

Course Descriptions

Abbreviations Used in Course Listings

Hr	credit hours per course
lec	lecture period
rec	recitation period
lab	laboratory period
Conc	concurrent registration required
PR	prerequisite
Coreq	corequisite
consent	consent of instructor required
NP	not a WVU Parallel Course

Restrictions

Students may be restricted from registering for a course based on placement scores or because they have not completed a required prerequisite. Courses at the 300 and 400 levels are restricted to students who have been admitted to the Bachelor of Applied Science or the Regents B.A. Students who have not earned a cumulative G.P.A. of at least 2.00 or who are concurrently enrolled in a Foundations course are restricted from registering for on-line (WEB) courses.

COURSE DESCRIPTIONS

Accounting (ACCT)

- 201. Principles of Accounting.** 3 Hr. The accounting cycle from the analysis of business transactions through the preparation of financial statements; basic theory and practice with respect to accounting for assets and equities.
- 202. Principles of Accounting.** 3 Hr. PR: ACCT 201. Utilization of accounting information for purposes of managerial control and decision making; cost concepts, profit and financial budgeting, analysis of financial statements.

Advertising (ADV)

- 215. Principles of Advertising.** 3 Hr. An introduction to all sides of the advertising field and to the process, quantitative, strategic, and aesthetic by which the sales message is planned, produced, and delivered.

African Studies (ASP)

- 220. Introduction to Africana Studies.** 3 Hr. An interdisciplinary introduction to the histories, economics, cultural and artistic heritages, political and social experiences of Africans and African-Americans, focusing on the relationships between the two experiences.

Agriculture and Extension Education (AGEE)

- 101. Global Food & Agricultural Industry.** 3 Hr. Examination of the history and current developments, structures, functions, and importance of the international food and agricultural industry; issues, concerns and interrelationships and their impacts on American agriculture and society.
- 103. Basics of Agricultural Mechanization.** 2 Hr. Study and application of the foundation area associated with agricultural mechanization.

- 110. Microcomputer Applications in Agricultural Education.** 3 Hr. PR: Consent. Microcomputer applications in the instructional process of agricultural education; use of applications software, agricultural software, and data bases; and methods of integrating microcomputers into secondary school agriculture and extension programs.
- 187. Welding and Heat Treatment.** 1 Hr. Principles and practices of metal arc welding using mild steel. Safety and electrode selection for various metals are covered. Designed for agricultural applied science students.
- 203. Agricultural Mechanics Practica.** 3 Hr. Theory and practice of construction structures and electrical circuits, masonry, equipment maintenance, and surveying.
- 220. Group Organization and Leadership.** 3 Hr. Study of the impact of leaders and organized groups on societies. Role of groups in conveying cultural norms. Principles and techniques involved in forming and directing organizations in providing effective leadership.

Agricultural and Resource Economics (ARE)

- 110. Agribusiness Accounting.** 3 Hr. Introduction to accounting for agricultural, rural, and small business managers. Emphasis on the accounting cycle, analysis, and interpretation of financial statements, income taxes, and managerial accounting. (Students having prior college credit in accounting are not eligible for this course.)
- 150. Introductory Agricultural and Agribusiness Economics.** 3 Hr. Introduction to basic agricultural economics and agribusiness concepts, and the application of these concepts to agricultural and agribusiness issues.
- 204. Agribusiness Management.** 3 Hr. Overview of the agribusiness decision-making process and the functions of agribusiness management; analysis of financial statements and budgeting for evaluating profitability of alternative enterprises and practices.
- 220. Introductory Environmental and Resource Economics.** 3 Hr. Economic analysis of environmental pollution, natural resource conservation and management, outdoor recreation, public land use, wildlife resources, water use, property rights, and benefit-cost issues.

Agriculture (AGRL)

- 111. Professions in Agriculture.** 1 Hr. An overview of subject matter related to agriculture in current society. Emphasis on agricultural organizations, environmental and food issues, careers, and programs within the college.
- 112. Professions in Agriculture.** 1 Hr. Continuation of AGRL 111.

Agriculture, Forestry, and Consumer Science (AFCS)

- 490. Teaching Practicum.** 1-3 Hr. PR: Consent. Teaching practice as a tutor or assistant.
- 491. Professional Field Experience.** 1-18 Hr. (May be repeated up to a maximum of 18 hours.) Prearranged experiential learning program to be planned, supervised, and evaluated for credit by faculty and field supervisors. Involves temporary placement with public or private enterprise for professional competence development.

Agronomy (AGRN)

- 202. Principles of Soil Science.** 3 Hr. PR: CHEM 111 or equiv. and PR or Conc: AGRN 203. Introductory course. Soils as a natural resource emphasizing physical, chemical, and biological properties in relation to plant growth and production, land use and management, soil and water pollution, and environmental protection.
- 203. Principles of Soil Science Laboratory.** 1 Hr. PR or Conc: AGRN 202 or Consent.
- 315. Turfgrass Management.** 3 Hr. PR: AGRN 202 and AGRN 203 and PLSC 206 or Consent. Establishment, maintenance, and adaptation of grasses for lawns, golf courses, parks, athletic and playing fields, and roadsides. Associating differential plant responses with soil, climatic, and biotic factors.

Animal Nutrition (ANNU)

- 260. Animal Nutrition.** 3 Hr. PR: Two courses in chemistry. Digestion and metabolism of food nutrients, nutrient requirements of farm animals, and nutritive values of feeds and rations.

Animal Production (ANPR)

- 308. Animal Production Experience.** (1-4 Hr.) Experience in operating a dairy or livestock farm, including layers or broilers, calving, lambing, or farrowing of hogs. Can be repeated up to a maximum of 4 credits. (3 hr. lab/ per hr. of credit.)
- 338. Horse, Livestock, Poultry Evaluation.** 3 Hr. Appraisal of horses, cattle, sheep, poultry, and swine. Evaluation of scientific techniques used in selecting those species. Tours of representative flocks, herds, and stables will be required. (Two 3-hr. labs.)
- 339. Advanced Evaluation of Animal Products.** (1-4 Hr.) PR: FDSC 334 or ANPR 336 or ANPR 338 or Consent. Advanced selection, evaluation, and grading of domestic livestock, species and animal products. Tours of representative flocks, herds and processing plants will be required. Can be repeated up to a maximum of four credits. (3 hr. lab. / per hr. credit.)

Animal and Veterinary Science (A&VS)

- 150. Introduction to Animal Science.** 2 Hr. Survey of major disciplines in animal and veterinary sciences with emphasis on related terminology; study of the development of breeds of livestock and their identification.
- 251. Principles of Animal Science.** 4 Hr. A comparative study of the production of meat, milk, eggs, and wool. Nutrition, physiology, genetics, hygiene and physical environment, and economics are discussed as bases for sound managerial decisions. (1 hr. lab.)
- 275. Companion Animal Science.** 3 Hr. Basic physiology, nutrition and genetics; economic and ethical consideration of pet ownership; benefits of companion animals in society; aspects of handling and training, behavior, and common health diseases and parasite problems of pet animals.
- 293. A-Z. Special Topics.** 1-6 Hr. PR: Consent. Investigation of topics not covered in regularly scheduled courses.
- 480. A-Z. Assigned Topics.** (1-4 Hr.) To be eligible to register in A&VS 480, the student (1) must be in good standing, and (2) obtain approval of the instructor supervising the topic and (3) approval from the instructor assigned the course responsibility.

- 491. Professional Field Experience.** 1-18 Hr. PR: Consent (May be repeated up to a maximum of 18 hours.) Prearranged experiential learning program, to be planned, supervised, and evaluated for credit by faculty and field supervisors. Involves temporary placement with public or private enterprise for professional competence development.

Applied and Environmental Microbiology (AEM)

- 341. General Microbiology.** 4 Hr. PR: CHEM 115. Introductory morphological, cultural, and physiological characteristics of microorganisms; application of microbiology to agriculture, home economics, and health.

Art History (ARHS)

- 101. Landmarks of World Art.** 3 Hr. The course encompasses the study of outstanding works of the visual arts from past times to the present: (1) sources of the creative impulse, and (2) relationship of art to the civilization producing it.
- 120. Survey of Art History 1.** 3 Hr. The course examines the history of the visual arts in world cultures from prehistoric periods to the fourteenth century.
- 160. Survey of Art History 2.** 3 Hr. The course examines the history of the visual arts in world cultures from the fourteenth century to the present.

Astronomy (ASTR)

- 106. Descriptive Astronomy.** 3 Hr. The celestial sphere, star time, solar time, Kepler's laws, H-R diagram, and modern developments. No sophisticated mathematics used; only simple geometrical arguments employed.

