

course descriptions



the following section includes the descriptions of the courses offered in our academic curriculum. Courses are listed alphabetically by department, then by course number. Each listing includes the title, applicable prerequisites, a brief description of the course content, number of credit hours awarded for successful completion, and course fees, if any. Clearwater Christian College regularly reviews the appropriateness of each course offered in our curriculum as it relates to the academic objectives for each major and the spiritual objectives of the institution.

COURSE DESCRIPTIONS

We have assigned an appropriate course prefix for each academic discipline offered as follows:

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Courses in Accounting

- ACC 200 SURVEY OF ACCOUNTING**
An overview of the basic topics in financial and managerial accounting. Emphasis on how accounting and accounting reports are used by managers and organization stakeholders. Credit will not be given for this course taken by business or accounting majors. **3 credits.**
- ACC 201 PRINCIPLES OF ACCOUNTING I**
An introduction to fundamental accounting procedures. The accounting cycle is studied including journalizing and posting transactions, managing payroll, accounting for sales and purchases, and preparing worksheets and financial statements. **3 credits.**
- ACC 202 PRINCIPLES OF ACCOUNTING II**
Prerequisite: ACC 201. Continued studies in accounting concepts and procedures with emphasis on accounting for corporations and partnerships and managerial accounting including financial reporting and financial statement analysis. **3 credits.**
- ACC 305 COST AND MANAGERIAL ACCOUNTING**
Prerequisite: ACC 202. An in-depth study of the role of the modern management accountant and the application of traditional and activity-based cost analysis to diverse industries and manufacturing operations. Characteristics of business costs are analyzed and the principles of various cost systems are examined. Emphasis is given to the use of cost systems and data in strategic and managerial decision making. **3 credits.**
- ACC 307 FINANCIAL ACCOUNTING AND REPORTING I**
Prerequisite: ACC 201, 202. An in-depth study of financial statement preparation, accounting theory, and accounting practice for current assets and non-current assets, and related income effects. The application of generally accepted accounting principles in financial accounting and reporting. **4 credits.**
- ACC 308 FINANCIAL ACCOUNTING AND REPORTING II**
Prerequisite: ACC 307. Continuation of ACC 307 with emphasis on accounting theory and practice for long term liabilities and shareholder equity accounts, and related income effects. **4 credits.**
- ACC 405 ADVANCED COST ACCOUNTING**
Prerequisites: ACC 305. Builds on the material studied in Cost and Managerial Accounting, ACC 305. This course is a more in-depth look at specialized topics such as joint products and byproducts, job order costing, transfer pricing, and quantitative methods applied to cost accounting such as linear programming, regression analysis, and other statistical tools. **3 credits.**
- ACC 410 FEDERAL TAX ACCOUNTING**
Prerequisites: ACC 201, 202. Introduction to the federal income tax structure. Concepts and methods of determining the taxable income of individuals, allowed deductions, credits, and property transactions; the interpretation and application of the IRS Code and regulation; tax computations and filing. **3 credits.**

COURSE DESCRIPTIONS

ACC 411 ADVANCED TAXATION

Prerequisite: ACC 410. Taxation of corporations. Special problems in the taxation of corporations, individuals, partnerships, fiduciaries, estate and gift taxes. Tax research techniques. Includes special topics. **3 credits.**

ACC 414 AUDITING

Prerequisite: ACC 308. The legal and professional responsibilities of accountants as auditors. Includes the theory of auditing and audit program development; generally accepted auditing standards of evidence, review, and controls. Review of internal controls, audit procedures, and development of audit programs for various types of businesses; consideration of the auditor's professional and ethical standards. **3 credits.**

ACC 415 ADVANCED AUDITING

Prerequisite: ACC 414. Builds on Auditing, ACC 414, to develop and integrate advanced auditing subjects and developments in current practices. Special audit examination topics and audit technique issues are presented together with a discussion of current issues in the profession. **3 credits.**

ACC 420 ADVANCED ACCOUNTING

Prerequisite: ACC 308. Accounting theory and practice for business combinations, consolidation, intercompany transactions, foreign operations, statements of cash flow, and other selected topics. **3 credits.**

ACC 422 ACCOUNTING INFORMATION SYSTEMS

Prerequisites: ACC 308. Problems and issues related to computer-based accounting information systems. Presents fundamental principles of systems development for performing general financial accounting and management accounting functions with emphasis on internal control. **3 credits.**

ACC 425 ACCOUNTING FOR GOVERNMENT AND NOT-FOR-PROFIT ENTITIES

Prerequisite: ACC 308. An introduction to fund accounting and the reporting requirements for not-for-profit/government entities. **3 credits.**

ACC 441 ADVANCED ACCOUNTING THEORY AND PRINCIPLES

Prerequisites: ACC 414, 415, BUS 303, Senior status. Comprehensive review of the application of accounting theory and principles using specific problems and the development of approaches to problem solving. **3 credits.**

ACC 460 ACCOUNTING INTERNSHIP

Prerequisites: Senior status, division approval. A semester of direct work experience in a local organization or CPA firm. The student is under the supervision of the business faculty of the College as well as the immediate supervisor within the participating organization. See BUS 460 for a description of the purposes and supervision of these activities. **3 credits.**

Courses in Air Force ROTC

- AFR 110 THE FOUNDATIONS OF THE UNITED STATES AIR FORCE**
Co-requisites: AFR 200, 201. Introduction to the Air Force Reserve Officer Training Corps (AFROTC) and the United States Air Force (USAF) including lessons in officership and professionalism as well as an introduction to communication. A minimum of 80 percent attendance in scheduled classes is required for a passing grade. **1 credit.**
- AFR 112 THE FOUNDATIONS OF THE UNITED STATES AIR FORCE**
Co-requisites: AFR 200, 201. Introduction to the Air Force Reserve Officer Training Corps (AFROTC) and the United States Air Force (USAF) including lessons in officership and professionalism as well as an introduction to communication. A minimum of 80 percent attendance in scheduled classes is required for a passing grade. **1 credit.**
- AFR 200 ENHANCED PHYSICAL FITNESS TRAINING**
Required of all students. It meets twice per week for one and 1/4 hours. Concentrates on motivational physical fitness, healthy lifestyle, and cadet esprit. A minimum of 80 percent attendance in scheduled classes is required for a passing grade. **0 credit.**
- AFR 201 AIR FORCE ROTC LEADERSHIP LABORATORY**
Leadership Laboratory is required for each of the Aerospace Studies courses. It meets one hour and 45 minutes per week. Instruction is conducted within the framework of an organized cadet corps with a progression of experiences designed to develop each student's leadership potential. Leadership Laboratory involves a study of Air Force customs and courtesies; drill and ceremonies; career opportunities in the Air Force; and the life and work of an Air Force junior officer. Students develop their leadership potential in a practical laboratory, which typically includes field trips to Air Force installations. A minimum of 80 percent attendance in scheduled classes is required for a passing grade. **0 credit.**
- AFR 213 THE HISTORY OF AIR AND SPACE POWER PART I**
Co-requisites: AFR 200, 201. A study of air power from balloons and dirigibles to the space-age global positioning systems in the Persian Gulf War. Emphasis is on the employment of air power in WWI and WWII and how it affected the evolution of air power concepts and doctrine. A minimum of 80 percent attendance in scheduled classes is required for a passing grade. **1 credit.**
- AFR 214 THE HISTORY OF AIR AND SPACE POWER PART II**
Co-requisites: AFR 200, 201. Historical review of air power employment in military and non-military operations in support of national objectives. Emphasis is on the period from post WWII to present. A minimum of 80 percent attendance in scheduled classes is required for a passing grade. **1 credit.**
- AFR 294 BASIC AEROSPACE INTERNSHIP**
 This internship is granted ONLY to AFROTC students who participated in the 6-week field training encampment. Those students receive academic instruction equal to AFR 110, 112, 213, and 214. Internship certified by the Professor of Aerospace Studies. **4 credits.**

COURSE DESCRIPTIONS

AFR 322 AIR FORCE LEADERSHIP AND MANAGEMENT I

Co-requisites: AFR 200, 201. An integrated management course, emphasizing the individual as a manager in an Air Force environment. The individual motivational and behavioral processes, leadership, communication, and group dynamics are covered to provide a foundation for the development of the junior officer's professional skills. The basic managerial processes involving decision making, utilization of analytic aids in planning, organizing, and controlling in a changing environment are emphasized as necessary professional concepts. A minimum of 80 percent attendance in scheduled classes is required for a passing grade. **3 credits.**

AFR 323 AIR FORCE LEADERSHIP AND MANAGEMENT II

Co-requisites: AFR 200, 201. A continuation of the study of Air Force advancement and leadership. Concentration is on advanced leadership topics, organizational and personal values, and military ethics. Actual Air Force scenarios are used to enhance the learning and communication processes. A minimum of 80 percent attendance in scheduled classes is required for a passing grade. **3 credits.**

AFR 420 NATIONAL SECURITY AFFAIRS AND PREPARATION FOR ACTIVE DUTY PART I

Co-requisites: AFR 200, 201. A study of the Armed Forces as an integral element of society, with an emphasis on American civil-military relations and context in which U.S. defense policy is formulated and implemented. Special themes include: societal attitudes toward the military and the role of the professional military leader-manager in a democratic society. A minimum of 80 percent attendance in scheduled classes is required for a passing grade. **3 credits.**

AFR 421 NATIONAL SECURITY AFFAIRS AND PREPARATION FOR ACTIVE DUTY PART II

Co-requisites: AFR 200, 201. A continuation of the study of the Armed Forces in contemporary American society. Concentration is on the requisites for maintaining adequate national security forces; political, economic, and social constraints on the national defense structure; the impact of technological and international developments on strategic preparedness; the variables involved in the formulation and implementation of national security policy; and military justice and its relationship to civilian law. A minimum of 80 percent attendance in scheduled classes is required for a passing grade. **3 credits.**

Courses in Army ROTC

ARM 101C FOUNDATIONS OF OFFICERSHIP

Examines the unique duties and responsibilities of officers, organization and role of the Army, review skills pertaining to fitness and communication, analyze Army values and expected ethical behavior. Lec-Lab. **2 credits.**

ARM 102C BASIC LEADERSHIP

Presents fundamental leadership concepts and doctrine, practice basic skills that underlie effective problem solving, examine the officer experience. Lec-Lab. **2 credits.**

ARM 211C INDIVIDUAL LEADERSHIP STUDIES

Develops knowledge of self, self-confidence, and individual leadership skills, develop problem solving and critical thinking skills, apply communication, feedback, and conflict resolution skills. Lec-Lab. **2 credits.**

ARM 212C LEADERSHIP AND TEAMWORK

Focuses on self-development guided by knowledge of self and group processes, challenges current beliefs, knowledge, and skills. **2 credits.**

ARM 290 ARMY PHYSICAL READINESS

This course will train students in the unique role of Army physical readiness in sustaining military operations. It will also prepare students to plan, prepare, and conduct military fitness training. Repeatable for 8 semesters, but only 4 credit hours will be counted toward the program. **1 credit.**

ARM 291 BASIC LEADER TRAINING

Prerequisite: CI. A 35-day internship at Fort Knox, Kentucky that incorporates a wide range of military subjects designed to develop/evaluate leadership and officer potential. The course is intentionally stressful and designed to build individual confidence through the accomplishment of tough and demanding training. Students completing the course may qualify for entry into the ROTC Advanced Course. **4 credits.**

ARM 321C LEADERSHIP AND PROBLEM SOLVING

Examines skills that underlie effective problem solving, analyze military missions and plan military operations, execute squad battle drills. **3 credits.**

ARM 322C LEADERSHIP AND ETHICS

Probes leader responsibilities that foster an ethical command climate, develop cadet leadership competencies, apply principles and techniques of effective written and oral communication. **3 credits.**

ARM 431C LEADERSHIP AND MANAGEMENT

Discuss staff organization, functions, and processes, analyze counseling responsibilities and methods, and apply leadership and problem solving principles to a complex case study/simulation. **3 credits.**

ARM 432C OFFICERSHIP

Capstone course to explore topics relevant to second lieutenants entering the Army, describe legal aspects of decision making and leadership, analyze Army organization from tactical to strategic level. **3 credits.**

ARM 493 ADVANCED DIRECTED STUDY AND RESEARCH

Prerequisite: CI and permission of Professor of Military Science. Intensive individual study in a particular aspect of military science that is not covered in regular course offerings. Request for enrollment must be made prior to registration in the form of a written proposal. **1-3 credits.**

