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COURSE DESCRIPTIONS

Courses with prefixes ending in V, such as Barbering (BAV), apply toward a Certificate of Proficiency and are not transferable to a four-year college or a university. Technology courses, such as Automotive Mechanics Technology (ATT), apply toward an Associate in Applied Science Degree or to a Certificate of Proficiency, and are not generally transferable to a university. (There may be a small number of exceptions; the student should always check with an advisor before assuming the transferability of any such course.) Courses other than these are general education, or academic, courses. With the exception of courses that are remedial, or developmental, such as Developmental English I (ENG 1103), these may apply toward either an Associate in Applied Science or an Associate in Arts degree and transfer to a university where they may apply toward a bachelor's degree. It is ultimately the responsibility of the student to determine whether any course will apply toward any particular degree or program. Faculty advisors and counselors should be consulted for assistance with this determination.

ACCOUNTING (ACC)

1213 Principles of Accounting I. (3)

A study of the elementary accounting principles as applied to the fundamentals of double-entry accounting for a sole proprietorship. Special emphasis will be given to the accounting cycle, assets, liabilities, equity, and the processes used to produce financial statements. Three lecture hours per week.

1223 Principles of Accounting II. (3) Prerequisite: ACC 1213

A continuation of the fundamentals of accounting applicable to corporations. Special attention will be given to corporate earnings, dividends, investments and financial statement analysis. Three lecture hours per week.

ART (ART)

1113 Art Appreciation. (3)

A survey course of visual art forms which are studied in an historical and technique-based format with an emphasis on learning to make sound aesthetic judgments. Lectures/discussions are augmented with film reviews, slides, critical analysis papers and a museum tour. Three lecture hours per week.

1213 Introduction to Art. (3)

An introduction to studio practices and the fundamentals of art with emphasis on the development of a visually creative vocabulary. Students work in a variety of black and white and color media emphasizing design and composition. Recommended for elementary education majors or anyone who desires to learn basic media techniques. Five lecture/studio hours per week.

1313 Drawing I (Beginning Drawing). (3)

The first of two foundation courses in basic drawing required of all art major emphases, architecture majors, and some applied design majors. This course emphasizes the basic drawing skills and the various achromatic or monochromatic dry and wet media used to perfect skills, technique, and creativity. Six lecture/studio hours per week with additional assignments.

1323 Drawing II. (3)

The continuation of the drawing foundation course, this course emphasizes form, color and value, rendering skills, and composition of drawings. Students work with a variety of achromatic and chromatic dry and wet media. Six lecture/studio hours per week with additional assignments.

1413 Design I. (3)

The first of the foundation courses in basic design for all art major emphases and some design majors. This course addresses the elements of design (except color) and the principles of organization by which they are ordered and communicate with viewers. Basis of study is visual perception and its affect on viewers and the artist. Six lecture and studio hours per week with outside assignments.

1423 Design II (Color Theory). (3)

The second foundation course in design with exploration of color theory. Studies using color media which emphasize brilliance and luminosity properties of color, basic color schemes, contrasts, and harmonies. Six lecture/studio hours per week with outside assignments.

1913 Art for Elementary Teachers (Elementary School Art). (3)

Designed for elementary education and art education majors, this course teaches the pedagogy of art for the elementary student in grades K-8. Emphasis is on the use of elements of art and the principles of design and art history/appreciation as applied to lesson/unit planning, curriculum development, and the artistic and creative growth stages of children. Crafts and application of multi-cultural art forms are explored in the application to elementary school art. Three lecture and two studio hours per week with some outside assignments.

2373 Lettering and Calligraphy. (3)

A studio course designed to help the beginning calligraphy student acquire the foundation level of basic hand lettering skills, familiarity with calligraphic alphabets, decoration, and illumination. The student will be exposed to a variety of papers, and wet and dry media. The class will move the student to more complex technical levels of rendering alphabets. Three lecture/studio hours per week with outside assignments.

2513 Painting I (Watercolor). (#)

The first course in a studio series in beginning painting for art majors, this course explores watercolor as a painting medium. The student learns basic techniques and handling of tools and materials for application to a variety of subject matter and compositional problem-solving. Six hours lecture/studio per week.

2523 Painting II (Oils). (3)

The second in the series of beginning painting studios, this course explores the use of oil paint as a traditional painting medium. Students learn the use of basic techniques, tools, methods, and materials in a variety of compositions and subject matter presented in a creative problem-solving format. Six lecture/studio hours per week with outside assignments.

2913 Special Studio (Supervised Independent Study). (3)

2923 Prerequisite: Permission of the instructor.

2933 A specialized course for further exploration of technical or creative problems as a continuation of the related art form or

2943 for exploring career options in studio work. Individualized goals and objectives are set by the student and

instructor. Student activities of studio problems and related research/writing are based on stated goals and objectives. Six critique/discussion and studio hours per week with outside assignments and culminating in a one-person exhibit of an exit portfolio. Possible areas of independent study include photography, drawing, multi-media, painting, cartooning, portraiture, sculpture, pottery, floral design, furniture design, and portfolio.

ASSOCIATE DEGREE NURSING (NUR)

- 1011 Professional Nursing Forum I. (1)** Prerequisite: Admission to the Associate Degree Nursing Program. This elective nursing course is designed to encourage the Associate Degree Nursing student's participation in various meetings/activities of a state and national nursing organization and to promote the growth of professional nursing development. The meetings will help facilitate awareness of current issues and trend, leadership skills, community awareness, nursing ethics and legislative issues affecting nursing practice/education. One lecture hour per week.
- 1012 Professional Nursing Forum II. (2)** Prerequisite: Admission to the Associate Degree Nursing Program. This elective nursing course is a continuation of NUR 1011 Professional Nursing Forum I. Two lecture hours per week.
- 1101 Nursing Dosages and Solutions. (1)** Prerequisite: Admission to the Associate Degree Nursing Program. Corequisite: NUR 1110. This course includes theoretical and mathematical concepts related to the administration of medications to adult clients. Content begins with a review of basic mathematics, continues with ratio and proportion, abbreviations, symbols and the systems of measurement used in drug administration. Emphasis is placed on conversions between systems of measurements; calculation of oral, parenteral and intravenous dosages; and interpretation of word problems with application to clinical situations. One lecture hour per week.
- 1110 Nursing I. (10)** Prerequisite: Admission to the Associate Degree Nursing Program. Corequisites: BIO 2511, BIO 2513, MAT 1313, NUR 1101, PSY 1513. This fundamental course in nursing is based on the biological, psychosocial and cultural aspects necessary to promote wellness of diverse clients, families and communities as reflected on the wellness-illness continuum. The content is designed to introduce the practice of nursing as an integral component of total health care. The focus of this course is placed on the process of learning; roles of the nurse as provider of care, manager of care, and member within the discipline of nursing; critical thinking; dosage calculations; the nursing process; the communication process; basic needs; and growth and development of the aged individual. This course requires seven class hours and nine clinical hours per week.
- 1210 Nursing II. (10)** Prerequisites: BIO 2511, BIO 2513, MAT 1313, NUR 1101, NUR 1110, PSY 1513. Corequisites: BIO 2521, BIO 2523, ENG 1113, EPY 2533. This beginning medical-surgical nursing course focuses on the roles of the nurse, utilization of critical thinking, nursing process, basic needs, growth and development, and scientific principles from the biological, physical and psychosocial sciences. While students focus on the process of learning, they plan and provide care to client in diverse health care settings. The client's position on the wellness-illness continuum is recognized as the student deals with the client's response to illness. Emphasis is placed on nutrition, pharmacology, diagnostic test, verbal and written communication, and dosage calculations. This course requires six class hours and twelve clinical hours per week.
- 2012 Professional Nursing Forum III. (2)** Prerequisite: Admission to the Associate Degree Nursing program. This nursing elective course is a continuation of NUR 1012 Professional Nursing II. Two lecture hours per week.
- 2104 Nursing III. (4)** Prerequisites: BIO 2511, BIO 2513, BIO 2521, BIO 2523, ENG 1113, EPY 2533, MAT 1313, NUR 1101, NUR 1111, NUR 1210, NUR 2107 (if applicable), PSY 1513. Corequisites: BIO 2921, BIO 2923, NUR 2115, SPT 1113 or SPT 2163. This course is designed to analyze the theory and practice of women's health and newborn nursing with emphasis on the nursing process, the basic needs, and principles of growth and development. The roles of the nurse are further developed in this specialty area in diverse health care settings. Nutrition, diagnostic studies, pharmacology and culture are integrated throughout the course. Critical thinking, research, dosage calculations, written and verbal communication, and development of computer skills are enhanced. This course requires three class hours per week and nine lab/clinical hours per week for eight weeks.
- 2107 Nursing LPN Bridge. (7)** Prerequisites: BIO 2511, BIO 2513, BIO 2521, BIO 2523, ENG 1113, EPY 2533, MAT 1313, PSY 1513, and admission to the LPN to ADN Bridge Course and the Associate Degree

Nursing program.

This course enhances the knowledge of the LPN in the practice of nursing and focuses on the roles of the nurse as provider of care, manager of care, and member within the discipline. Students utilize critical thinking, the nursing process, basic needs, principles of growth and development, and scientific principles from the biological, physical and psychosocial sciences in the care of the adult. Emphasis is placed on nutrition, pharmacology, diagnostic tests, verbal and written communication, and dosage calculations. The client's position on the wellness-illness continuum is recognized as the student understands the client's response to illnesses. This course requires 24 class hours and 3 clinical hours per week for 5 weeks.

- 2115 Nursing IV. (5)** Prerequisites: BIO 2511, BIO 2513, BIO 2521, BIO 2523, ENG 1113, EPY 2533, MAT 1313, NUR 1101, NUR 1110, NUR 1210, NUR 2107 (if applicable), PSY 1513. Corequisites: BIO 2921, BIO 2923, NUR 2104, SPT 1113 or SPT 2163.

This course is designed to analyze the theory and practice of pediatric nursing with emphasis on the nursing process, the basic needs, and principles of growth and development. The roles of the nurse are developed in this specialty area in diverse health care settings. Nutrition, diagnostic studies, pharmacology and culture are integrated throughout the course. Critical thinking, research, dosage calculations, written and verbal communication, and development of computer skills are enhanced. This course requires three class hours per week for the semester and twelve clinical hours for eight weeks.

- 2203 Nursing V. (3)** Prerequisites: BIO 2511, BIO 2513, BIO 2521, BIO 2523, BIO 2921, BIO 2923, ENG 1113, EPY 2533, MAT 1313, NUR 1101, NUR 1110, NUR 1210, NUR 2104, NUR 2107 (if applicable), NUR 2115, PSY 1513, SPT 1113 or SPT 2163. Corequisites: NUR 2209, SOC 2113.

The student is assisted in the application of nursing knowledge in the care of clients experiencing problems meeting basic needs related to mental disorders in diverse health care settings. Students are assisted to further their expertise using critical thinking in the development of the role of nurse for mental health nursing. Acknowledgment of cultural and ethnic differences and psychopharmacology is emphasized throughout the course. Refinement of verbal and written communication skills, dosage calculations and computer competencies is expected. This course requires an average of two class hours per week for the semester and twelve clinical hours per week for three weeks.

- 2209 Nursing VI. (9)** Prerequisites: BIO 2511, BIO 2513, BIO 2521, BIO 2523, BIO 2921, BIO 2923, ENG 1113, EPY 2533, MAT 1313, NUR 1101, NUR 1111, NUR 1210, NUR 2104, NUR 2115, NUR 2107 (if applicable), PSY 1513, SPT 1113 or SPT 2163. Corequisites: NUR 2203, SOC 2113.

This course is designed to analyze theory and implement the practice of medical-surgical nursing, as well as assist the student with transition from the student role to registered nurse. The focus of the course is to utilize critical thinking in the preceptorship. The specific foci of the course are to utilize critical thinking in the refinement of the nursing process and the organization of nursing care of adults and groups of adults in a variety of settings. Students are assisted to further their knowledge and expertise in the development of the role of manager, provider of care, and member within the discipline of nursing. Emphasis is placed on cultural and ethical differences, research, dosage calculations, pharmacology, diagnostic studies, critical thinking, and verbal and written skills. The preceptor component requires 72 hours of clinical practice during the last three weeks of the semester. This course requires an average of five class hours per week for the semester and twelve clinical hours weekly for ten weeks.

AUTOMATION AND CONTROLS TECHNOLOGY (INT)

- 1113 Fundamentals of Instrumentation. (3)**

This course provides students with a general knowledge of instrumentation principles. This course includes instruction in the basic of hydraulics and pneumatics and the use of electrical circuits in the instrumentation process. Two lecture and two lab hours per week.

- 1214 Fluid Power. (4)**

This course introduces the student to basic hydraulic and pneumatic principles, laws, work devices, control devices and fluid circuit diagrams. Emphasis is placed on development of fluid control circuits, electro-mechanical control of fluid power, and troubleshooting techniques. Three lecture and two lab hours per week.

- 2114 Control Systems I. (4)** Prerequisite: EET 1123

This is an introductory course to provide information on various instrumentation components and processes. Topics include analyzing pressure processes, temperatures, flow and level. Three lecture and two lab hours per week.

- 2124 Control Systems II. (4)** Prerequisite: INT 2114
This course is a continuation of Control Systems I with special emphasis on application of applied skills along with new skills to develop instrument process controls. The student will be given a process to develop the appropriate instruments, needed diagrams, utilizing various controlling processes and demonstrate loop troubleshooting techniques. Three lecture and two lab hours per week.
- 2134 Programmable Control Applications. (4)**
A course to provide instruction and practice in the use of programmable logic controllers (PLC's) in modern industrial settings. Includes instruction in the operating principles of PLC's and practice in the programming, installation and maintenance of PLC's. Three lecture and two lab hours per week.
- 2214 Calibration and Measurement Principles. (4)**
This course introduces the student to various terms related to measurement principles and calibration techniques. The topics also include the procedures and calibration of various instruments used in the industry. Three lecture and two lab hours per week.

AUTOMATION AND CONTROL TECHNOLOGY (MFT)

- 1112 Introduction to Automation and Controls. (2)**
Introduction to manufacturing/industrial technology with emphasis on safe work practices, manufacturing dynamics, use of test equipment, and fundamentals of automation and control technology. One lecture and two lab hours per week.
- 1123 Electrical Wiring for Automation and Control Technology. (3)**
Basic electrical wiring for automation and controls including safety practices; installation and maintenance of raceways, conduit, and fittings; and three-phase service entrances, metering devices, main panels, raceways or ducts, sub-panels, feeder circuits, and branch circuits according to electrical codes. Two lecture and two lab hours per week.
- 1214 Principles of Automation I. (4)** Prerequisites: EET 1192, EET 1114
This is the first of two courses that introduces the student to the electrical, electronic, and fluid power devices and components that are utilized in flexible automated manufacturing systems. Principles of solid state devices and digital logic are explained. Additionally, devices such as power supplies, operational amplifiers, motors, servos, transducers, mechanical drives, etc., are studied. Three lecture and two lab hours per week.
- 2013 Automated Motion Control. (3)**
This course is designed to develop advanced skills in the set up of servo motion controller systems, troubleshooting and maintenance of servo motion control systems, and programming of servo motion control. Two lecture and two lab hours per week.
- 2113 Material Requirement Planning. (3)**
This is a course that will develop student skills and mechanics in MRP II. Areas include resource management for productive manufacturing, development, and executing an MRP II plan, order point inventory, and closed loop systems. Two lecture and two lab hours per week.
- 2224 Principles of Automation II. (4)** Prerequisite: EET 1192, EET 1114
This course introduces the student to automated control components such as programmable logic controllers and computer controlled devices such as lathes, mills, robots, sensors, actuators, etc. Emphasis will be placed on programming, troubleshooting and interfacing these types of automation components. Two lecture and four lab hours per week.
- 2313 Statistical Process Control. (3)**
This course provides a detailed study of the methods of implementing and using a computer-based statistical process control system and the associated gauging and automated data collection devices. Two lecture and two lab hours per week.
- 2413 Computer Integrated Manufacturing. (3)**
This course is a study of how computers, robots, CAD/CAM, vision systems, and other automated systems can be used in computer integrated manufacturing (CIM). Two lecture and two lab hours per week.
- 2513 Data Acquisition and Communications. (3)**

This is a course in acquisition and communication of systems data in automated applications. Two lecture and two lab hours per week.