Athletic Coaching Education (ACE)

- 100. The Total Athlete.** 3 Hr. In-depth analysis of topics associated with being an athlete, i.e., attitude, academics, media, peer pressure, racism in sports, recruiting, AIDS, rape, stress/time management, suicide, sportsmanship, ethics, drugs (types and testing), agents, coping with adversity, eating disorders, gambling, life after sports, non-revenue sports, pro sports, violence in sports, gender equity, and personal growth.
- 106. Introduction to Physical Education.** A general overview into the teaching, methodologies, etc. in a physical education/ coaching education environment.
- 256. Principles and Problems of Coaching.** 3 Hr. Principles and problems of interscholastic athletic coaching.

Athletic Training (ATTR)

- 121. Sport Injury Control and Management.** 3 Hr. Training, conditioning, protection, and other injury prevention measures. First aid, emergency service, and care related to physical education and athletics.

Biology (BIOL)

- 101. General Biology.** 3 Hr. Coreq. BIOL 103. Introductory course in biology: cellular, organismal, and population genetics, including reproduction, growth and development, and evolution.

- 102. General Biology.** 3 Hr. Coreq. BIOL 104. Introductory biology: energetics and physiology of cells, organisms, and populations, including regulation and control of multicellular organisms.
- 103. General Biology Laboratory.** 1 Hr. Coreq. BIOL 101. Experiments in biology: genetics and evolution; reproduction, growth, and development of cells, organisms, and populations.
- 104. General Biology Laboratory.** 1 Hr. Coreq. BIOL 102. Experiments in biology: materials exchange, action of enzymes, photosynthesis and respiration, and physiology of organisms.
- 107. Biotechnology and Society.** 3 Hr. An overview of the use of biotechnology to solve agricultural, medical, and environmental problems. Bioethical concerns and societal impacts of the use of the technologies will be discussed.
- 115. Principles of Biology.** 4 Hr. An introductory course presenting basic principles of modern biology. This course represents the first in a four course, integrated sequence required of biology majors. Topics include ecology and evolution, organismal biology, and cellular/molecular biology.
- 117. Introductory Physiology.** 4 Hr. PR: BIOL 115 or BIOL 101, 102, 103, and 104. Continuation of Biology 115. The diversity of reproductive, developmental, functional, and integrative mechanisms in plants and animals.
- 219. The Living Cell.** 4 Hr. PR: CHEM 115 or CHEM 117 and BIOL 117. Continuation of Biology 117. Structure, function and diversity of cells with emphasis on gene expression and the cellular phenotype including cell chemistry, energetics, and regulation of cell activities.
- 221. Ecology and Evolution.** 3 Hr. PR: BIOL 219. Continuation of Biology 219. Basic concepts in evolution and ecology, including Darwin's theory of natural selection, modern population genetics, speciation, population growth and regulation, demography, community ecology, ecosystem dynamics, and human ecology.
- 230. Human Anatomy and Physiology I.** 4 Hr. PR: BIOL 102 and BIOL 104 or Consent. The study of human body structure and function. Lecture emphasizes the integumentary, skeletal, muscular, and nervous systems, and special senses. Laboratory includes a complete cat dissection. For nursing students or others by instructor's consent. (3 hr. lec., 3 hr. lab). NP.
- 231. Human Anatomy and Physiology II.** 4 Hr. PR: BIOL 230 or Consent. A continuation of Biology 230. The following systems are thoroughly studied: endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive. Laboratory work involves physiological investigations and dissections. For nursing students or others by instructor's consent. (3 hr. lec., 3 hr. lab). NP.

Business Administration (BUSA)

- 310. Survey of Business Law.** 3 Hr. PR: junior standing. Overview of the business law discipline. Topics include laws and the court system, employment and labor law, business forms and capitalization, business competition law and business ethics.
- 320. Survey of Management.** 3 Hr. PR: junior standing. Overview of the management discipline as a process involving planning, organizing, controlling and directing. An integrated view of management including organizational behavior is emphasized.
- 330. Survey of Marketing.** 3 Hr. PR: junior standing. Overview of the marketing discipline. Topics include the management of the product, communication, price, and distribution variables as well as an introduction to buyer behavior and marketing research.
- 340. Survey of Finance.** 3 Hr. PR: junior standing. Overview of the finance discipline. Topics include financial statement analysis, risk, capital budgeting, investments, and security markets.

Business Technology (BTEC)

- 101. Introduction to Management.** 3 Hr. An introduction to principles and basic considerations of management at all levels, including aspects of management performance in areas of decision-making, planning, organizing, control, and ethics. NP.
- 102. Introduction to Business.** 3 Hr. Introduces students to the internal organization of business by surveying finance, marketing, ethics, law, and information management. Business structures, changes, and trends will be analyzed. Emphasis will also be placed on the effect of global competition and international marketing. NP.
- 103. Personnel Management.** 3 Hr. Theory, practice and principles involved in the direction, coordination, and payrolls for personnel. NP.
- 107. Business Communications.** 3 Hr. PR: ENGL 101. A study of the vocabulary and techniques of business writing as applied to various forms of research and reporting. Correct English usage in modern business forms and letters. NP.
- 109. Business Mathematics.** 3 Hr. A study of the fundamental processes of banking procedures, percentage, discount, interest, depreciation, investments, payrolls, and insurance. NP.
- 218. Medical Billing and Coding.** 3 Hr. PR: OSTC 107. An introduction to medical coding and billing. The course will cover a variety of medical specialties and issues involved with procedural coding. Insurance carriers, billing requirements, and specific forms will be introduced and completed. NP.
- 256. Managerial Accounting.** 3 Hr. PR: ACCT 202. The theory and practice of managerial accounting for small businesses. NP.
- 257. Income Tax Accounting.** 3 Hr. PR: ACCT 202 or consent. Preparation of income tax returns: gross income, capital gains, and losses, deductions, tax credits, and other tax regulations mainly pertaining to individuals. NP.
- 260. Computerized Accounting.** 3 Hr. PR: ACCT 201 or consent. This course covers pc-based accounting systems. NP.
- 320. Personal Finance.** 3 Hr. Provides the tools and knowledge for personal short- and long-term financial success; includes the topics of financial planning, money management, income and asset protection, investments, and retirement planning. NP.
- 340. Human Resource Management.** 3 Hr. A study of the policies, practices, and systems that influence employees' behavior, attitudes, and performance. NP.
- 350. Advanced Computer Applications in Business.** 4 Hr. PR: CIS 114, CIS 116, or consent. A study of advanced information concepts for managing business in a competitive environment. The Internet, spreadsheet, and database applications will be utilized to research, analyze, and make decisions regarding operations. NP.
- 360. Leadership and Human Behavior.** 3 Hr. A study of leadership in relation to employee motivation, decision-making, and team dynamics. Additional topics include ethics and responsibility, diversity, organizational control, and managing change in the workplace. NP.
- 370. Intermediate Accounting.** 3 Hr. PR: ACCT 201, ACT 202. A study of accounting theory including a review of the accounting cycle. Topics include income recognition, asset valuation, liabilities, current tax regulations, corporate ownership equity, and analysis of accounting data. NP.
- 380. Business Ethics.** 3 Hr. A study of the ethical, cultural, and societal issues facing business and managers with regard to a global business environment. NP.

- 485. Senior Seminar.** 4 Hr. PR: BTEC 350, BTEC 370, senior standing. A capstone course in which the students will integrate the concepts and principles of the B.A.S management emphasis through the process of case analysis and other methods. NP.

Chemistry (CHEM)

- 111. Survey of Chemistry.** 4 Hr. Designed primarily for students taking only one year of college chemistry. Atomic structure; chemical bonding; acids, bases, and salts; periodicity, properties of gases, liquids, and solids; stoichiometry; oxidation-reduction. (3 hr. lec., 3 hr. lab.) (Students may not receive credit for CHEM 115 or CHEM 117 and for CHEM 111.) (CHEM 111 and CHEM 112 cannot be used as pre-requisite courses for organic chemistry; students anticipating the possibility or likelihood of taking organic chemistry must have credit for CHEM 115 and CHEM 116 or for CHEM 117 and CHEM 118.)
- 112. Survey of Chemistry.** 4 Hr. PR: CHEM 111. Continuation of Chemistry 111. Nuclear chemistry; air and water pollution; useful natural materials; consumer chemistry; introduction to organic and biochemistry. (3 hr. Lec., 3 hr. lab.) (Students may not receive credit for CHEM 116 or CHEM 118 and for CHEM 112.) (CHEM 111 and CHEM 112 cannot be used as pre-requisite courses for organic chemistry. Students anticipating the possibility or likelihood of taking organic chemistry must have credit for CHEM 115 and CHEM 116 and CHEM 117 and CHEM 118.)
- 115. Fundamentals of Chemistry.** 4 Hr. Coreq. MATH 126. For students who need more than one year of college chemistry and quantitative relationships on which subsequent chemistry courses are built. (3 hr. lec., 3 hr. lab.) (Students may not receive credit for CHEM 117 and for CHEM 115.)
- 116. Fundamentals of Chemistry.** 4 Hr. PR: CHEM 115. Continuation of CHEM 115. (3 hr. lec., 3 hr. lab.) (Students may not receive credit for CHEM 118 and for CHEM 112 or CHEM 116.)
- 233. Organic Chemistry.** 3 Hr. PR: CHEM 116 or CHEM 118; and PR or CONC: CHEM 235. Basic principles of organic chemistry. Modern structural concepts, the effect of structure on physical and chemical properties, reactions and their mechanisms and application to syntheses.
- 234. Organic Chemistry.** 3 Hr. PR: CHEM 233 and CHEM 235 and PR or CONC: CHEM 236. Continuation of CHEM 233. (3 hr. lec.)
- 235. Organic Chemistry Laboratory.** 1 Hr. PR or CONC: CHEM 233. Fundamental organic reactions and the preparation of organic compounds. (3 hr. lab.)
- 236. Organic Chemistry Laboratory.** 1 Hr. PR: CHEM 233 and CHEM 235 and PR or CONC: CHEM 234. Continuation of CHEM 235. (3 hr. lab.)

