as an integral part of students’ personal and academic career plans. Course activities include development of a Career Vision Statement, introduction to the Co-op Career Portfolio, and networking skills.
- COOP 2310 Parallel Cooperative Education Work Experience** 0-0-0
Prerequisite: Placement in an approved parallel cooperative education position. Graded “Satisfactory” or “Unsatisfactory.” Incorporation of skills learned in the co-op experience in students’ personal career plans. Course activities include development of a Career Vision Statement, setting measurable performance objectives, and introduction to the Co-op Career Portfolio and networking skills.
- COOP 2400 Full-time Cooperative Education Internship** 0-0-0
Prerequisite: Placement in an approved full-time cooperative education internship. Graded “Satisfactory” or “Unsatisfactory.” Incorporation of skills learned in the full-time cooperative internship experience with students’ personal and academic career plans. Course activities include development of a Career Vision Statement and introduction to the Career Portfolio and networking.

- COOP 2410 Part-time Cooperative Education Internship** 0-0-0
Prerequisite: Placement in an approved part-time cooperative education internship.
Graded “Satisfactory” or “Unsatisfactory.” Incorporation of skills learned in the part-time cooperative internship experience with students’ personal and academic career plans. Course activities include development of a Career Vision Statement and introduction to the Career Portfolio and networking.
- COOP 2500 Evaluation and Integration of Alternating Cooperative Education** 3-0-3
Prerequisite: COOP 2300 and placement in an approved alternating cooperative education position. Incorporation of skills learned in the co-op experience into students’ personal career plans. Course activities include development of a Career Vision Statement, introduction to the Co-op Career Portfolio, and networking skills,
- COOP 4990 Applied Research Project in Co-op Work Experience** 3-0-3
Prerequisites: COOP 1103 or COOP 2500. A major research project directly related to the student’s co-op employment position and major. Students must submit a project prospectus for approval in advance of enrolling in this course. Students must present their completed project in written form to their academic advisor and orally to students or faculty in their major area.

CRJU: CRIMINAL JUSTICE

- CRJU 1100 Introduction to Criminal Justice** 3-0-3
 An introduction to the structure, functions, and operations of criminal justice agencies, including the police, the courts, and corrections.
- CRJU 2100 Survey of Law Enforcement** 3-0-3
Prerequisite: CRJU 1100 or permission of the instructor. An overview of law enforcement in a free society and the relationship of police to the criminal justice system as a whole. History, organization, administration, operations, and selected issues such as community policing are examined.
- CRJU 2200 Corrections** 3-0-3
Prerequisite: CRJU 1100 or permission of the instructor. A study of the history, structure, and functions of corrections, and the legal and philosophical basis for the punishment of criminal offenders. Study will include the role of corrections as one of the three major components of the criminal justice system.
- CRJU 2400 Survey of Juvenile Justice** 3-0-3
Prerequisite: CRJU 1100 or permission of the instructor. An analysis of the juvenile justice system. Major emphasis will be placed upon the socio-historical development of the juvenile justice system, the impact of Supreme Court decisions, and current issues surrounding the juvenile justice system.
- CRJU 3300 Criminal Law** 3-0-3
Prerequisite: CRJU 1100 or permission of the instructor. A study of the source and development of criminal law, its application, interpretation, and enforcement, and an analysis of Supreme Court decisions to emphasize problems in due process.
- CRJU 3310 Criminal Procedure** 3-0-3
Prerequisite: CRJU 1100 or permission of the instructor. A study of the nature and function of the law with relation to the criminal processes, and policies and procedures in the administration of criminal justice. Special attention will be given to United States Supreme Court decisions that govern criminal procedures.