- 2614 Flexible Manufacturing Systems.** (4) Prerequisite: Consent of instructor
This course is a production project which requires the student to apply technical skills acquired in previous courses. Project management is provided by the instructor with the students working as teams in each particular area of the manufacturing system. The students are required to plan the project and prepare the integrated system to manufacture a product. This includes all software, hardware, fixtures, clamping mechanisms, material handling requirements, sensors and interfacing, and external control devices. Two lecture and four lab hours per week.
- 291(1-3) Special Project in Automation and Control Technology.** (1-3) Prerequisite: Consent of instructor
A course to provide students with an opportunity to utilize skills and knowledge gained in other Automation and Control Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. Two to six lab hours per week.
- 292(1-6) Supervised Work Experience in Automation and Control Technology.** (1-6) Prerequisite: Consent of instructor
A course which is a cooperative program between industry and education and is designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours. Three to eighteen hours externship per week.

AUTOMOTIVE MECHANICS TECHNOLOGY (ATT)

- 1113 Applied Mathematics for Automotive Technicians.** (3)
This course covers situations encountered by automotive technicians during routine service work. Topics include whole numbers, decimal fractions, common fractions, percentages, measurement, ratio and proportion, powers and roots, formulas, graphs, and invoices. Three lecture hours per week.
- 1124 Basic Electrical/Electronic Systems.** (4)
A course to provide advanced skills and knowledge related to all components of the vehicle electrical system including lights, instruments and charging components. Two lecture and four lab hours per week.
- 1134 Advanced Electrical/Electronic Systems.** (4)
A course to provide advanced skills and knowledge related to all components of the vehicle electrical system including gauges, driver information systems, horn, wiper/wiper systems, and accessories. Two lecture and four lab hours per week.
- 1213 Brakes.** (3)
A course to provide advanced skills and knowledge related to the repair and maintenance of brake systems on automobiles. Includes instruction and practice in diagnosis of braking systems problems and the repair of brake systems. Two lecture and two lab hours per week.
- 1314 Manual Drive Trains/Transaxles.** (4)
A course to provide advanced skills and knowledge related to the maintenance and repair of manual transmissions, transaxles and drive train components. Includes instruction in the diagnosis of drive train problems and the repair and maintenance of transmissions, transaxles, clutches, CV joints, differentials and other components. Two lecture and four lab hours per week.
- 1424 Engine Performance I.** (4) Prerequisites: ATT 1124
A course to provide advanced skills and knowledge related to the maintenance and adjustment of gasoline engines for optimum performance. Includes instruction, diagnosis and correction of problems associated within these areas. Two lecture and four lab hours per week.
- 1715 Engine Repair.** (5)
A course to provide advanced skills and knowledge related to the repair and rebuilding of automotive-type engines. Includes instruction and practice in the diagnosis and repair of engine components including valve trains, block, pistons and connecting rods, crankshafts and oil pumps. Two lecture and six lab hours per week.

- 1811 Introduction, Safety, and Employability.** (1)
A course to provide knowledge of classroom and lab policies and procedures. Safety practices and procedures associated with the automotive program and automotive industry. One lecture hour per week.
- 2325 Automatic Transmission/Transaxles.** (5) Prerequisite: ATT 1315
A course to provide technical skills and knowledge related to the diagnosis and repair of automotive-type automatic transmissions and transaxles. Includes instruction and practice in testing and inspecting these devices and in disassembly, repair and re-assembly. Three lecture and four lab hours per week.
- 2334 Steering and Suspension Systems.** (4) Prerequisite: ATT 1315
A course to provide advanced skills and knowledge related to the inspection and repair of steering and suspension systems on automobiles. Includes instruction and practice in the diagnosis of steering system problems and the repair/replacement of steering systems components. Two lecture and four lab hours per week.
- 2434 Engine Performance II.** (4)
A course to provide advanced skills and knowledge related to the ignition system, fuel, air induction, and exhaust systems. It includes instruction, diagnosis, and correction of problems associated within these areas. Two lecture and four lab hours per week.
- 2444 Engine Performance III.** (4)
A course to provide advanced skills and knowledge related to the emissions control systems and engine related service. It includes instruction, diagnosis and correction of problems associated within these areas. Two lecture and four lab hours per week.
- 2614 Heating and Air Conditioning.** (4)
A course to provide advanced skills and knowledge associated with the maintenance and repair of automotive heating and air conditioning systems. Includes instruction and practice in the diagnosis and repair of air conditioning system components, heater lines and cores and control systems. Two lecture and four lab hours per week.
- 291(1-3) Special Problem in Automotive Mechanics Technology.** (1-3) Prerequisite: Consent of instructor
A course to provide students with an opportunity to utilize skills and knowledge gained in other Automotive Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. Two to six lab hours per week.
- 292(1-6) Supervised Work Experience in Automotive Mechanics Technology.** (1-6) Prerequisite: Consent of instructor
This internship course provides actual work experience in an automotive mechanics business under the direction of the employer and the instructor. Three to eighteen hours externship per week.

AVIATION MAINTENANCE TECHNOLOGY (APT)

- 1113 Aviation Applied Science.** (3)
General aviation maintenance practices including orientation to aviation, aircraft maintenance safety procedures, aviation mathematics, aviation physics, and aircraft drawing. Forty-two clock hours and fifty-seven clock hours lab.
- 1123 Aviation Electricity I.** (3) Pre/corequisite: APT 1113
Theory and application of direct and alternating current distribution and utilization of voltage. Practical application of Ohm's Law. Thirty-three clock hours lecture and forty clock hours lab.
- 1134 Aviation Materials and Processes.** (4) Pre/corequisite: APT 1123
Materials and processes used in the construction and repair of aircraft and components, fluid lines and fittings, and corrosion protection. Forty-five clock hours lecture and sixty-five clock hours lab.
- 1142 Aircraft Servicing and Weight-and-Balance.** (2) Pre/corequisite: APT 1153
Aircraft ground operation and servicing and weight-and-balance checks and records. Twenty-eight clock hours lecture and forty-six clock hours lab.

- 1153 Maintenance Forms and Regulations.** (3) Pre/corequisite: APT 1134
Maintenance publications, maintenance forms and records, and mechanic privileges and limitations. Twenty-seven clock hours lecture and forty-one clock hours lab.
- 1162 Reciprocating Engine Theory.** (2)
Theory and principles of operation of reciprocating engines. Thirty-seven clock hours lecture.
- 1213 Reciprocating Engine Overhaul and Inspection.** (3) Prerequisite: APT 1162
Actual overhaul of reciprocating engines. Included is a study of the procedures and acceptable techniques used in engine disassembly, inspection, repair, and reassembly. Twenty-eight clock hours lecture and ninety-two clock hours lab.
- 1222 Turbine Engine Theory.** (2)
Theory of basic gas turbine engines and related accessories including unducted fan systems and turbine-driven auxiliary power units. Thirty seven clock hours lecture.
- 1233 Turbine Engine Overhaul and Inspection.** (2) Prerequisite: APT 1222
Overhaul of basic gas turbine engines and related accessories and components, including, disassembly, inspection, assembly, and operation of jet engines. Twenty-eight clock hours lecture and ninety-two clock hours lab.
- 1241 Powerplant Conformity and Airworthiness Inspection.** (1) Pre/corequisite: APT 1233, APT 1213
Inspection of aircraft powerplants for conformity with airworthiness directives and manufacturer's specifications. Inspections will conform with Federal Aviation regulations. Fourteen clock hours lecture and eighteen clock hour lab.
- 1254 Lubrication and Fuel Metering Systems.** (4) Pre/corequisite: APT 1241
Aircraft lubrication, fuel metering, and fuel system components for reciprocating and turbine engines. Identification and selection of engine fuels and lubricants. Fifty-five clock lecture hours and sixty-eight clock lab hours.
- 1262 Induction, Cooling and Exhaust Systems.** (2) Pre/corequisites: APT 1233, APT 1213
Reciprocating and turbine induction and engine airflow system, engine cooling systems, and engine exhaust and reverser systems. Twenty-seven clock lecture hours, and fifty -two clock lab hours.
- 2114 Aviation Electricity II .** (4) Prerequisites: APT 1233, APT 1213
Aircraft engine systems including instrument, engine fire protection, engine electrical, ignition, and starting. Fifty-five clock lecture hours and sixty-seven clock lab hours.
- 2123 Propellers and Powerplant Review.** (3) Prerequisite: APT 1233, APT 1213
Inspection, service, and repair of fixed pitch, constant speed, and feathering propellers. Included are propeller governing systems, propeller synchronizing, and ice removal systems. Thirty-six clock lecture hours and forty-five clock lab hours.
- 2135 Structures I.** (5)
Sheet metal structures and welding processes as applied to aviation mechanics. Forty-three clock lecture hours and one hundred thirty- one clock lab hours.
- 2143 Structures II.** (3) Pre/corequisite: APT 2135
Aircraft wood and non-metallic structures, covering and finishes. Forty-two clock lecture hours and fifty-nine clock lab hours.
- 2212 Aircraft Controls.** (2) Prerequisite: APT 2143
Aircraft rigging and assembly. Seventeen clock lecture hours and forty-two clock lab hours.
- 2222 Aviation Electricity III.** (2) Pre/corequisite: APT 2212
Airframe electrical systems and components including wiring, switches, and controls. Twenty-eight clock lecture hours and forty-one clock lab hours.
- 2232 Hydraulic and Pneumatic Power System.** (2) Pre/corequisite: APT 2222

Aircraft hydraulic and pneumatic power system and components. Eighteen clock lecture hours and forty-two clock lab hours.

- 2243 Landing Gear and Protection Systems.** (3) Pre/corequisite: APT 2222
Aircraft landing gear systems, position and warning systems, and ice and rain control systems. Thirty-two clock lecture hours and forty-two clock lab hours.
- 2251 Environmental Control.** (1) Pre/corequisite: APT 2222
Inspecting, troubleshooting, and servicing and warning systems, and ice and rain control systems and cabin atmosphere control systems. Fourteen clock lecture hours and twenty-four clock lab hours.
- 2263 Aircraft Instrumentation Systems.** (3) Pre/corequisite: APT 2222
Aircraft instrument systems, communications and navigation systems, and aircraft fire protection system. Forty -two clock lecture hours and forty-two clock lab hours.
- 2271 Aircraft Fuel Systems.** (1) Pre/corequisite: APT 2222
Construction, inspection, and maintenance of various fuel system and components including tanks, pumps strainers, tubing and hoses. Eighteen clock lecture hours and eighteen clock lab hours.
- 2282 Airframe Inspection and Review.** (2) Prerequisites: All airframe courses
Airframe conformity and air worthiness inspections and maintenance procedures. Fourteen clock lecture hours and forty-two clock lab hours.

BARBERING (BAV)

- 1118 Basic Practices in Barbering.** (8)
Basic practices include orientation, safety, and practical experience in handling tools and hair cutting. Practices are done independently with supervision. Two lecture and eighteen lab hours per week.
- 1218 Fundamental Practices in Barbering I.** (8)
Fundamental practices in styling, shampooing, blow drying, perm rolling, and perm processing. Practices are done independently with supervision. Two lecture and eighteen lab hours per week.
- 1318 Fundamental Practices in Barbering II.** (8)
Sanitization, sterilization, prevention and control of contamination and decontamination in the workplace, hygiene and good grooming, hair analysis, and the application of a chemical hair relaxer and style. Practice are done independently with supervision. Two lecture and eighteen lab.
- 1418 Intermediate Practices in Barbering I.** (8)
This course includes practices in colors and bleach, and treatment of damaged hair. Practices are performed independently with supervision. Two lecture and eighteen lab hours per week.
- 1518 Intermediate Practices in Barbering II.** (8) Prerequisites: BAV 1118, BAV 1218
This course includes a study of the structure and function of the skin, common skin disorders, and scalp and hair disorders. Practices are included in giving a facial massage, rendering a plain facial, and barbering services previously introduced. Two lecture and eighteen lab hours per week.
- 1618 Advanced Practices in Barbering.** (8) Prerequisites: BAV 1318, BAV 1418
This course includes the study of business management and business law applicable to shop management. Practice in included in basic first aid procedures and trimming a mustache and beard, and barbering services previously introduced. Two lecture and eighteen lab hours per week.

BARBERING INSTRUCTOR TRAINING (BAV)

- 2218 Barbering Instructor Training.** (8) Prerequisite: Two years experience as an active licensed barber
This course prepares the student to become a barbering instructor. Topics covered include theory and techniques in hair cutting, styling, salesmanship, student records, lectures, supervision, and office work. Seventy hours lecture and five hundred thirty hours lab.

BIOLOGY (BIO)

- 1131 General Biology I Laboratory.** (1) Corequisite: BIO 1133
A laboratory course with selected activities to illustrate the principles taught in lecture. Two laboratory hours per week.
- 1133 General Biology I.** (3) Corequisite: BIO 1131
A course introducing the student to biological principles including biochemistry, cell structure and physiology, metabolic processes emphasizing respiration and photosynthesis, reproduction and development, genetics, and ecology. Three lecture hours per week.
- 1134 General Biology I and Laboratory.** (4)
A course introducing the student to biological principles including biochemistry, cell structure and physiology, metabolic process emphasizing respiration and photosynthesis, reproduction and development, genetics, and ecology. Three lecture hours and 2 laboratory hours per week.
- 1141 General Biology II Laboratory.** (1) Corequisite: BIO 1143
A laboratory course with selected activities to illustrate the principles taught in lecture. OPTION: Special sections of this course emphasize field study and must be taken concurrently with 1143-FD lecture (BIO 1141-0F or BIO 1141-1F). Two laboratory hours per week.
- 1143 General Biology II.** (3) Corequisite: BIO 1141
The course deals with a survey of the viruses and Monera, Protista, Fungi, Plant, and Animal Kingdoms. Ecological, form/function relationships and evolutionary adaptations are emphasized. OPTION: Special sections of this course emphasize field study and must be taken concurrently with sections identified as an "F" section, for example, 1141-0F, 1141-1F, etc. Three lecture hours per week.
- 1144 General Biology II and Laboratory.** (4)
The course deals with a survey of the viruses and Monera, Protista, Fungi, Plant, and Animal Kingdoms. Ecological, form/function relationships and evolutionary adaptations are emphasized. OPTION: Special sections of this course emphasize field study and must be taken concurrently with sections identified as an "F" section, for example, 1141-0F, 1141-1F, etc. Three lecture hours and 2 laboratory hours per week.
- 1214 Environmental Science.** (4)
This is an introductory course on environmental science with emphasis on aquatic biology. Areas of study will include the relationship of water on biome formation, aquatic biodiversity, water pollution and its detection, and water resources. Through the use of lecture, student research, laboratory experimentation and field study including the collection of real water pollution data, students will develop methods for protecting, sustaining and restoring aquatic systems. (This course is taught as a Dual Enrollment course only.)
- 1314 Botany.** (4) Corequisites: BIO 1133 and BIO 1131 or BIO 1134.
An introductory course in botany dealing with the application of biological principles to the study of plants including classification, structure, function, and environmental interrelationships. The laboratory part of the course deals with selected activities to illustrate the subject area taught in lecture. Three lecture hours and two laboratory hours per week.
- 1511 Anatomy and Physiology for Allied Health I Lab.** (1) Corequisite: 1513.
Selected experiments to illustrate the principles taught in BIO 1513. Two laboratory hours per week. Does not apply toward any nursing program.
- 1513 Anatomy and Physiology for Allied Health I.** (3) Corequisite: 1511.
A lecture/laboratory course dealing with the anatomical and physiological study of the human body, particularly the molecular, cellular, tissue, organs, and systems. Each system is considered in detail regarding both structure and function. Three lecture hours per week. Does not apply toward any nursing program.
- 1514 Anatomy and Physiology for Allied Health I and Lab.** (4)
A lecture/laboratory course dealing with the anatomical and physiological study of the human body, particularly the molecular, cellular, tissue, organs, and systems. Each system is considered in detail regarding both structure and function. Selected experiments to illustrate the principles taught in Anatomy and Physiology. Three lecture hours and two laboratory hours per week. Does not apply toward any nursing program.
- 1521 Anatomy and Physiology for Allied Health II Lab.** (1) Prerequisites: BIO 1511 or BIO 1514. Corequisite:

1523. Selected experiments to illustrate the principles taught in BIO 1523. Two laboratory hours per week. Does not apply toward any nursing program.
- 1523 Anatomy and Physiology for Allied Health II.** (3) Prerequisites: BIO 1513 or BIO 1514. Corequisite: 1521. A lecture/laboratory course of the systems listed but not covered in BIO 1513. Three lecture hours per week. Does not apply toward any nursing program.
- 1524 Anatomy and Physiology for Allied Health II and Lab.** (4) Prerequisites: BIO 1514 or 1513 and BIO 1511. A lecture/laboratory course of the systems listed but not covered in BIO 1514. Selected experiments to illustrate the principles taught in Anatomy and Physiology. Three lecture hours and two laboratory hours per week. Does not apply toward any nursing program.
- 2214 Introduction to Marine Science.** (4)
A lecture/laboratory introductory course in oceanography with emphasis on the measurement of physical, chemical, and biological aspects of the marine environment as well as functional morphology and taxonomy of local biota.
- 2234 Aquatic and Terrestrial Ecology.** (4) Prerequisite: BIO 1131/1133 or BIO 1141/1143
Aquatic and Terrestrial Ecology is a field course designed to give students an opportunity to become familiar with interactions of the flora and fauna of South Mississippi's ecosystems. Students will conduct a research project in the field. A final document will be produced that is useable by both scientists and the general public.
- 2414 Zoology I and Laboratory.** (4) Prerequisite: BIO 1133 and BIO 1131 or BIO 1134 with a grade of C or better.
An introductory course in zoology dealing with the application of biological principles to the study of animals including classification, structure, function, and environmental interrelationships. Emphasis is placed on both invertebrates as well as vertebrate organisms. The laboratory part of the course deals with selected activities to illustrate the subject area taught in lecture. Three lecture hours and two laboratory hours per week.
- 2424 Zoology II and Laboratory. (4) Prerequisite: BIO 2414**
A continuation of Zoology 2414 in which the major animal groups are studied. Typical representatives of each animal group are studied, and/or dissected in the laboratory. Three lecture hours and two laboratory hours per week.
- 2511 Human Anatomy and Physiology I Laboratory.** (1) Prerequisites: BIO 1133, BIO 1131 or BIO 1134 with a grade of C or better. Corequisite: BIO 2513
A laboratory with selected activities to illustrate the principles taught in lecture. Two laboratory hours per week.
- 2513 Human Anatomy and Physiology I.** (3) Prerequisites: BIO 1133, BIO 1131, or BIO 1134 with a grade of C or better. Corequisite: BIO 2511
This course is designed to study the structure and function of the human body. The study begins with the study of tissues and organ systems comprising the human body, and deepens in the detailed study of the integumentary, skeletal, muscular, and cardiovascular systems. Three lecture hours per week.
- 2514 Human Anatomy and Physiology I and Laboratory.** (4) Prerequisite: BIO 1133, BIO 1131, or BIO 1134 with a grade of C or better. This course is designed to study the structure and function of the human body. The study begins with the study of tissues and organ systems comprising the human body, and deepens in the detailed study of the integumentary, skeletal, muscular, cardiovascular, and nervous systems. The laboratory course uses selected activities to illustrate the principles taught in lecture. Three lecture hours and two laboratory hours per week.
- 2521 Human Anatomy and Physiology II Laboratory.** (1) Prerequisite: BIO 2513, BIO 2511, or BIO 2514
Corequisite: BIO 2523
A laboratory course with selected activities to illustrate the principles taught in lecture. This laboratory course includes the dissection of a representative mammal. Two laboratory hours per week.
- 2523 Human Anatomy and Physiology II.** (3) Prerequisite: BIO 2513, BIO 2511, or BIO 2514 Corequisite: BIO 2521
This course is a continuation of the concepts of Human Anatomy and Physiology I, in which the nervous, respiratory, digestive, urinary, reproductive, endocrine systems and homeostatic mechanisms are studied. Three lecture hours per week.
- 2524 Human Anatomy and Physiology II and Laboratory.** (4) Prerequisite: BIO 2513, BIO 2511, or BIO 2514
This course is a continuation of the concepts of Human Anatomy and Physiology I and lab, in which the

respiratory, digestive, urinary, reproductive, endocrine systems and homeostatic mechanisms are studied. The laboratory course uses selected activities to illustrate the principles taught in lecture. This laboratory course includes the dissection of a representative mammal. Three lecture hours and two laboratory hours per week.

- 2921 Microbiology Laboratory.** (1) Prerequisites: BIO 1133, BIO 1131 or BIO 1134 with a grade of C or better. Corequisite: BIO 2923
A laboratory course with selected activities to illustrate the principles taught in lecture. Two laboratory hours per week.
- 2923 Microbiology.** (3) Prerequisites: BIO 1133, BIO 1131 or BIO 1134 with a grade of C or better. Corequisite: BIO 2921
A survey of microbes (microscopic organisms), with emphasis and detailed study being placed on those affecting other forms of life, such as man. Laboratory is devoted to basic techniques of microbial study, such as culturing, identifying, control, anatomy, and life cycles. Three lecture hours per week.
- 2924 Microbiology and Microbiology Laboratory.** (4) Prerequisites: BIO 1133, BIO 1131 or BIO 1134 with a grade of C or better. A survey of microbes (microscopic organisms). With emphasis and detailed study being placed on those affecting other forms of life, such as man. Laboratory is devoted to basic techniques of microbial study, such as culturing, identifying, control, anatomy, and life cycles. Three lecture and three laboratory hours per week.

BRICK, BLOCK AND STONEMASONRY (BBV)

- 1115 Brick and Block Laying.** (5)
This course is designed to give the student experience in laying brick and block. One lecture and eight lab hours per week.
- 1215 Masonry Construction.** (5)
This course is designed to give the student experience in various types of walls, finishing, and masonry construction techniques. Three lecture and four lab hours per week.
- 1223 Masonry Math and Blueprint Reading and Estimating.** (3)
This course is designed to prepare the student to estimate the building materials for masonry through blueprint reading and calculation. Three lecture hours per week.
- 1313 Tools Safety and Equipment.** (3)
This course is designed to give the student experience in the use and care of tools and equipment along with the safety procedures used in the masonry trade. Two lecture and two lab hours per week.
- 1425 Advanced Block Laying.** (5)
This course is designed to give the student experience in laying block/columns, piers, and various walls. One lecture and eight lab hours per week.
- 1525 Advanced Brick Laying.** (5)
This course is designed to give the student experience in laying brick columns, piers, and various walls. One lecture and eight lab hours per week.
- 1623 Chimneys and Fireplaces Construction.** (3)
This course is designed to give the student experience in constructing chimneys and fireplaces. One lecture and four lab hours per week.
- 1723 Steps, Arches, and Brick Floors.** (3)
Students will gain advanced experiences in layout and construction of steps, arches, and brick floors. One lecture and four lab hours per week.
- 191 (1-3) Special Problem in Brick, Block, and Stone Masonry.** (1-3)
A course to provide students with an opportunity to utilize skills and knowledge gained in other Brick, Block and Stone Masonry courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. Two to six lab hours per week.

292 (1-6) Supervised Work Experience in Brick, Block and Stone Masonry. (1-6)

A course which is a cooperative program between industry and education and is designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours. Three to eighteen externship hours.

BUSINESS ADMINISTRATION (BAD)

1113 Introduction to Business. (3)

This course includes an introduction to the major areas of business. Special emphasis is given to business organizations and the environment; cultural diversity, total quality management, technology, general business practices, global business, ethical issues and business careers. Three lecture hours per week.

1213 Introduction to International Business. (3)

Introduction to international business theory and practices. Emphasis is placed on terminology and the importance of understanding cultural differences. Three lecture hours per week.

2323 Business Statistics. (3)

Introduction to statistical methods of collecting, presenting, analyzing, and interpreting quantitative data for business management and control. This course satisfies the statistics course requirement for a Bachelor of Science in Nursing degree. Offered online only.

2413 Legal Environment of Business. (3)

A study of the interrelationship of law and society and the impact of Juris prudence upon business activity. Special attention will be given to an introduction to law of contracts, commercial papers, and real property. Three lecture hours per week.

2533 Business Applications of Computing. (3).

A basic course that advances concepts, terminology, and theory of modern computers and surveys their use in various activities. This course will use word processing, spreadsheets, database, presentation software, and Internet applications to reinforce the concept of using microcomputers as a tool. Three lecture hours per week and open laboratory assignments. This course will satisfy the computer literacy requirement for graduation from PRCC. A student may not earn credit for both BAD 2533 and CSC 1113.

BUSINESS AND OFFICE TECHNOLOGY (BOT)

1013 Introduction to Keyboarding. (3)

This course provides an introduction to basic work processing commands and essential skill development using the touch system on the alphabetic keyboard. Course emphasis will be on speed and accuracy when keying documents and timed writings Two lecture and two lab hours per week.

1113 Document Formatting. (3) Prerequisite: BOT 1013

This course focuses on improving keyboarding techniques using the touch method and on production of documents using work processing functions. Two lecture and two lab hours per week.

1123 Keyboard Skillbuilding. (3)

This course further develops keyboard techniques emphasizing speed and accuracy. Two lecture and two hours lab per week.

1133 Microcomputer Applications. (3) Prerequisite: BOT 1013 or consent of instructor

This course will introduce an operating system and word processing spreadsheet, database management, and presentation software applications. Two lecture and two lab hours per week.

1143 Word Processing. (3) Prerequisites: BOT 1713

This course focuses on production of documents using word processing functions. Production with accuracy is stressed and practice is given through a variety of documents for skillbuilding. Two lecture and two lab per week.

1213 Professional Development. (3)

- This course develops an awareness of interpersonal skills essential for job success. Three lecture hours per week.
- 1313 Applied Business Mathematics. (3)**
This course is designed to develop competency in mathematics for business use. Ten-key touch method on the electronic desktop calculators is stressed. Three lecture hours per week.
- 1413 Records Management. (3)**
This course focuses on the systems approach to managing recorded information in any form. Emphasis is placed on the three categories into which records generally fall – paper, image, and digital – and the treatment of these categories in proper management, storage, and retrieval. Three lecture hours per week.
- 1433 Business Accounting. (3)**
This course is designed to develop an understanding of recording, classifying, and summarizing business transactions and events with insight into interpreting and reporting the resulting effects upon the business. Three lecture hours per week.
- 1443 Advanced Business Accounting. (3)**
This course is designed as a continuation of Business Accounting. Three lecture hours per week.
- 1513 Machine Transcription. (3) Prerequisite: BOT 1143**
This course is designed to teach transcription of a wide variety of business communications from machine dictation. Two lecture and two lab hours per week.
- 1613 Medical Office Terminology I. (3)**
This course is a study of medical language relating to the various body systems including diseases, physical conditions, procedures, clinical specialties, and abbreviations. Emphasis is placed on correct spelling and pronunciation. Two lecture and two lab hours per week.
- 1623 Medical Office Terminology II. (3)**
This course presents medical terminology pertaining to human anatomy in the context of body systems. The emphasis is directed toward medical terminology as it relates to Medical Office Technology. Two lecture and two lab hours per week.
- 1713 Mechanics of Communication. (3)**
This course is designed to develop the basic English competencies necessary for success in the business world. A study of the parts of speech, sentence structure, sentence types, capitalization, punctuation, and spelling is emphasized. Three lecture hours per week.
- 1813 Electronic Spreadsheet. (3) Prerequisite: BOT 1313**
This course focuses on applications of the electronic spreadsheet as an aid to management decision making. Two lecture and two lab hours per week.
- 2133 Desktop Publishing. (3) Prerequisite: BOT 1143**
This course presents graphic design techniques, principles of page layout and design, and electronic publishing terminology and applications to create a variety of documents such as flyers, brochures, newsletters, and business cards. Two lecture and two hours lab per week.
- 2323 Database Management. (3) Prerequisite: BOT 1413**
This course applies database concepts for designing and manipulating data files and formatting output as complex documents and reports. Two lecture and two lab hours per week.
- 2413 Computerized Accounting. (3) Prerequisites: BOT 1433 or ACC 1213**
This course applies basic accounting principles using a computerized accounting system. Two lecture and two hours lab per week.
- 2423 Income Tax Accounting. (3)**
This course is designed to be an introductory tax accounting class with insight in federal income tax laws and preparation of reports. Two lecture and two hours lab per week.
- 2463 Payroll Accounting. (3)**

This course provides an in-depth study of payroll accounting. Two lecture and two hours lab per week.

- 2523 Medical Machine Transcription I.** (3) Prerequisite: BOT 1613
This course is designed to teach transcription of various medical documents. One lecture and two lab hours per week.
- 2533 Medical Machine Transcription II.** (3) Prerequisite: BOT 1513
This course is designed to continue teaching transcription of various medical documents including dictation given by doctors with foreign accents and additional medical specialties. One lecture and two hours lab per week.
- 2643 CPT Coding.** (3) Prerequisites: BOT 1613 and BOT 1623 or consent of instructor
This course is an introduction to the field of procedural coding and requirements for insurance reimbursement. Two lecture and two lab hours per week.
- 2653 ICD Coding.** (3) Prerequisites: BOT 1613 and BOT 1623 or consent of instructor
This course is an introduction to the field of diagnostic coding. Two lecture and two lab hours per week.
- 2663 Advanced Coding.** (3) Prerequisites: BOT 2643, BOT 2653
This course includes advanced analysis of diagnostic and procedural coding systems. Two lecture and two lab hours per week.
- 2673 Medical Insurance Billing.** (3) Prerequisites: BOT 2643, BOT 2653
This course is a culmination of skills and knowledge of appropriate procedures for generating, processing, and submitting health insurance claims to private and governmental health insurance programs. Two lecture and two lab hours per week.
- 2723 Administrative Office Procedures.** (3) Prerequisite: BOT 1143
This course will provide comprehensive coverage and integration of business skills and issues, develop critical-thinking and problem-solving skills, and establish a foundation in business procedures. Two lecture and two hours lab per week.
- 2743 Medical Office Concepts.** (3) Prerequisite: BOT 1613 and/or BOT 1623
This course will provide coverage and integration of medical office skills and issues using knowledge of medical terminology. Problem solving will be emphasized. Two lecture and two hours lab per week.
- 2753 Medical Information Management.** (3) Prerequisite: BOT 2743
This course will continue coverage of medical office issues with emphasis on health insurance filing. Two lecture and two hours lab per week.
- 2813 Business Communication.** (3) Prerequisite: BOT 1713
This course develops communication skills with emphasis on principles of writing business correspondence and reports, and analyzing and summarizing information in a logically written presentation. Three lecture hours.
- 2823 Communication Technology.** (3) Prerequisite: BOT 1143
This course will present an overview of the resources available for online Communication. Two lecture and two hours lab per week.
- 2833 Integrated Computer Applications.** (3) Prerequisites: BOT 1143, BOT 2813, BOT 2323, and BOT 1813
This course integrates activities using applications software including word processing, database, spreadsheet, graphics, and multimedia. Two lecture and two hours lab per week.