Child Development and Family Studies (CDFS)

- 110. Families Across the Life Span.** 3 Hr. Explores the physical, psychological, and cognitive developmental changes of individuals who are functioning in family systems that change across the life-span.
- 112. Introduction to Marriage and Family.** 3 Hr. Explores various dimensions of self-development and personal preference relevant to dating, mate selection, marriage, having children, parenting, divorce, and remarriage.
- 210. Introduction to Parenting.** 3 Hr. Introduction of terminology, descriptions, and explanations of the parental role and parent-child interactions. Emphasis on social and personal definitions of the parental role and on the problems and changes in parent-child relationships.
- 211. Infant Development.** 4 Hr. PR: CDFS 110. Developmental characteristics and environmental effects on the child during the prenatal period and the first two years with implications for guidance and care, includes practical experience working with infants and toddlers.

- 212. Early Childhood Development.** 3 Hr. PR: CDFS 110. Physical, social, emotional, and cognitive development of children from conception to seven years with implications for guidance and care in practical settings.

Communication Studies (COMM)

- 100. Principles of Human Communication.** 1 Hr. Introduction to the human communication process with emphasis on the principles, variables, and social contexts of communication.
- 102. Human Communication in the Interpersonal Context.** 2 Hr. Introduction to interpersonal communication with emphasis upon application of one-to-one communication in a variety of social contexts.
- 104. Human Communication in the Public Communication Context.** 2 Hr. Introduction to principles of communication in the one-to-many context.

Community Health Promotion (CHPR)

- 172. First Aid and Emergency Care.** 2 Hr. Emergency aid for the sick and injured. Emergency services aimed at reducing the potential of permanent disability or threats to life, as well as pain, damage, or suffering of less serious nature.

Computer Engineering (CPE)

- 271. Introduction to Digital Logic Design.** 3 Hr. PR: MATH 156 or Consent. An introduction to the design of digital networks and computers. Topics include number systems, coding, Boolean and switching algebra, logic design, minimization of logic, sequential networks and design of digital sub-systems. (3 hr. lec.)

Computer Science (CS)

- 101. Introduction to Computer Applications.** 4 Hr. Introduction to spreadsheets and databases for problem-solving in disciplines such as math, science, engineering, business, social sciences, behavioral sciences, and environment: using computer applications to create technical reports and presentations.

Counseling (COUN)

- 230. Life Choices.** 3 Hr. Students will examine lifestyle choices typically dictated by unconscious customs rather than research. Covers areas of attitude, relationships, physical lifestyle, health and spirituality. The class consists of lectures and required student participation.

Criminal Justice Studies (CJ)

- 101. Introduction to Criminal Justice.** 3 Hr. This course introduces the student to the three principal components of the criminal justice system: law enforcement, judiciary, and corrections. It will examine the history, structure, functions, and issues of each component, and introduce the student to the measurement of crime, criminological theories, criminal law, justice perspectives, and the juvenile justice system. NP.
- 111. Police Operations.** 3 Hr. The student will be introduced to the day-to-day duties of a police officer. Emphasis will be placed on community and human relations, patrol and traffic functions, order maintenance, report writing, investigations, communications, interviewing, search and seizure, and arrest. Police stress and survival skills will also be discussed. NP.

- 201. Traffic Law Enforcement.** 3 Hr. PR: CJ 101. The role of the police officer in traffic control and enforcement is examined in detail. Among the topics studied will be West Virginia traffic law, accident investigation and reconstruction, traffic education, and the interrelations of local, state, and federal agencies responsible for traffic functions. NP.
- 202. Principles of Criminal Law.** 3 Hr. Structure, definitions, and interpretations of criminal statutes of particular interest. The scope, purpose, and definition of the criminal law in general, including the study of crimes against the person, property, and other offenses. NP.
- 204. Police Defense Tactics.** 3 Hr. The student will be exposed to the methods of physical protection, including the techniques of baton use, disarmament, and defense techniques. NP.
- 206. Introduction to Corrections.** 3 Hr. A survey of the current correctional process in America which includes the origin and legal procedures of the present system and the effects of the system on the individuals as well as on our society. Special emphasis is given to current theories of rehabilitation in the institution and in probation and parole. Emphasis is also given to the administration of the adult and juvenile institutions and the alternatives and future of the present system. NP.
- 212. Abnormal Behavior & Crisis Intervention.** 3 Hr. PR: CJ 101. A study of the recognition and handling of abnormal persons with emphasis on those mental conditions most encountered by the criminal justice practitioner. Methods of crisis intervention, basic conflict management, and referral and diversion will also be discussed. NP.
- 225. Criminal Procedure and Constitutional Law.** 3 Hr. PR: CJ 101. Constitutional and procedural issues relating to search and seizure, arrest, confinement; the admissibility and exclusion of evidence; types and degrees of evidence; discussion of court decisions interpreting the guarantees found in the Bill of Rights. NP.
- 230. Probation and Parole Operations.** 3 Hr. PR: CJ 101. Daily activities in probation and parole. Emphasis on supervision and surveillance techniques, community risk assessment and classification, revocation and pre-sentence report investigations, and effective use of community resources. NP.
- 236. Criminal Investigation.** 3 Hr. PR: CJ 101. This course will survey the fundamental techniques of criminal investigation. Students will be exposed to the history of criminal investigation and criminalistics, interviewing and interrogation, physical evidence, crime scene procedures, crime analysis, investigation techniques, report writing and case preparation, and courtroom testimony. NP.
- 240. Adjudication Process.** 3 Hr. PR: CJ 101. Role and structure of prosecution, public defense, and the courts; basic elements of the substantive criminal law; procedural law and its relation to constitutional guarantees. NP.
- 255. Analysis of Correctional Operations.** 3 Hr. PR: CJ 206. Problems of management of the correctional process; programming, security, information systems, reports, case management, evaluation progress; custody and discipline as they relate to rehabilitative efforts; community adjustment facilities; problems of probation and parole. NP.
- 280. Victimology.** 3 Hr. PR: CJ 101. A focused examination on the victims of crime. Concentration on the psychological and emotional harm experienced by victims and victim services and programs. Analysis of domestic violence, victim compensation, rights, and treatment throughout the criminal justice process. NP.
- 295. Field Practicum.** 3 Hr. PR: Sophomore status and a GPA of 2.0 or higher. A supervised professional study conducted in a criminal justice field setting. NP.

- 301. White Collar and Economic Crime.** 3 Hr. PR: CJ 101. Overview of white collar and economic crime in America including an examination of the extent of economic crime, law enforcement effectiveness, theories of causation and methods of prevention. Includes discussion of the effect of the Internet on white collar and economic crime. NP.
- 302. Terrorism.** 3 Hr. An examination of terrorism both domestic and foreign including its causes and trends. Also examines selected current cases, explanatory theories, methods of prevention or containment, and the effectiveness of law enforcement efforts. NP.
- 315. Criminal Evidence.** 3 Hr. PR: CJ 225. Study of the rules of evidence and admissibility. Students will develop the ability to apply those rules in the collection and presentation of evidence in a court of law. Forensic requirements, statutory law, and other related issues will be emphasized. NP.
- 316. Community Based Corrections.** 3 Hr. PR: CJ 206. Study of probation, parole, diversion programs, and intermediate sanctions including house arrest, community service, restitution, half-way houses, and temporary release. Some focus placed on special-needs offenders. NP.
- 324. Drugs, Crime, and Society.** 3 Hr. PR: CJ 101 and SOCA 101. Examines the effects of drugs on the individual, the criminal justice system, and society. The focus is on investigation, prevention, and intervention techniques. Societal values and theoretical frameworks surrounding drug abuse, laws, and punishments are examined.
- 325. The Role of Women in Criminal Justice.** 3 Hr. Examination of how the roles of women in criminal justice have changed over time. Focus will be placed on women as practitioners, victims, and offenders. NP.
- 410. Research Methods in Criminal Justice.** 3 Hr. PR: STAT 111 or STAT 211. A general introduction to the process of research emphasizing research design, techniques of data collection including electronic methods, analysis and interpretation of research results as applied to the study of criminal justice. NP.
- 415. Forensic Techniques.** 3 Hr. PR: CJ 236 and CJ 315. Explores the scientific disciplines utilized to detect trace evidence at a crime scene. Explains and demonstrates the methods used for collection of various kinds of evidence. The student will learn the importance of the “chain of custody” from the crime scene to the court room. NP.
- 455. Ethics and the Criminal Justice System.** 3 Hr. PR: CJ 101 and 410. Focus on the ethical issues faced by individuals as citizens and criminal justice professionals. The course will assist students in clarifying their values and in establishing a framework for ethical decision making. Students will examine ethical issues, which relate to a variety of concerns, and a variety of professional ethical codes. NP.
- 461. Current Issues in Criminal Justice.** 3 Hr. PR: CJ 101 and 410. Focus on current issues facing criminal justice including those related to prevention of crime, law enforcement, corrections, institutional reform, and public opinion. Examination of recent research, emerging trends, and policy. NP.
- 485. Senior Seminar.** 3 Hr. PR: Senior standing. Criminal Justice major. A senior capstone course. An examination of controversial criminal justice issues. Course allows students to consider the integration of theoretical and methodological issues. Focus will also be given to career or graduate placement. NP.