- CRJU 3401 Criminal Justice Data Analysis** 3-0-3
Prerequisite: CRJU 1100 or permission of the instructor. An introduction to criminal justice data analysis including the logic of science, operationalization, sampling, coding, data entry, data file management, and microcomputer processing of research information. Will be taught in an electronic classroom, as facility availability permits.
- CRJU 3402 Criminal Justice Research Methods** 3-0-3
Prerequisite: CRJU 1100 or CRJU 3401 or permission of instructor. An introduction to criminal justice research methodologies with an emphasis on firsthand data collection. Project work introduces students to issues in research design, ethical concerns, conceptualization, sampling, data analysis, interpretation of research results, report writing, and application of research findings. Students will use computer applications in the development of their projects.
- CRJU 3600 Criminology** 3-0-3
Prerequisite: CRJU 1100 or permission of the instructor. A study of the nature and scope of crime and delinquency in society with an emphasis on criminological theories. Study will include the application of theory as a foundation for conducting research.
- CRJU 3700 Ethics in Criminal Justice** 3-0-3
Prerequisite: CRJU 1100 or permission of the instructor. Standards of conduct in law enforcement, the court system, and corrections. An examination of traditional and non-traditional criminal justice practices such as fidelity to office, discretion, covert operations, deadly force, affirmative action, political involvement, sentencing, incarceration, and the death penalty.
- CRJU 4010 Comparative Justice Systems** 3-0-3
Prerequisite: Area F Criminal Justice courses or permission of the instructor. A study and comparison of the world's major justice systems.
- CRJU 4100 Seminar in Law Enforcement** 3-0-3
Prerequisite: CRJU 1100 and CRJU 2100 or permission of the instructor. An in-depth study of policies and procedures which govern law enforcement and major contemporary problems in law enforcement.
- CRJU 4110 Forensic Criminology** 3-0-3
Prerequisite: Area F Criminal Justice Courses or permission of the instructor. The scientific investigation of crime with emphasis on the collection, analysis, comparison, and identification of physical evidence.
- CRJU 4200 Seminar in Corrections** 3-0-3
Prerequisite: CRJU 1100 and CRJU 2200 or permission of the instructor. An in-depth study of laws, policies, and procedures which govern corrections and major contemporary problems and issues in corrections.
- CRJU 4400 Seminar in Juvenile Justice** 3-0-3
Prerequisite: CRJU 1100 and CRJU 2400 or permission of the instructor. An in-depth examination of current issues surrounding the juvenile justice system in the State of Georgia and nationwide. Topics include treatment strategies and alternative rehabilitation programs.
- CRJU 4500 Classification of Criminal Behavior** 3-0-3
Prerequisite: CRJU 1100 or permission of the instructor. A study of the methods of identification and classification of specific criminal behavior types with an emphasis on violent offenders, sexual deviants, the anti-social personality, and the criminally insane.
- CRJU 4610 White-Collar Crime** 3-0-3
Prerequisite: CRJU 1100 or permission of the instructor. A forum for students to explore the nature and extent of white-collar crime in the U.S. and abroad. Students will critically review several explanatory models of the elite criminality, construct a typology of offenses, evaluate current criminal justice responses, and explore policy options for criminal justice administration.