COURSE DESCRIPTIONS

Courses in Bible

- BIB 101 OLD TESTAMENT SURVEY**
A brief summary and introduction to each book of the Old Testament, tracing the chronological development of the nation of Israel. **3 credits.**
- BIB 103 NEW TESTAMENT SURVEY**
A foundational survey of the world as it existed in the New Testament times. Primary focus is on the content of the New Testament with emphasis on the special characteristics and the key passages of each book. **3 credits.**
- BIB 201 LIFE OF CHRIST**
A harmonistic chronological study of the significant events in the earthly life and ministry of Jesus Christ from His incarnation to His ascension. **3 credits.**
- BIB 206 MODERN RELIGIOUS ISSUES**
Prerequisites: BIB 101, 103. Analysis of current religious movements as they confront religious orthodoxy movements examined in the light of the biblical doctrines of salvation and separation. **2 credits.**
- BIB 221 ACTS**
Prerequisite: BIB 103. A historical and topical study of the life and message of the early church as recorded in the book of Acts. Particular attention is given to the conversion of the Apostle Paul and his missionary outreach. **3 credits.**
- BIB 254 PAULINE EPISTLES I**
Prerequisite: BIB 103. A study of the major themes and doctrines of Galatians, I & II Corinthians, and I & II Thessalonians. Special emphasis on Law and Grace, spiritual gifts, and the Second Coming. **3 credits.**
- BIB 255 PAULINE EPISTLES II**
Prerequisite: BIB 103. A study of the major themes and doctrines of the Prison and Pastoral Epistles. Special emphasis on the believer's position in Christ and the unique ministry of the local pastor. **3 credits.**
- BIB 301 BIBLICAL INTRODUCTION - OLD TESTAMENT**
Prerequisite: BIB 101. A survey of the inspiration, canon, text, and versions of the Old Testament. Includes a general introduction to the Old Testament and a special consideration of each book relative to questions of date and authorship. Some emphasis is given to the issues raised by the destructive claims of higher criticism, and answers are given based on the conservative position. **3 credits.**
- BIB 302 BIBLICAL INTRODUCTION - NEW TESTAMENT**
Prerequisite: BIB 103. A survey of the development and characteristics of the language, canon, and text of the New Testament as well as the authorship, date, place of writing, original recipients, occasions, purpose, and special problems of the individual books. **3 credits.**

COURSE DESCRIPTIONS

- BIB 307 COMPARATIVE RELIGIONS**
A comparative study of the world's major religions, their origins, histories, beliefs, and practices. Special emphasis is placed on their contrast with Christianity. **3 credits.**
- BIB 308 CULTS**
A survey of the major cults, including new groups, their origins, histories, doctrines, and practices. Contrasts with Christianity are also included. **3 credits.**
- BIB 332 MAJOR PROPHETS**
Prerequisite: BIB 101. An analytical study of the historical backgrounds and major prophetic messages of Isaiah, Jeremiah, Lamentations, Ezekiel, and Daniel. **3 credits.**
- BIB 406 METHODS OF BIBLE STUDY AND TEACHING**
Prerequisites: BIB 101, 103. A study of the principles used in the interpretation of the Scriptures and the objectives and methods to be used in creative Bible teaching. Illustrations from both the Old and New Testaments are used in the study. **3 credits.**
- BIB 411, 412 BIBLE DOCTRINES I & II**
Prerequisites: BIB 101, 103. A systematic study of the doctrines of the Christian faith, including Bibliology, Theology, Christology, Pneumatology, Anthropology, Hamartiology, Soteriology, Ecclesiology, Angelology, and Eschatology. **3 credits each.**
- BIB 430 APOLOGETICS**
The course focuses on the material and means by which Christians can answer the most common arguments against Christianity. Topics include some history of the field, different apologetic methods, confronting contemporary culture, forming a Biblical worldview, understanding opposing worldviews, science and faith, the problems of evil and suffering, etc. **3 credits.**
- BIB 452 ROMANS**
Prerequisite: BIB 103. A contextual study of the book of Romans. Emphasis is placed on justification, sanctification, and Christian responsibilities. **3 credits.**
- BIB 456 HEBREWS**
Prerequisite: BIB 103. A contextual study of the book of Hebrews with emphasis on the superiority of Christ, His high priestly work, and the warnings and encouragements concerning Christian behavior. **3 credits.**
- BIB 471-473 ADVANCED DIRECTED STUDY AND RESEARCH**
Prerequisite: Senior standing and permission of department. Intensive individual study in a particular area of the Bible or theology that is not covered in the regular course offerings. Request for enrollment must be made prior to registration in the form of a written proposal. **471 = 1 credit; 472 = 2 credits; 473 = 3 credits.**
- BIB 491-492 BIBLE SEMINAR I & II**
A capstone course for all Bible, Pastoral Studies, and Church Ministries majors designed to summarize and review the main material covered by the Bible Department over four years of study. Class time both semesters will also be made available to visiting pastors, missionaries, and evangelists who can provide insight into Christian ministry through their unique experiences. **1 credit each.**

COURSE DESCRIPTIONS

Courses in Business

BUS 201 MANAGEMENT PRINCIPLES

Addresses the nature of management work, management theories, the organization system, and managing for high performance. Emphasis is placed on the three basic management skills: goal setting, decision making, and interpersonal relations. **3 credits.**

BUS 203 BUSINESS COMMUNICATIONS

Prerequisites: ENG 101, 102, COM 110. Designed to teach the mechanics and principles of effective business correspondence: memorandums, letters, and reports; letterhead design; persuasive speeches; group participation; and international and cultural barriers to communication. **3 credits.**

BUS 301 FINANCIAL MANAGEMENT OF THE FIRM

Prerequisites: ACC 202, MAT 350 or BUS 311. A study of the principles of finance and the value creation process. Major topics of study include cash flow and financial statement analysis, concepts and methods of financial planning, capital budgeting, capital structure, long-term financing, cost of capital, and working capital management—all with an international perspective. **3 credits.**

BUS 302 MARKETING PRINCIPLES

Prerequisites: ACC 202, BUS 201, BUS 311, ECO 201. An introduction to global marketing and the strategic concept of marketing. This study focuses on three vital and essential areas of principles of marketing—customer value and the purpose and task of marketing; competitive or differential advantage as the reality of marketing; and focus as the means for achieving customer value and competitive advantage. **3 credits.**

BUS 303 BUSINESS LAW

Prerequisite: Junior status. A study of the nature, classification, and characteristics of law, with an introduction to the legal system and the legal environment of business. Examines contract rights and remedies, sales, property, bailments, and commercial paper. **3 credits.**

BUS 304 ADVANCED BUSINESS LAW

Prerequisite: BUS 303. Builds on Business Law, BUS 303, in the further study of agency and employment law, corporations, partnerships, risk-bearing and transference devices, property, creditor and debtor rights, and remedies. **3 credits.**

BUS 305 ORGANIZATIONAL BEHAVIOR

Prerequisite: BUS 201. Organizational structure and functioning, behavior effects of power and autonomy, formal organization, leadership, motivation, communication, team building, recruitment and hiring, performance evaluation. **3 credits.**

BUS 311 BUSINESS STATISTICS

Introduction to statistics, probability distributions, the binomial and normal distributions, sampling, estimation and tests of hypotheses, regression and correlation, and Bayesian decision theory. **3 credits.**

BUS 320 SECURITIES AND INVESTMENTS

Prerequisite: FIN 301. A definitive study of securities instruments used in financial markets and the risk characteristics and features appropriate for investor return requirements and risk aversion. Emphasis is given to the fundamentals of securities investing and contemporary fination in global financial markets. As in most finance courses, this course uses computer network services for on-line, real time analysis. **3 credits.**

BUS 406 INNOVATION AND ENTREPRENEURSHIP

Prerequisites: ACC 202. This course introduces students to the role of innovation in the venture creation process. The relative importance of innovation in launching new entrepreneurial businesses is studied. Students prepare original research studies to identify commercial innovations in successful entrepreneurship ventures and examine the innovative processes and conditions leading to the successful introduction of new products and services in the market place. **3 credits.**

BUS 421 BUSINESS STRATEGY AND POLICY

Prerequisite: Senior status. A capstone course structured to synthesize concepts, principles, and skills learned in individual business courses. This course concerns strategic direction—the long-term vision for an organization. The primary focus is on managers and their responsibility to make long-term decisions affecting the future performance of an organization. Strategic management is not taught as analysis or planning but rather the determination of purpose and setting corporate direction. Contemporary business issues concerning the strategic process and implementation of policies are examined from secular and Biblical viewpoints primarily through the use of case studies. This course includes a simulated business game competition. **3 credits.**

BUS 451 AOM INTERNSHIP

Prerequisites: Senior status, division approval, required of all AOM majors. Fourteen 40-hour weeks of practical training and direct work experience in a local organization. The student is under the supervision of the business faculty of the College as well as the immediate supervisor within the participating organization. The value of working in a practical, hands-on business environment is of utmost importance in putting theory into practice. Students will be required to submit a paper describing what they learn through their work experience. The employer will be asked to submit a report on the student’s job performance. **12 credits.**

BUS 460 BUSINESS INTERNSHIP

Prerequisites: Senior status, division approval. A semester of work experience in a local organization under the supervision of the College Business faculty and a supervisor within the participating organization. The value of working in an actual business environment is of utmost importance in applying theory to practice. Student work reports are required to document and review their learning experiences. Employers also report on the student’s job performance. **3 credits.**

Courses in Church Ministries

CHU 121 INTRODUCTION TO CHRISTIAN CAMPING

A program designed to introduce students to camping fundamentals through a combination of classroom sessions and field experience gained through eight (8) weeks of summer camp experience. Only those camps previously approved by Clearwater Christian College will be acceptable for the field experience. **3 credits.**

COURSE DESCRIPTIONS

CHU 201 INTRODUCTION TO CHURCH MINISTRIES

This course is the foundation for the major. It covers the fundamental principles of Christian education including objectives, development, principles, problems, methods, materials, and programs. **3 credits.**

CHU 230 THE CHRISTIAN HOME

Passages of Scripture that provide the Biblical basis for the traits of a healthy Christian home are examined. The various traits examined will be the commitment, communication, calendar, charm, confidence, celebration and composure of the Christian home. **3 credits.**

CHU 302 HOMILETICS

Prerequisite: COM 110. An introductory study of the preparation and delivery of sermons, with special emphasis on kinds, content, and sources of material for sermons. Attention will be given to the actual practice of the things presented in class. **2 credits.**

CHU 303 PASTORAL CARE

This course is designed to deal with the practical aspects of the ministry, such as the call to the ministry, ordination, home and hospital visitation, weddings, funerals, and setting up special services. In addition, the minister's role in personal counseling will be studied. **2 credits.**

CHU 304 COUNSELING FOR CHRISTIAN WORKERS

This course covers Biblical counseling techniques which may be used in training Christian workers for effective counseling. Emphasis will be placed on Scripture as the authority for helping people to cope with real-life problems. The course will also stress the integration of counseling as a part of the discipleship ministry of the local church. **3 credits.**

CHU 321 CHRISTIAN EDUCATION OF YOUTH

This course examines the characteristics and needs of youth. Spiritual objectives, methods and materials to be used in local church work will be presented. **2 credits.**

CHU 401, 402 PASTORAL PRACTICUM

Senior Pastoral Studies majors will be assigned a local church in which to intern both first and second semesters. This is to provide valuable on-the-job training to the future pastor. The student will be under the leadership of the local pastor to be trained in such areas as visitation, preaching, administration, and leadership. **0 credit each.**

CHU 411 CHURCH ADMINISTRATION

The focus of this course will be on the structural organization and administration of the church, including its educational ministries. Attention will be given to its constitutions, boards, finances, and other responsibilities. **3 credits.**

Courses in Computer Information Systems

CIS 100 INTRODUCTION TO COMPUTER INFORMATION SYSTEMS

An introduction to computers and data processing taught as a general education course for all students. Students will be screened for entry level proficiency. Prerequisite for all other computer courses. Course fee: \$40. **3 credits.**

COURSE DESCRIPTIONS

- CIS 201 APPLICATION PROGRAMMING I**
Prerequisite: CIS 100. A computer programming course using structured design techniques. Course fee: \$40. **3 credits.**
- CIS 202 APPLICATION PROGRAMMING II**
Prerequisites: CIS 100, 201. This course seeks to improve the student's ability to design and develop software using the methods of an object-oriented, event-driven language. Course fee: \$40. **3 credits.**
- CIS 250 ADVANCED MICROCOMPUTER APPLICATIONS**
Prerequisite: CIS 100. This course involves word processing, electronic mail, electronic spread sheets, graphics packages, file handling, and other office automation concepts. Course fee: \$40. **3 credits.**
- CIS 300 DATABASE DESIGN CONCEPTS I**
Prerequisites: CIS 100, 201, 250. A course emphasizing database design and programming in a database environment. Course fee: \$40. **3 credits.**
- CIS 301 DATABASE DESIGN CONCEPTS II**
Prerequisites: CIS 100, 201, 250, 300. This course is a continuation of the CIS 300 course, further developing the student's ability to design and develop complex databases. Course fee: \$40. **3 credits.**
- CIS 320 STRUCTURED PROGRAMMING IN OBJECT-ORIENTED LANGUAGES**
Prerequisites: CIS 100, 201 and CIS 202 or MAT 360. This course provides structured programming in object-oriented languages, including data structures and algorithms with their properties and methods, functions, inheritance, abstract datatypes, and polymorphism. Course fee: \$40. **3 credits.**

Courses in Communication Arts

- COM 110 FUNDAMENTALS OF COMMUNICATION**
Consideration of the basic principles of human communication, including composition and delivery of public speeches, verbal and nonverbal communication elements, audience analysis and adaptation, interpersonal and small group communication. Preparation and presentation of various types of speeches. **3 credits.**
- COM 121-126 NEWSPAPER PRODUCTION**
Prerequisite: Consent of instructor. Workshop in publication of student newspaper. Staff assignments in reporting, editing, photography, advertising. Minimum of 15 hours work with the student newspaper per semester required for one hour credit. May be repeated each semester. A maximum of six hours of COM 121 or COM 410-412 credit may be applied toward production major requirements; maximum of three hours credit toward production minor requirements. **1 credit each.**