Economics (ECON)

- 201. Principles of Microeconomics.** 3 Hr. Introductory microeconomic analysis. Competitive behavior of firms, price determination, efficiency in production and equity in distribution.
- 202. Principles of Macroeconomics.** 3 Hr. Introductory macroeconomic analysis. Aggregate demand and supply, saving, investment, the level of employment and national income determination, monetary and fiscal policy.

Education (EDUC)

- 100. Education Colloquium.** 1 Hr. Components of and requirements for the teacher preparation program, including specializations, professional organizations, requirements for admission to the major, avenues to program completion, and requirements for work with children or youth.
- 200. Professional Inquiry in Education.** 3 Hr. PR: EDUC 100 and ENGL 101 and ENGL 102. An examination of students' preconceptions about education and their socialization process relative to the following: aims and purposes of public education, students as learners, curriculum, instruction.

Educational Psychology (EDP)

- 101. Learning Strategies for Academic Success.** 3 Hr. The purpose of the course is to help students develop active learning strategies that are research-based and appropriate for the college curriculum that will enable them to achieve academic success.

Electrical Engineering (EE)

- 221. Introduction to Electrical Engineering.** 3 Hr. PR: PHYS 111 and MATH 156. Electrical engineering units, circuit elements, circuit laws, measurement principles, mesh and node equations, network theorems, operational amplifier circuits, energy storage elements, sinusoids and phasors, sinusoidal steady state analysis, average and RMS values, complex power. (3 hr. lec.)
- 222. Introduction to Electrical Engineering Laboratory.** 1 Hr. Coreq: EE 221. Design and experimental exercises in basic electrical circuits. Use of the digital computer to solve circuit problems. (3 hr. lab.)
- 223. Electrical Circuits.** 3 Hr. PR: EE 221 and EE 222 and PHYS 112 and MATH 156. Continuation of EE 221. Time response of RC and RL circuits, unit step response, second order circuits, poly-phase systems, mutual inductance, complex frequency, network frequency response, two-port networks and transformers. Fourier methods and Laplace Transforms. (3 hr. lec.)
- 224. Electrical Circuits Laboratory.** 1 Hr. Coreq: EE 223. Design and experimental exercises in circuits. Transient circuits, steady state AC circuits, frequency response of networks. Use of digital computer to solve circuit problems. (3 hr. lab.)

Engineering (ENGR)

- 101. Engineering Problem Solving 1.** 2 Hr. PR: Open to all Freshman Engineering students or consent. Orientation to engineering disciplines, academic success strategies, engineering design process and team projects, use of computers in problem solving, technical report writing, presentational techniques, and Internet applications.
- 102. Engineering Problem-Solving 2.** 3 Hr. PR: ENGR 101 and MATH 155 with a C or higher. Continued development of engineering problem-solving, teamwork, and communication skills with emphases on using the computer as a tool and algorithm development with a high-level language such as MATLAB.
- 199. Orientation to Engineering.** 1 Hr. Orientation to degree programs and requirements, departmental resources, curriculum options, students' responsibilities, and opportunities. Development of academic success strategies and University experiences to equip students to make life decisions.

English Language and Literature (ENGL)

- 090. Developmental Writing.** 3 Hr. A course especially designed for students needing to develop basic writing skills. Students who score less than 18 on the ACT English, less than 88 on the ACCUPLACER sentence skills test, or less than 450 on the SAT Verbal may not register for English 101 until they pass English 090. Pass/ Fail grading. Course does not count toward graduation. NP.

- 101. Composition and Rhetoric.** 3 Hr. A course in writing non-fiction prose, principally the expository essay.
- 102. Composition and Rhetoric.** 3 Hr. PR: ENGL 101 or equiv. Writing college-level research papers based on argumentative models. Precision in footnotes, bibliographies, usage, punctuation, and stylistics assumed.
- 111. Introduction to Creative Writing.** 3 Hr. PR: ENGL 101 and ENGL 102 or equivalent. Practice in writing a sequence of structured exercises designed to enhance creative writing skills.
- 154. African American Literature.** 3 Hr. A historical introduction and survey from its beginnings to the present.
- 156. Literature of Native America.** 3 Hr. A historical survey of Native American prose, poetry, song, and story from the beginning to the present.
- 230. Film Studies.** 3 Hr. Topics in the study of film, or film and literature, in a historical, theoretical, and/or cultural context.
- 232. Poetry.** 3 Hr. Appreciation and enjoyment of poems through critical and analytical reading. Studies in the various types of poetry, and of the language, imagery, and techniques of poetic expression.
- 233. The Short Story.** 3 Hr. The short story's structure, history, and contemporary forms.
- 235. Novel.** 3 Hr. The novel's structure, history, and contemporary forms.
- 241. American Literature 1.** 3 Hr. A historical introduction and survey from its beginnings to the mid-nineteenth century.
- 242. American Literature 2.** 3 Hr. A historical introduction and survey from the mid-nineteenth century to the present.
- 258. Popular American Culture.** 3 Hr. A survey of modern popular American culture from 1940 to the present, with special emphasis on popular literature, music, television, movies, radio in its golden age, and comic books.
- 261. British Literature 1.** 3 Hr. A historical introduction and survey from the middle ages through the eighteenth century.
- 262. British Literature 2.** 3 Hr. A historical introduction and survey from the late eighteenth century to the present.
- 272. Modern Literature.** 3 Hr. British and American poetry, drama, and fiction from 1900 to 1960.
- 285. Images of Women in Literature.** 3 Hr. Representative literary works studied against backdrop of social and historical documents to examine the effect of images of women in literature on the self-image of women today.
- 318. Topics in Creative Writing.** 3 Hr. (May be repeated for a maximum of 9 hours.) Advanced work in creative writing; course content changes with genre: fiction, poetry, non-fiction.
- 331. Topics in Genre.** 3 Hr. This variable-topic course will trace formal and thematic conventions in poetry, drama, prose, fiction, and/or nonfiction.

Environmental Protection (ENVP)

155. Elements of Environmental Protection. 3 Hr. An introduction to land and water resources and their management and protection. An evaluation of the relationships between human activities and natural environments and the interaction between natural resource utilization and development.

Equine Production and Management (EQST)

101. Introduction to Equine Science. 3 Hr. Provides a basic understanding of equine science and management. Topics include the history and future of the equine industry, breeds, selection, health and nutrition, along with basic management practices. NP.

105. Equine Safety and Behavior. 3 Hr. Discusses and demonstrated safety measures required when working with and around horses. Students will learn the importance of understanding equine behavior for safety, management, and training purposes. NP.

115. Riding Basics. 1 Hr. Provides riding instruction aimed at improving the rider's body position, balance, control, seat, strength, confidence and concentration. Riders will learn the skills and techniques needed to handle and control a horse effectively from the saddle. NP.

120. Introduction to Horsemanship & Training. 4 Hr. PR: EQST 105. Focuses on the understanding and application of natural horsemanship and a variety of horsemanship and training techniques, including gaining control and respect, handling, ground work, and starting colts. (3 hr. lec., 3 hr. lab) NP.

230. Advanced Horsemanship & Training. 4 Hr. PR: EQST 105 and EQST 120. Improves overall communication between the horse and rider. Students will learn techniques used in training horses to be willing and responsible to the rider's subtle cues (3 hr. lec., 3 hr. lab) NP.

240. Equine Facilities & Stable Management. 4 Hr. Teaches practical skills and considerations that will be needed to own or operate an equine facility, including functional requirements, design and layout, safety and operation of farm equipment, and waste management. (3 hr. lec., 3 hr. lab) NP.

Fashion Design and Merchandising (FDM)

110. Introduction to Fashion Business. 3 Hr. Introduces the fashion business by exploring its production and distribution systems with a focus on basic merchandising, design, marketing, and retail concepts.

140. Introduction to Textiles. 3 Hr. Study and classification of fibers, yarns, fabrics, color applications, and finishes for apparel-industry applications.