BUSINESS AND MARKETING MANAGEMENT TECHNOLOGY (MMT)

- 1113 Marketing I.** (3)
Study of principles and problems of marketing goods and methods of distribution from producer to consumer. Types, functions and practices of wholesalers and retailers in the American marketing system and efficient techniques in the development and expansion of markets are included. Three lecture hours per week.
- 1123 Marketing II.** (3) Prerequisite: MMT 1113
This course is a continuation of MMT 1113. Three lecture hours per week.

- 1313 Salesmanship. (3)**
Basic principles and techniques of salesmanship and their practical application. Topics include basic tenets of psychology as related to the selling field, motivating the customer to buy, closing a sale, how to lose a sale and still keep a good customer, and producing good customer relations and a good selling environment. Two lecture and two lab hours per week.
- 1323 Advertising. (3)** Prerequisite: MMT 1113
The role of advertising and its effectiveness. Consumer and product research, advertising media and strategic planning, and advertising construction. Two lecture and two lab hours per week.
- 1413 Merchandising Mathematics. (3)**
Study of the mathematical calculations involved in the merchandising process. Fundamental principles and operations in buying, pricing and inventory control. Three lecture hours per week.
- 1713 Marketing Seminar I. (3)**
The objective of this course is to introduce the student to the field of visual merchandising. It integrates classroom instruction and field experiences to enhance the learning experience. Emphasis is placed on creating window displays in the classroom as well as in area businesses. A portfolio is compiled of the creations for future use. Two lecture and two lab hours per week.
- 2213 Management. (3)**
The objective of this course is to present a straightforward, fundamental approach to managing a business firm. The steps in planning, organizing, leading and controlling a business concern are discussed. Emphasis is put on basic managerial decision-making activities with the use of case studies and experiential exercises as primary learning tools. Three lecture hours per week.
- 2233 Human Resource Management. (3)** Prerequisite: MMT 2213
Objectives, organization and functions of personnel programs. Emphasis is placed on selection and placement, job evaluation, training, education, safety, health, employer-employee relationships and employee services. Three lecture hours per week.
- 2323 Internet Marketing. (3)**
Study of effective marketing principles as they apply to the electronic marketplace. Two lecture and two hours lab per week.
- 2513 Entrepreneurship. (3)**
A course designed to provide the student with an understanding of the opportunities, processes, activities and disadvantage of operating or owning a small business. Analysis of market opportunities and personal assessment of entrepreneur qualities, feasibility studies and basic management skills are the basic topics of discussion. Two lecture and two lab hours per week.
- 2613 International Marketing. (3)**
This course is designed to provide students with an overview and understanding of International marketing. It involves an analysis of world markets, their respective consumers and environments, and the marketing management required to meet the demands of constantly changing foreign markets. Three lecture hours per week.
- 2523 Event Marketing. (3)**
This course is a continuation of design principles learned in Marketing Seminar I as well as incorporating the design of a plan for special events, trade and consumer shows, exhibitions, and conventions. A continuation of the portfolio assembled in Marketing Seminar I is used. Two lecture and two lab hours per week.
- 291(1-6) Supervised Work Experience in Marketing and Management Technology. (1-6)**
Direct application of concepts and theory of marketing management technology. Students will work in a marketing related environment. Three to eighteen hours externship.

CHEMISTRY (CHE)

- 1211 General Chemistry I Laboratory. (1)** Corequisite: CHE 1213
A laboratory course with selected experiments to illustrate the principles taught in lecture. Two hours laboratory per week.

- 1213 General Chemistry I.** (3) Prerequisite: High school chemistry or Principles of Chemistry (CHE 1313), and College Algebra (MAT 1313) or higher level mathematics taken concurrently. Corequisite: CHE 1211
This course covers the fundamental laws and theories of chemistry, together with a study of the descriptive chemistry of the nonmetallic and metallic elements. Atomic and molecular structure, bonding, general stoichiometry, solutions, and reduction oxidation are studied. Laboratory techniques and the preparation and properties of compounds are covered. Three lecture hours per week.
- 1214 General Chemistry I and Laboratory.** (4) Prerequisites: High school chemistry or Principles of Chemistry (CHE 1313), and College Algebra (MAT 1313) or higher level mathematics taken concurrently.
This course covers the fundamental laws and theories of chemistry, together with a study of the descriptive chemistry of the non-metallic and metallic elements. Atomic and molecular structure, bonding, general stoichiometry, solutions, and reduction oxidation are studied. Laboratory techniques and the preparation and properties of compounds are covered. Three lecture hours and two laboratory hours per week.
- 1221 General Chemistry II Laboratory.** (1) Prerequisites: CHE 1211 and CHE 1213 Corequisite: CHE 1223
A continuation of General Chemistry Lab I. Must be taken concurrently with Chemistry 1223. Two hours laboratory per week.
- 1223 General Chemistry II.** (3) Prerequisites: CHE 1211 and grade of C or better in CHE 1213. Corequisite: CHE 1221
The topics of ionization, chemical equilibrium, reaction rates, and the acids/bases are discussed. Complex compounds, electrochemistry, radioactivity, and carbon chemistry are introduced. Three lecture hours per week.
- 1313 Principles of Chemistry I.** (3)
Lecture, demonstrations, and films. Emphasis on atomic structure, bonding, stoichiometry, solutions, gas laws, and properties of matter. Not acceptable for pre-professional majors. Three lecture hours per week. Recommended for pre-nursing.
- 1314 Principles of Chemistry with Laboratory.** (4) This course covers basic chemical concepts through lecture, demonstrations, films, and selected laboratory experiments emphasizing atomic structure, bonding, mathematical concepts, nomenclature, stoichiometry, solutions, gas laws, properties of matter, and the application of these concepts. Five lecture/laboratory hours per week. Recommended for allied health science majors not requiring General Chemistry.
- 2421 Organic Chemistry Laboratory I.** (1) Prerequisites: CHE 1221 and CHE 1223 Corequisite: CHE 2423
A laboratory course designed for the beginning student in Organic Chemistry. Acquaints students with important manipulations and procedures and the preparations and study of organic compounds. Two hours laboratory per week.
- 2423 Organic Chemistry I.** (3) Prerequisites: CHE 1221 and CHE 1223 Corequisite: CHE 2421
Basic principles of carbon chemistry, bonding, structure, and behavior; aliphatic compounds; identification and preparation of compounds. Emphasis is on reaction mechanism, nomenclature, stereochemistry, application of spectroscopy to organic compounds, classification, and general application. Three lecture hours per week.
- 2432 Organic Chemistry Laboratory II.** (2) Prerequisites: CHE 2421 and CHE 2423 Corequisite: CHE 2433
A continuation of Organic Chemistry Lab I. Four hours laboratory per week.
- 2433 Organic Chemistry II.** (3) Prerequisites: CHE 2421 and CHE 2423 Corequisite: CHE 2432
A continuation of Chemistry 2423. Aromatic and complex compounds. A comprehensive study of the carbohydrates-benzene and its homologs and structure and reaction mechanisms of closed ring compounds. Three lecture hours per week.

COMMERCIAL TRUCK DRIVING (DTV)

- 1114 Commercial Truck Driving I.** (4)
Fundamental instruction on safety, rules and regulations, driving practices, air brakes, hazardous material, and emergencies. Includes instruction and practice in performing vehicle inspections, coupling and uncoupling, maneuvering, backing and driving a tractor-trailer truck under varying road and climate conditions. One lecture and six lab hours per week.
- 1124 Commercial Truck Driving II.** (4) Prerequisite: DTV 1114
Continuation of Commercial Truck Driving I with additional instruction on safety, rules and regulations, driving practices, air brakes, hazardous materials, and emergencies. Includes instruction and practice in performing

vehicle inspections, coupling and uncoupling, maneuvering, backing, and driving a tractor-trailer truck under varying road and climate conditions. One lecture and six lab hours per week.

COMPUTER NETWORK SUPPORT TECHNOLOGY (CNT)

- 1414 Fundamentals of Data Communication. (4)**
This course presents basic concepts of telephony, local area networks, wide area networks, data transmission, and topology methods. Two lecture and four lab hours per week.
- 1513 Web Development Concepts. (3)**
This course is an introduction to the Internet and its uses in the world of business. It includes basic and advanced features of the Internet, World Wide Web, gophers, listservers, and creating web pages. Upon completion of the course, students will be able to create a personalized home page and post it on the Internet, download files using a browser and FTP program, and send email messages. Two lecture and two lab hours per week.
- 1524 Network Components (4) Prerequisite: CNT 1414**
This course presents local area network and wide area network connectivity. It focuses on architectures, topologies, protocols, and transport methods of a network. Two lecture and four lab hours per week.
- 1624 Network Administration Using Windows Server 2003. (4) Prerequisites: CNT 1414 and enrollment in CPT 1332**
This course focuses on the management of a computer network using the Windows Server network operating system. Emphasis will be placed on daily administrative tasks performed by a network administrator. Two lecture and four lab hours per week.
- 2423 Systems Maintenance. (3) Prerequisite: CPT 1333**
This course covers the diagnosis, troubleshooting, and maintenance of computer components. Topics include hardware compatibility, system architecture, memory, input devices, video displays, disk drives, modems, and printers. Two lecture and two lab hours per week.
- 2534 Network Planning and Design. (4) Prerequisite: CNT 1624, CNT 1524**
This course involves applying network concepts in planning and designing a functioning network. Emphasis is placed on recognizing the need for a network, conducting analysis, and designing solution. Two lecture and four lab hours per week.
- 2544 Network Implementation. (4) Prerequisite: CNT 2534**
This course is the culmination of all concepts learned in the network curriculum. Topics include planning, installation, evaluation, and maintenance of a network solution. Two lecture and four lab hours per week.
- 2553 Network Security. (3) Prerequisite: CNT 1513 or WDT 1123, CNT 1524**
This course provides an introduction to network and computer security. Topics such as ethics, security policies, legal issues, vulnerability testing tools, firewalls, and operating system hardening will be discussed. Students will receive a deeper understanding of network operations and protocols through traffic capture and protocol analysis. Two lecture and two lab hours per week.
- 2644 Advanced Network Administration Using Windows Server 2003. (4) Prerequisite: CNT 1624**
This course is a continuation of Network Administration using Windows Server. Emphasis is placed on installation, configuration, and implementation of a functional Windows Server. Two lecture and four lab hours per week.

COMPUTER PROGRAMMING TECHNOLOGY (CPT)

- 1113 Fundamentals of Microcomputer Applications. (3)**
This course will introduce information processing concepts to include word processing, electronic spreadsheet, and database management. Service course; not to be taken by Computer Programming students or Business and Office and Related Technology students. Two hours lecture and two hours lab per week.

- 1143 Programming Development Concepts. (3)**
This course is an introduction to programming logic and computer systems. Students will gain hands-on experience in the development of computer programs. Two hours lecture and two hours lab per week.
- 1214 Visual Basic Programming Language. (4)**
Introduction to the Visual BASIC programming language. Introduces the student to object-oriented programming and a graphical integrated development environment. Two lecture and four lab hours per week.
- 1323 Survey of Microcomputer Applications. (3)**
This course will introduce word processing, electronic spreadsheet, and database management software with integration of these applications. Two hours lecture and two hours lab per week.
- 1333 Operating Platforms. (3)**
This course will provide experience in a variety of operating platforms. Emphasis will be placed on support personal interaction with the platform to assist users in business environment. Two hours lecture and two hours lab per week.
- 1353 Database Design Fundamentals. (3)** Prerequisite: Any programming class or by permission of instructor
This course is a study of the design of databases. Additional emphasis is placed on creation, manipulation, extraction, and display of data from existing databases. Two lecture and two lab hours per week.
- 2244 Database Programming. (4)** Prerequisites: CPT 1353 and CPT 2434 or permission of the instructor
This course will introduce programming using a database management software application. Emphasis will be placed on menus and file maintenance. Two lecture and four lab hours per week.
- 2284 C Programming Language. (4)** Prerequisite: CPT 1214 or permission of instructor
This course is designed to introduce the student to the C programming language and its basic functions. Two lecture and four lab hours per week.
- 2354 Systems Analysis and Design. (4)**
This course introduces techniques used in systems analysis and design. Emphasis will be placed on the design, development, and implementation of an information system. Two lecture and four lab hours per week.
- 2423 Systems Maintenance. (3)** Prerequisite: CPT 1333
This course cover the diagnosis, troubleshooting, and maintenance of computer components. Topics include hardware compatibility, system architecture, memory, input devices, video displays, disk drives, modems, and printers. Two lecture and two lab hours per week.
- 2424 Advanced C Programming Language. (4)** Prerequisite: CPT 2284 with a grade of "C" or better
This course is a continuation of CPT 2284 C Programming language. Two lecture and four lab hours per week.
- 2434 Advanced Visual Basic Programming Language. (4)** Prerequisite: CPT 1214 with a grade of "C" or better.
This course is a continuation of CPT 1214 Visual Basic Programming Language. Two lecture and four lab hours per week.
- 2914 Supervised Work Experience in Computer Information Systems. (4)** Prerequisites: Consent of instructor and completion of at least one semester of advanced coursework in Computer Information Systems Technology.
A course which is a cooperative program between industry and education and is designed to integrate the student's technical studies with industrial experience. Twelve hours externship per week.

COMPUTER SCIENCE (CSC)

- 1113 Introduction to Computing with Business Applications. (3)**
A basic course that advances concepts, terminology, and theory of modern computers and surveys their use in various activities. This course will use word processing, spreadsheets, database, presentation software, and Internet applications to reinforce the concept of using microcomputers as a tool. Three lecture hours and open laboratory assignments. A student may not earn credit for both BAD 2533 and CSC 1113.
- 1123 Computing Applications. (3)** Prerequisite: CSC 1113
Designed each semester to teach the use of a single major application package used on microcomputers in

business, education, and other environments. Packages and concepts will range from desktop publishing using WordPerfect and Arts & Letters to microcomputer Internet applications. Three lecture hours and open laboratory assignments.

- 1614 Introduction to Programming I** (5 contact hours / 4 credit hours) Prerequisite: Prior credit for or registration in MAT 1313.
Problem solving, algorithm development, computer programming, and an overview of computer science using a structured high level language. Three hours of lecture and two hours of closed lab per week. (Offered in the Fall only.)
- 2134 Computer Science I.** (5 contact hours / 4 credit hours) Prerequisite: CSC 1614 or CSC 2323 and prior credit for or registration in MAT 1613.
Problem solving, algorithm development, computer programming, and an overview of computer science using a high-level, object-oriented language. Three hours of lecture and two hours of closed lab per week.
- 2144 Computer Science II.** (4 contact hours / 4 credit hours) Prerequisite: CSC 2134.
A continuation of CSC 2134 with emphasis on program style, algorithm development, and object-oriented programming. Four hours of lecture per week with open lab assignments. (Offered in Spring only.)
- 2323 FORTRAN Programming and Applications.** (3)
A course primarily for mathematics, engineering, and science majors. Emphasis is on the structure of the FORTRAN language and its applications to problems in mathematics, engineering, and the sciences. Three lecture hours per week. Open laboratory assignments.
- 2624 Introduction to Programming II.** (5 contact hours / 4 credit hours) Prerequisite: CSC 1614.
A continuation of CSC 1614 with emphasis on data structures, and visual programming techniques. Three hours of lecture and two hours of closed lab per week.
- 2833 Discrete Mathematical Structures of Computer Science.** (3) Prerequisite: CSC 1614
Introduction to finite and discrete structures, combinatorics and graph theory, logic, models of algorithmic processes and application in languages, computers, and programs. Three lecture hours per week. Open laboratory assignments.