COURSE DESCRIPTIONS

COM 215 MASS COMMUNICATION

Prerequisite: COM 110. A study of the contemporary mass media in our society. Focus on the nature, role, and influence of radio, television, films, newspapers, magazines, books, and the internet. **3 credits.**

COM 220 INTERPERSONAL COMMUNICATION

Prerequisite: COM 110. Concentrates on the building of interpersonal relationships by developing knowledge and skills in self-concept, perception, emotions, language, non-verbal communication, listening, relationship initiation and management, and conflict resolution. Provides theory instruction, experience analysis, and practical exercises. **3 credits.**

COM 235 VOICE AND ARTICULATION

Prerequisite: COM 110. Voice improvement through knowledge of anatomical and physiological bases of the normal voice. Emphasis on breathing, projection, articulation, and pronunciation through class discussion and structured practice drills. **3 credits.**

COM 240 ACTING I

Prerequisite: COM 110. Focuses on an understanding of acting techniques with emphasis on movement, discipline, concentration, and projection. Students investigate the creation of a character in preparation for acting in the classroom. **3 credits.**

COM 241 ACTING II

Prerequisites: COM 110, 240, or consent of instructor. The study and application of the acting process to period works, including Greek tragedy, Shakespeare, comedy, and realism. **3 credits.**

COM 255 COMMUNICATION THEORY

Prerequisite: COM 110. Introduction to speech communication theory. Examination of history and theoretical issues as a basis for understanding applied communication areas. **3 credits.**

COM 260 DRAMATIC PRODUCTION I

Prerequisite: COM 110. An introduction to the backstage crafts of play production, intended to give the student a broad understanding of the basic principles and technical procedures used in the design of scenery, lighting, and sound. **3 credits.**

COM 261 DRAMATIC PRODUCTION II

Prerequisites: COM 110, 260. An introduction to the backstage crafts of play production, intended to give the student a broad understanding of the basic principles and technical procedures used in costumes and makeup. **3 credits.**

COM 310 ARGUMENTATION AND DEBATE

Prerequisite: COM 110. An examination of the principles of analysis, reasoning, evidence, organization, and logical structure in oral and written discourse with special attention given to fallacies and tests of evidence. Emphasis is placed on the methodology of demonstrating and defending a position before an audience. **3 credits.**

COM 315 WRITING FOR MEDIA

Prerequisites: COM 110, 215 or consent of instructor. Experience in writing in media formats, including print, radio, and television. Develops critical awareness and analytical attitude toward mass media writing, and stresses imagination and creative writing skills. Frequent written assignments in and out of class. **3 credits.**

COM 320 COMMUNICATION AND COGNITION

Prerequisite: COM 110 or consent of instructor. A study of language, communication, and thought focusing on the relation of mental constructs (i.e., the sensory register, pattern recognition, attention, encoding, semantic processing and conceptualization) to language development, production, processing, and communication skills acquisition. **3 credits.**

COM 325 PLAY DIRECTING

Prerequisite: COM 110, 240 and ENG 312 or consent of instructor. Study of the principles of play direction including play selection, analysis, and patterning of auditory and visual elements of production, culminating in the direction of a one-act play. **3 credits.**

COM 330 ORAL INTERPRETATION OF PROSE

Prerequisite: COM 110. Focuses on the development of techniques involved in the performance of literature (prose, fiction, non-fiction, and Biblical texts) including controlling voice quality, using facial expression and body movement to enhance literature performance and practicing effective characterization. **3 credits.**

COM 331 ORAL INTERPRETATION OF POETRY AND DRAMA

Prerequisites: COM 110. Focuses on the development of techniques involved in the performance of poetic and dramatic literature including effective characterization through voice and body and appropriate use of rhyme and rhythm. **3 credits.**

COM 335 GROUP INTERPRETATION

Prerequisite: COM 330. A study of criteria employed in the selection and adaptation of prose, poetry, and drama for group performance, using oral interpretation skills. Includes practical training in preparation and performance. **3 credits.**

COM 340 NONVERBAL COMMUNICATION

Prerequisite: COM 220 or consent of instructor. Study of nonverbal factors that influence communicative interaction (i.e., facial expression, eye contact, gestures and posture, use of space, touch, and vocal qualities). Emphasis is placed on the importance of non-verbal cues in impression formation and management, persuasion, intercultural and gender communication and various other contexts. **3 credits.**

COM 410-412 DRAMA PERFORMANCE ACTIVITY

Practicum for support of major college productions in all areas, including acting and technical crews. A maximum of six hours of COM 121-126 or COM 410-412 credit may be applied toward production major requirements; maximum of three hours credit toward production minor requirements. **410 = 1 credit; 411 = 2 credits; 412 = 3 credits.**

COM 430 PLAYWRITING

Prerequisites: COM 240 and ENG 312 for majors, or consent of instructor. A study of the principles of dramatic construction and practice in the writing of short plays. **3 credits.**

COURSE DESCRIPTIONS

COM 440 COMMUNICATION ARTS FIELD STUDY

Prerequisite: COM 110. Off-campus study trips to various communication arts sites. **3 credits.**

COM 460 COMMUNICATION ARTS INTERNSHIP

Prerequisites: Junior or Senior status; department approval. A semester working under field conditions for 150 hours in a communication-related industry (i.e., public relations, radio and television broadcasting, advertising, print media, or journalism). **3 credits.**

COM 491 COMMUNICATION ARTS SEMINAR

Prerequisite: Senior standing. Capstone course providing interaction of faculty with advanced students in areas of communication arts. **3 credits.**

COM 495 COMMUNICATION ARTS RECITAL I

Senior communication arts recital preparation. Students are graded on an S/U basis. **1 credit.**

COM 496 COMMUNICATION ARTS RECITAL II

Prerequisite: COM 495. Preparation and delivery of senior communication arts recital. Recital course fee: \$440. **1 credit.**

NOTE: All recital lessons have a \$440 course fee per semester.

Courses in Economics

ECO 201 PRINCIPLES OF ECONOMICS I

This course is designed to provide a rigorous introduction to the study of macroeconomics, with particular emphasis on the fundamentals of macroeconomic theory, the basics of macroeconomic policy, and the practical application of macroeconomic theory to current issues. **3 credits.**

ECO 202 PRINCIPLES OF ECONOMICS II

This course is designed to provide a rigorous introduction to the study of microeconomics, with particular emphasis on the fundamentals of microeconomic theory, the basics of microeconomic policy, and the practical application of microeconomic theory to current issues. **3 credits.**

ECO 302 MANAGERIAL ECONOMICS

This course develops the art of abstracting cause and effect “irrefutables” from human actions. Content includes a strong emphasis on case studies and the uniquely developed power of marginal analysis. **3 credits.**

Courses in Education

EDU 103 HISTORY AND PHILOSOPHY OF EDUCATION

A beginning level survey required of all education majors which serves as a prerequisite for all other education courses. Explores the history and principles of Western and American education. Surveys the program and function of all levels of education from preschool through higher education. Studies various philosophies of education and their relation to the Christian world-view. Applications of the Christian philosophy to learning and teaching methodology. **3 credits.**

EDU 145 TEACHING DIVERSE POPULATIONS

This course will examine the demographic revolution in American society and its implications for the classroom. Students will be introduced to culture, diversity, multicultural education, and pluralism from a Biblical worldview. **3 credits.**

EDU 202 CURRICULUM AND INSTRUCTION

Principles of developing curriculum and an analysis of the content and construction of curricula available in various grade levels and subject areas. Emphasis in classroom methods, materials, and development of lesson plans are included. Students will develop their philosophy for teaching in this course. **3 credits.**

EDU 210 INTRODUCTION TO ENGLISH FOR SPEAKERS OF OTHER LANGUAGES (ESOL)

Prerequisite: EDU 145, 202. An anchor course to provide students with an overview of the following five state mandated areas: Methods of Teaching ESOL, ESOL Curriculum and Materials Development, Cross-Cultural Communication and Understanding, Applied Linguistics, and Testing and Evaluation of ESOL and having an understanding of the 25 ESOL Performance Standards. Some field experience is required. **3 credits.**

EDU 235 TECHNOLOGY IN EDUCATION

Introduction to computer technology and its role in the teaching and learning processes. Topics include educational software, ethical and social issues, hardware, interactive multimedia, models for integrating technology into instruction, productivity tools, and telecommunications. Having personal access to a computer is strongly recommended. **3 credits.**

EDU 272 EDUCATIONAL PSYCHOLOGY

Prerequisite: PSY 210. Introduces concepts, principles, and research methods of the teaching-learning process. Includes areas of learning and motivation, teaching methods, practices and styles, student characteristics, and cultural differences as related to behavior in the classroom. **3 credits.**

EDU 307 LITERATURE IN EARLY CHILDHOOD EDUCATION

Prerequisite: Junior standing. This course develops knowledge of literature for younger children (0-8 years) and methodologies and strategies for utilizing literature to teach literacy in content areas of the early childhood curriculum. Emphasis on thematic units and incorporating children's literature throughout the curriculum. **3 credits.**

COURSE DESCRIPTIONS

EDU 310 CHILDREN'S LITERATURE

Prerequisite: EDU 202. Evaluation and review of children's literature. Critical analysis of format and illustrations in light of purpose and philosophy of the author. Teaching techniques and uses of literature in the elementary classroom. **3 credits.**

EDU 311 HEALTH AND PHYSICAL EDUCATION FOR THE ELEMENTARY SCHOOL CHILD

Prerequisite: EDU 202. A study of the importance of health and physical activity for the elementary school student. Knowledge, attitudes and behaviors necessary for a healthy lifestyle will be covered. **2 credits.**

EDU 312 TEACHING READING IN THE SCHOOL

Prerequisites: EDU 202, 272. Examination of methods and materials in the most widely used reading curriculums with a critical analysis of their strengths and weaknesses. Application of the techniques of teaching reading in the elementary classroom. **3 credits.**

EDU 313 ELEMENTARY MUSIC METHODS

Prerequisites: EDU 202, 272. Techniques, materials, organization, and assessment of instruction in K-6 grade music for the **music education major**. Orff and Kodály methods are emphasized. **3 credits.**

EDU 314 METHODS OF TEACHING ELEMENTARY LANGUAGE ARTS

Prerequisites: EDU 202. Materials, methods, and techniques of instruction in elementary language arts including oral and written communication and developing visual representing skills. **3 credits.**

EDU 315 SOCIAL STUDIES FOR ELEMENTARY EDUCATION

Prerequisite: EDU 202, 272. Materials, methods, subject matter, and techniques of instruction in elementary social studies. **3 credits.**

EDU 316 METHODS OF TEACHING ELEMENTARY MATHEMATICS

Prerequisites: EDU 202, 272. This course examines the materials, methods, techniques, and mathematical content necessary for instruction in elementary mathematics. **3 credits.**

EDU 318 METHODS OF TEACHING ELEMENTARY SCIENCE

Prerequisites: EDU 202, 272. Materials, methods, and techniques of instruction in elementary science. **3 credits.**

EDU 320 METHODS OF TEACHING ELEMENTARY MUSIC AND ART

Prerequisite: EDU 202. Materials, methods, and techniques of instruction in elementary art and music. Includes music literature and teaching aids for students regarding singing, rhythmic, creative, instrumental, and listening experiences, and their presentation. Includes methods and materials for integrating art throughout the elementary curriculum. Course fee: \$40. **2 credits.**

EDU 321 METHODS OF TEACHING MIDDLE AND SECONDARY ENGLISH

Prerequisites: EDU 202, 272. Procedures, materials, organization, and assessment for teaching middle and secondary level English courses are investigated. The use of computers in the classroom and in assessment are also explored. This course will provide on-campus clinical teaching experiences at the middle and secondary levels. **3 credits.**

- EDU 322 METHODS OF TEACHING SECONDARY MUSIC**
Prerequisites: EDU 202, 272. Special methods in teaching music on the secondary school level. Junior and senior high school general music class curriculum, as well as band, string, and vocal programs of instruction are emphasized. **3 credits.**
- EDU 323 METHODS OF TEACHING MIDDLE AND SECONDARY SOCIAL STUDIES**
Prerequisites: EDU 202, 272. Materials, methods, and techniques for social studies courses on the middle and secondary school level. This course will provide on-campus clinical teaching experiences at the middle and secondary levels. **3 credits.**
- EDU 324 METHODS OF TEACHING PHYSICAL EDUCATION**
Prerequisites: EDU 202, 272. This course is designed for the physical education teaching major and analyzes the strategies of proper teaching techniques in physical education. Discussion includes curriculum design, lesson planning, instructional techniques, assessment strategies, as well as discipline and classroom management procedures. **3 credits.**
- EDU 325 METHODS OF TEACHING MIDDLE AND SECONDARY SCIENCE**
Prerequisites: EDU 202, 272. Materials, methods, and techniques of instruction for science courses on the middle and secondary school level. This course will provide on-campus clinical teaching experiences at the middle and secondary levels. **3 credits.**
- EDU 328 METHODS OF TEACHING MIDDLE AND SECONDARY MATHEMATICS**
Prerequisites: EDU 202, 272. Materials, methods, and techniques of instruction for mathematics courses on the middle and secondary school level. This course will provide on-campus clinical teaching experiences at the middle and secondary levels. **3 credits.**
- EDU 332 TEACHING READING IN MIDDLE AND SECONDARY SCHOOLS**
Prerequisites: EDU 202, 272. An introduction to determining signs of middle and secondary students' progress with the reading process followed by practice with appropriate measures for improving students' reading performance. Included in the study are issues of assessment, vocabulary, comprehension, writing, study skills, and cultural aspects of learning. **3 credits.**
- EDU 362, 363 FIELD EXPERIENCE PRACTICUM I & II**
Prerequisites: Junior status. To be taken in conjunction with education methods classes. An intensive prescribed clinical field experience program for education majors; provides opportunities to field test pedagogical learnings, while assisting cooperating teachers in a variety of ways, including tutoring, working with small groups, teaching, grading papers, and other appropriate activities. Students in EDU 363 will be expected to demonstrate greater initiative and proficiency in classroom related tasks. Students are graded on a *S/U* basis. *S* grades are required in order to qualify for EDU 460. **0 credit each.**
- EDU 404 TESTS & MEASUREMENTS**
Prerequisites: EDU 202, 272. A study of available standardized psychological and education tests and measurements and the interpretation of test results. Attention is given to the construction of classroom tests and quizzes. **3 credits.**