- CRJU 4620 Criminal Victimization** 3-0-3
Prerequisite: CRJU 1100 or permission of the instructor. An introduction to the study of victims of crime. The course will examine different areas related to the study of crime victims, including different types of crime victims, the role of the crime victim within the criminal justice system, reporting and data collection methods used to assess crime victims, and how crime victims are identified, confronted, and treated, both historically and in today's criminal justice system.
- CRJU 4630 Crime Prevention Through Environmental Design** 3-0-3
Prerequisite: CRJU 1100 or permission of the instructor. Basic concepts of crime prevention theories and techniques, with a special focus on the Crime Prevention Through Environmental Design (CPTED) Model. Students will study past and current techniques and programs to determine their effectiveness and how these can be used to establish crime prevention in today's society.
- CRJU 4640 Organized Crime** 3-0-3
Prerequisite: CRJU 1100 or permission of the instructor. An examination of the history, nature, scope, and typologies of organized crime. Students will apply several theories in order to better understand the development of organized crime. In addition, students will critically evaluate the criminal justice system response to the problem of organized crime.
- CRJU 4650 Sex Crimes** 3-0-3
Prerequisite: CRJU 1100 or permission of the instructor. A study of sex offenses, including nuisance and dangerous sex crimes, theoretical explanations for sex crimes, identification of and treatment for sex offenders, and the role of the criminal justice system in identifying, punishing, and preventing sex crimes.
- CRJU 4660 Issues in Cybercrime** 3-0-3
Prerequisite: CRJU 1100 or permission of the instructor. An examination of the extent of illegal activities occurring in cyberspace. The course reviews the varieties of cybercrime and discusses legal issues in the investigation and prosecutions of cybercrimes.
- CRJU 4670 Terrorism** 3-0-3
 An analysis of the various forms of terrorism and the organizations that carry out terrorist activities. Students will use a criminological framework to review the theoretical causes and historical development of terrorist organizations. Students will also examine the criminal justice system's response to terrorist activities.
- CRJU 4700 Special Topics in Criminal Justice** 3-0-3 to 6-0-6
Prerequisite: Area F Criminal Justice Courses or permission of instructor. An intensive study of a topic relevant to criminal justice.
- CRJU 4800 Seminar in Criminal Justice** 3-0-3
Prerequisites: CRJU 3300, CRJU 3310, CRJU 3401, CRJU 3402, CRJU 3600, CRJU 3700, and senior status or permission of the instructor. An application and integration of core and related criminal justice courses to contemporary criminal justice issues.
- CRJU 4900 Directed Study in Criminal Justice** 3-0-3 to 6-0-6
Prerequisite: major in Criminal Justice; permission of the student's advisor, the instructor, and the Criminal Justice coordinator or department head. Graded "Satisfactory" or "Unsatisfactory." A study in an area not covered in other criminal justice courses; allows the student to explore in more detail a topic which is normally covered in criminal justice courses. May be taken for a maximum of 6 credit hours.
- CRJU 4910 Internship in Criminal Justice** 3 or 6 hours credit
Prerequisite: major in Criminal Justice; permission of the student's advisor, internship coordinator, and the coordinator **Criminal Justice application: application forms must be submitted prior to midterm of the semester before internship.** Graded "Satisfactory" or "Unsatisfactory." Supervised, practical experience in an appropriate criminal justice agency; an opportunity for students to demonstrate maturity and judgements to discover the integration between theory and practice.

CS: COMPUTER SCIENCE

- CS 1000 Introduction to Microcomputers and Applications** 3-0-3
Computing technology and concepts; applications of personal computers. Topics include hardware and software terminology, word processing, spreadsheets, e-mail, the Internet, the microcomputer's operating system and its use, ethics, and current trends in the use of computers. A hands-on laboratory is integrated with the course.
- CS 1010 Algorithmic Problem Solving** 3-0-3
An introduction to algorithm design and programming as components of the software life cycle, with emphasis on the development of algorithms for solving problems; introduction to the development environment for a particular programming language.
- CS 1301 Principles of Programming I** 4-0-4
Prerequisite: MATH 1101 or MATH 1111, with a grade of "C" or better in each. Programming-language syntax and semantics; problem solving; algorithm design and implementation using modern programming paradigms and techniques; data types and elementary data structures. This course involves extensive programming activities. Students without a strong math and programming background are encouraged to take CS 1010 first.
- CS 1302 Principles of Programming II** 4-0-4
Prerequisite: CS 1301 with a grade of "C" or better. A continuation of CS 1301 with emphasis on advanced programming structures and techniques. Theory and applications of stacks, queues, and lists; recursion; file processing; introduction to binary trees. This course involves extensive programming activities.
- CS 1340 Computing for Scientists** 3-0-3
Prerequisite or Corequisite: Math 2261. Foundations of computing, with an introduction to design and analysis of algorithms, including design and construction of programs for scientific and engineering applications.
- CS 2010 Survey of Computer Information Systems** 3-0-3
Prerequisite: CS 1301 with a grade of "C" or better. A general introduction to software engineering, database applications, and networking concepts, as well as an overview of other aspects of computer information systems.
- CS 2620 Discrete Structures** 3-0-3
Prerequisite: MATH 1261 or MATH 2261, with a grade of "C" or better. Propositional and predicate logic, mathematical induction, and recursion. Sets, relations, functions. Graphs and trees. Boolean algebra and computer logic. Finite state machines and computability.
- CS 3000 Tutoring In Computer Science I** 2-0-2
Prerequisite or co-requisite: CS 3410 or consent of instructor. Graded "Satisfactory" or "Unsatisfactory." Fundamentals of one-on-one tutoring in computer science. Review of the principles in programming, including programming language syntax and semantics; problem solving; algorithm design and implementation using current paradigms; data types and data structures; theory and applications of stacks, queues, lists, and binary trees; recursion; and file processing. Introduction to techniques and guidelines for tutoring. Designed for the Tutoring Center tutors in computer science.
- CS 3001 Tutoring In Computer Science II** 1-0-1
Prerequisite: CS 3000. Graded "Satisfactory" or "Unsatisfactory." Advanced techniques for one-on-one tutoring in computer science. Review of discrete structures, computer organization, and advanced programming principles. Identification and discussion of effective methods for correcting common problems and misconceptions encountered by beginning and intermediate programming students. Discussion of techniques with less experienced tutors. Designed for the Tutoring Center tutors in computer science.