COMPUTER SERVICING TECHNOLOGY (CST)

- 1114 Electronics for Computer Servicing.** Prerequisite: none
Concepts of electronics as related to computer systems. Topics include DC/AC fundamentals, instrument and test equipment familiarization, soldering, terminology, and assembly/repair techniques. Two lecture and four lab hours per week.
- 1123 Basic Computer Systems.** (3) Prerequisite: permission of the instructor
A survey of computer components. Topics include hardware and software components and interactivity, compatibility, and system architecture such as processors, memory, input devices, video displays, disk drives, modems, and printers. Two lecture and two lab hours per week.
- 1333 Operating Platforms** (3) Prerequisite: none
Fundamentals of operating systems structure and concepts. Major operating systems' fundamentals, utilities, and features. Emphasis is placed on support personnel interaction with the platform to assist users in business environments. Two lecture and two lab hours per week.
- 1413 Fundamentals of Data Communication** (3) Prerequisite: none
Concepts of telephony, data transmission, transmission protocols, and topology methods. Emphasis placed on the OSI Model and how it relates to standards within local area networks, wide area networks, and other topologies. Two lecture and two lab hours per week.
- 1523 Network Components.** Prerequisite: CST 1413
Advanced concepts of local area network and wide area network connectivity. Focuses on architectures, topologies, protocols, and transport methods of a network, with emphasis on networking devices and components and their capabilities. Two lecture and two lab hours per week.

- 2113 Computer Servicing Lab I (3)** Prerequisite CST 1123
Fundamentals of servicing of personal computer and peripheral systems in a laboratory and field environment. Includes system configuration, test equipment usage, disassembly and assembly methods, tests and diagnostics, and schematic interpretation. Concepts of equitable and practical time and resource allocation within a project for a client will be incorporated. Six lab hours per week.
- 2123 Computer Servicing Lab II. (3)** Prerequisite: CST 1523, CST 2113
Fundamentals of servicing of network components and networking systems in a laboratory and field environment. Includes system and network configuration, test equipment usage, disassembly and assembly methods, tests and diagnostics, electronic and network schematic and diagram interpretation, and building cables. Six lab hours per week.
- 2134 Diagnosing and Troubleshooting. (4)** Prerequisite: CST 2113
Diagnosing and troubleshooting techniques of computer and networking systems; operating systems interface, common hardware and software/O.S. problems, system malfunctions, including peripheral systems. Building and maintaining good client relationships for the technician will be incorporated. Two lecture and four lab hours per week.
- 291(1-3) Special project. (1-3)** Prerequisite: permission of the instructor
Practical application of skills and knowledge gained in CST or CST-related technical courses. The student will be provided materials and lab time to work toward A+ Certification, or other certification upon instructor approval. Two to six lab hours per week.
- 292(1-6) Supervised Work Experience. (1-6)** Prerequisite: permission of the instructor
Cooperative program between industry and education designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of semester hour per 45 industrial hours. Three to eighteen hour externship.

CONSTRUCTION MANAGEMENT TECHNOLOGY (CON)

- 1113 Survey of Modern Construction. (3)**
Fundamentals of the construction environment, methods, materials, and processes from a historical perspective, and the impact on the construction industry. Two lecture and two lab hours per week.
- 1213 Construction Materials. (3)**
Study and testing of the various materials used in the construction industry including on-site asphaltic and portland cement concrete, reinforced concrete, pre-stressed concrete and soils. Two lecture and two lab hours per week.
- 1222 Plans and Document Interpretation. (2)**
Graphic techniques used in the construction industry. Includes computation of areas and volumes, interpretation of building plans and specifications, and symbols and terms used in the residential and commercial construction industry. One lecture and two lab hours per week.
- 1233 Construction Systems I. (3)**
Common practices of engineering principles and construction methods. Two lecture and two lab hours per week.
- 2113 Construction Job Site Management. (3)**
Basic techniques of the modern methods of managing construction projects including critical path scheduling, resource allocation, and funds flow. Practical applications are made through simulated projects. Two lecture and two lab hours per week.
- 2123 Construction Cost Estimation. (3)**
Estimating, quantity survey, unit cost synthesis and analysis, bid organization and planning, and competitive simulations and exercises. Computer software programs are utilized to develop simulated construction bid. Two lecture and two lab hours per week.
- 2233 Construction Systems II. (3)**
Common practices of construction using engineering techniques to determine relations between equipment production and design criteria. Two lecture and two lab hours per week.

- 2243 Construction Systems III. (3)**
A study of material properties and common practices of design and construction of civil/highway structures. The operation and cost of construction machinery and equipment, power generating equipment, and powered fastening systems will be covered. Two lecture and two lab hours per week.
- 2313 Construction Layout. (3)**
Principles of site preparation and layout of structures. Use of levels, tapes, and surveying instruments. Triangle calculations, differential leveling, and erection of batter boards and markers are included. One lecture and four lab hours per week.
- 2413 Construction Safety Standards. (3)**
Management of safety and health in the construction environment. Basic elements of a safety and health program for the construction general contractor are examined to include Occupational Safety and Health Administration (OSHA). Two lecture and two lab hours per week.
- 2513 Leadership and Organization. (3)**
Study of the effective leadership and management styles in the construction industry. Organization of the construction industry at the local, state, and national levels. Two lecture and two lab hours per week.
- 261(3-6) Internship in Construction Engineering Technology I. (3-6)** Prerequisite: Consent of Instructor
A cooperative program between the construction industry and education which is designed to integrate the student's technical studies with on-site construction experiences. Offered only in the summer term. Credit is awarded on the basis of 1 semester hour per 45 hours of on-site experience. Three to six credit hours scheduled, 135 to 270 work hours.
- 262(3-6) Internship in Construction Engineering Technology II. (3-6)**
Continuation of CON 2616 with advanced placement in on-site construction. Offered only in the summer term. Credit is awarded on the basis of one semester hour per forty-five hours of on-site experience. Three to six credit hours scheduled, 135 to 270 work hours.
- 291(1-3) Special Problem in Construction Engineering Technology. (1-3)** Prerequisite: Consent of Instructor
A course to provide students with an opportunity to utilize skills and knowledge gained in other Construction Engineering Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. Two to six lab hours per week.

COSMETOLOGY (COV)

- 1122 Cosmetology Orientation. (2)**
This course will cover the history, career opportunities, life skills, professional image, Mississippi Cosmetology laws, rules and regulations and communicating for success in the cosmetology industry. Included are classroom theory and lab practice as governed by Mississippi Cosmetology law, rules, and regulations involved in cosmetology practices and safety precautions associated with each. Two lecture hours per week.
- 1245 Cosmetology Sciences I. (5)**
This course consists of the study of bacteriology, sterilization, and sanitation. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practice and safety precautions associated with each. Three lecture and six lab hours per week.
- 1255 Cosmetology Science II. (5)** Pre/corequisite: COV 1245
This course consists of the study of anatomy and physiology. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulation involved in cosmetology practices and safety precautions associated with each. Two lecture and six lab hours per week.
- 1263 Cosmetology Science III. (3)** Prerequisite: COV 1255
This course consists of the application and demonstration of chemistry and electricity. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. Two lecture and three lab hours per week.
- 1426 Hair Care I. (6)**
This course consists of the study of properties of the hair and scalp; principles of hair design; shampooing, rinsing, and conditioning; haircutting; hairstyling; braiding and braid extension; wigs and hair enhancements;

chemical texture services; and hair coloring. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. Two lecture and twelve lab hours per week.

1436 Hair Care II. (6) Pre/corequisites: COV 1426

This course consists of the advanced study of properties of the hair and scalp; principles of hair design; shampooing, rinsing, and conditioning; haircutting; hairstyling; braiding and braid extension; wigs and hair enhancement; chemical texture; and hair coloring. Included are classroom theory and lab practices and safety precautions associated with each. Two lecture and twelve lab hours per week.

1443 Hair Care III. (3) Pre/corequisites: COV 1436

This course consists of the practical applications of the study of properties of the hair and scalp; principles of hair design; shampooing, rinsing, and conditioning; haircutting; hairstyling; braiding and braid extensions; hair enhancements; chemical texture services; and hair coloring. Included are classroom theory and lab as governed by Mississippi cosmetology law, rules, and regulations involved in cosmetology practices and safety precautions associated by each. Nine lab hours per week.

1522 Nail Care I. (2)

This course consists of basic nail care services including nail structure and growth, manicuring and pedicuring, and advanced nail techniques. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. One lecture and three lab hours per week.

1532 Nail Care II. (2) Pre/corequisites: COV 1522

This course consists of basic nail care services including nail structure and growth, manicuring and pedicuring, and advanced nail techniques. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. One lecture and three lab hours per week.

1542 Nail Care III. (2) Pre/corequisites: COV 1532

This course consists of basic nail care service including nail structure and growth, manicuring and pedicuring, and advanced nail techniques. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. Six lab hours per week.

1622 Skin Care I. (2)

This course consists fo the introduction to basic skin services including anatomy of skin, disorders of skin, hair removal, facials, and facial makeup. Included are classroom theory and lab practice as governed my Mississippi cosmetology law, rules and regulations involved in cosmetology practices and safety precautions associated with each. One lecture and three lab hours per week.

1632 Skin Care II. (2) Pre/corequisites: COV 1622

This course consists of basic skin care services including anatomy of skin, disorders of skin, hair removal, facials and facial makeup. Included are classroom theory and lab practice as governed by Mississippi cosmetology law, rules and regulations involved in cosmetology practices and safety precautions associated with each. One lecture and three lab hours per week.

1642 Skin Care III. (2) Pre/corequistes: COV 1632

This course consists of advanced skin care services including anatomy of skin, disorders of skin, hair removal, facials, and facial makeup. Included are classroom theory and lab practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practice and safety precautions associated with each. Six lab hours per week.

1722 Salon Business I. (2)

This course will cover preparing to operate a successful salon. Included are classroom theory and lab practice as governed by Mississippi cosmetology law, rules, and regulations involved in cosmetology practices and safety precaution associated with each. One lecture and three lab hours per week.

1732 Salon Business II. (2) Pre/corequisites: COV 1722

This course will cover operating a successful salon and seeking employment. Included are classroom theory

and lab practice as governed by Mississippi cosmetology law, rules, and regulations involved in cosmetology practices and safety precaution associated with each. One lecture and three lab hours per week.

COSMETOLOGY TEACHER TRAINING (COV)

- 2816 Cosmetology Teacher Training I.** Pre/corequisites: Students must have at least two years of active practical experience as a licensed cosmetologist and currently hold a valid Mississippi cosmetology license. Instruction will be given in developing appropriate communication skills, effective use of visual aids, identification of various teaching styles, and practical application of cosmetology instruction. Three lecture and nine lab hours per week.
- 2826 Cosmetology Teacher Training II.** Pre/corequisites: COV 2816
Instruction will be given in development of instructional methods, development of visual aids, development of effective evaluation, and practical application of cosmetology instruction. Three lecture and nine hours per week.
- 2836 Cosmetology Teacher Training III.** Pre/corequisties: COV 2826
Instruction will be given in development of appropriate lesson plans and practical application of cosmetology instruction.
Three lecture and nine hours per week.
- 2846 Cosmetology Teacher Training IV.** Pre/corequisties: COV 2836
Instruction will be given in classroom management techniques; cosmetology laws, rules, and regulations; and practical application of cosmetology instruction. Three lecture and nine lab hours per week.

CRIMINAL JUSTICE (CRJ)

- 1313 Introduction to Criminal Justice. (3)**
History, development, and philosophy of law enforcement in a democratic society, introduction to agencies involved in the administration of criminal justice; career orientation. Three lecture hours per week.
- 1323 Police Administration and Organization. (3)**
Principles of organization and administration in law enforcement as applied to law enforcement agencies; introduction to concepts of organizational behavior. Three lecture hours per week.
- 1353 Internship in Criminal Justice. (3)** Prerequisite: Instructor Approval
Internship in an approved law enforcement, juvenile justice or correctional agency; major in criminal justice with Sophomore standing, under supervision of the agency concerned and school instructor. Field work offering research and practice in a criminal justice agency.
- 1363 Introduction to Corrections. (3)**
An introduction to the origins, historical, and philosophical development of the American correctional system and its relationship with other criminal justice agencies. An overview of major contemporary correctional systems and methods of treatment of offenders. Three lecture hours per week.
- 1383 Criminology. (3)**
A study of causes, treatment, and prevention of crime with emphasis on the nature and significance of criminal behavior. Course content includes theories, statistics, trends, and programs concerning criminal behavior. Three lecture hours per week.
- 2213 Traffic Law. (3)**
An examination of the history, development, and enforcement of statutes pertaining to motor vehicles with an emphasis on prevailing Mississippi traffic law and methods of enforcement. Three lecture hours per week.
- 2313 Police Operations. (3)**
A study of police procedures and enforcement methods within law enforcement agencies. Particular emphasis is placed on the function of the patrol division. Three lecture hours per week.
- 2323 Criminal Law - Evidence. (3)**

A survey of applied substantive law with emphasis on the most common criminal offenses. Practical insight into the rules of evidence and considerations governing the admissibility of evidence in court. Three lecture hours per week.

2333 Criminal Investigations I. (3)

An examination of the crime solving process with an emphasis on methodology, corpus delicti, and evidence. Fundamentals of evidence collection, preservation, and analysis; fingerprinting, photography, crime scene processing, and the use of scientific techniques in investigation. Three lecture hours per week.

2363 Criminal Court Practice. (3)

An in-depth study of the criminal case within the several courts of the state and federal systems. Three lecture hours per week.

2413 Administration of Criminal Justice. (3)

A study of basic legal concepts; due-process and criminal procedure, to include laws of arrest, search and seizure, the warrant process and warrant exceptions, and evidence. Three lecture hours per week.

2513 Law Enforcement and the Juvenile. (3)

A survey of the common law roots of juvenile law; the unfolding of case law in American history; and the development of the juvenile courts and corrections. The role of law enforcement in juvenile delinquency. Theoretical perspectives on juvenile deviance. Three lecture hours per week.

DENTAL ASSISTING (DAT)

1111 Orientation. (1)

The development, function, status, and organization of the dental profession, and the legal, ethical, moral, and professional responsibilities of the dental assistant. Terminology emphasizing prefixes, suffixes, roots, abbreviations, spelling, and definitions of medical and dental terms. One lecture hour per week.

1214 Dental Assisting Materials. (4)

Dental safety precautions will be emphasized. Includes a comprehensive study of the physical and chemical properties of dental materials. Lab sessions include measuring, manipulating, and preparing dental materials for use in the dental operatory and dental laboratory. Two lecture and four lab hours per week.

1313 Dental Science I. (3)

Physiology, anatomy, and morphology as related to the oral cavity. The content is organized to include a study of the body systems, the anatomy of the head and neck, and the form of each of the thirty-two teeth. Three lecture hours per week.

1323 Dental Science II. (3) Prerequisite: DAT 1313

Microbiology, embryology, pathology, and pharmacology as related to dentistry. Content organized to give the student basic information required for effective dental assisting. Three lecture hours per week.

1415 Chairside Assisting I. (5)

Comprehensive study of information relating to assisting at the dental chair. Laboratory sessions include all phases of chairside assisting from seating the patient to post operative care of the treatment room. Two lecture and six lab hours per week.

1423 Chairside Assisting II. (3) Prerequisite: DAT 1415

A continuation of the study of information related to assisting at the dental chair. Emphasis on techniques utilized in performing all dental procedures especially in the dental specialties. Two lecture and two lab hours per week.

1433 Chairside Assisting III. (3) Prerequisite: DAT 1423

A continuation of Chairside Assisting II with emphasis in orthodontics, prosthodontics, and pedodontics. Two lecture and two lab hours per week.

1513 Dental Radiology I. (3)

Principles and safety precautions in dental radiology. Laboratory sessions include positioning, exposing, processing, and mounting bitewing, occlusal, periapical and panoramic dental radiographs. Two lecture and two lab hours per week.

1522 Dental Radiology II. (2) Prerequisite: DAT 1513

A continuation of Dental Radiology I with emphasis on clinical competence in exposing periapical radiographs. Four lab hours per week.