COURSE DESCRIPTIONS

EDU 410 APPLIED LINGUISTICS

Prerequisite: Senior Status, EDU 210. A capstone course providing a framework and a practical/theoretical basis for synthesizing all five ESOL state mandates. Completion of an ESOL Performance Standards Portfolio is required. **3 credits.**

EDU 419 DIAGNOSTIC AND PRESCRIPTIVE PROCEDURES IN READING

Prerequisite: EDU 312. Corequisite: EDU 363. This course will examine methods for teaching reading to students including the use of diagnostic and descriptive procedures using individual and group reading instruction. The course will examine the study and procedures currently used in the field and the factors related to the diagnosis, assessment, and remediation of reading difficulties. **3 credits.**

EDU 420 CLASSROOM MANAGEMENT

Prerequisite: Senior status. This course integrates classroom management, school safety, professional ethics, and educational law. The students will develop a classroom management plan and their portfolio to reflect the demonstration of the twelve accomplished practices. **3 credits.**

EDU 460 STUDENT TEACHING INTERNSHIP

Prerequisites: Senior status, division approval. Fourteen weeks of observation and direct teaching experience in a local school. The student is under the supervision of the education faculty of the College as well as the administrator and directing teacher within the participating school. The value of working under the supervision of a master teacher in a self-contained or departmentalized classroom is of utmost importance in putting theory into practice. Course fee: \$175. **12 credits.**

For courses in EXERCISE AND SPORT SCIENCE, see ESS.

For courses in SPECIAL EDUCATION, see SED.

Courses in English

ENG 099 BASIC ENGLISH GRAMMAR

A course designed to cover the principles of grammar. Entrance is determined by scores from a recent administration of the ACT or SAT and College placement decisions. A minimum grade of C- is required for satisfactory completion. Not applicable toward graduation requirements. **3 hours.**

ENG 101 ENGLISH COMPOSITION I

The student writes a variety of compositions. The course covers basic competencies tested by the general knowledge test in the writing and essay subtest areas. Entrance is determined by scores from a recent administration of the ACT or SAT and College placement decisions or satisfactory completion of ENG 099. A minimum grade of C- is required for satisfactory completion. **3 credits.**

ENG 102 ENGLISH COMPOSITION II

Prerequisite: ENG 101. Research techniques leading to the preparation of a term paper are investigated and applied. Critical writing skills are practiced and evaluated. A minimum grade of C- is required for satisfactory completion. This course is a prerequisite for all 300- and 400-level courses. **3 credits.**

ENG 201 EXPOSITORY WRITING

Prerequisites: ENG 101, 102. Specialized seminar for practice in literary exposition. Designed to sharpen critical thinking and writing skills by reading thought-provoking essays and by practicing different expository forms. **3 credits.**

ENG 204 CREATIVE WRITING

Prerequisites: ENG 101, 102. A critical study of literary forms for creative writing. Emphasis on writing various types of original compositions. **3 credits.**

ENG 211, AMERICAN LITERATURE I & II
212

Prerequisites: ENG 101, 102. An intensive study of several major works of American literature which are representative of their periods and genres. Each course should enable the student to develop his ability to read discerningly and to understand the cultural basis for the literature. **3 credits each.**

ENG 221, BRITISH LITERATURE I & II
222

Prerequisites: ENG 101, 102. An intensive study of works representative of periods and development in British literature. Each course should aid the student in understanding the cultural development of the time and in forming his own ideas and judgments in relation to these major works. Emphasis is placed on the influence of the Bible upon British literature. **3 credits each.**

ENG 291 WESTERN LITERATURE STUDY ABROAD

Escorted 14-day study tour of western European countries (specific destinations will be selected each time offered) to visit historic and literary sites including theater productions. Cost includes air, hotels and local transportation. Pre-tour reading and post-tour papers will be assigned. Course fees apply in addition to tuition. **3 credits.**

ENG 301 STUDIES IN AMERICAN LITERATURE

Prerequisites: ENG 101, 102, 211, and 212. A detailed study of a principal period, author, work, or subject in American literature. The course will examine the writings of American authors in context with the development of American thought and culture. **3 credits.**

ENG 311 ADOLESCENT LITERATURE

Prerequisites: ENG 101, 102 and two of the following: ENG 211, 212, 221, 222. Surveys appropriate literature for junior and senior high school students which will help them better understand their world, their peers, and themselves in light of God's Word. **3 credits.**

ENG 312 DRAMATIC LITERATURE

Prerequisites: ENG 101, 102, and two of the following: ENG 211, 212, 221, 222. A study of specific dramatic pieces, beginning with Greek tragedy and comedy through French seventeenth and eighteenth century British and American plays, nineteenth and twentieth century British and American plays. Specifically, this course will examine play construction and criticism to reveal the elements of tragic and comic writing for the theater. **3 credits.**

ENG 321 ADVANCED GRAMMAR

Prerequisites: ENG 101, 102 and two of the following: ENG 211, 212, 221, 222. A detailed study of English grammar for the upper level student who plans to teach English or who seeks a higher proficiency in English skills than that attained in freshman English composition. **3 credits.**

COURSE DESCRIPTIONS

ENG 324 ENGLISH LITERATURE OF THE SEVENTEENTH AND EIGHTEENTH CENTURIES

Prerequisites: ENG 101, 102 and two of the following: ENG 211, 212, 221, 222. A study of the representative literature of the late Renaissance, Restoration, and Neo-classical eras including such writers as Donne, Herbert, Jonson, Milton, Dryden, Bunyan, Swift, Pope, and Johnson. **3 credits.**

ENG 331 WORLD LITERATURE

Prerequisites: ENG 101, 102 and two of the following: ENG 211, 212, 221, 222. A wide-ranging study of world literature. Representative selections from the ancient period up through the twentieth century are included, with a broad spectrum of countries represented. Attention is given to the historical, cultural, and philosophical contexts of the literature. **3 credits.**

ENG 332 SHAKESPEARE

Prerequisites: ENG 101, 102 and two of the following: ENG 211, 212, 221, 222. An in-depth study of Shakespeare's plays, assigned sonnets, and early seventeenth century culture. **3 credits.**

ENG 334 MILTON

Prerequisites: ENG 101, 102 and two of the following: ENG 211, 212, 221, 222. A study of Milton's poetical works (mainly *Paradise Lost*), selected prose, and the author's philosophy in relation to his historical setting. **3 credits.**

ENG 391 ENGLISH STUDY ABROAD

Prerequisites: ENG 101, 102. An escorted study tour to the United Kingdom, visiting historic and literary sites, attending theater productions, and participating in class meetings prior to the tour and, if applicable, after returning to campus. Students will read fiction, poetry, dramatic literature, and compose scholarly papers. Substantial course fees apply in addition to tuition. **3 credits.**

ENG 430 THE NOVEL

Prerequisites: ENG 101, 102 and two of the following: ENG 211, 212, 221, 222. A study of the novel in English, its history, elements, and criticism, including British and American novels from early fictional literature to the present. Students will read and study at least six novels representative of the genre. **3 credits.**

ENG 431 CHAUCER

Prerequisites: ENG 101, 102 and two of the following: ENG 211, 212, 221, 222. A study of Chaucer's major works and other major works of the medieval period of English literature. Much is read in Middle English in order to familiarize the student with an important stage in the development of the English language. **3 credits.**

ENG 436 BRITISH LITERATURE OF THE NINETEENTH CENTURY

Prerequisites: ENG 101, 102 and two of the following: ENG 211, 212, 221, 222. Selections from Romantic and Victorian poetry and prose including the novel. Emphasis is placed on the major poetry of Wordsworth, Coleridge, Byron, Shelley, Keats, Tennyson, Browning, and Arnold as well as selections from their critical prose. Representative novels by the major writers from Jane Austen to Thomas Hardy are also studied. **3 credits.**

ENG 441 CONTEMPORARY LITERATURE

Prerequisites: ENG 211, 212, 221, 222. Students will evaluate works of Christian and secular philosophy as well as contemporary fiction in order to understand current thought and its translation into narrative. Critical research is conducted and reviews analyzed to understand contemporary criticism and to prepare students for ENG 491. Some off-campus work may be necessary. **3 credits.**

ENG 490 LITERARY CRITICISM

Prerequisites: ENG 101, 102 and two of the following: ENG 211, 212, 221, 222. Investigation of various literary movements and approaches through examination of the most influential critics and theorists from Plato and Aristotle to the twentieth century, evaluating them from a Christian perspective. **3 credits.**

ENG 491 LITERATURE SEMINAR

Prerequisite: Senior status. An introduction to the tools and techniques of literary scholarship. Students will do several research-related projects and submit reports on certain aspects of their work. They will also report to the class on at least one research project. To accompany this report, they will prepare a handout for each class member. Students will use *The Art of Literary Research* as their major text. **3 credits.**

Courses in Exercise and Sport Science

ESS 109 CONCEPTS OF LIFETIME FITNESS (M/W)

Required of all students. This course is designed to prepare the student to evaluate, develop, and maintain a personal level of health-related fitness. Special emphasis is placed upon participation in aerobic activities. **1 credit.**

ESS 151 INTRODUCTION TO EXERCISE AND SPORT SCIENCE

An introduction to the area of exercise and sport sciences with an overview of the various fields of study and career options available. **2 credits.**

ESS 211 TEACHING TEAM SPORTS

Prerequisite: Physical Education or Exercise and Sport Science majors only. This course enables the student to analyze the mechanics, develop teaching cues, and provide for error detection and correction of team sport skills. This course is reserved for the physical education major. **2 credits.**

ESS 212 TEACHING INDIVIDUAL AND DUAL SPORTS

Prerequisite: Physical Education or Exercise and Sport Science majors only. This course enables the student to analyze the mechanics, develop teaching cues, and provide for error detection and correction of individual and dual sport skills. This course is reserved for the physical education major. **2 credits.**

ESS 271 PREVENTION & CARE OF ATHLETIC INJURIES

Studies the principles and procedures for the immediate and long-term prevention, treatment, and care of athletic-related injuries. Red Cross certification is given. Course fee: \$40. **3 credits.**

COURSE DESCRIPTIONS

- ESS 279-280 EXERCISE AND SPORT SCIENCE PRE-PRACTICUM**
These pre-practicums are designed to provide the student with practical experience on campus in the exercise and sport science areas. The student will assist with health and fitness activities, sport teams, athletic events, athletic training, etc. **0 credit.**
- ESS 304 CONDITIONING AND FITNESS**
Prerequisite: Open only to Physical Education and Exercise and Sport Science majors. Methods of instruction are given in the area of nutrition, conditioning, and fitness. Emphasis is placed on the role of exercises and personal fitness. Evaluation of physical fitness is analyzed and studied. Limited to Exercise and Sport Science and Physical Education majors only. **3 credits.**
- ESS 305 NUTRITION**
A study of the nutrients; their sources, functions, and utilization; their relationship to health and development. Examines the need for reliable nutrition information, education, and dietetics. **3 credits.**
- ESS 311-319 THEORY AND PRACTICE IN COACHING SPORTS**
Discussions of positions, strategy of offense, defense, and team play. Emphasis on developing Christian character in student athletes. **2 credits each.**
311 Volleyball 317 Baseball
313 Basketball 319 Softball
315 Soccer
- ESS 320 COACHING PRACTICUM**
A field experience assisting with a college or high school sports team. Advanced departmental approval is required. Graded on a credit/no credit basis. **2 credits.**
- ESS 340 MOTOR LEARNING AND DEVELOPMENT**
An overview of motor development along with the study of theories, principles, and concepts that increase the capability of a person in performing a motor or sport skill. The student will be involved in lectures and laboratory experiences in motor learning and performance. **3 credits.**
- ESS 371 ADVANCED ATHLETIC TRAINING**
Prerequisite: ESS 271. Care and prevention of athletic injuries. Advanced analysis and practiced application of the principles of sports medicine and athletic injuries. An in-depth study of the role and techniques of the athletic trainer. Course fee: \$40. **3 credits.**
- ESS 378 KINESIOLOGY**
Prerequisites: SCI 104, 204. Examines the anatomical origins, insertions, and innervations of muscles. Specific emphasis is on anatomical development and muscle physiology. **3 credits.**
- ESS 379-380 EXERCISE AND SPORT SCIENCE PRE-PRACTICUM**
These pre-practicums are designed to provide the student with practical experience on campus in the exercise and sport science areas. The student will supervise health and fitness activities, sport teams, athletic events, athletic training, etc. **1 credit.**