- CS 3101 Computer Organization** 3-0-3
Prerequisite: CS 1302 with a grade of “C” or better. An overview of computer organization and design including Boolean algebra, combinational and sequential circuits, data representation, register transfer and microoperations, CPU organization, microprogrammed control, and machine language programming.
- CS 3102 Assembly Language** 3-0-3
Prerequisite: CS 3101 with a grade of “C” or better. A continuation of CS 3101 with emphasis on machine and assembly language instruction and programming techniques, addressing modes, data representations, I/O, and the assembly process.
- CS 3300 UNIX Programming** 3-0-3
Prerequisite: CS 1302 with a grade of “C” or better. An introduction to UNIX and shell programming. Various shell languages, including ksh and bash are discussed, in addition to basic UNIX commands. Web scripting languages such as Perl, HTML, and XML are also introduced in the UNIX environment.
- CS 3320 Visual Basic Programming** 3-0-3
Prerequisite: CS 1302 with a grade of “C” or better. Shows experienced object-oriented programmers how to develop complete and stand-alone client-server applications using Visual Basic. The topics considered include basics of event-driven programming, error handling, data-bound controls, ADO, SQL, file processing, classes, collection classes, DLL and EXE servers, creating Active X controls, COM, automation, packaging, and deployment.
- CS 3335 The C Programming Language** 3-0-3
Prerequisite: CS 1302 with a grade of “C” or better. Programming using the C programming language. Syntax and semantics of C; information representation; stylistic consideration; the C library. This course also discusses issues relating to the UNIX operating system.
- CS 3340 Web Programming** 3-0-3
Prerequisite: CS 1302 with a grade of “C” or better. Examination and implementation of the foundations of web-based computing. Topics include Hypertext Markup Language (HTML), Cascading Style Sheets (CSS), client-side scripting, server-side programming, state management, data access, Extensible Markup Language (XML), web services, and component-based development.
- CS 3410 Data Structures** 3-0-3
Prerequisite: CS 1302 with a grade of “C” or better. Trees, graphs, and other forms of data structures and their implementations. Emphasizing abstract data types; static memory allocation vs. dynamic storage allocation; searching, hashing, and sorting methods; algorithm analysis.
- CS 3520 Algorithms** 3-0-3
Prerequisite: CS 3410 with a grade of “C” or better. Sequential and parallel algorithms for solving a variety of different problems; paradigms for algorithms; algorithm analysis; NP-complete problems.
- CS 3700 Introduction to E-Commerce** 3-0-3
Prerequisite: CS 1302 with a grade of “C” or better. An introduction to e-commerce trends, technologies, and strategies. Topics include the importance and impact of e-commerce, business-to-consumer, business-to-business, wireless networks, mobile commerce, online marketing, web services, supply chains, electronic payment, security, and legal issues.
- CS 4121 Data Communications and Networks I** 3-0-3
Prerequisites: CS 3101 and CS 3410, each with a grade of “C” or better. Basic concepts of data communications and computer networks architectures: including OSI and TCP/IP models, packet switching, local area and high speed networks. Error control, routing, and transmission media.