- 1612 Dental Health Education. (2)**
Study of the nutritional needs of the body. Emphasis on nutritional requirements for maintaining good oral hygiene. Comprehensive study of the dental assistant's responsibilities in patient education as related to good oral health. Two lecture hours per week.
- 1714 Practice Management. (4)**
Comprehensive study of the dental office business procedures. Topics covered: patient contact, patient records, insurance, financial records, telephone use, office management, and the computer in the dental office. Three lecture and two lab hours per week.
- 1816 Clinical Experience I. (5)** Corequisite: DAT 1415
Supervised clinical experience in authorized dental clinic. One hour lecture per week and twenty hours clinical.
- 1823 Clinical Experience II. (3)** Prerequisite: All first semester DAT courses
A continuation of Supervised Clinical Experience I. Supervised clinical experience in authorized general practice. Nine clinical hours.

DENTAL HYGIENE TECHNOLOGY (DHT)

- 1116 Fundamentals of Dental Hygiene. (6)** Prerequisites: BIO 2513/11, and BIO 2923/21
This course will provide the dental hygiene student with fundamental knowledge and skills necessary to begin actual clinical treatment of clients. The lecture portion will focus on the history, philosophy, and theories relevant to the dental hygiene profession. The preclinical portion will focus on the development of the psychomotor skills necessary for the delivery of dental hygiene services. Two lecture and six lab hours per week.
- 1911 Dental Hygiene Seminar. (1)**
1921 This course provides group assembly on a regular basis. Topics include managing dental
2931 office emergencies, professional development, dental disciplines, and a comprehensive
2941 review for the national board exam. One lecture hour per week.
- 1212 Dental Anatomy. (2)**
A study of the morphological characteristics of the teeth and supporting structures. Two lecture hours per week.
- 1222 Head and Neck Anatomy. (2)**
A detailed study of skeletal, muscular, vascular, and neural features of the face, head, and neck. Two lecture hours per week.
- 1232 Oral Histology and Embryology. (2)**
The microscopic structure and development of types of cells, tissues, and organs of the human body. Also given is a survey of the elements of embryology emphasizing the area of the head and neck, as related to the development of the dental arches, salivary glands, buccal mucosa, pharynx, and tongue, and in cooperating the oral histology of the teeth and gingivae. Two lecture hours per week.
- 1314 Dental Radiology. (4)** Corequisite: DHT 1115
This course involves a broad scope of study of radiology and its use by the dentist as a diagnostic aid. Also covered are techniques for making radiographs, the processing and mounting of exposed film and their interpretation, and the study of anatomical landmarks evident in periapical films. Three lecture and two lab hours per week.
- 1415 Clinical Dental Hygiene I. (5)** Prerequisites: DHT 1115, DHT 1214, and DHT 1314
Performing dental hygiene procedures including patient education, prophylaxis, radiography, recall, application of fluorides and charting are covered. Clinical cases are discussed. One lecture hour and twelve clinical hours.
- 1513 Periodontics. (3)** Prerequisites: CHT 1115
An in-depth study of the supporting structures of the teeth is covered in the course. Also included is a full clinical and theoretical understanding of their conditions in good health as well as their reaction to bacterial invasion in disease of varying etiology. The theory of clinical application to the management of the advanced periodontal patient to maintain a healthy and functional dental apparatus is also studied. Three lecture hours per week.
- 2922 Dental Ethics/Law (2)**
Focus on the ethical and legal aspects of providing dental health care. Two lecture hours per week.

- 2233 General/Oral Pathology.** (3) Prerequisites: DHT 1115, DHT 1214, and DHT 1314.
The etiology and symptomatology of the general pathological conditions affecting the body. A study of the etiology and symptomatology of the pathological and conditions affecting the head and neck with emphasis on the oral cavity is also included. Three lecture hours.
- 2426 Clinical Dental Hygiene II.** (6) Prerequisites: DHT 1513, DHT 1416
Continuation of the principles and techniques involved in the practice of dental hygiene. Emphasis will be on theoretical background needed to provide advanced clinical skills. Clinical experiences will focus on treatment of clients with moderate to advanced periodontal disease. Two lecture and twelve clinical hours.
- 2436 Clinical Dental Hygiene III.** (6) Prerequisites: DHT 2426
A culmination of practice, and the clinical procedures and theoretical knowledge needed to provide preventive, interceptive, and definitive dental hygiene treatment. Two lecture and twelve clinical hours per week.
- 2612 Dental Hygiene Materials.** (2) Prerequisite: DHT 1115
Study of materials used in dentistry, their physical properties, and proper manipulation as used in the operatory and laboratory. One lecture and two lab hours per week.
- 2712 Dental Pharmacology.** (2) Prerequisite: DHT 2425
This course gives a basic introduction to drug actions, their mechanisms, and the reactions of the body to these drugs. Special emphasis is given to the drugs used in the modern dental office including emergency procedures. Two lecture hours per week.
- 2813 Community Dental Health.** (3) Prerequisites: DHT 2425
This course provides an introduction to preventive dentistry as administered on federal, state, and local levels through official and voluntary health agencies. Supervised field experience gives an opportunity to observe and participate in some phases of community and school dental health programs. Two lecture and three clinical hours per week.

DRAFTING AND DESIGN TECHNOLOGY (DDT)

- 1114 Fundamentals of Drafting.** (4)
Course designed to give drafting majors the background needed for all other drafting courses. Emphasis placed upon maintaining correct techniques while developing speed. Two lecture and four lab hours per week.
- 1123 Computational Methods for Drafting.** (3)
Study of computational skills required for the development of accurate design and drafting methods. Three lecture hours per week.
- 1133 Machine Drafting I.** (3) Prerequisite: DDT 1114
Emphasizes methods, techniques, procedures in presenting screws, bolts, rivets, springs, thread types, symbols for welding, materials, finish and heat treatment notation, working order preparation, routing and other drafting room procedures. One lecture and four lab hours per week.
- 1213 Construction Materials.** (3)
Physical properties of the materials generally used in the erection of a structure with a brief description of their manufacture. Two lecture and two lab hours per week.
- 1313 Principles of CAD.** (3)
This course will use CAD software to design and draw various problems in the architectural, mechanical and civil drafting areas. Emphasis will be placed on the operations of the CAD system to solve these problems. One lecture and four lab hours per week.
- 1323 Intermediate CAD.** (3) Prerequisite: DDT 1313
This course is designed as a continuation of Principles of CAD. Subject areas will include dimensioning, sectional views and symbols. Two lecture and two lab hours per week.
- 1413 Elementary Surveying.** (3)
Basic course dealing with principles of geometry, theory and use of instruments, mathematical calculations and the control and reduction of errors. One lecture and four lab hours per week.
- 1613 Architectural Design.** (3) Prerequisite: DDT 1313
Presentation and application of architectural drafting room standards. One lecture and four lab hours per week.

- 2163 Machine Drafting II.** (3) Prerequisite: DDT 1133
A continuation of Machine Drafting I with emphasis on advanced techniques and knowledge employed in the planning of mechanical objects. Includes instruction in the use of tolerancing and dimensioning techniques. Two lecture and two lab hours per week.
- 2233 Structural Drafting I.** (3) Prerequisite: DDT 1114
Structural section, terms and conventional abbreviations and symbols used by structural fabricators and erectors are studied. Knowledge is gained in the use of the American Institute of Steel Construction, Inc. handbook. Problems are studied that involve structural designing and drawing of beams, columns, connections, trusses and bracing. One lecture and four lab hours per week.
- 2243 Cost Estimating.** (3)
Preparation of material and labor quantity surveys from actual working drawings and specifications. Two lecture and two lab hours per week.
- 2253 Statics and Strengths of Materials.** (3) Prerequisite: DDT 1114
Study of forces acting on bodies; movement of forces; stress of materials; basic machine design; beams, columns and connections. Two lecture and two lab hours per week.
- 2343 Advanced CAD.** (3) Prerequisite: DDT 1323
This course explores the three-dimensional viewing and construction capabilities of Auto CAD. Topics covered include a review of point coordinate entry, X, Y, and Z filters, and the (UCS) User Coordinate System. Spherical and cylindrical coordinate entry, 3D viewing techniques, 3D geometry construction, surface meshes, regions, and solid modeling are also introduced. The use of paper space, model space, and multiple viewports for 3D construction is covered. The creation of presentation graphics using bitmap files, shading, and rendering is also discussed. One lecture and four lab hours per week.
- 2353 CAD Management.** (3)
This course of study is designed to use CAD generated drawings for translation and production of machined products. Two lecture and two lab hours per week.
- 2523 Pipe Drafting.** (3) Prerequisite: DDT 1313
An advanced course in drafting in which techniques and knowledge are employed in the planning of mechanical objects. Efficient use of all common types of applicable handbooks, code books and other standard references is an integral part of this phase of drafting. Two lecture and two lab hours per week.
- 2623 Architectural Design II.** (3) Prerequisite: DDT 1613
This course emphasizes standard procedures and working drawings. Details involving architectural, mechanical, electrical and structural drawings are covered, along with presentation of drawings and computer aided design assignments. One lecture and four lab hours per week.
- 2913 Special Projects in Drafting and Design Technology.** (3)
Study of the process used to estimate, detail and locate reinforcement steel for concrete structures using microstation with an estimating package. Two to six lab hours per week.
- 292(1-6) Supervised Work Experience in Drafting and Design Technology.** (1-6) Prerequisite: Consent of instructor and completion of at least one semester of advanced coursework in the drafting program. A course which is a cooperative program between industry and education and is designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours. Three to eighteen hours externship per week.

EARLY CHILDHOOD EDUCATION TECHNOLOGY (CDT)

- 1113 Early Childhood Profession.** (3)
This course is an introduction to the profession of early childhood, types of early childhood programs, and theories of child development. Students are required to observe, assess, and record child behavior through laboratory experience. Room arrangements, software, play and safety are explored. Two lecture and two lab hours per week.
- 1214 Child Development I.** (4)
This course provides for a knowledge concerning the care and development of infants and toddlers in group settings. Practice is given in infant and toddler care-giving in group settings through classroom laboratory or collaborative centers. Three lecture and two lab hours per week.
- 1224 Child Development II.** (4) Prerequisite: CDT 1214
The cognitive, physical, emotional and social developmental characteristics of young children (ages 3-8).

Three lecture and two lab hours per week.

- 1314 Creative Arts for Young Children. (4)**
To plan and develop art activities with children birth to age eight. Activities will be implemented during Student Teaching I and II. Four lecture hours per week.
- 1343 Child Health and Safety. (3)**
Health and safety practices in the care and education of young children. Includes health and safety issues such as first aid, CPR, universal precautions, communicable diseases, and child abuse. Three lecture hours per week.
- 1513 Nutrition for Young Children. (3)**
This course focuses on fundamental principles of child nutrition and the practical application of this knowledge in the selection of balanced diets. Three lecture hours per week.
- 1713 Language and Literacy Development for Young Children. (3)**
A study of language development and the implementation of a developmentally appropriate language arts curriculum for young children. Three lecture hours per week.
- 2233 Guiding Social and Emotional Behavior. (3)**
To identify and practice positive and effective techniques in guiding young children's behavior. Laboratory activities with the children are implemented during Student Teaching I and II. Three lecture hours per week.
- 2413 Atypical Child Development. (3)** Prerequisites: CDT 1214, CDT 1224
This course provides information concerning growth and development, identification, intervention strategies, and management of atypical children. Legal, ethical and legislative issues will be explored. Family issues will be explored. Two lecture and two lab hours per week.
- 2613 Methods and Materials. (3)**
Appropriate methods and materials for young children in a learning environment. Laboratory activities with the children are implemented during Student Teaching I and II. Three lecture hours per week.
- 2714 Social Studies, Mathematics, and Science for Preschool Children. (4)**
Planning developmentally appropriate activities in social studies, mathematics, and science for the young child. Laboratory activities with the children are implemented during Student Teaching I and II. Four lecture hours per week.
- 2813 Administration of Programs for Young Children. (3)**
Development and administration of programs for young children to include an emphasis on evaluation of policies and procedures, organizational structure and management. Four lecture hours per week.
- 2915 Student Teaching I. (5)** Prerequisites: CDT 1214, CDT 1224, CDT 1314, CDT 1343, CDT 1713
Corequisite: CDT 1513
This course allows child development students to implement knowledge and experience in preparing and implementing positive experiences for young children. Completion of the competencies provides opportunities for students to implement experiences planned in the prerequisites and ensures a balance of all curriculum areas. Not all competencies will be achieved at the end of this course due to the variance that exists in the childhood setting used for student experiences. Other competencies will be achieved and documented by the end of the two year program of study. Ten lab hours per week.
- 2925 Student Teaching II. (5)** Prerequisites: CDT 1214, CDT 1224, CDT 1314, CDT 2233, CDT 2613, CDT 2714, CDT 2915
This course is a continuation of Student Teaching I which allows advanced child development students to implement knowledge and experience in preparing and implementing positive experiences for young children. Completion of the competencies provide opportunities for students to implement experiences planned in the prerequisites and ensures a balance of all curriculum areas. All competencies will be achieved and documented by the completion of the two Student Teaching courses. Ten lab hours per week.

ECONOMICS (ECO)

- 2113 Principles of Macroeconomics. (3)**
An introduction to economic principles, problems, and policies with emphasis on American capitalism, global economy, national income, employment, fiscal policy, money, monetary policy, economic stability, and the understanding of national policy for economic growth. Three lecture hours per week.
- 2123 Principles of Microeconomics. (3)** Prerequisite: ECO 2113
A continuation of the introduction to economic principles, problems, and policies with emphasis on the

understanding of the theories of consumer demand, cost of production, varying degrees of competition, and current national and international trade concepts. Three lecture hours per week.

EDUCATION (EDU)

- 1103 Essential College Skills I (Remedial Course)** (3) Corequisite: ENG 1103, MAT 1103, or REA 1103.
This course is designed to aid in the development of student potentials in four fundamental areas; improving self-image and awareness, setting life goals (decision-making, value clarification, setting personal priorities), developing effective study skills and habits and developing classroom learning skills. The course emphasizes reasoning skills, interpersonal skills, personal and social adjustment. It is open only to students taking at least one other remedial course. Three lecture hours per week.
- 1121 Electronic Resources.** (1)
This course is an introduction to information technology and presentational programs for enhancing the professional and educational development of the student. The first half of the course includes techniques in locating information for print and online sources. The second half of the course includes hands on experiences in active applications in PowerPoint, Microsoft Word and Electronic Portfolios. One lecture hour per week and one lab hour per week.
- 1213 Self-Affirmation.** (3)
This course is designed to teach responsibility in regard to making personal choices, improving self-image and awareness, enhancing reasoning ability and developing interpersonal skills as well as personal and social adjustments. Three lecture hours per week.
- 1321 Career Exploration.** (1)
This course is designed to assist students in determining career goals. Interest tests, personality inventories, and aptitude tests are administered to help students determine career choices. One lecture hour per week.
- 1423 College Success Skills.** (3)
This course is designed to help students develop more effective and efficient study skills and attitudes which are needed in order to be successful in college. Emphasis is placed on major study aids and process, lecture/listening skills, note taking, reading techniques, and test taking strategies. Reading, writing, and mathematics across the curriculum, as well as critical thinking, will be stressed throughout this course. Three lecture hours per week.
- 1911 River Navigators.** (1) Prerequisite: Recruitment Committee approval.
1921 This course familiarizes the student with his/her responsibilities as a member of
2911 the recruiting/public relations team. It explores leadership skills, communication,
2921 and factual information about the college. Through this course the student will be able to function as a representative in recruitment and in public relations.
- 2713 Introduction to Education.** (3)
This course is designed to introduce education majors to the teaching profession, to prepare them to successfully complete Praxis I, and to give them the opportunity to observe real classroom activities and teaching situations.

EDUCATIONAL PSYCHOLOGY (EPY)

- 2513 Child Psychology.** (3) Prerequisite: PSY 1513
A course that deals with various aspects of child growth and development. Problems studied include physical, mental, social, and emotional development from infancy through preadolescence. Special attention is given to implications for education. Three lecture hours per week.
- 2533 Human Growth and Development.** (3) Prerequisite: PSY 1513
This course is designed to study the human organism as it is affected by growth and development from conception to death. Problems studied include physical, mental, social, and emotional development of each maturity level from infancy through death. Three lecture hours per week.