COURSE DESCRIPTIONS

- ESS 470 PSYCHOLOGY OF EXERCISE AND SPORT**
Prerequisites: ESS 151, PSY 210. A study of psychological principles that apply to the areas of exercise and sport. Emphasis is given to practical applications of these principles in the exercise and/or sport setting. **3 credits.**
- ESS 472 ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION AND ATHLETICS**
Prerequisite: ESS 151. Studies of the organizational and administrative duties and problems related to physical education and athletic programs in the school. **2 credits.**
- ESS 478 EXERCISE PHYSIOLOGY**
Prerequisites: SCI 104, 204. Studies acute and chronic adaptations of various bodily systems to exercise. **3 credits.**
- ESS 479 EXERCISE AND SPORT SCIENCE PRACTICUM I**
Prerequisite: Departmental approval required. A field experience where the student is introduced to an area of exercise and sport science. **2 credits.**
- ESS 480 EXERCISE AND SPORT SCIENCE PRACTICUM II**
Prerequisite: Departmental approval required. A field experience where the student gains knowledge and practical experience in an area of exercise and sport science. **4 credits.**
- ESS 485 EXERCISE AND SPORT SCIENCE SEMINAR**
Prerequisites: ESS 151, 271, 304, 340, 378, 470, 478, 479; department approval required. A capstone course that reviews the major areas of study within the sport and exercise science field, evaluating the student's knowledge of major concepts in their field of study. **3 credits.**

Courses in Geography

- GEO 200 SURVEY OF WORLD GEOGRAPHY**
A thematic study of the world's geographic realms with particular emphasis on physical, political, and economic geography while noting social, cultural, and environmental concerns. **3 credits.**

Courses in General Studies

- GNS 101 FRESHMAN SEMINAR**
This course assists students in establishing a good foundation for college life. Areas included are campus life, spiritual growth, Christian service, academics, library skills, etiquette, internet skills, and the procedures specific to this college. **Required for all freshmen and other new students; encouraged for new and returning students on academic probation.** Graded on a P/F basis. **0 credit.**

COURSE DESCRIPTIONS

Courses in History

- HIS 121, 122 HISTORY OF CIVILIZATION I & II**
A survey of civilization from the beginning of writing to the present time. Special emphasis is given to the political, social, cultural, and religious developments in the history of mankind. **3 credits.**
- HIS 201, 202 UNITED STATES HISTORY I & II**
History of the United States from the earliest explorations to the present. Special attention is paid to the political, economic, cultural, and religious growth of the United States. **3 credits.**
- HIS 311 BRITISH HISTORY**
History of England from the time of the Roman occupation until the present time. Special attention is given to the development of the British Empire, and the role of Great Britain in the modern world. **3 credits.**
- HIS 318 RECENT EUROPEAN HISTORY**
Political and Cultural development in twentieth century Europe. Special emphasis is given to World War I, the rise of Communism, Fascism, and Nazism; the inter-war period; World War II; and the various plans for European cooperation. **3 credits.**
- HIS 321 MODERN SUB-SAHARIAN AFRICAN HISTORY—POST 1500**
An overview of African civilization and culture from 1500 A.D. - 2000. The course will also examine the impact of European Imperialism upon the economic, political and cultural life of subsaharian Africa. **3 credits.**
- HIS 331 SPANISH HISTORY**
This course traces Spain's history from Roman colonization through contemporary events in the Post-Franco democratic period. This includes an overview of the Musselman invasion, reconquist, Catholic Kings, the epoch of the Emperor Charles the Fifth, the 18th Century War of Independence, Restoration, social and economic problems leading to the Spanish Civil War, and the Franco Regime. Special attention will be drawn to various events in Spanish history as the tour visits places of historical significance. **3 credits.**
- HIS 333 LATIN AMERICAN HISTORY**
A study of Latin American history covering the pre-colonial era, the colonial era, and the post-colonial era with a special emphasis upon the Third World character of the region. **3 credits.**
- HIS 341 RUSSIAN HISTORY**
A study of Russia from national beginnings through the Soviet state. Analysis will be made of Tzardom, the Revolution, and the changing Soviet state and its international relations in the modern world. **3 credits.**
- HIS 343 ASIAN/AMERICAN HISTORY**
A study of American international relations with Asian nations from the opening of Japan to American trade by Commodore Perry through the modern period. **3 credits.**

- HIS 347 FLORIDA HISTORY**
 A study of Florida history beginning with the original Indian tribes, the Spanish and British occupations, the acquisition of the Floridas from Spain, the territorial period, the Seminole Wars, and statehood through the present. **3 credits.**
- HIS 349 HISTORY OF U.S. PRESIDENTIAL ELECTIONS**
 This course is a study of American political history from 1789 to the present with particular emphasis on the quadrennial presidential campaigns of major parties and selected third parties. It will examine the nominating system, party conventions, electioneering, the Electoral College, debates and the impact of the media in more recent years on the election of the President of the United States. **3 credits.**
- HIS 351 AMERICA IN THE NUCLEAR AGE**
 A study of critical trends and events in American history from World War II through the present day. This course will include an examination of the Cold War and American foreign policy, the Civil Rights movement, and American domestic policy, the influence of popular culture and the media, and the increasing role of technology in our society. **3 credits.**
- HIS 353 MIDDLE EAST HISTORY**
 A study of the political, religious, ethnic, and economic development of the Middle East from 538 BC to the present with particular emphasis on the state of Israel and the rise of Islamic nationalism. **3 credits.**
- HIS 401, 402 CHURCH HISTORY I & II**
 First semester: the Christian church from its beginning to the Reformation. Second semester: the Reformation and Counter-Reformation, the reformers, the persecution, and developments of post-Reformation denominations and their effects on governments and culture. **3 credits each.**
- HIS 409 COLONIAL ERA**
 A seminar course with directed readings and discussion covering the Colonial Period of American history from the European discovery of America through the American War of Independence with comprehensive study of the economic, ethnic, and social culture of the developing American society. **3 credits.**
- HIS 423 EARLY NATIONAL PERIOD**
 A study of the political, economic and social development of the United States from 1800-1860, with particular emphasis on the Industrial Revolution and the rise of sectionalism. **3 credits.**
- HIS 425 CIVIL WAR & RECONSTRUCTION**
 An in-depth study of the factors of sectionalism and states' rights which led to the Civil War. Heavy emphasis is placed on military campaigns and the post-war Reconstruction. **3 credits.**
- HIS 427 HISTORICAL BIOGRAPHY**
 A seminar consisting of directed readings in the biographies of individuals whose lives and deeds have impacted our national life and focuses. **3 credits.**

COURSE DESCRIPTIONS

HIS 491 HISTORY SEMINAR

Selected problems in history and an examination of historiography and philosophies of history. **3 credits.**

Courses in Humanities

HUM 200 INTRODUCTION TO THE FINE ARTS

Prerequisite: ENG 102. A general survey of music and the visual arts with a focus on the elements of art and music in general and in relation to specific forms and works of art and music. The purpose of the course is appreciation and understanding of all of the arts and of the artists and composers who created them, with emphasis on the development of intelligent listening, observation, and understanding. **3 credits.**

HUM 491 HUMANITIES SEMINAR

Prerequisite: Senior status. A capstone course designed to integrate and summarize the ideas and concepts presented in the courses leading to a B.A. in Humanities. The student researches and writes about topics geared to his/her interests and purposes and makes some evaluation about past achievements and future possibilities. **3 credits.**

Courses in Information System Management

ISM 300 DATABASE DESIGN CONCEPTS I

See CIS 300. **3 credits.**

ISM 301 DATABASE DESIGN CONCEPTS II

See CIS 301. **3 credits.**

ISM 310 INTRODUCTION TO INFORMATION SYSTEMS MANAGEMENT

Prerequisites: CIS 100, 250. An introduction to the use of technology in managing the creation and flow of information through a business. Topics include management of information systems, hardware and software considerations, networks, and data communications. Course fee: \$20. **3 credits.**

ISM 320 E-COMMERCE

Prerequisites: CIS 201, 250, ISM 310. E-Commerce explores the new world of electronic commerce and its impact on business practices. The course explores electronic commerce opportunities, issues, alternatives and techniques to support the development of an e-commerce business and a web site that supports the plan. The impact on members of the supply chain may also be evaluated. The issue of understanding customer's needs and concerns will be addressed. E-commerce marketing tools will be investigated. Students will evaluate alternative e-commerce Internet web sites and plan a site that meets marketing objectives. They will look at how to promote the site to target audiences. Course fee: \$40. **3 credits.**

ISM 430 DATA COMMUNICATIONS AND NETWORKS

Prerequisite: ISM 310. Examines the concepts and methods of telecommunications and network architecture. Students study the fundamentals of networking, transmission standards, and communication protocols. Course fee: \$40. **3 credits.**

- ISM 450 WEB APPLICATION DEVELOPMENT**
Prerequisite: CIS 201. A survey of languages and tools used in client-side and server-side web development. These include HTML, JAVA, XML, ASP.NET, .NET Languages, and various scripting languages. Course fee: \$40. **3 credits.**
- ISM 460 INFORMATION SYSTEMS INTERNSHIP**
Prerequisites: CIS 201, ISM 300, 310, 430, senior status, division approval. Student will work with a system administrator or software developer to gain relevant experience and application of course concepts. **3 credits.**
- ISM 470 SYSTEMS ANALYSIS AND DESIGN**
Prerequisites: CIS 100, 201, 250, ISM 300, 310, 430. An overview of systems development using the life cycle methodology with emphasis on use of analytical tools, development of selection criteria, and development of comprehensive system documentation. **3 credits.**

Courses in Languages

- LAN 101, 102 ELEMENTARY GREEK I & II**
Prerequisite: ENG 102. A foundational study of the grammar, vocabulary, and syntax of New Testament Greek with the goal of preparing the student to translate in the Greek New Testament. **3 credits each.**
- LAN 105 ELEMENTARY SPANISH I**
 Development of basic skills in listening, reading, comprehension, speaking, and writing of Spanish. **3 credits.**
- LAN 106 ELEMENTARY SPANISH II**
 Continued development of basic skills in listening, reading, comprehension, speaking, and writing of Spanish. **3 credits.**
- LAN 109 ELEMENTARY FRENCH I**
 Development of basic skills in listening, reading, comprehension, speaking, and writing of French. **3 credits.**
- LAN 110 ELEMENTARY FRENCH II**
 Continued development of basic skills in listening, reading, comprehension, speaking, and writing of French. **3 credits.**
- LAN 201, 202 INTERMEDIATE GREEK I & II**
Prerequisite: LAN 102. A study of intermediate Greek grammar, syntax, and vocabulary with the goal of preparing students to write simple exegetical commentary. Translation of various portions of the Greek New Testament. **3 credits each.**
- LAN 205 INTERMEDIATE SPANISH I**
Prerequisite: LAN 106 or equivalent. Readings in Spanish on the intermediate level. A review of the basic structure of spoken and written Spanish, and exploration of present day Hispanic culture. **3 credits.**

COURSE DESCRIPTIONS

LAN 206 INTERMEDIATE SPANISH II

Continued readings in Spanish on the intermediate level. Continued review of the basic structure of spoken and written Spanish and exploration of present day Hispanic culture. **3 credits.**

LAN 209 INTERMEDIATE FRENCH I

Prerequisite: LAN 110 or equivalent. Readings in French on the intermediate level. A review of the basic structure of spoken and written French and exploration of present day French culture. **3 credits.**

LAN 210 INTERMEDIATE FRENCH II

Continued readings in French on the intermediate level. Continued review of the basic structure of spoken and written French and exploration of present day French culture. **3 credits.**

LAN 301 GREEK TEXT STUDIES I

Prerequisite: LAN 202. An exegetical study of the Greek text of Paul's Epistle to the Galatians. The course will include a translation of the entire epistle, and further development of the student's ability to exegete New Testament Greek. **3 credits.**

LAN 302 GREEK TEXT STUDIES II

Prerequisite: LAN 202. An exegetical study of the Greek New Testament. The course will include a translation of varied passages, further development of the student's ability to do exegesis, along with extensive reading of the Greek New Testament. **3 credits.**

Courses in Mathematics

MAT 099 BASIC ALGEBRA

A course designed to cover basic algebraic concepts. Entrance is determined by scores from a recent administration of the ACT or SAT and college placement decisions. A minimum grade of C- is required for satisfactory completion. Not applicable toward graduation requirements. **3 credits.**

MAT 130 INTERMEDIATE ALGEBRA

Prerequisite: MAT 099 or an appropriate score on the mathematics placement test. Major topics include factoring, algebraic fractions, radicals and rational exponents, complex numbers, quadratic equations, rational equations, linear equations and inequalities, absolute value equations, and an introduction to functions and their applications. A TI-83 calculator is recommended for this course. **3 credits.**

MAT 140 COLLEGE ALGEBRA

A study of sets, properties of real numbers, algebraic expressions and polynomials, solving equations and inequalities, various relations, and functions and their graphs. Entrance is determined by scores from a recent administration of the ACT or SAT and College placement decisions or satisfactory completion of MAT 130. A TI-83 calculator is required for this course. **3 credits.**