Foreign Literature in Translation (FLIT)

125. Spanish Civilization and Literature. 3 Hr. This course provides students with an understanding of and appreciation for Spanish literature as it relates to the social, historical and cultural developments within Spain from the sixteenth century to today.

Forest Management (FMAN)

212. Forest Ecology. 3 Hr. PR: FOR 205. Forest and environmental factors; site and type characteristics.

222. Forest Mensuration. 4 Hr. PR: MATH 155 and STAT 211. Estimating volume and growth of trees and forest stands with emphasis on the mathematical and statistical techniques involved. Laboratories include practical field experience.

Forestry (FOR)

- 101. Careers in Natural Resources Management.** 1 Hr. (Required only for students who rank as freshmen in the Division of Forestry.) An introduction to professional activities in forest resources management, recreation and parks management, wildlife and fisheries management, and wood science and utilization. Survey of major issues in natural resources management and conservation.
- 140. West Virginia's Natural Resources.** 3 Hr. Survey of policies and practices in development and use of soil, water, forest, wildlife, mineral, and human resources in West Virginia.
- 203. Careers in Natural Resources.** 1 Hr. Planning a career in forestry and natural resources professions. Developing a career strategy, resume building, and conducting a successful job search.
- 205. Dendrology.** 3 Hr. Classification and silvical characteristics of North American forest trees.

Geography (GEOG)

- 102. World Regions.** 3 Hr. Comparison and relationships of world regions. Geographical perspectives of contemporary global problems. Developing regions contrasted with modernized regions and the consequences of their interactions.
- 106. Physical Geography Laboratory.** 1Hr. Coreq. GEOG 107.
- 107. Physical Geography.** 3 Hr. Introduction to global environmental systems operating on the earth's surface, emphasizing weather and climate, soils, natural vegetation, and geomorphology, and examination of human interaction with these natural processes.
- 108. Human Geography.** 3 Hr. Introduction to geographical dimension in human behavior and the human-altered landscape including social, demographic, economic, and political attributes of societies.
- 205. Natural Resources.** 3 Hr. Introduces the concept of natural resources and surveys such topics as land, soil, rangeland, forests, water, atmosphere, minerals, and energy. Emphasis is on the United States within the context of the global environment.
- 240. United States and Canada.** 3 Hr. Regional study of the United States and Canada emphasizing such geographic features as climate, natural vegetation, topography, natural resources, population distribution and trends, agriculture, manufacturing, transportation systems, and regional culture.

Geology (GEOL)

- 101. Planet Earth.** 3 Hr. Composition and structure of the Earth and the physical processes that change Earth's surface. GEOL 102 not required with GEOL 101. (Accompanied by registration in GEOL 102, class meets requirements for 4 hr. credit in a laboratory science in geology.) Students cannot receive credit for GEOL 101 and GEOL 110 or GEOG 110.
- 102. Planet Earth Laboratory.** 1 Hr. PR or CONC: GEOL 101. Laboratory study of the earth using rocks, minerals and maps. (2 hr. lab.) (Students cannot receive credit for GEOL 102 and GEOL 111 or GEOG 111.)
- 103. Earth Through Time.** 3 Hr. PR: GEOL 101 or GEOL 110 or GEOG 110. Evolution of the Earth and its inhabitants. (Accompanied by registration in GEOL 104, class meets requirements for 4 hr. credit in a laboratory science in geology.)
- 104. Earth Through Time Laboratory.** 1 Hr. PR or CONC: GEOL 103. Laboratory study of sedimentary rocks, fossils and geologic maps and their use in interpreting Earth history. (2 hr. lab.)

- 105. A Study of Dinosaurs.** 3 Hr. A beginning course in the study of dinosaurs. Classification, biology, and behavior will be studied. NP.
- 110. Environmental Geoscience.** 3 Hr. Physical aspects of the earth with emphasis on natural resources, environmental degradation and hazards. (Accompanied by GEOL 111 meets requirements for a 4 hr. credit in laboratory science.) (Students may not receive credit for GEOL 101 and GEOL 111.)
- 111. Environmental Geoscience Laboratory.** 1 Hr. PR or CONC: GEOL 110. (Students may not receive credit for GEOL 102 and GEOL 111.)

History (HIST)

- 101. Western Civilization: Antiquity to 1600.** 3 Hr. (HIST 101 does not have to precede HIST 102.) A survey of the major developments in Western civilization beginning with the ancient Mediterranean world and concluding with Reformation Europe.
- 102. Western Civilization: 1600 to Present.** 3 Hr. (HIST 102 may precede HIST 101.) A survey of major developments in Western civilization from 1600 to the present with attention to Europe's emerging industrial society and changing role in world affairs.
- 152. Growth of the American Nation to 1865.** 3 Hr. (HIST 152 does not have to precede HIST 153.) Examines the basic political, economic, and social forces in formation and development of United States before 1865. Emphasis on national development from independence through the Civil War.
- 153. Making of Modern America: 1865 to the Present.** 3 Hr. (HIST 153 may precede HIST 152.) Continues the examination of basic political, economic, and social forces in the development of the United States since the Civil War.
- 179. World History to 1500.** 3 Hr. Comparative history of Africa, Asia, and Europe from earliest times until 1500. Political, economic, social, and religious developments with emphasis on patterns of authority, the individual, nature, and society.
- 180. World History since 1500.** 3 Hr. Comparative history of Africa, Asia, and Europe 1500 to present. Political, economic, and social developments with emphasis on patterns of authority, the individual, nature, society, and the impact of the West.
- 209. Twentieth Century Europe.** 3 Hr. Traces the major political, economic, and social developments of Europe from World War I to the present.
- 250. West Virginia.** 3 Hr. Historical foundations and development of West Virginia, with particular emphasis upon the growth of the government, the economy, and the traditions of the state.
- 261. Recent America: U.S. since 1918.** 3 Hr. (Primarily for non-history majors). The 1920's, the New Deal, World War II, and a survey of developments since World War II.

Honors (HONR)

- 199. Orientation to Honors.** 1 Hr. Orientation to degree programs and requirements, departmental resources, curriculum options, student responsibilities and opportunities.

Horticulture (HORT)

- 220. General Horticulture.** 3 Hr. PR: BIOL 101 and BIOL 103, or consent. Principles underlying present-day horticulture practice with special emphasis on how basic discoveries in plant science have been applied in horticulture.

- 260. Woody Plant Materials.** 3 Hr. PR: BIOL 101 and 103 or equiv. Common ornamental woody plants, their identification, cultural needs, and evaluation of use; some outdoor study and a one-day nursery trip.
- 262. Herbaceous Plant Materials.** 3 Hr. Identification, description, adaptability, and evaluation of selected herbaceous annuals and perennials with emphasis on their use as design elements.

Hospitality and Tourism (HTOR)

- 110. Food Production I.** 6 Hr. Coreq: HTOR 120. Develops basic skills needed in the kitchen. Students learn proper techniques, terminology, and equipment for activities ranging from carving to menu planning. Prepare small quantity menus in a commercial-kitchen setting and review current food quality standards. NP.
- 111. Food Production II.** 6 Hr. PR: HTOR 110. Builds on techniques learning in HTOR 110, with an emphasis on restaurant and dining room operations. Exercises will include exploration in classic cuisines, dinner promotion methods, personnel training, and budget development. Students will develop the culinary skills needed to prepare professional cafeteria-style meals as well as catered events. NP.
- 120. Sanitation.** 2 Hr. Stresses the principles of safe food preparation and handling. Topics include safe food purchasing; storage and preparation; causes of food-borne illness; insect and rodent control; and government rules and regulations pertaining to food service sanitation. NP.
- 130. Food, Beverage, Inventory, Labor, and Cost Control.** 3 Hr. Principles of modern food and beverage management as applied to the food service industry. Emphasis on systems of food and labor cost controls, budgets for food service operations, pricing and planning, and menu analysis. Relationships between management and employees and current trends in the food service industry will also be explored. NP.
- 140. Restaurant Management.** 6 Hr. PR: HTOR 110 and 111. Provides a realistic understanding of how to operate a restaurant. Experience will be provided in cooking food to order, service, managerial skills, training and supervising employees, purchasing food products, and managerial decision making. NP.
- 141. Kitchen Layout.** 3 Hr. Basic facts, principles, and learning experiences involved in planning a commercial kitchen. Appropriate kitchen equipment selection and sequence of work and material flow are analyzed for specific menus. NP.
- 150. Fine Dining.** 3 Hr. PR: HTOR 140. Students learn skills necessary to work in a five-star resort, hotel, or restaurant. Skills include serving foods sent from the kitchen to be prepared tableside, and include carving, flaming, filleting, and mixing of meats, fish and salads. NP.
- 160. Topics in International Cuisine.** 1 Hr. Topics explore international cooking and trends in the vast range of foods around the world to bring new ideas and variety in cooking. NP.
- 162. Topics in Fine Dining.** 1 Hr. Practices associated with fine dining are studied. Topics and activities include the preparation and presentation of gourmet foods, table preparation, and serving procedures. NP.
- 295. Internship.** 6 Hr. PR: Sophomore status. Supervised professional study conducted in a hospitality or tourism field setting. NP.