- CS 4122 Data Communications and Networks II** 3-0-3
Prerequisite: CS 4121 with a grade of “C” or better. A continuation of CS 4121 in which advanced topics in data communication and networking are studied.
- CS 4123 Project in Data Communications and Networks** 3-0-3
Prerequisite: CS 4122 with a grade of “C” or better. Students will work together in teams on a major data communications/networking project. Data communications and networking principles, tools, and techniques are stressed.
- CS 4321 Software Engineering I** 3-0-3
Prerequisite: CS 3410 with a grade of “C” or better. Concepts and techniques used in all aspects of the software life-cycle relevant to the production of large object-oriented software systems. Students will work in teams on a project.
- CS 4322 Software Engineering II** 3-0-3
Prerequisite: CS 4321 with a grade of “C” or better. Advanced topics in software engineering, such as analysis, design, architecture, testing, and maintenance.
- CS 4323 Project in Software Engineering** 3-0-3
Prerequisite: CS 4322 with a grade of “C” or better. Students will work together in teams on a major software development project. Software engineering principles, tools, and techniques are stressed.
- CS 4330 Theory of Programming Languages** 3-0-3
Prerequisite: CS 3410 with a grade of “C” or better or consent of instructor. Formal description of programming languages, standard and advanced features of modern programming languages, complexity.
- CS 4335 Principles of Compiler Design** 3-0-3
Prerequisites: CS 3102 and CS 3410, each with a grade of “C” or better. Introduction to programming language structure, lexical analysis, syntax analysis, code generation, and optimization. A large programming project will be required.
- CS 4340 Systems Programming** 3-0-3
Prerequisites: CS 3300, CS 3335 and CS 3410, each with a grade of “C” or better. Implementation of concepts pertaining to the UNIX environment: process control and interprocess communication, job control, file and directory structures, and client/server processes.
- CS 4345 Operating Systems** 3-0-3
Prerequisites: CS 3101 and CS 3410, each with a grade of “C” or better. A survey of operating systems structures and services including batch systems, multiprogramming, time-sharing, process scheduling and synchronization, deadlocks, memory management, file-system interfaces and implementations, and secondary storage management.
- CS 4500 Foundations of Computer Science** 3-0-3
Prerequisites: CS 2620 and CS 3410, each with a grade of “C” or better. Concepts pertaining to regular expressions, finite state machines, regular languages, regular grammars, non regular languages, decidability, context-free grammars, and Turing machines.
- CS 4700 E-Commerce Design** 3-0-3
Prerequisite: CS 3410 with a grade of “C” or better. An in-depth study of e-commerce implementation. Through programming projects, students will learn e-commerce design principles, tools, and techniques.
- CS 4721 Database Design I** 3-0-3
Prerequisite: CS 3410 with a grade of “C” or better. The logical organization of databases: the entity-relationship model; the hierarchical model, network, and relational models. Hardware characteristics; file organization and evaluation. Functional dependencies and normal forms. Query optimization, concurrency control, and distributed database systems.