MAT 145 LIBERAL ARTS MATHEMATICS

This course will include topics related to mathematical logic, sets and systematic counting, probability, statistics, and geometry. The history of mathematics, critical thinking skills, problem solving and appropriate use of technology will be incorporated throughout the course. At least one-third of the course will be devoted to geometry. **3 credits.**

MAT 147 COLLEGE GEOMETRY

A study of the axiomatic method used in mathematics through an application to Euclidian geometry. **3 credits.**

MAT 148 PRECALCULUS MATHEMATICS

Prerequisites: MAT 130 or an appropriate score on the mathematics placement test. This course is designed to prepare the student for Calculus I. It includes a study of functions and their graphs, exponential and log functions, the trigonometric functions and their graphs, trigonometric identities, solving trigonometric equations, the Law of Sines and Law of Cosines, rational functions, and solving polynomial equations. A TI-83 calculator is recommended for this course. **3 credits.**

MAT 150 PROBABILITY AND STATISTICS

Descriptive statistics, introductory probability theory, random variables, discrete and continuous probability distributions, sampling distributions, confidence intervals, and hypotheses testing. A TI-83 calculator is required for this course. **3 credits.**

MAT 161 CALCULUS I

Prerequisite: MAT 147, 148. A study of functions and limits, differentiation of single variable, and associated applications. Entrance is determined by scores from a recent administration of ACT or SAT and College placement decisions. **3 credits.**

MAT 162 CALCULUS II

Prerequisite: MAT 161. Methods of integration and differentiation, sequences and series, Taylor series and polar coordinates. **3 credits.**

MAT 261 CALCULUS III

Prerequisite: MAT 162. Functions of more than one variable, multiple integrals and partial differentiation, non-rectangular coordinate systems, line integrals, and vector calculus. **3 credits.**

MAT 320 FOUNDATIONS OF GEOMETRY

Prerequisite: MAT 261, 380. An introduction to differential geometry including surfaces, tangent spaces, vector fields, metrics, and geometric transformations. **3 credits.**

MAT 340 HISTORY OF MATHEMATICS

Prerequisites: MAT 161, 162. Chronological study of the evolution of mathematical thought from primitive counting to modern ideas of the twentieth century. **3 credits.**

MAT 360 DISCRETE MATHEMATICS

Prerequisite: MAT 140. An introduction to finite mathematics and discrete models, logic, algorithms, inductions, combinations, Boolean algebra. Emphasis on discrete rather than continuous aspects. **3 credits.**

COURSE DESCRIPTIONS

MAT 370 LINEAR ALGEBRA

Prerequisites: MAT 162. A study of systems of linear equations, matrices, and vector spaces with their properties. **3 credits.**

MAT 380 DIFFERENTIAL EQUATIONS

Prerequisites: MAT 261. A study of first order linear and non-linear differential equations, higher order linear equations and applications. **3 credits.**

MAT 390 INTRODUCTORY NUMBER THEORY

An investigation of properties of the integers, including the Euclidean and division algorithms, prime factorization, Diophantine equations, congruences, and classical theorems of number theory. **3 credits.**

MAT 430 MATHEMATICAL STATISTICS

Prerequisites: MAT 161, 162. A Calculus-based study of probability and statistics. Probability density functions, conditional probability and independence, special probability distributions. Sampling distributions, estimations, and hypotheses testing. **3 credits.**

MAT 460 ABSTRACT ALGEBRA

An introduction to abstract algebraic structures including groups, rings, integral domains, and fields, and their applications. **3 credits.**

MAT 470 TOPOLOGY

An introduction to topological spaces and their structure with emphasis on separation axioms, continuity, metric spaces, and homology. **3 credits.**

MAT 475 ADVANCED TOPICS IN MATHEMATICS

Prerequisite: MAT 380. The department will choose topics to be covered which will best prepare students to begin graduate studies in mathematics. Possible topics include topology, abstract algebra, partial differential equations, differential geometry, group theory, measure theory and probability, computation and logic, and mathematical computation. **3 credits.**

MAT 480 MATHEMATICAL COMPUTATION

A survey of technology and procedures being used to aid computation in a number of mathematical fields such as calculus, algebra, differential equations, linear algebra, geometry, numerical analysis, statistics, number theory, and mathematical programming. **3 credits.**

MAT 490 ADVANCED CALCULUS

Prerequisite: MAT 261. The theory behind the differential and integral calculus in real Euclidian spaces and an introduction to complex variables and the differentiation and integration of complex valued functions. **3 credits.**

MAT 491 MATHEMATICS SEMINAR

Interaction of faculty with advanced students in areas of mathematical study. Required of all Mathematics majors. **3 credits.**

Courses in Missions

- MIS 101 PERSONAL EVANGELISM**
Scriptural methods of witnessing and leading souls to a personal acceptance of Christ as Savior and of basic teaching needed in the discipleship of new believers. A program of Scripture memorization, reading of biographies of personal workers, and opportunities for practical experiences in personal work are included. **3 credits.**
- MIS 201 INTRODUCTION TO MISSIONS**
An introduction to the mission work of the Church. This course will include the biblical basis of missions, a survey of its history, the call, life and work of the missionary, the role of the local church, as well as the present state of the worldwide mission task. **3 credits.**
- MIS 320 CROSS CULTURAL ISSUES**
An examination of cross cultural issues including, but not limited to culture shock, ethnocentrism, and stereotypes as well as deep and surface culture. This course is designed to promote an understanding of and sensitivity to cultural differences for individuals who intend to pursue careers as Christian teachers, missionaries, and other workers who desire to serve in this country and abroad. Applications and awareness of these concepts in the multicultural classroom are addressed in the course. **3 credits.**
- MIS 401 MISSIONARY FIELD EXPERIENCE**
Prerequisite: Faculty approval. A minimum three-week experience on a selected mission field under the direction of a qualified missionary field director in co-ordination with a fundamental mission agency. Fee dependent on approved experience. **3 credits.**

Courses in Applied Music

- MUA 000, 001 PIANO, VOICE PERFORMANCE**
Group instruction and performance for all applied music students in piano or voice required each semester. Piano = 000; Voice = 001. Failure to attend performance class will result in a lowered applied music grade for the semester. **0 credit.**

COURSE DESCRIPTIONS

APPLIED MUSIC - PRINCIPAL PROFICIENCY*

The principal applied music proficiency field is designed for music majors and considered the student's major concentration. The student is required to study and perform representative repertoire from the Baroque, Classical, Romantic, and Modern periods. A proficiency jury is required at the end of the first semester. A freshman assessment test is required at the end of the second semester. A sophomore platform test is required at the end of the student's second year to determine admission into the major. For the junior and senior years, a proficiency jury is held at the end of each semester. In addition, a recital is required of the student during the junior and senior years. **Each course awards one semester credit for successful completion.** Course numbers below are assigned for the various types of instruction available.

Bassoon: *MUA 145*

Cello: *MUA 181*

Clarinet: *MUA 141*

Composition: *MUA 197*

Flute: *MUA 133*

French Horn: *MUA 161*

Guitar: *MUA 189*

Harp: *MUA 163*

Oboe: *MUA 137*

Organ: *MUA 125*

Percussion: *MUA 193*

Piano: *MUA 115*

Saxophone: *MUA 149*

String Bass: *MUA 185*

Trombone: *MUA 157*

Trumpet: *MUA 153*

Tuba: *MUA 169*

Viola: *MUA 177*

Violin: *MUA 173*

Voice: *MUA 105*

NOTE: All principal proficiency lessons have a \$440 course fee per lesson (50-minute lesson).

APPLIED MUSIC - SECONDARY PROFICIENCY*

The secondary applied music proficiency field is designed for music majors and is taken in conjunction with the student's principal proficiency. Minimum proficiency is required and proven through examination. Piano principals are required to study secondary voice or an orchestral instrument. Vocal and all other instrumental principals are required to study secondary piano. **Each course awards one semester credit for successful completion.** Course numbers below are assigned for the various types of instruction available.

Piano: *MUA 113*

Voice: *MUA 103*

NOTE: All secondary proficiency lessons have a \$220 course fee per lesson (25-minute lesson).

APPLIED MUSIC - NON-MUSIC MAJOR*

These applied courses are designed for the non-music major who is interested solely in developing skill for personal enrichment. Instruction is tailored to take students from their level of entry to a designated level of improvement. **Each course awards one semester credit for successful completion.** Course numbers below are assigned for the various types of instruction.

Bassoon: *MUA 143*

Cello: *MUA 179*

Clarinet: *MUA 139*

Composition: *MUA 195*

Flute: *MUA 131*

French Horn: *MUA 159*

Guitar: *MUA 187*

Harp: *MUA 165*

Hymnplaying: *MUA 117*

Oboe: *MUA 135*

Organ: *MUA 121*

Percussion: *MUA 191*

Piano: *MUA 111*

Saxophone: *MUA 147*

String Bass: *MUA 183*

Trombone: *MUA 155*

Trumpet: *MUA 151*

Tuba: *MUA 167*

Viola: *MUA 175*

Violin: *MUA 171*

Voice: *MUA 101*

NOTE: All non-music major lessons have a \$220 course fee per lesson (25-minute lesson).

*Students enrolling in any applied music course are required to enroll in the appropriate performance class. Performance classes meet regularly as announced by the music department.

Courses in Music

All entering music majors and minors and transfer students will take a music theory placement test prior to or during the first scheduled meeting of MUS 123 or 125. The result of this test will determine whether they may enroll in MUS 123 or whether they must enroll in MUS 098.

MUS 098, BASIC MUSIC 099

Covers rudiments of music pertaining to notation, intervals, keys, scales, sight-singing, and ear-training. Entrance is determined by score on Theory Placement Test. A minimum grade of C- is required for satisfactory completion. Not applicable toward graduation requirements. **1 credit each.**

COURSE DESCRIPTIONS

- MUS 123, 124** **MUSIC THEORY I & II**
Fundamentals of music and basic harmony. Some instrumental or vocal background desirable. **2 credits each.**
- MUS 125, 126** **AURAL THEORY I & II**
Sight-singing and ear training, including rhythmic, melodic, and harmonic dictation and elementary keyboard harmony. Must be taken concurrently with MUS 123, 124. **1 credit each.**
- MUS 160** **CONCERT CHOIR**
Open audition to all who love to sing serious music. The choir presents major choral works, periodically ministers in church services and Christian schools and takes a bi-annual extended tour. Extra time commitment is expected. Choir fee: \$30. **1 credit.**
- MUS 170** **CHORALE**
A select mixed ensemble chosen by audition. Represents the college through performances in high school assemblies, local churches, civic organizations, and college productions. Periodically takes an extended tour. **1 credit.**
- MUS 180** **HANDBELL CHOIR**
Ringing ensemble with three octaves of handbells. Performs in chapel, major programs on campus, and periodically in church ministry. **1 credit.**
- MUS 190** **PEP BAND**
The Pep Band stirs up the crowd at the home basketball games. It meets once a week for one hour just a few weeks before basketball season and will perform all season long. Individuals are selected by audition. A minimum of ten students must register for credit in order for the course to be offered. **1 credit.**
- MUS 223, 224** **MUSIC THEORY III & IV**
Prerequisites: MUS 124, 126. Advanced harmony including secondary dominants and augmented sixth chords. **2 credits each.**
- MUS 225, 226** **AURAL THEORY III & IV**
Advanced sight-singing and ear training with increased emphasis on harmonic dictation in addition to more advanced rhythmic and melodic dictation and keyboard harmony. Must be taken concurrently with MUS 223, 224. **1 credit each.**
- MUS 230** **DICTION FOR SINGERS**
These courses should be taken concurrently with the first semester of voice study. Pronunciation improvement through study of the International Phonetic Alphabet (IPA). Emphasis on Latin, Italian, German, French, and English pronunciation through class discussion, practice drills, and song preparation. May be repeated one time. **1 credit.**
- MUS 250** **WOODWIND ENSEMBLE**
Group practice and performance of selected music in chapel, in recital, and in local churches. Individuals are selected by audition. **1 credit.**

COURSE DESCRIPTIONS

- MUS 255 BRASS ENSEMBLE**
Group practice and performance of selected music in chapel, in recital, and in local churches. Individuals are selected by audition. **1 credit.**
- MUS 260 STRING ENSEMBLE**
Group practice and performance of selected music in chapel, in recital, and in local churches. Individuals are selected by audition. **1 credit.**
- MUS 265 WIND ENSEMBLE**
Group practice and performance of selected music in chapel, in recital, and in local churches. Individuals are selected by audition. **1 credit.**
- MUS 270 ORCHESTRA**
Group practice and performance of various orchestral literature, primarily for annual Christmas concerts and spring musical productions. **1 credit.**
- MUS 275 FLUTE CHOIR**
Group practice and performance of selected music in chapel, in recital, and in local churches. Individuals are selected by audition. A minimum of ten students must register for credit in order for the course to be offered. **1 credit.**
- MUS 313, 314 MUSIC HISTORY I & II**
Prerequisites: MUS 124, 126, HUM 200. A survey of the historical development of musical styles and the literature representative of those styles including listening and score study. MUS 313 covers medieval, renaissance, and baroque styles and MUS 314 covers classic, romantic, and modern styles. **3 credits each.**
- MUS 323 FORM & ANALYSIS**
Prerequisites: MUS 224, 226. A study of the development of form in music beginning with simple two-part forms, 16th-century counterpoint, and concluding with sonata-allegro form. Most of the class work consists of music analysis by the student. **2 credits.**
- MUS 324 ORCHESTRATION & ARRANGING**
Prerequisites: MUS 124, 126. Basics of instrumentation including transpositions, ranges, and technical limitations of orchestral instruments. Principles of arranging apply primarily to choral arrangements of hymns. **2 credits.**
- MUS 332 PIANO LITERATURE I**
A survey and evaluation of elementary-level piano literature and materials. **2 credits.**
- MUS 333 PIANO LITERATURE II**
A historical survey and stylistic analysis of intermediate and advanced piano literature. **2 credits.**
- MUS 334 VOCAL PEDAGOGY AND LITERATURE**
Prerequisite: MUS 124, 126. A study of the methods, techniques, and basic literature for teaching voice. Required of all voice principal students. **2 credits.**