ELECTRICAL TECHNOLOGY (ELT)

- 1114 Residential/Light Commercial Wiring.** (4) Pre/Corequisite: ELT 1192
This course provides advanced skills related to the wiring of multi-family and small commercial buildings. This course includes instruction and practice in service entrance installation, specialized circuits and the use of commercial raceways. Two lecture and four lab hours per week.
- 1124 Commercial and Industrial Wiring.** (4) Prerequisite: ELT 1192
A course to provide instruction and practice in the installation of commercial electrical service including the

types of uses of conduit and other raceways, NEC code requirements and three-phase distribution networks. Two lecture and four lab hours per week.

- 1133 Introduction to the National Electric Code. (3)**
This is a course in the layout, format, rules, and regulations set forth in the National Electric Code. Emphasis is placed on developing the student's ability to find information in the National Electric Code and apply that information in real world applications. Two lecture and two lab hours per week.
- 1144 AC and DC Circuits for Electrical Technology. (4) Pre/Corequisite: ELT 1192**
Principles and theories associated with AC and DC circuits used in the electrical trades. Includes the study of electrical circuits, laws and formulas, and the use of test equipment to analyze AC and DC circuits. Two lecture and four lab hours per week.
- 1192 Fundamentals of Electricity. (2)**
This is a basic course designed to provide fundamental skills associated with all electrical courses. It includes safety, basic tools, special tools, equipment and introduction to simple AC and DC circuits. One lecture and two lab hours per week.
- 1213 Electrical Power. (3)**
A course to provide skills related to electrical motors and their installation. Includes instruction and practice in using the different types of motors, transformers and alternators. Two lecture and two lab hours per week.
- 1223 Motor Maintenance and Troubleshooting. (3) Prerequisite: ELT 1192 or equivalent**
A course to familiarize the student with the principles and practice of electrical motor repair. Includes instruction and practice in the disassembly/assembly and preventive maintenance of common electrical motors. Two lecture and two lab hours per week.
- 1253 Branch Circuit and Service Entrance Calculations. (3) Pre/Corequisite: ELT 1192 or equivalent**
This is a course in calculating circuit sizes for all branch circuits and service entrances in residential installation. Two lecture and two lab hours per week.
- 1263 Blueprint Reading/Planning the Residential Installation. (3)**
This course provides knowledge of architectural symbols and electric symbols needed to read blueprints. All elevations and various plans associated with electrical wiring will be studied. Blank blueprints will be provided and a list of all appliances and their amperage will be supplied. The blanks will be filled with receptacles, switches and lighting outlets as required by NEC. Circuit layouts for all switching will be demonstrated. All branch circuits will be plotted on the blueprint. Two lecture and two lab hours per week.
- 1274 Switching Circuits for Residential, Commercial and Industrial Application. (4) Pre/Corequisite: ELT 1192 or equivalent**
This course is designed to introduce the student to the various methods by which single pole, 3-way and 4-way switches are used in residential, commercial and industrial installations. This course also includes the installation and operation of low voltage, remote control switching. Three lecture and two lab hours per week.
- 1283 Estimating the Cost of a Residential Installation. (3) Pre/Corequisites: ELT 1192, ELT 1113**
A course to provide a probable cost of a residential installation. It will include a study of the specifications set forth for a particular structure. Two lecture and two lab hours per week.
- 1413 Motor Control Systems. (4) Prerequisite: ELT 1192 or equivalent**
A course in the installation of different motor control circuits and devices. Emphasis is placed on developing student's ability to diagram, wire and troubleshoot the different circuits and mechanical control devices. Two lecture and four lab hours per week.
- 2424 Solid State Motor Control. (4) Prerequisite: ELT 1413**
This course deals with the principles and operation of solid state motor control. This course includes instruction and practice in the design, installation and maintenance of different solid state devices for motor control. Two lecture and four lab hours per week.
- 2613 Programmable Logic Controllers. (3) Prerequisite: ELT 1413**
A course to provide instruction and practice in the use of programmable logic controllers (PLC's) in modern industrial settings. Includes instruction in the operating principles of PLC's and practice in the programming, installation and maintenance of PLC's. Two lecture and two lab hours per week.
- 2623 Advanced Programmable Logic Controllers. (3) Prerequisites: ELT 1413, ELT 2613**
A course which provides instruction in the various operations, installations, and maintenance of electric motor controls. Also, information in such areas as sequencer, program control, block transfer used in analog input and output programming, and logical and conversion instructions. Two lecture and two lab hours per week.

291(1-4) Special Project in Electrical Technology. (1-4) Prerequisite: Consent of instructor

This course is designed to provide the student with practical application of skills and knowledge gained in other electronics or electronics-related technical courses. The instructor works closely with the student to ensure that the selection of a project will enhance the student's learning experience. Two to eight lab hours per week.

292(1-6) Supervised Work Experience in Electrical Technology. (1-6) Prerequisite: Consent of instructor and completion of at least one semester of advanced course work in electrical/electronics related programs.

This course is a cooperative program between industry and education and is designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of semester hour per 45 industrial contact hours. Three to eighteen hours externship per week.

ELECTRONICS TECHNOLOGY (EET)

1101 Introduction to Aerospace Technology. (1)

This course provides students with a foundation of knowledge and technically oriented experience in the study of Aerospace Technologies, its effects upon their lives, and career opportunities. The content includes the study of aerospace industry terminology and acronyms, safety, tools, machines, materials, processes, and systems. One lecture hour per week.

1182 Introduction to Photonics. (2) Prerequisite: MAT 1313

Introduction to Photonics explores the fundamentals of photonics theory including concepts, application in the workplace, and career opportunities. Photonics is defined as the controlled flow of light particles (photons) used in the generation, manipulation, transport, detection, and use of light information and energy. This course will explore the production and nature of light including: the laws of reflection and refraction, theory of image formation, principles of wave optics (including interference, diffraction and polarization), fundamentals of fiber optic theory, principles of lasers and laser safety, and the basics of holography with image processing. Concepts will be reinforced through demonstrations, classroom activities and take-home lab and written exercises. Throughout the course, emphasis will be placed on applications of photonics in medicine, transportation, manufacturing, communications, environmental monitoring and consumer devices. One lecture and two lab hours per week.

1192 Fundamentals of Electronics. (2)

This course is designed to provide fundamental skills associated with all electronics courses. This course includes safety, bread-boarding, use of calculator, test equipment familiarization, soldering, electronic symbols and terminology. One lecture and two lab hours per week.

1113 Mathematics for Electronics. (3)

This course is designed for the student in engineering related technology and will provide the mathematics skills technicians will need. It will focus on practical and applied skills. Students will work with real-world concepts, systems and problems. Topics covered include mathematical operations using scientific and engineering notation, engineering metric conversion, SI units, data measurements, linear algebraic equations and linear graphing. Three lecture hours per week.

1114 DC Circuits. (4)

An overview of fundamental electronic components and circuits. Resistors, capacitors, inductors and transformers are detailed. This course includes: Ohm's laws series and parallel circuits, network theorems and power systems. Proper use of test equipment, laboratory procedures, safety and soldering techniques are also stressed. Two lecture and four lab hours per week.

1123 AC Circuits. (3) Prerequisites: EET 1114 DC, EET 1192

This course is designed to provide students with the principles and theories associated with AC circuits. This course includes the study of electrical circuits, laws and formulae and the use of test equipment to analyze AC circuits. Two lecture and two lab hours per week.

1214 Digital Electronics. (4)

The uses for digital circuits are explored. A thorough treatment of the binary, octal and hexadecimal number systems and the conversion of numbers with different radix or bases. Also covered are digital codes and alphanumeric codes. Binary logic gates are covered and the application of the universal NAND gate is introduced. The rules and laws of Boolean algebra, Demorgan's theorems and the simplification of gate networks by the use of Boolean algebra and Karnaugh mapping are also covered. Coverage is provided for the analysis of the various failure modes of digital integrated circuits and the test equipment that is required to provide trouble analysis. This course provides the firm foundation in digital concepts for the following course in Advanced Digital Applications. Three lecture and two lab hours per week.

1311 Orientation to Biomedical Equipment Repair. (1)

A course designed to orient students to the biomedical field. Topics covered are the different career paths that

- are open to students and the organization and operation of the hospital environment. One lecture hour per week.
- 1334 Solid State Devices and Circuits.** (4) Prerequisite: EET 1114
A comprehensive study of semiconductor diodes and transistors. Solid state circuits including rectifiers, clippers, clamps, power supplies, Zener regulators, filters, bipolar amplifier circuits and power amplifiers. Temperature effects, biasing techniques, configuration, frequency ranges and other parameters are analyzed. Two lecture and four lab hours per week.
- 1324 Microprocessors.** (4) Prerequisite: Completion of freshman Electronic Technology courses
The objective of this course is to give the student both a solid theoretical and practical introduction to the wide array of microprocessors and support integrated circuits found in the microcomputer and a wide range of microprocessor controlled industrial electronic applications. Basic microprocessor architectural concepts, block diagram analysis, communicating with the microprocessors, memory and mass storage and input and output hardware techniques are covered in the course. Emphasis is placed on hardware trouble analysis. Software coverage with an introduction to assembly language programming is included. Microprocessors covered extend from basic eight bit to advanced thirty two bit devices. Two lecture and four lab hours per week.
- 1613 Computer Fundamentals for Electronics.** (3)
This course is designed to introduce the student to the nomenclature and technology used within the computer environment. Emphasis is on use and understanding of microcomputer components and peripherals. Lab periods will place emphasis on use of the personal computer. Both applications software and operating systems will be addressed in the course material. Two lecture and two lab hours per week.
- 1713 Drafting for Electronic/Electrical Technology.** (3)
This course is designed to provide instruction on the preparation and interpretation of schematics. One lecture and four lab hours per week.
- 211(3-6) Supervised Work Experience in Biomedical Equipment Repair Technology I.** (3-6) Prerequisite: Consent of instructor
A course which is a cooperative program between the health care facility and education which is designed to integrate the student's technical studies with health care experience. Variable credit is awarded on the basis of 1 semester hour per 45 health care contact hours. Three to eighteen externship hours.
- 222(3-6) Supervised Work Experience in Biomedical Equipment Repair Technology II.** (3-6) Prerequisites: Consent of instructor and EET 211(3-6)
Continuation of BMT 211(3-6) with advanced study in the repair and maintenance of bio-medical equipment. Variable credit is awarded on the basis of 1 semester hour per 45 health care contact hours. Three to eighteen externship hours.
- 2334 Linear Integrated Circuits.** (4) Prerequisite: EET 1334
A coverage of advanced solid state devices such as FET's, MOSFETS, UJT's, Thyristors and other special devices. Chip technology is analyzed from differential amps to numerous operational amplifier chips to include inverting, non inverting op amps, adders, subtractors, comparitors, followers and instrumentation amplifiers. Also covered are oscillators, 555 timer, basic multivibrators and electronic regulator circuits. Three lecture and two lab hours per week.
- 2414 Electronic Communication.** (4) Prerequisite: EET 1334
This course along with the prerequisite provides the student with the technical knowledge to prepare for entry into the field of electronic Communication. Emphasis is placed on system analysis and trouble analysis for each of the Communication systems covered. Topics studied include transmitters and receivers designed for amplitude, frequency and phase modulation systems along with circuit alignment and failure analysis and repair. Transmission lines and antennas, Communication systems and noise, transmission and propagation are covered along with two-way radio, television and optical Communication. Two lecture and four lab hours per week.
- 2423 Fundamentals of Fiber Optics.** (3) Prerequisite: EET 2414
This course introduces the student to the optical fiber, its characteristics, manufacturing techniques and fiber optic components. Fiber optic sources and detectors are studied in detail and is supported by experiments. The course also includes the study of fiber optic transmitters, fiber optic receivers, modulation, multiplexing and fiber optic communication system design and trouble analysis. Two lecture and two lab hours per week.
- 2514 Interfacing Techniques.** (4) Prerequisite: EET 1324
An in-depth study of the major components of a PC type microcomputer. As each major section of the computer is covered in class, a companion exercise is conducted in the laboratory which is followed by a troubleshooting exercise on the same section or board. Emphasis is placed not only on failure analysis at the board level but also at the component level. The course covers hardware, the operating system and agnostic

software. In the hardware instruction, the unit objectives consist of CPU, memory, busses, monochrome and color video, video display terminal, hard and floppy disks, Communication ports, power supply theory of operation and troubleshooting. Two lecture and four lab hours per week.

291(1-3) Special Project in Electronics Technology. (1-3)

This course is designed to provide the student with practical application of skills and knowledge gained in other electronics or electronics-related technical courses. The instructor works closely with the student to insure that the selection of a project will enhance the student's learning experience. Two to six lab hours per week.

292(1-6) Supervised Work Experience in Electronics Technology. (1-6)

This course is a cooperative program between industry and education and is designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of semester hour per 45 industrial contact hours. Three to eighteen externship hours per week.

ENGINEERING (EGR)

2413 Engineering Mechanics. (3) Prerequisites: MAT 1623 and PHY 2515

This is a course required for engineering majors. It includes concepts of forces, moments, and other vector quantities; analysis of force systems; conditions of equilibrium; friction; centroids; and moments of inertia. Three lecture hours per week.

ENGLISH (ENG)

1103 Developmental English I. (3) Prerequisite: An English score of 1-12 on the enhanced ACT is required for placement in this course. This course is an intensive review of the structure of the English language. Grammar and mechanics, sentence construction, and paragraph development are emphasized. A reading component requires students to read and to write responses to the reading in a journal. Three lecture hours per week and one hour of Learning Lab instruction per week.

1113 English Composition I. (3) Prerequisite: A score of 16 or above on the English portion of the Enhanced ACT or successful completion of ENG 1103 and/or ENG 1203 is required for placement in this course. Students prepare two bibliographies, write a book report, and write a minimum of five expository essays. Clarity of thought, unity of content, and coherence of ideas are stressed. Model essays are analyzed. Journal writing is based on the model essays and outside reading. Three lecture hours per week.

1123 English Composition II. (3) Prerequisite: ENG 1113 Students in this course continue to build compositional skills through writing critical, narrative, descriptive, and persuasive essays. A documented research paper is required for successful completion of this course. Three lecture hours per week.

1203 Developmental English II. (3) Prerequisite: An English score of 13-15 on the enhanced ACT or successful completion of ENG 1103 is required for placement in this course. This course builds skills necessary for success in ENG 1113 through emphasis on developing ideas through use of specific details, sentence combining, unity, coherence, and logical order. The reading component, which requires critical responses in a journal, further develops interpretive and organizational skills. Three lecture hours per week and assigned instruction in the Learning Lab.

2133 Creative Writing I. (3) Prerequisite: Permission of instructor. Designed for the student interested in writing poems, short stories, essays, and plays. Includes reading, editing, critiquing, and publishing. Three lecture hours per week.

2143 Creative Writing II. (3) Prerequisite: ENG 2133 and Permission of instructor. This course is a continuation of ENG 2133.

2153 Traditional Grammar. (3) Prerequisites: ENG 1113 and ENG 1123 Offered primarily for elementary education majors, this course focuses on the system of rules underlying the grammar of English. Sentence patterns, parts of speech, and standard American usage are covered. Three lecture hours per week.

2223 American Literature I. (3) Prerequisites: ENG 1113 and ENG 1123 Students in this course read and analyze selected works of literature from the earliest colonial writings to the beginning of the Civil War. A writing component involves journal responses and critical essays based on the literature. Three lecture hours per week.

2233 American Literature II. (3) Prerequisites: ENG 1113 and ENG 1123 This course continues the study of American literature with selected works from the post-Civil War period to the modern era. A writing component consists of journal responses and critical essays based on the readings.

Three lecture hours per week.