- CS 4722 Database Design II** 3-0-3
Prerequisite: CS 4721 with a grade of “C” or better. An in-depth study of advanced database design and implementation concepts including transaction processing, concurrency, control techniques, recovery techniques, distributed databases and client/server architecture, and security and authorization.
- CS 4723 Project in Database Design** 3-0-3
Prerequisite: CS 4722 with a grade of “C” or better. Students will work together in teams on a major database development project. Database development principles, tools, and techniques are stressed.
- CS 4800 Internship in Computer Science** 3-6 credit hours
Prerequisites: Junior or senior standing, a minimum 2.5 GPA, and permission of the internship coordinator and department head. Graded “Satisfactory” or “Unsatisfactory.” Active participation in research or development in computer science or in a closely allied field. A daily log of activities, a report on the work done, and a report on the internship experience or a research paper relating the work done to the field of computer science are required.
- CS 4820 Artificial Intelligence** 3-0-3
Prerequisites: CS 2620 and CS 3410, each with a grade of “C” or better. Definition of artificial intelligence, Common Lisp, logic programming, search techniques, knowledge representation including schemas and scripts, ART-enterprise as an expert system, and principles of expert systems.
- CS 4825 Neural Networks** 3-0-3
Prerequisites: MATH 2150 and MATH 2262, each with a grade of “C” or better. Concepts pertaining to neural networks including: definition of neural intelligence, basic neural computational models, learning: supervised and unsupervised, knowledge bases neural networks, back-propagation neural networks, radial basis neural networks.
- CS 4830 Computer Graphics** 3-0-3
Prerequisites: CS 3335, CS 3410, and MATH 2150, each with a grade of “C” or better. A survey of graphics systems and graphics programming. Topics include output primitives, transformations and viewing, modeling, user interfaces, and interactive methods. Both 2-D and 3-D concepts are discussed.
- CS 4900 Senior Seminar** 3-0-3
Prerequisites: CS 3101 and CS 3410, each with a grade of “C” or better, and senior standing. A capstone experience intended primarily for computing majors that combines societal, ethical, and legal implications and trends of computing with the development of research and communication skills for the profession. Topics include societal effects of computing, ethics in the field, legal issues, professional literature and organizations, current industrial, social, legal, governmental, and technical developments, research methodology, and career opportunities. Involves extensive reading and writing (both technical and non-technical), as well as library research, prepared group discussions, and oral presentations.
- CS 4950 Directed Study in Computer Science** 1-0-1 to 3-0-3
Prerequisite: Consent of instructor. The student will undertake at least one major computer-science project under the supervision of the instructor. Credit will be assigned on the basis of the effort required by the project. May be taken more than once if topics are different.
- CS 4990 Topics in Computer Science** 1-0-1 to 3-0-3
Prerequisite: Consent of instructor. Topics to be assigned. May be taken more than once if topics are different.