COURSE DESCRIPTIONS

MUS 341 BRASS TECHNIQUES

Prerequisites: MUS 124, 126. Basic class instruction in brass instrument pedagogy. **1 credit.**

MUS 342 PERCUSSION TECHNIQUES

Prerequisites: MUS 124, 126. Basic class instruction in percussion instrument pedagogy. **1 credit.**

MUS 351 ELEMENTS OF CONDUCTING

Prerequisites: MUS 124, 126. Basic time-beating gestures and patterns, both traditional and modern. Basic baton techniques and expressive gestures; cues, fermatas, cut-offs, tempo changes; conducting terminology; and basic score reading. **1 credit.**

MUS 352 CHORAL CONDUCTING

Prerequisites: MUS 124, 126, 351. Application of basic conducting techniques specifically to choral music and to interpreting the choral score. Conducting recitative; choral style; consonants and vowels; breathing; tone quality and intonation; balance; attack and release; seating charts; and basic choral score reading. **1 credit.**

MUS 353 INSTRUMENTAL CONDUCTING

Prerequisites: MUS 124, 126, MUS 351. Application of basic conducting techniques specifically to instrumental music and to interpreting band and orchestral scores. Problems of intonation, balance, attack, and release and of string, woodwind, brass and percussion instruments. The instruments in the score; clefs; bowings; instrument ranges; seating charts; and basic score reading. **1 credit.**

MUS 354 CHORAL LITERATURE

Prerequisites: MUS 124, 126, HUM 202. A survey of choral literature through all the style periods of music history. Major emphasis is the examination of shorter and longer forms of sacred choral works. **2 credits.**

MUS 356 CHURCH MUSIC ADMINISTRATION

Prerequisites: HUM 202, instructor's approval. Philosophies of music in worship based on the Scriptures and our Christian heritage; organizing and administering a church music program; the responsibilities of the minister of music. **2 credits.**

MUS 358 EVANGELISTIC SONGLEADING

Fundamentals of basic conducting as it applies to leading congregational singing. **1 credit.**

MUS 364 HYMNOLOGY

Prerequisites: MUS 124, 126, HUM 202. A survey of hymn history and development of hymnody from Biblical times to the present day. **2 credits.**

MUS 372 PIANO PEDAGOGY I

A survey of piano teaching methods and procedures appropriate for beginning and elementary-level students of all ages. Guided teaching experience, business aspects of teaching included. Observation of beginner and elementary-level lessons required. **2 credits.**

- MUS 373 PIANO PEDAGOGY II**
 A survey of piano teaching methods and procedures for intermediate and advanced students. Guided teaching experience included. Observation of intermediate and advanced lessons required. **2 credits.**
- MUS 395 JUNIOR RECITAL**
 Junior Music recital. Students are graded on an *S/U* basis. **0 credit.**
- MUS 401 CHURCH MUSIC PRACTICUM**
Prerequisite: Senior status. Senior Church Music majors will be assigned a local church in which to serve as assistant minister of music under the supervision of a music faculty member. This is to provide valuable on-the-job training to the future church music director in the areas of worship leadership, song leading, choir directing, and possibly orchestra directing and piano and/or organ playing. **0 credit.**
- MUS 423 COUNTERPOINT**
Prerequisites: MUS 224, 226. The study of composition for examples and principles of counterpoint with particular emphasis on counterpointal techniques represented in Bach's works. Emphasizes fundamental principles of tonal functions, voice leading, harmonic formulae, and compositional devices to create original examples of two- and three-part counterpoint and canon. **2 credits.**
- MUS 431 ADVANCED STYLISTIC ANALYSIS**
Prerequisites: MUS 224, 225. An in-depth study of the stylistic analysis of music ranging from Medieval to twentieth century combined with a study of the analysis systems of Hindemith, Schenker, Schoenberg, Serialism and Set theory. An elective course that prepares students for graduate studies in music. **3 credits.**
- MUS 441 STRING TECHNIQUES**
Prerequisites: MUS 124, 126. Basic class instruction in string instrument pedagogy. **1 credit.**
- MUS 442 WOODWIND TECHNIQUES**
Prerequisites: MUS 124, 126. Basic class instruction in woodwind instrument pedagogy. **1 credit.**
- MUS 451, 452 MUSICAL COMPOSITION I AND II**
Prerequisites: MUS 224, 226. Designed to train the student to compose in two, three and four voices with emphasis on the melody. One requirement will be to compose a church hymn. The student will also learn to apply harmony learned in previous courses by harmonizing original melodies. How to make the most out of the music cell, the row, and other creative melodic devices. Group and individual lessons. **1 credit each.**
- MUS 472 PIANO PEDAGOGY INTERNSHIP I**
 Student teaching under faculty supervision. **1 credit.**
- MUS 473 PIANO PEDAGOGY INTERNSHIP II**
 Student teaching under faculty supervision. **1 credit.**

COURSE DESCRIPTIONS

MUS 492 MUSIC SEMINAR

Prerequisites: MUS 224, 226, 314, HUM 200. Capstone course reviewing major areas of music study. Required of all senior music majors. Interaction of faculty with advanced students in an area of musical study. Requires formulation of a written personal philosophy of music. **2 credits.**

MUS 495 SENIOR RECITAL

Senior Music recital. Students are graded on an *S/U* basis. Recital fee: \$150. **0 credit.**

Courses in Navy ROTC

NSC 110L NAVAL SCIENCE LABORATORY

A weekly two-hour laboratory covering professional and military subject matter. Attendance is mandatory for all midshipmen. **0 credit.**

NSC 111 INTRODUCTION TO NAVAL SCIENCE

Emphasis on the mission, organization, regulations and components of the Navy and Marine Corps. **3 credits.**

NSC 114 SEAPOWER AND MARITIME AFFAIRS

This course deals with the importance of seapower in historical events, including emphasis on worldwide political-military confrontations following the cold war. **3 credits.**

NSC 212 NAVAL SHIPS SYSTEMS

Types, structures and purpose of naval ships. Hydrodynamic forces, stability, compartmentalization, electrical, and auxiliary systems. Theory of design and operation of steam, gas turbine, and nuclear propulsion. Shipboard safety and firefighting. **3 credits.**

NSC 221C NAVIGATION/NAVAL OPERATIONS I: NAVIGATION

Piloting and celestial navigation theory, principles, and procedures. Tides, currents, weather, use of navigation instruments and equipment, and practicum. Laboratory required. **3 credits.**

NSC 222 EVOLUTION OF WARFARE

A survey of military history emphasizing principles of warfare, strategy and tactics, and significant military leaders and organizations. **3 credits.**

NSC 223 PRINCIPLES OF NAVAL MANAGEMENT I

Theory and principles of management, focusing on the officer-manager as an organizational decision maker. Includes interpersonal skills, behavior factors, and group dynamics. **3 credits.**

NSC 293 DIRECTED STUDY IN NAVAL ROTC

Prerequisite: Permission of Professor of Naval Science. Intensive individualized study in particular aspects of Naval Science that are not covered in regular course offerings. Enrollment is recommended for NROTC students who are anticipating attending the Naval Science Institute in Newport, RI, during sophomore/junior summer. Course content and title may vary from term to term. **1-3 credits.**

NSC 312 NAVAL SHIPS SYSTEMS II

Prerequisite: NSC 212. Fire control systems, weapons types, capabilities, and limitations. Physical aspects of radar and underwater sound for target acquisition, threat analysis, tracking, weapons selection, delivery, and guidance. Explosives, fusing, and Naval ordnance. **3 credits.**

NSC 321C NAVIGATION/NAVAL OPERATIONS II: SEAMANSHIP AND SHIP OPERATIONS

Prerequisite: NSC 223. International and inland rules of the road; relative motion-vector analysis; ship handling, employment, and tactics, afloat communications; and operations analysis. Laboratory required. **3 credits.**

NSC 422 AMPHIBIOUS WARFARE

History of amphibious warfare emphasizing doctrine and techniques as well as an understanding of the interrelations of political, strategic, operational, tactical, and technical levels of war from the past. **3 credits.**

NSC 423 PRINCIPLES OF NAVAL MANAGEMENT II (LEADERSHIP AND ETHICS)

Prerequisite: NSC 223. Integration of professional competencies and qualities of effective leadership with emphasis on moral and ethical responsibilities, accountability, communications and military law for the junior officer. **3 credits.**



COURSE DESCRIPTIONS

Courses in Philosophy

PHI 201 INTRODUCTION TO PHILOSOPHY

A study of the issues of philosophy centered in such classical problems as truth, knowledge, origins, values, and religious experience. Includes a survey of the leading systems of philosophy. All systems are compared and contrasted with the Christian world view based on divine revelation. **3 credits.**

Courses in Political Science

POS 231 AMERICAN CONSTITUTIONAL GOVERNMENT

A historical study of the origins, framing, and ratification of the U.S. Constitution with an emphasis on the structure of American government and the development of the distinctly American theory and practice of constitutionalism. **3 credits.**

POS 349 HISTORY OF U.S. PRESIDENTIAL ELECTIONS

See HIS 349. **3 credits.**

POS 492 POLITICAL SCIENCE INTERNSHIP

One semester field experience in Washington, D.C., offered in conjunction with a government agency or political organization. **6 credits.**

Courses in Psychology

PSY 210 GENERAL PSYCHOLOGY

Prerequisite to all other courses in psychology. A survey of the field including fundamentals of neurophysiology, sensation/perception, learning, memory, thinking/language/intelligence, child development, emotion, motivation, personality, and social behavior. Introduces specialized fields of psychology. **3 credits.**

PSY 215 INTERMEDIATE PSYCHOLOGY

Prerequisite: PSY 210. An introductory study of sensation, perception, learning, and memory, including an emphasis on the endocrine system and emotions. Through critical thinking, students will filter all content through a Scriptural frame of reference. **3 credits.**

PSY 220 BIBLICAL COUNSELING TRAINING

Prerequisites: PSY 210 and Psychology major or permission of professor. Teaches how to examine one's emotions and relationships Biblically. Compares and contrasts Biblical and humanistic ways of handling life's problems. **3 credits.**

PSY 230 INTERMEDIATE PSYCHOLOGY PRACTICUM

Prerequisites: PSY 210, 220. Intermediate Practicum is an exposure to the task of Biblical counseling. This course is designed to assist the student with the development of a helping framework with a Biblical foundation. The student will develop skills needed to aid others in managing the problem situations of their lives more effectively. Opportunity will be afforded to observe and perhaps experience counseling situations through volunteering at an approved organization. **3 credits.**

- PSY 240 ADOLESCENT PSYCHOLOGY**
Prerequisites: PSY 210, 220. Studies the emotional and interpersonal dynamics of human beings between the developmental characteristics of childhood dependency and adult commitments, such as marriage and career. **3 credits.**
- PSY 250 MARRIAGE AND THE FAMILY**
Prerequisites: PSY 210, 220, 240. Examines the characteristics which foster commitments for a lifetime and the foundations for raising strong, healthy children. **3 credits.**
- PSY 260 CHILD PSYCHOLOGY**
Prerequisites: PSY 210, 220, 240, 250. Clarifies nature versus nurture. Studies the spiritual, sensory, motor, attention, perceptual, memory, cognitive (including learning and intelligence), emotional, language, and social development of human life from birth through late childhood. **3 credits.**
- PSY 272 EDUCATIONAL PSYCHOLOGY**
 See EDU 272. **3 credits.**
- PSY 330 CLINICAL AND COUNSELING PSYCHOLOGY**
Prerequisites: PSY 210-250. The principal approaches to counseling are considered. Methods in group and individual counseling; theories and procedures used in clinical and counseling psychology. **3 credits.**
- PSY 340 NEUROPHYSIOLOGY**
Prerequisites: PSY 210-250. Studies sensory structures and processes, motor structures and functions, central structures and processes, motivation, arousal, emotion, neuromodulators and drugs, hormonal factors, and neurophysiological models (such as memory, language, learning, and psychiatric disorders). **3 credits.**
- PSY 350 ABNORMAL PSYCHOLOGY**
Prerequisites: PSY 210-250. Studies the cause of personality disorganization including neurotic and psychotic behavior and their origin, classification, and symptoms. Surveys diagnosis, therapy, and prevention. **3 credits.**
- PSY 450 PSYCHOLOGY PRACTICUM**
Prerequisite: Senior standing in the psychology department; departmental approval. The student gains practical experience in a specialty area by doing volunteer work in an approved organization. This knowledge will be reinforced with classroom sharing and instruction one to three hours per week and supervised field work a minimum of five hours per week. **3 credits.**
- PSY 460 EXPERIMENTAL PSYCHOLOGY**
Prerequisites: PSY 210-250. An introduction to the research process including the basic nature of research, simple research designs, and statistics for the behavioral sciences, with an emphasis on laboratory skills and reporting. Required for graduate work in psychology. Lab fee: \$35. **3 credits.**
- PSY 465 SOCIAL PSYCHOLOGY**
Prerequisites: PSY 210-250. A scientific study of how people think about, influence, and relate to one another, with an emphasis on attitudes and beliefs. **3 credits.**