Human Nutrition and Foods (HN&F)

- 171. Introduction to Human Nutrition.** 3 Hr. Nutrient structure, metabolism, integrated function, and their importance to human well-being during all stages of the life cycle. Current concerns and those of special interest to college students in meeting nutrient needs.

Information Technology (CIS)

- 100. Introduction to Computer Information Systems.** 3 Hr. Introductory survey of the needs for and roles of computer information systems in business organizations. Emphasis is on hardware functions, systems development, DOS, Windows and computer operations. NP.
- 106. PC Hardware Concepts.** 3 Hr. This course provides hands-on experience and skill development necessary to install, service, and support microcomputers. This course also covers A+ core competencies. NP.
- 107. Operating Systems Concepts.** 3 Hr. PR: CIS 100. Introduction to the operating system of a modern general purpose digital computer. The student studies the organization of an operating system and its control language. NP.
- 109. Networking Essentials.** 3 Hr. Provides introduction to computer network components, network architecture and data communications fundamentals. Covers essential competencies contained in Network + certification. NP.
- 113. Micro Application I (WORD).** 3 Hr. PR: CIS 100. This course provides a survey of computer applications in business with emphasis on word processing. NP.
- 114. Micro Application II (EXCEL).** 3 Hr. PR: CIS 100. The student continues the study of computer applications acquiring further skills in the use of spreadsheets, such as Excel. NP.
- 115. Micro Application III (POWER POINT).** 3 Hr. PR: CIS 100. A continuation of computer applications with a concentration on presentation software such as PowerPoint. NP.
- 116. Micro Application IV (ACCESS).** 3 Hr. PR: CIS 100. The student continues the study of microcomputer applications acquiring further skills in the use of database software such as Access. NP.
- 118. Web Page Design.** 3 Hr. Provides hands-on experience and skills development necessary to perform basic and advanced functions in designing and developing web pages and an introduction to a variety of web software tools. NP.
- 225. Internet Essentials I.** 3 Hr. PR: CIS 106 and CIS 109. Provides skills necessary to install, configure, customize, and network and integrate Internet technologies. Covers essential competencies contained in the Inet+ certification. NP.
- 226. Photoshop Essentials.** 3 Hr. Provides skills necessary to manipulate raster and vector images using image management software such as Photoshop and Illustrator. NP.
- 229. Digital Video Essentials.** 3 Hr. Provides skills necessary to design, capture, edit, and author DVDs and digital video movies using digital video editing software such as Adobe Premier. NP.
- 232. Visual Basic Programming I.** 3 Hr. Develop intermediate-level skills to design, develop, write, and debug programs using Visual Basic. NP.
- 233. Visual Basic Programming II.** 3 Hr. Develop advanced-level skills to design, develop, write, and debug programs using Visual Basic. NP.
- 234. Computer Graphics—Illustrator.** Provides skills necessary to create illustrations and graphics using Adobe Illustrator. Course covers drawing, typography, paths, effects, layer, masks, blends, patterns, and color. NP.
- 250. Directed Computer Experience I.** 3 Hr. PR: CIS 100 and CIS 103. Students are placed into practical working situations where they are involved in problem resolution, programming, system design or other areas as deemed appropriate. NP.

Journalism (JRL)

- 101. Introduction to Mass Communications.** 3 Hr. Mass communicator's role in developing political, social, and economic fabrics of a democratic society. Organization and function of newspapers, magazines, broadcast stations, and other principal media, including the role of advertising and public relations.
- 215. Media Writing.** 3 Hr. PR: ULIB 101 and ENGL 101 and ENGL 102 and JRL 101 with a grade of C or better, passage of Journalism Qualifying Exam. Introduction to the fundamental writing and fact-gathering skills of journalism and public relations for print and electronic media.
- 318. Reporting for Print Media.** 3 Hr. PR: JRL 215. Essentials of developing and covering a news beat. Students generate stories, cultivate sources, and discover their community. News and feature stories include police, budgets, meetings, and speeches.
- 319. Copy Editing and Make-Up.** 3 Hr. PR: JRL 318. Students develop the skills necessary for the modern newspaper copy desk, including copy editing, working with wire service copy, headline writing, page layout and desktop production.

Landscape Architecture (LARC)

- 105. Introduction to Landscape Architecture.** 3 Hr. A general overview of the field of landscape architecture, environmental design and planning.
- 212. History of Landscape Architecture.** 3 Hr. A broad survey of the history of the designed human environment with emphasis on the development of landscape architecture.

Library Instruction (ULIB)

- 101. Introduction to Library Research.** 1 Hr. Focuses on the concepts and logic of information access including using the libraries' online catalog, various databases and the Internet to find quality information. Incorporates hands-on practice with electronic resources for term paper preparation.

Machinist Technology (MT)

- 105. Industrial Safety & Environmental Protection.** 2 Hr. The course is designed to develop safe workplace practices to ensure individual protection, the protection of others, and the environment. The application of the requirements and guidelines in accordance with the Occupational Safety and Health Act (OSHA) or Environmental Protection Agency (EPA) will be demonstrated throughout the course. NP.
- 121. Introduction to Machinery.** 3 Hr. This course is a hands-on lab to acquaint the students with the machinery and the industrial environment. This is the application of skills and knowledge of the measurement course and the tools that the machinist will be expected to apply in his/her daily task. NP.
- 136. Mathematics for Machine Technology 1.** 3 Hr. The course covers arithmetic and algebraic concepts such as fractions, decimals, metric system, formulas, ratio and proportion; principles and propositions of geometry pertaining to lines, circles, triangles, and polygons. NP.
- 137. Mathematics for Machine Technology 2.** 3 Hr. Continuation of MT136. NP.
- 200. Blueprint Reading.** 3 Hr. Designed to develop the knowledge, abilities, and skills to use standard and GDT orthographic blueprints as required in a machine shop. NP.
- 205. Measurement in Machining.** 3 Hr. Designed to develop the knowledge, abilities, and skill to use measurement instruments necessary to the machine tool industry. NP.

- 215. Metalworking Theory and Application.** 10 Hr. Students will become skilled in the use of machines and processes utilized in metalworking. They will develop a basic knowledge of CNC machining and programming, and the calculation of speeds and feeds. NP.
- 220. Introduction to Computer Aided Design.** 4 Hr. Introduction to computer aided drafting. Topics include construction and editing tools; templates and plotting; editing with GRIPS; solid modeling, assembly, and editing; blueprint reading; SI metric system; welding drawing; and geometrics. NP.
- 223. Technical Specialization.** 4 Hr. The application of skills and knowledge used in turning, milling, and drilling with emphasis on specific types of machining. NP.
- 233. NIMS Credentialing.** 4 Hr. This course will acquaint students with the National Institute for Metalworking Skills (NIMS) and prepare them for the national credentialing examination. Students will be credentialed in at least three areas recognized by the Institute before they are graduated from the Machinist Technology program. NP.
- 289. Manufacturing Technology Internship.** 6 Hr. Students receive work assignments in approved business and industry settings as the final phase in developing their skills. NP.

Mathematics (MATH)

- 090. Developmental Arithmetic.** 3 Hr. A course designed to strengthen students' skills in arithmetic, for students who score less than an 85 on the ACCUPLACER arithmetic test. Pass/ Fail grading. Course does not count toward graduation. NP.
- 091. Elementary Algebra.** 3 Hr. A course for students needing developmental algebra, for students who score 85 or more on the ACCUPLACER arithmetic test and less than 75 on the elementary algebra test. Pass/ Fail grading. Course does not count toward graduation. NP.
- 093. Intermediate Algebra.** 3 Hr. A course for students needing developmental algebra, for students who score 85 or more on the ACCUPLACER arithmetic test and 75 or more on the elementary algebra test. Pass/ Fail grading. Course does not count toward graduation. NP.
- 121. Introductory Concepts of Mathematics.** 3 hr. PR: MATH 090 or required minimum ACT, ACCUPLACER, or SAT score. (Designed for non-science majors who do not need the techniques of mathematics for other course work in their programs.) Topics in modern mathematics.
- 126. College Algebra.** 3 hr. PR: MATH 093 or required minimum ACT, ACCUPLACER, or SAT score. Review of the real number system and algebraic expressions, equations, inequalities, graphing, functions, basic matrix operations and properties, systems of equations, polynomials, counting, and probability.
- 128. Plane Trigonometry.** 3 Hr. PR: MATH 126. Trigonometric functions, identities, vectors, logarithms, complex numbers, and trigonometric equations.
- 150. Introduction to Calculus.** 3 Hr. PR: MATH 126. For students in other disciplines needing calculus for applications. Limits of sequences and functions, continuity, derivatives, and integrals of polynomials, rational functions, and exponential and logarithmic functions, partial derivatives, maxima and minima.
- 153. Calculus 1a with Precalculus.** 4 Hr. PR: required minimum test score. Introduction to limits, continuity, derivatives, and applications of derivative.
- 154. Calculus 1b with Precalculus.** 4 Hr. PR : A grade of C or better in MATH 153. Introduction to applications of derivatives, antiderivatives, and definite integrals.
- 155. Calculus 1.** 4 Hr. PR: MATH 126 and MATH 128 or required minimum test score. Introduction to limits, continuity, derivatives, antiderivatives, definite integrals, and applications of the derivative.