CSD: COMMUNICATION SCIENCES AND DISORDERS

- CSD 2999 Entry to the Education Profession** 0 hours credit
Graded “Satisfactory” or “Unsatisfactory.” A required non-credit course for all teacher education candidates pursuing a VSU recommendation for initial certification; must be successfully completed prior to admission to teacher education. Candidates are required to establish an electronic portfolio and provide evidence that all teacher education admission requirements have been satisfactorily met. If an “Unsatisfactory” grade is earned, the course must be repeated until a “Satisfactory” grade is received.
- CSD 3010 Introduction to Communication Disorders** 3-0-3
Prerequisites: CSD 2999. An introduction to communication disorders. Terminology, etiology and management procedures required in the practice of Speech-Language Pathology are emphasized. Public school observation/participation is required.
- CSD 3020 Audiology I** 3-0-3
An introduction to basic auditory tests, anatomy and physiology of the hearing mechanism, and disorders of hearing. Emphasis is placed on audiometric measurement and interpretation.
- CSD 3030 Anatomy & Physiology of the Hearing Mechanism** 2-0-2
Prerequisites: CSD 2999. The study of the anatomy and physiology of the hearing mechanism.
- CSD 3040 Applied Phonetics** 2-2-3
Prerequisites: CSD 2999. Principles of phonetics and their application to typical speech production. Emphasis is placed on skill development in the use of the International Phonetic Alphabet (IPA) and diacritic markers.
- CSD 3060 Anatomy & Physiology of the Speech Mechanism** 2-2-3
Prerequisite: CSD 2999. The study of anatomy and physiology of the head, neck, and trunk relevant to speech production.
- CSD 3070 Normal Language Acquisition** 3-0-3
Prerequisites: CSD 2999 or SPEC 2999. An initial study of language acquisition focusing on the sequence and process of typical development in children. Topics include theories of language development, acquisition sequence of the major components of language, variables affecting language acquisition, and clinical application. Open to non-majors.
- CSD 3080 Introduction to Neurology in Communication Disorders** 2-2-3
Prerequisite: CSD 2999 and CSD 3060. This a check-point course, and check-point requirements must be met. An introduction to the anatomy and physiology of the nervous system as it relates to speech and language functions.
- CSD 3090 Professional Practices in Communication Disorders** 2-0-2
Prerequisites: CSD 3010, CSD 3040, CSD 3050. An introduction to the process, practices, roles, responsibilities, and working site opportunities for the speech-language pathologist.
- CSD 4020 Speech Science** 2-2-3
Prerequisites: CSD 2999, CSD 3060. An introduction to the normal processes of communication; the intensification and prolongation of sound, the psychoacoustics of speech sound production and perception, and theories of normal speech production and perception.
- CSD 4040 Introduction to Articulation Disorders** 3-0-3
Prerequisites: CSD 2999 and CSD 3040. An introduction to the normal process of speech acquisition and development; theories of speech acquisition and types of disorders of articulation and phonology. Emphasis is placed on the diagnosis and treatment of children with articulation and phonological disorders.

- CSD 4050 Observation** 0-4-2
Prerequisites: CSD 2999, CSD 3040, CSD 3070. Supervised video-based observation of speech and language diagnosis and therapy with children and adults with speech/language disorders. Students obtain a minimum of 25 hours of direct observation for ASHA requirements.
- CSD 4060 Introduction to Oro-Facial/Laryngeal Disorders** 3-0-3
Prerequisites: CSD 4020. An overview of two common areas of organic disorders of oral communication. Introduction to the communication parameters of oro-facial disorders with special emphasis on cleft lip and palate and communication aspects of voice disorders.
- CSD 4070 Introduction to Fluency Disorders** 3-0-3
Prerequisites: CSD 2999, CSD 4040. Provides basic information on the characteristics and nature of stuttering and causal theories.
- CSD 4080 Introduction to and Analysis of Language Disorders** 3-0-3
Prerequisites: CSD 3070, CSD 4040. An initial study of the identification of varying types of language disorders. Emphasis is on language sampling procedures and analysis.
- CSD 4090 Speech & Language for the Hearing Impaired** 3-0-3
Prerequisites: CSD 3020, CSD 3030, CSD 3070. Application of speech and language therapy principles to the management of hearing impaired children (infants through school age).
- CSD 4110 Diagnostics in Communication Disorders** 3-2-4
Prerequisite: CSD 2999. An in-depth study of the evaluation and assessment processes for communication disorders. Content encompasses planning, informal, and standardized assessment and interpretation, for the development of appropriate goals and outcomes.
- CSD 4120 Consultation in Communication Disorders** 3-0-3
 A course designed to introduce concepts and develop skills in interviewing, consultation, and conferencing with clients who have communication disorders, their families, and other related professionals.
- CSD 4130 Organic Speech Disorders** 3-0-3
Prerequisite: CSD 2999. A study of the development, genetics, and syndromes associated with organic speech disorders such as oro-facial anomalies, cerebral palsy, and other physically or medically involved populations.
- CSD 4140 Cultural and Dialectical Issues** 3-0-3
 A study of the interrelation of sociological variables and linguistic performance, with special emphasis on communication differences and disorders among culturally and linguistically diverse populations.
- CSD 4150 Directed Study** 0-0-1 to 0-0-3
Prerequisites: At least Junior standing; permission of advisor, instructor, and department head. A maximum of 3 hours per semester, not exceeding a total of 9 semester hours within the program. Study in area or subject not normally found in established courses offered by the department; may also allow students to explore in more detail and depth an area or subject covered by the department in communication disorders.
- CSD 4151 Audiology II** 3-0-3
 An introduction to advanced audiometric diagnostic procedures and interpretation, including electrophysical, oto-acoustic, brainstem-evoked potential audiometry, and central auditory processing disorders. Speech-language development and management procedures related to childhood hearing impairment are included.
- CSD 4320 Visual Perceptions of Oral Communications** 3-0-3
 An overview of manual communication systems that support speech reading. Emphasis is placed on Signed English, contact Signing, Sim-Com, Total Communication, and Cued Speech.