COURSE DESCRIPTIONS

- PSY 470 PERSONALITY THEORY**
Prerequisites: PSY 210-250. Studies the organization, classification, and dynamics of personality. **3 credits.**
- PSY 471-474 DIRECTED STUDY IN PSYCHOLOGY**
Prerequisite: Approval by Department Chairman. This course is tailored to fit the special needs of the students involved. Course descriptions may vary with the course needs.
471 = 1 credit; 472-474 = 2 credits each.
- PSY 491 PSYCHOLOGY SEMINAR**
Prerequisites: PSY 210-470. Reviews major areas of study within the field of psychology, evaluating the student's knowledge of major concepts throughout the field. **3 credits.**

Courses in Science

- SCI 104 GENERAL BIOLOGY I**
An introduction to biology with a Christian-creationist perspective, to the major concepts in life science that affect our society and concept of self: DNA and chemical effects on living cells; reproduction and life before birth; genetic principles, general animal and plant studies, ecology, origin and history of life on earth; understanding scientific thinking. NOTE: Those who are majoring in biology, pre-medicine, psychology, or exercise and sport science must also register for SCI 194 Biology I Lab. **3 credits.**
- SCI 105 GENERAL BIOLOGY II**
Prerequisite: SCI 104. A continuation of SCI 104. The study of metabolic processes, plant and animal structure and function, genetic engineering, and social ecology. Laboratory SCI 195 required. **3 credits.**
- SCI 106 PHYSICAL SCIENCE**
An introduction to the fundamentals of matter and energy, emphasizing the Biblical teaching of a literal six-day creation for interpreting scientific data. This course is designed for non-science and elementary education majors with a laboratory component incorporated into the course. **3 credits.**
- SCI 107 EARTH SCIENCE**
An introduction to the fundamentals of geology, weather, and astronomy, emphasizing the Biblical teaching of a literal six-day creation and a universal Flood for interpreting scientific data. **3 credits.**
- SCI 151 MEDICAL TERMINOLOGY**
Introduction to biomedical terminology through the study of prefixes, suffixes, and root words. **1 credit.**
- SCI 194 BIOLOGY I LAB**
Lab work in biology. Lab fee: \$40. **1 credit.**
- SCI 195 BIOLOGY II LAB**
Lab work in biology. Lab fee: \$40. **1 credit.**

COURSE DESCRIPTIONS

- SCI 201 GENERAL PHYSICS I WITH LAB**
Prerequisite: MAT 140 or equivalent. Basic principles and laboratory work. Topics include force balances, Newton's laws of motion, conservation of momentum, properties of fluids, phase changes, and gas laws. Laboratory required. Lab fee: \$40. **4 credits each.**
- SCI 202 GENERAL PHYSICS II WITH LAB**
Prerequisite: SCI 201 or equivalent. A continuation of General Physics I (SCI 201). Topics include acoustics, electricity and magnetism, electromagnetic radiation, optics, and radioactivity. Laboratory required. Lab fee: \$40. **4 credits.**
- SCI 204 ANATOMY AND PHYSIOLOGY I WITH LAB**
Prerequisite: SCI 104. This course consists of a study of the structures and functions of the human body. This semester covers cells, tissues, the integument, skeletal system, muscular system, nervous system, and endocrine system. Laboratory required. Lab fee: \$40. **4 credits.**
- SCI 205 ANATOMY AND PHYSIOLOGY II WITH LAB**
Prerequisite: SCI 204. A continuation of SCI 204. Covers digestion, the respiratory system, circulatory system, urinary system, reproduction, and development. Laboratory required. Lab fee: \$40. **4 credits.**
- SCI 210 HISTORY AND PHILOSOPHY OF SCIENCE**
Prerequisites: SCI 104, 106 or 107. The history of science beginning with the earliest human history recorded in Genesis chapter 1; the divine mandate for science (Genesis 1:28) and the philosophical underpinnings of secular and Biblically-based science are emphasized. **3 credits.**
- SCI 251 GENERAL CHEMISTRY I WITH LAB**
Prerequisite: High school Algebra II or MAT 140 may be taken concurrently. Basic principles and laboratory work. Topics include the mole concept, stoichiometry, solutions, gas laws, thermochemistry, quantum theory, and chemical bonding. Laboratory required. Lab fee: \$40. **4 credits.**
- SCI 252 GENERAL CHEMISTRY II WITH LAB**
Prerequisite: SCI 251 or equivalent. A continuation of General Chemistry I (SCI 251). Topics include chemical equilibrium, acids and bases, reaction equilibrium and reaction rates, electrochemistry, nuclear chemistry, and introductory organic chemistry. Laboratory required. Lab fee: \$40. **4 credits.**
- SCI 279 SCIENCE SEMINAR**
Special topics and content review in the science programs. **1 credit.**
- SCI 304 BOTANY WITH LAB**
Prerequisite: SCI 104, 194. Anatomy and physiology of seed plants and a systematic survey of all major plant groups, living and fossil, including laboratory and field work. Laboratory required. Lab fee: \$40. **4 credits.**

COURSE DESCRIPTIONS

SCI 305 INVERTEBRATE ZOOLOGY WITH LAB

Prerequisite: SCI 105, 195. A systematic survey of the major invertebrate groups, contrasting creationist and evolutionist concepts of phylogeny and the meaning of the taxonomic hierarchy. Laboratory required. Lab fee: \$40. **4 credits.**

SCI 306 ORGANIC CHEMISTRY I WITH LAB

Prerequisite: SCI 252 or equivalent. Nomenclature, structure, physical properties, reactions, and preparation of carbon compounds. Laboratory required. Lab fee: \$40. **4 credits.**

SCI 307 ORGANIC CHEMISTRY II WITH LAB

Prerequisite: SCI 306. A continuation of Organic Chemistry I (SCI 306) with special emphasis on compounds of biological importance. Laboratory required. Lab fee: \$40. **4 credits.**

SCI 320 ECOLOGY

Prerequisite: SCI 104. A study of ecology emphasizing the interrelationships of various systems and man's stewardship of the earth's resources. **3 credits.**

SCI 321- FIELD BIOLOGY

322 Field study emphasizing the biology and related geology of selected sites in the United States. Course fee: includes travel and camping expenses; varies with the location of the site. **2 credits each.**

SCI 329 MARINE BIOLOGY

Prerequisites: SCI 105, 305. A study of marine life in natural environments with emphasis on ecological factors and relationships. Course fee: \$125 plus scuba option. **3 credits.**

SCI 330 MICROBIOLOGY WITH LAB

Prerequisites: SCI 104, 194. The study of microbes, especially bacteria, with emphasis on laboratory skills broadly useful in medical and environmental sciences. Laboratory required. Lab fee: \$40. **4 credits.**

SCI 340 IMMUNOLOGY

Prerequisites: SCI 204, 205. An introduction to the immune system including the production and structure of immunoglobulins, the immune response, development of immunity to infection, autoimmunity, and rejection of transplants. **3 credits.**

SCI 375 PALEONTOLOGY

Prerequisites: SCI 105, 106, 305. The study of fossils including an extended field trip, with emphasis on field collection techniques, identification, and biosystematic relationships. Course fee: \$75. **3 credits.**

SCI 402 CELL BIOLOGY

Prerequisite: SCI 105, 252. This course will integrate molecular biology, DNA structure, RNA structure and activity into cell biology. This will include cell morphology as well as physiology. These areas will include distribution of proteins, membrane structure, activities of mitochondria, microtubule and genetic inheritance. Other topics may be introduced as time permits. **3 credits.**

COURSE DESCRIPTIONS

- SCI 410 GENETICS WITH LAB**
Prerequisite: SCI 105. Molecular, neo-Mendelian, and population genetics, including DNA, meiosis, and problem solving, concluding with a discussion of the limits of hereditary variability and the nature and origin of species. Laboratory required. Lab fee: \$40. **4 credits.**
- SCI 420 BIOCHEMISTRY**
Prerequisite: SCI 104, 105, 205, 251, 252. The study of the chemical and physical properties of the major constituents of cells and body fluids. This includes the mechanisms and utilization of amino acids, carbohydrates, lipids, proteins, and nucleic acids. Also included are enzymes, bioenergetics, and nutrition. **3 credits.**
- SCI 475 SENIOR RESEARCH I**
Prerequisites: five laboratory courses and approval of cooperating faculty, GPA of 3.00. Scientific literature search leading to formulation of a thesis statement or development of a research project. Laboratory required. Lab fee: \$40. **0 credit**
- SCI 480 SENIOR RESEARCH II**
Prerequisites: SCI 479, GPA of 3.00. Development of an oral presentation or performance of a research experiment and presentation of a scientific research paper. Laboratory required. Lab fee: \$40. **2 credits.**
- SCI 481-482 DIRECTED STUDY IN SCIENCE**
Prerequisite: department approval. This course is tailored to fit the special needs of the students involved. Course descriptions may vary with the course needs. **3 credits each.**
- SCI 491 ORIGINS SEMINAR**
Prerequisites: Senior status. Capstone course. Topics in origins research from a creationist perspective. **1 credit.**

Courses in Secretarial Science

- SEC 101 OFFICE PROCEDURES AND SUPERVISION**
Students develop ability and skill in a variety of office responsibilities. Course covers duties expected of a confidential, administrative, or executive assistant in the normal operations of business and professional offices. Emphasis is given to job staffing, appraisals, motivation, human relations, equipment, and ethics. An introduction to the field of records management is covered. **3 credits.**
- SEC 107 KEYBOARDING/WORDPROCESSING I**
Students learn the touch system of keyboarding and develop accuracy, rhythm, and speed. Presents form, arrangement, and style of business letters and other business documents. Course fee: \$40. **3 credits.**
- SEC 108 KEYBOARDING/WORDPROCESSING II**
Prerequisite: SEC 107. Experience in typing a wide variety of cards, envelopes, reports, manuscripts, forms, and general correspondence. Course fee: \$40. **3 credits.**

COURSE DESCRIPTIONS

SEC 210 OFFICE TECHNOLOGY

Prerequisites: SEC 107, 108. The operation of business equipment found in modern offices, including transcription equipment, word processors, electronic calculators and computer related functions, telephone, electronic mail, FAX, and photocopiers. Course fee: \$20.
3 credits.

SEC 300 MEDICAL AND LEGAL TRANSCRIPTION

Prerequisites: SEC 107, 108, 210. An overview of common medical and legal office terminology, documents, and procedures. **3 credits.**

Courses in Special Education

SED 200 INTRODUCTION TO EXCEPTIONAL STUDENTS

Examines the foundations of special education, including historical perspectives, current trends and issues, and service delivery models. It provides elementary and special education majors with recommended procedures for teaching children who have learning disabilities, behavior disorders, hearing impairments, visual impairments, mental retardation, physical challenges, and those who are gifted and talented. **3 credits.**

SED 331 STRATEGIES FOR TEACHING STUDENTS WITH SPECIFIC LEARNING DISABILITIES

Prerequisite: SED 200. Instructional strategies will be analyzed for teaching students with specific learning disabilities. Topics include teaching basic skills, the adaptation of existing curriculum, and principles in the development, implementation, and evaluation of the individualized educational plan (IEP). **3 credits.**

SED 341 STRATEGIES FOR TEACHING STUDENTS WITH MENTAL RETARDATION

Prerequisite: SED 200. Instructional strategies for teaching children with mental handicaps will be discussed. Topics include special approaches to teaching academic, adaptive, and social skills, key principles in the development, implementation, and evaluation of the individualized educational plan (IEP). Students will have experiences with adaptive and assistive technologies. **3 credits.**

SED 410 TESTS & MEASUREMENTS OF EXCEPTIONAL STUDENTS

Prerequisite: SED 200. Investigation of formal and informal evaluation techniques and the interpretation, application, and communication of results. Emphasis is placed on the use of assessment information for educational programming and individualization of instruction. **3 credits.**

SED 420 BEHAVIOR AND EDUCATIONAL MANAGEMENT OF EXCEPTIONAL STUDENTS

Prerequisite: SED 200. Provides an analysis of classroom organization, behavior management, and consultation skills. Emphasis is placed on spiritual principles of nurturance, child training, and discipline. **3 credits.**

SED 421 STRATEGIES FOR TEACHING STUDENTS WITH BEHAVIOR DISORDERS AND EMOTIONAL HANDICAPS

Prerequisite: SED 200. Instructional strategies will be explored for teaching children and youth with emotional or behavioral disorders. Topics include the development and implementation and evaluation of the individualized education plan (IEP), motivational strategies, technology, and Biblical models for self-discipline. **3 credits.**

SED 430 PERSONAL DEVELOPMENT OF EXCEPTIONAL STUDENTS

Prerequisite: SED 200. Students will learn methods of teaching social and personal skills to exceptional students. Topics include interpersonal relationships, goal setting, individual responsibility, interest inventories, career awareness, vocational training, and transition planning for adult living. **3 credits.**