- 156. Calculus 2.** 4 Hr. PR: MATH 154 or 155. Techniques of integration, applications of the definite integral, polar coordinates, indeterminate forms, infinite series.
- 251. Multivariable Calculus.** 4 hr. PR: MATH 156. Introduction to solid analytic geometry, vector algebra, matrix algebra, calculus of several variables.
- 261. Elementary Differential Equations.** 4 Hr. PR: MATH 251. Ordinary differential equations, Laplace transforms, partial differential equations, Fourier series, applications.

Mechanical and Aerospace Engineering (MAE)

- 241. Statics.** 3 Hr. PR: Grade of C or better in MATH 155 and PHYS 111. Engineering applications of equilibrium of forces. Vector operations, couple and moment of force, resultants (two and three dimensions), center of gravity and center of pressure, static friction, free-body diagrams, trusses, and frames. (3 hr. lec.)
- 242. Dynamics.** 3 Hr. PR: MAE 241 and MATH 156. Newtonian dynamics of particles and rigid bodies. Engineering applications of equations of motion, work and energy, conservative forces, impulse and momentum, impulsive forces, acceleration in several coordinate systems, relative motion, instantaneous centers, and plane motion. (3 hr. lec.)
- 243. Mechanics of Materials.** 3 Hr. PR: MAE 241 and MATH 156. Stress, deformation, and failure of solid bodies under the action of forces. Internal force resultants, stress, strain, Mohr's circle, mechanical properties of materials, generalized Hooke's Law. Axial, bending, and buckling loads and combinations (3 hr. lec.)
- 320. Thermodynamics.** 3 Hr. PR: PHYS 111 and MATH 156. Principles of thermodynamics; properties of ideal gases and vapors; first and second laws of thermodynamics; basic gas and vapor cycles; basic refrigeration. (3 hr. lec.)

Music (MUSC)

- 111. Introduction to Music.** 3 Hr. Introductory course designed to develop an appreciation and understanding of the significance of music as a fine art and to help the student develop intelligent listening habits.
- 115. Introduction to History of Jazz.** 3 Hr. PR: MUSC 170 or consent. An introduction to jazz, its characteristics, important performers, and their music, including an historical survey with attention to the changing style of the music.

Nursing (NSG)

- 100. Introduction to Nursing.** 2 Hr. Introduction to the role of the nurse in modern health care: critical thinking, nursing interventions, professionalism, caring and communication in nursing practice with emphasis on safety, quality, health, culture, ethics, leadership, and health policy.

Office Systems Technology (OSTC)

- 107. Medical Terminology.** 3 Hr. Introduction to medical terminology as it applies to the various body systems and practical application in medical office procedures. NP.
- 115. Formatting and Editing.** 3 Hr. Designed for students who have had previous training in keyboarding. Emphasis on document formatting and editing to include proper use of grammar, punctuation, spelling, capitalization, and number usage. NP.

- 119. Office Training.** 3 Hr. PR: OSTC 115 or Consent. Office Technology majors only. A course combining theory with the actual practice embodied in the courses above. "Hands on" experience is stressed on various machines in the department--dictating and transcribing equipment; facsimile machine; and photocopy machines. Office grooming, office etiquette, different types of office work, and other topics pertinent to an office are studied and discussed. NP.
- 221. Word Processing.** 3 Hr. PR: OSTC 115 or Consent. This course provides study in the theories and practical applications of word processing for employment or home use. NP.
- 222. Office Automation.** 3 Hr. PR: CS 101 or CIS 100 and OSTC 113 or Consent. This course provides an evolutionary perspective on today's changing office. Topics include information flow and management, communications, replication, and records management. NP.
- 223. Directed Office Experience.** 3 Hr. PR: Business Technology or Office Technology students during final semester of study only, or Consent. Students are placed in appropriate work sites in the community and surrounding area to participate in an on-the-job training experience. (A minimum of 56 hours is required.) NP.
- 240. Fundamentals of Desktop Publishing.** 3 Hr. Current hardware and software used in desktop publishing (Microsoft Publisher). Students will complete projects developed to train the user in basic hardware and software applications. NP.
- 254. Machine Transcription.** 3 Hr. Transcription of specialized documents and records using transcribing equipment/computers; production measurement and content based on majors. NP.

Orientation (ORIN)

- 270. Introduction to Health Careers.** 1 Hr. A study of careers in the health professions. Readings, lectures, and discussions by professionals in many health fields will include the educational requirements for and functions of their respective health professions. (Pass/Fail grading only.)

Philosophy (PHIL)

- 100. Problems of Philosophy.** 3 Hr. An elementary examination of such philosophical problems as the mind-body problem, the existence of God, freedom and determinism, and the nature of persons and their knowledge.
- 170. Introduction to Critical Reasoning.** 3 Hr. An elementary study of critical thinking and reasoning. For students who want to improve their skills in recognizing fallacious patterns of reasoning, constructing acceptable arguments, and criticizing faulty lines of reasoning.

Physical Education (PE)

- 101. Badminton.** 1 Hr. Introduction to beginning knowledge and skills in badminton.
- 103. Beginning Basketball.** 1 Hr. This course is designed to provide historical background, rules and regulations, and the fundamental skills. These will be accomplished through instruction, drills, games and class team play.
- 122. Billiards.** 1 Hr. Introduction to beginning knowledge and skills in billiards.
- 125. Aerobics.** 1 Hr. Introduction to beginning knowledge and skills in aerobics.
- 145. Karate.** 1 Hr. Introduction to beginning knowledge and skills in karate.
- 153. Yoga for Fitness.** 1 Hr. Introduction to basic yoga techniques that can be practiced as a way of developing a wide variety of sports.

- 157. Slow Pitch Softball.** 1 Hr. Introduction to beginning knowledge and skills in slow pitch softball.
- 158. Indoor Soccer.** 1 Hr. Introduction to beginning knowledge and skills in indoor soccer.
- 164. Weight Training.** 1 Hr. Introduction to beginning knowledge and skills in weight training.
- 165. Conditioning.** 1 Hr. Introduction to beginning knowledge and skills in conditioning.
- 170. Volleyball.** 1 Hr. Introduction to beginning knowledge and skills in volleyball.
- 182. Bowling.** 1 Hr. Introduction to beginning knowledge and skills in bowling.
- 187. Golf.** 1 Hr. Introduction to the rules, skills, and strategies involved in golf.

Physical Education Teaching (PET)

- 124. Human Body: Structure and Function.** 2 Hr. Overview of the structure and function of the organ systems in the human body. Topics covered include the skeletal, muscular, nervous, digestive, respiratory, and cardiovascular systems.
- 125. Principles of Human Movement.** 2 Hr. PR: PET 124. This course is designed to introduce prospective physical educators to the principles of human movement.
- 167. Introduction to Physical Education.** 3 Hr. Historical and philosophical bases, major issues, and professional practices in physical education teaching.
- 175. Motor Development.** 3 Hr. To examine changes in human movement behavior across the lifespan and the factors that contribute to those changes.
- 206. Behavioral Technology for Physical Education.** 2 Hr. Basic concepts and instructional techniques associated with applying behavior analysis to school-aged children.
- 276. Special Physical Education.** 2 Hr. Examines motor developmental characteristics of various handicapped groups and emphasizes the physical education role in remediating possible developmental deficiencies.

Physics (PHYS)

- 101. Introductory Physics.** 4 Hr. PR: MATH 126 and PR or Conc: MATH 128, or MATH 150 or MATH 155. The fundamental philosophy and principles of physics are applied to studies of mechanics, sound, heat, and thermodynamics through demonstrations, problems, and experiments.
- 102. Introductory Physics.** 4 Hr. PR: PHYS 101 and MATH 128. The fundamental philosophy and principles of physics are applied to studies of electricity, magnetism, optics, and atomic and nuclear physics through demonstrations, problems, and experiments.
- 105. Conceptual Physics.** 4 Hr. Basic principles of physics and their relationship to our modern technological society. Major topics include properties of matter, electricity, optics, motion, heat and temperature, and energy. Nonmathematical approach emphasized.
- 111. General Physics.** 4 Hr. PR: A grade of C or better in MATH 155. Survey of classical mechanics, thermodynamics, and waves.
- 112. General Physics.** 4 Hr. PR: PHYS 111. Survey of electricity, magnetism, and optics.

Plant Science (PLSC)

206. Principles of Plant Science. 4 hr. Anatomy, morphology, and physiology of higher plants. Study of growth and development of economically important plants, their culture, and products.