CWCL: CREATIVE WRITING

- CWCL 2500 Contemporary Literary Magazines: Revision, Editing, and Production** 1-0-1
A practicum focusing on the content, editing, and production of traditional and electronic contemporary literary magazines.
- CWCL 3400 Introduction to Creative Writing** 3-0-3
Prerequisite: ENGL 2110 or 2110H, 2120 or 2120H, 2130 or 2130H, or 2060. An introduction to the stylistic conventions and techniques of poetry and prose. The course also emphasizes techniques of literary invention and offers a brief exposure to the analysis and critique of peer texts.
- CWCL 3420 Introduction to Creative Non-Fiction** 3-0-3
Prerequisite: CWCL 3400. An introduction to non-fiction writing which employs a variety of literary techniques common in literary journalism and fiction writing. Students will read model texts and further develop workshop and revision techniques in order to produce a carefully revised piece of their own non-fiction.
- CWCL 3440 Poetry Writing** 3-0-3
Prerequisite: CWCL 3400. A study of poetic technique beyond the fundamentals introduced in ENGL/CWCL 3400. The course emphasizes prosody and poetic forms, both prescribed and organic. Students receive further training in workshop techniques via the analysis of poems produced by class members.
- CWCL 3460 Fiction Writing** 3-0-3
Prerequisite: CWCL 3400. A craft-oriented course devoted to the genre of the modern short story. Students will study classic stories by writers such as Chekhov, Maupassant, O'Connor, and more recent award-winning writers as well as undertaking exercises in technique and producing at least two stories of their own.
- CWCL 4410 Contemporary Poetics: Form and Theory** 3-0-3
Prerequisite or co-requisite: ENGL 3060 or CWCL 3400. A study of key formal and theoretical elements of 20th and 21st century Anglophone poetry and poetry in translation. The course will emphasize poetry as genre, with a reflection on craft and issues in prosody.
- CWCL 4420 Contemporary Narrative: Form and Theory** 3-0-3
Prerequisite or co-requisite: ENGL 3060 or CWCL 3400. A study of key formal and theoretical elements of 20th and 21st century Anglophone fiction and fiction in translation. The course will emphasize the novel as genre, with a reflection on craft and narrative history and analysis.
- CWCL 4430 Contemporary Creative Non-Fiction: Form and Theory** 3-0-3
Prerequisite: ENGL 3060 or CWCL 3400. A study of key formal and theoretical elements in 20th and 21st century Anglophone creative nonfiction and creative nonfiction in translation. The course will emphasize creative nonfiction as genre, with a reflection on craft and issues related to its narrative and lyric structures.
- CWCL 4440 Advanced Poetry Writing** 3-0-3
Prerequisite: CWCL 3400. A workshop-intensive course emphasizing technical analysis of poems produced by members of the class. The course also emphasizes the application of various aesthetic theories, and students will articulate their own poetics.
- CWCL 4460 Advanced Fiction Writing** 3-0-3
Prerequisite: CWCL 3400. A workshop-intensive course in fiction writing. Students will produce their own work and study narrative alternatives and storytelling strategies. Students will also read book-length story collections and/or novels and write stylistic analyses of a major contemporary writer.