Political Science (POLS)

101. Introduction to Political Science. 3 Hr. Introduction to government and politics. Origins, forms, and functions of the state; organization and processes of government; and the behavior of groups and individuals in various political systems.

102. Introduction to American Government. 3 Hr. General survey of American national government and politics.

103. Global Political Issues. 3 Hr. Analysis of issues in post-cold war international politics, ranging from traditional major power diplomacy and intervention to the newer problems of economic interdependence and development, human rights, population pressures on limited resources, and the environment.

210. Law and the Legal System. 3 Hr. Introductory course on the role of law in the political system. Includes a survey of subfields in United States law and an examination of participants, processes, and policy making in the United States legal system.

220. State and Local Government. 3 Hr. The legal basis, structure, politics and operation of state and local governments, in the context of the American federal system.

250. Introduction to Comparative Politics. 3 Hr. An introduction to the political and governmental systems of industrialized and developing countries. Focuses on approaches to comparative political study, political cultures and participation, and government structures, processes, and policy performance.

Psychology (PSYC)

101. Introduction to Psychology. 3 Hr. Survey of general psychology.

201. Psychology as a Profession. 1 Hr. PR: PSYC 101. Orientation to opportunities for experience, employment, and graduate and professional training in psychology.

202. Research Methods in Psychology. 3 Hr. PR: PSYC 101 and STAT 211. Research methods in experimental, developmental, clinical, and community-social psychology in the laboratory and the natural environment.

241. Introduction to Human Development. 3 Hr. PR: PSYC 101. Survey of human psychological development across the life span with emphasis on change in biological, cognitive, and social-emotional processes. Special attention given to theoretical, conceptual, methodological, and practical issues.

251. Introduction to Social Psychology. 3 Hr. PR: PSYC 101. Examination of social interaction and behavior from a psychological perspective. Topics include attraction, social perception and cognition, attitudes and attitude change, social influence and group process, prosocial behavior and aggression, cultural influence, and prejudice.

281. Abnormal Psychology. 3 Hr. PR : PSYC 101. Introduction to major categories of behavior disorders; etiology, prevention, and treatment.

Recreation, Parks, and Tourism Resources (RPTR)

142. Introduction to Recreation, Parks, and Tourism. 2 Hr. Recreation, parks, and tourism philosophy, environments, agency contexts, historical antecedents, service delivery systems, special settings and populations, leadership programs, and professional challenges. Thirty-hour field placement with local recreation, park, or tourism agency.

Religious Studies (RELG)

102. Introduction to World Religions. 3 Hr. This course explores five of the most widely practiced world religions: Judaism, Christianity, Islam, Hinduism, and Buddhism. Students are introduced to the history and basic tenets of each faith.

219. The History of Christianity. 3 Hr. This course explores the birth and evolution of Christianity from its inception until the modern era. Emphasis will be placed upon the significant people and events that shaped Christianity.

Social Work (SOWK)

105. Social Welfare Institutions. 3 Hr. Examines the historical development of social welfare in the United States and the values that shape social welfare institutions.

147. Human Diversity. 3 Hr. (Must be completed before applying to the major.) Covers a range of diverse populations, especially those historically subjected to oppression and social and economic injustice. Addresses the causes and effects of institutionalized forms of oppression.

151. Introduction to Social Work. 3 Hr. PR: Consent. Overview of the social welfare field and social work profession. Emphasizes social work values and ethics.

Sociology & Anthropology (SOCA)

101. Introduction to Sociology. 3 Hr. Basic course intended to develop a perspective about the nature of social processes and the structure of society.

105. Introduction to Anthropology. 3 Hr. Essentials of human evolution and prehistory with a concentration on the varieties of languages and cultures found among peoples of the world.

107. Social Problems. 3 Hr. Causes of social disorganization in modern society and social life. Emphasis on research findings derived from studies of contemporary American society.

207. Social Problems in Contemporary America. 3 Hr. Sociological analysis of the causes, effects and approaches to preventing and reducing social problems in American society.

221. Families and Society. 3 Hr. Historical comparative approach to changing structure and functions of the family institution. Effect of economic, demographic, and cultural changes on relationships, gender roles, marriage, childcare; variations by socioeconomic status, race, ethnicity, gender, sexual orientation.

222. The Community. 3 Hr. Social structure of small towns and rural communities. The community power structure and political participation as they relate to community planning.

223. Death and Dying. 3 Hr. Sociological and anthropological perspectives on death and dying. Examines sociopsychological and structural factors supporting the beliefs and practices associated with the institution of death, both historically and in contemporary society.

- 233. Juvenile Delinquency.** 3 Hr. Nature, extent, and causal explanation of forms of juvenile delinquency. The nature of juvenile courts, the correctional systems, and prevention programs. Emphasizes current issues.
- 235. Race Relations.** 3 Hr. Causes and consequences of prejudice and discriminatory practices involving minority group members. Emphasis is on blacks, but social and economic conditions of Indians and other racial and religious minorities are also discussed.

Spanish (SPAN)

- 101. Elementary Spanish 1.** 3 Hr. PR: Score of S1 on placement test or no prior study of the language or departmental consent. Introduction to the sound and writing systems of the language with emphasis on listening, speaking, reading, and writing within an authentic cultural context. (Course presumes no prior knowledge of the language.)
- 102. Elementary Spanish 2.** 3 Hr. PR: SPAN 101 or score of S2 on placement exam. Continuation of SPAN 101. Introduction to the sound and writing systems of the language with emphasis on listening, speaking, reading, and writing within an authentic cultural context.
- 203. Intermediate Spanish 1.** 3 Hr. PR: SPAN 102 or score of S3 on placement exam. Continuation of SPAN 102.
- 204. Intermediate Spanish 2.** 3 Hr. PR: SPAN 203 or score of S4 on placement exam. Foundation for advanced study of Spanish. Emphasis on oral and written communication.

Speech Pathology and Audiology (SPA)

- 270. Effective Public Speaking.** 3 Hr. Designed for improvement of student's speech based upon theory and demonstrated performance of voice and diction skills and public-speaking skills for effective communication in a variety of speaking situation.
- 274. Manual Communication.** 3 Hr. Development of skills needed to communicate in sign language. The manual alphabet, basic number concepts, and the basic vocabulary of traditional American signs.
- 276. Intermed Manual Communication.** 3 Hr. PR: SPA 274 or consent. Improve skills needed to communicate in sign language. Includes increasing sign language vocabulary, practicing finger spelling, and communicating with signs.

Sport and Exercise Psychology (SEP)

- 271. Sport in American Society.** 3 Hr. Sociocultural investigation of sport in American society.
- 272. Psychological Perspectives of Sport.** 3 Hr. An examination of personality and behavioral factors as they affect participation in sport. Topics such as stress and sport, body image, aggression and sport participant, and the licensure of sport psychologists highlight the course.

Sport Management (SM)

- 167. Introduction to Sport Studies.** 3 Hr. Examines the historical and philosophical bases, major issues, and professional practices in sport studies.

Statistics (STAT)

- 111. Understanding Statistics.** 3 Hr. Introduction to basic concepts and ideas of statistics. Methodologies and case studies to prepare students to understand the use of statistics in the mass media and professional publications in their major field of study. Not open to students who have earned credit for STAT 211 or STAT 215.

- 211. Elementary Statistical Inference.** 3 Hr. PR: MATH 126. (Not open to students who have completed STAT 215.) Basic concepts of descriptive and inferential statistics; descriptive measures, random variables, sampling distributions, estimation, tests of hypotheses, chi-square tests, regression, and correlation. (Equivalent to ECON 225.)

Theatre (THET)

- 102. Acting.** 3 hr. (Open to all students.) Basic theories and concepts in stage acting for the beginning student. Emphasis is on the physical, intellectual, emotional, and personality languages of acting.
- 400. Theatre Performance and Rehearsal Laboratory.** 1 hr. PR: Theatre major and Consent. Participation in assigned theatre projects. Appreciation of creativity and performance techniques in theatre. (May be repeated for credit.)

West Virginia University Experience (WVUe)

- 191. First-Year Experience.** 1 Hr. Exploration of academic experiences through meaningful contexts. The course will envelope a range of academic components needed to achieve student success and successfully transition to West Virginia University.

Visual Journalism (VISJ)

- 220. Introduction to Photojournalism.** 3 Hr. Basic techniques of journalistic photography, digital imaging, and editing. Students must have access to a film or digital camera.

Wildlife and Fisheries Management (WMAN)

- 150. Principles of Conservation Ecology.** 3 Hr. Overview of the science of conservation ecology with emphasis on the concepts of biological diversity, extension, habitat loss and fragmentation, establishment of protected areas, endangered species, and establishment and preservation of new populations.

Women's Studies (WMST)

- 170. Introduction to Women's Studies.** 3 Hr. The major contexts in which woman's identity has been and is being defined and of the relationships between these definitions and the roles and history of women (and men) in society and culture.