- 2323 British Literature I.** (3) Prerequisites: ENG 1113 and ENG 1123
Students in this course read and discuss the major literary genres of a period consisting of roughly one thousand years, concentration on the forms of the texts and their relationships to other texts. This course includes *Beowulf*, Milton, Spenser, Chaucer, Sidney, Donne, Swift, Shakespeare, Wyatt, Surrey, More, Johnson, Thompson, Gray, and Collins. Three lecture hours per week.
- 2333 British Literature II.** (3) Prerequisites: ENG 1113 and ENG 1123
Students in this course focus on British literature of the last two hundred years, beginning with the Romantic Poets. Students will consider both poetry and prose and relate these literary forms to the social, political, and religious context from which they arose. This course includes writings by Blake, Wordsworth, Coleridge, Byron, Shelley, Keats, Tennyson, Wilde, Kipling, Hardy, Yeats, Joyce, Eliot, Lawrence, Mansfield, and others. Three lecture hours per week.
- 2423 World Literature I.** (3) Prerequisites: ENG 1113 and ENG 1123
Students in this course read and analyze selected works of literature from the ancient, medieval, and renaissance periods. A writing component involves journal responses and critical essays based on the literature. Three lecture hours per week.
- 2433 World Literature II.** (3) Prerequisites: ENG 1113 and ENG 1123
This course continues the study of world literature with selected works from the neoclassical period to the present. A writing component consists of journal responses and critical essays based on the readings. Three lecture hours per week. (Offered: Spring and Summer semesters only).
- 2913 Occupational Writing.** (3) Prerequisites: ENG 1113 and ENG 1123
The course begins with an assessment of students' career goals and their current on-the-job demands. An individualized writing program is planned to complement career goals and to raise on-the-job efficiency. A wide range of types of writing may be covered, such as minutes of business meetings, pre-employment writing, instruction manuals, technical definitions, brochures, literature reviews, observation/experience/research articles, proposals, and documented persuasive reports.

FAMILY AND CONSUMER SCIENCE (FCS)

- 1131 Introduction to Modeling.** (1)
1141 A course designed to teach students the fundamentals of visual poise together with
2131 modeling techniques. Enrollment by audition only. 1 lecture/rehearsal hour per
2141 week.
- 1253 Nutrition.** (3)
This course is a study of nutrients required for normal growth and diet therapy, as applied to the selection of food for ingestion, metabolic process of digestion, assimilation and absorption. Three lecture hours per week.

FOREIGN LANGUAGE (MFL)

- 1113 French I.** (3)
This course is designed to develop basic language skills: speaking, reading, and writing. Phonetic symbols are used to aid correct pronunciation, but the principal aid is to be found in the language laboratory. Three lecture hours per week.
- 1123 French II.** (3) Prerequisite: MFL 1113
A continuation of MFL 1113. Special drill on verb forms and uses, as well as idiomatic vocabulary by means of oral and written exercises. Three lecture hours per week.
- 1213 Spanish I.** (3)
This course is designed to develop basic language skills: reading, writing, and speaking. Drills on grammar through written and oral exercises are used in class work. Emphasis is provided with present tense conjugation of verbs. Three lecture hours per week.
- 1223 Spanish II.** (3) Prerequisite: MFL 1213
A continuation of MFL 1213. Emphasis is provided with irregular verbs and the conjugation of preterite (past) tense verbs. Three lecture hours per week.
- 2113 French III.** (3) Prerequisite: MFL 1123

A review of French grammar, and continued development of basic language skills. Reading materials are used which have literary and cultural value. Three lecture hours per week.

- 2123 French IV. (3)** Prerequisite: MFL 2113
Literary and cultural appreciation of the language and the country is enhanced by the reading of a book which pictures life in a typical French village, with class conversation concerning the contents of this book. Three lecture hours per week.
- 2213 Spanish III. (3)** Prerequisite: MFL 1223
A verb and grammar review and a further development of language skills. Reading materials used have literary and cultural value. Spanish videos and tapes are available for students to use. Three lecture hours per week.
- 2223 Spanish IV. (3)** Prerequisite: MFL 2213
A continuation of MFL 2213. Special attention is given to rapid reading. Recording equipment permits the student to record and listen to his own and other students use of the language. Three lecture hours per week.
- 2243 Basic Spanish for Law Enforcement. (3)**
This course is designed to provide basic language and culture communication between law enforcement and the Hispanic community. For Criminal Justice majors or with permission of instructor. Three lecture hours per week.

FORENSIC SCIENCE (FSC)

- 1113 Introduction to Forensic Science. (3)**
This course is designed to introduce students to the basics of forensic science. Students will be introduced to the scientific concepts, methods, practices and analytical instrumentation utilized by forensic scientists for the recognition, collection, preservation, identification, comparison, analysis and documentation of physical evidence. Three lecture hours per week.

GEOGRAPHIC INFORMATION TECHNOLOGY (GIT)

- 1253 Cartography and Computer Map Reading. (3)** Pre/Corequisite: GIT 2123
An introduction to the preparation and interpretation of data in cartographic form and the use of computers for map compilation, design, and production. Includes principles of global positioning (GPS), methods of map making, and principles of digital cartography. Two lecture and two lab hours per week.
- 2113 Database Construction and Maintenance. (3)**
A course designed to introduce database concepts and goals of database management systems, and relational, hierarchical, and network models of data. Included are Structured Query Language (SQL) and methods for organizing data are introduced and discussed. Two lecture and two lab hours per week.
- 2123 Fundamentals of Geographic Information Systems. (3)**
An introductory course in the basic principles and uses of Geographic Information Systems (GIS) along with an overview of the GIS industry and GIS software. Course content will also highlight current GIS applications and steps taken for planning, implementing and maintaining a GIS. This course will help the student understand GIS concepts concerning mapping/cartography, global positioning systems, remote sensing, database analysis and database management. Students will gain hands-on experience using GIS software and global positioning equipment. Two lecture and two lab hours per week.
- 2133 Principles of Image Processing. (3)** Pre/Corequisite: GIT 2273
This course includes fundamentals of remotely sensed data including scale, feature identification, and symbolization. Includes fundamentals of interpretation techniques of various image products, including topographic and thematic maps, aerial photographs, sensor images, and satellite images. Two lecture and two lab hours per week.
- 2273 Remote Sensing. (3)**
This course includes a discussion of a variety of remote sensing data collections methods. This course deals with manual interpretation data from photographs and other imagery. One lecture and four lab hours per week.

GEOGRAPHY (GEO)

- 1113 World Geography. (3)**
A survey course emphasizing basic geographical concepts, regional themes, and identifying major new developments of the nations of the world. Three lecture hours per week.
- 1123 Introduction to Geography. (3)**
An introduction to the basic elements and concepts of geography. Three lecture hours per week.

GRAPHICS AND DRAWING (GRA)

- 1113 Graphic Communication. (3)**
Two-dimensional computer assisted drafting strategies applied to descriptive geometry topics and traditional mechanical drawing topics; sketching skills. Two hours lecture and four hours computer graphics laboratory work per week.

HEALTH, PHYSICAL EDUCATION, AND RECREATION (HPR)

- 1021 Step Aerobics. (1)**
1051 Concepts of Strength Training. (1)
These courses include various exercises and activities such as speed/agility training, stretching, and abdominal exercises. Basic and advanced weight training is included in this class. No lecture is involved. Two activity sessions per week. (Wellness Center Access).
- 1011 Recreational Tennis (1)**
This course is designed to develop fundamentals of play including all basic shots. Open to all students. Two activity sessions per week. (No Wellness Center Access).
- 1213 Personal and Community Health. (3)**
Application of principles and practices of healthful living to the individual and community. Major health problems and the mutual responsibilities of home, school, and health agencies are addressed. Two lecture hours per week and 90 minutes of lab sessions per week. (Wellness Center Access).
- 1591 Health Concepts of Physical Activity. (1)**
1691 A thorough investigation of contemporary health fitness concepts as they pertain to the
1791 individual student. Three 30-minute lab sessions per week. (Participation at the Wellness
1891 Center).
- 1752 Nutrition and Wellness. (2)**
A survey course designed to expose the student to the importance and significance of nutrition in health and physical education. Also places emphasis on the various aspects of wellness and their relationship to weight control and therapeutic exercise. This course requires one lecture hour per week and 90 minutes of lab per week. (Wellness Center Access).
- 2213 First Aid/CPR. (3)**
Instruction and practice in methods prescribed by the American Heart Association basic life support (BLS) and cardiopulmonary resuscitation (CPR) for health care providers. Course is intended for participants who must have a credential (a card) documenting successful completion of a course in CPR and BLS for healthcare professionals. Also includes American Red Cross First Aid Training. Three lecture hours per week.
- 2323 Recreational Leadership. (3)**
Planning and leadership techniques for conducting community recreation centers, playgrounds, parks, and school recreation programs. Three lecture hours per week.
- 2423 Football Theory. (3)**
Theoretical study of football from an offensive and defensive standpoint including the fundamentals of blocking, passing, tackling, charging, punting, generalship, rules, and learn team play. Three lecture hours per week.
- 2433 Basketball Theory. (3)**
Theoretical study of basketball from an offensive and defensive standpoint, including the study of teaching of the fundamentals and team organization. Three lecture hours per week.
- 2443 Concepts of Athletic Training. (3)**
A practical study of safety and first aid, taping, bandaging, and use of massage, and the uses of heat, light, and water in the treatment and prevention of injuries; conditioning of athletes as to diet, rest, work, and proper methods of procedures in training for sports. Three lecture hours per week.
- 2453 Baseball Theory. (3)**
Theoretical study of coaching baseball, and a study of baseball team fundamentals and individual fundamentals. These fundamentals include form throwing mechanics, batting, bunting, pitching, team offense and team defense. Also to include recruiting, team offensive and defensive philosophies, as well as the mental part of the game. Three lecture hours per week.
- 2463 Tennis Theory. (3)**
Theoretical study of tennis and the comparison to coaching other sports, including the fundamentals of teaching techniques of all shots, singles and doubles strategies. Fundamentals of teaching privately as well as coaching and organizing High School/Junior College teams for tryouts to team play. Three lecture hours per week.

- 2742 Taping and Wrapping of Athletic Injuries I. (2)**
This course is designed to prepare future coaches, athletic trainers, and student athletic assistants in practical taping and wrapping by experiences consisting of observation and actual taping of all types of athletic injuries. Two lecture hours per week.
- 2752 Taping and Wrapping of Athletic Injuries II. (2)**
This course is a continuation of HPR 2742. Two lecture hours per week.

Varsity Sports

- 1111 Football Manager I.** Serves as manager for varsity football team. (No Wellness Center Access.)
- 1121 Football Manager II.**
- 2111 Football Manager III.**
- 2121 Football Manager IV.**
- 1131 Football I.** Participation in varsity football. (No Wellness Center Access.)
- 1141 Football II.**
- 2131 Football III.**
- 2141 Football IV.**
- 1511 Softball Manager I.** Serves as manager for varsity softball team. (No Wellness Center Access.)
- 1521 Softball Manager II.**
- 2511 Softball Manager III.**
- 2521 Softball Manager IV.**
- 1531 Softball I.** Participation in varsity softball. (No Wellness Center Access.)
- 1541 Softball II.**
- 2531 Softball III.**
- 2541 Softball IV.**
- 1411 Baseball Manager I.** Serves as manager for varsity baseball team. (No Wellness Center Access.)
- 1421 Baseball Manager II.**
- 2411 Baseball Manager III.**
- 2421 Baseball Manager IV.**
- 1431 Baseball I.** Participation in varsity baseball. (No Wellness Center Access.)
- 1441 Baseball II.**
- 2431 Baseball III.**
- 2441 Baseball IV.**
- 1211 Basketball Manager I. (Men)** Serves as manager for varsity basketball team. (No Wellness Center Access.)
- 1221 Basketball Manager II. (Men)**
- 2211 Basketball Manager III. (Men)**
- 2221 Basketball Manager IV. (Men)**
- 1231 Basketball I. (Men)** Participation in varsity basketball. (No Wellness Center Access.)
- 1241 Basketball II. (Men)**
- 2231 Basketball III. (Men)**
- 2241 Basketball IV. (Men)**
- 1311 Basketball Manager I. (Women)** Serves as manager for varsity basketball team. (No Wellness Center Access.)
- 1321 Basketball Manager II. (Women)**
- 2311 Basketball Manager III. (Women)**
- 2321 Basketball Manager IV. (Women)**
- 1331 Basketball I. (Women)** Participation in varsity basketball. (No Wellness Center Access.)
- 1341 Basketball II. (Women)**
- 2331 Basketball III. (Women)**
- 2341 Basketball IV. (Women)**
- 1201 Men's Varsity Soccer I.** Participation in varsity soccer. (No Wellness Center Access.)
- 1401 Men's Varsity Soccer II.**
- 1601 Men's Varsity Soccer III.**
- 1801 Men's Varsity Soccer IV.**
- 1301 Women's Varsity Soccer I.** Participation in varsity soccer. (No Wellness Center Access.)
- 1501 Women's Varsity Soccer II.**
- 1701 Women's Varsity Soccer III.**
- 1901 Women's Varsity Soccer IV.**
- 1631 Tennis I.** Participation in varsity tennis. (No Wellness Center Access.)
- 1641 Tennis II.**
- 2631 Tennis III.**
- 2641 Tennis IV.**
- 1731 Golf I.** Participation in varsity golf. (No Wellness Center Access.)
- 1741 Golf II.**
- 2731 Golf III.**
- 2741 Golf IV.**

- 1831 **Cheerleader I.** Participation as a varsity cheerleader. (No Wellness Center Access.)
- 1841 **Cheerleader II.**
- 2831 **Cheerleader III.**
- 2841 **Cheerleader IV.**
- 1931 **Pearls I.** Participation in String of Pearls. (No Wellness Center Access.)
- 1941 **Pearls II.**
- 2931 **Pearls III.**
- 2941 **Pearls IV.**
- 1551 **Weight Training I.** Fitness and conditioning training for varsity sports. (No Wellness Center Access.)
- 1561 **Weight Training II.**
- 2551 **Weight Training III.**
- 2561 **Weight Training IV.**
- 1651 **Aerobics for Varsity Athletes I.** Fitness and conditioning training for varsity sports. (No Wellness Center Access.)
- 1661 **Aerobics for Varsity Athletes II.**
- 2651 **Aerobics for Varsity Athletes III.**
- 2661 **Aerobics for Varsity Athletes IV.**

HEATING, AIR CONDITIONING AND REFRIGERATION TECHNOLOGY (ACT)

- 1124 **Basic Compression Refrigeration. (4)**
An introduction to the field of refrigeration and air conditioning. Emphasis is placed on principles of safety, thermodynamics and heat transfer. Two lecture and four lab hours per week.
- 1133 **Tools and Piping. (3)**
Various tools and pipe connecting techniques. Covers tools and test equipment required in heating, ventilation, air conditioning and refrigeration. Two lecture and two lab hours per week.
- 1213 **Controls. (3)**
Fundamentals of gas, fluid, electrical and programmable controls. Two lecture and two lab hours per week.
- 1313 **Refrigeration Systems Components. (3)**
An in-depth study of the components and accessories of a sealed system including metering devices, evaporators, compressors and condensers. Two lecture and two lab hours per week.
- 1713 **Electricity for Heating, Ventilation, Air Conditioning and Refrigeration. (3)**
Basic knowledge of electricity, power distribution, components, solid state devices and electrical circuits. Two lecture and two lab hours per week.
- 1812 **Professional Service Procedures. (2)**
Business ethics necessary to work with both the employer and customer. Includes resume, record keeping and service contracts. Two lecture hours per week.
- 2324 **Commercial Refrigeration. (4)**
A study of various commercial refrigeration systems. It includes installation, servicing and maintaining systems. Two lecture and four lab hours per week.
- 2414 **Air Conditioning I. (4)**
Various types of residential and commercial air conditioning, including hydronic, absorption and desiccant systems. Two lecture and four lab hours per week.
- 2424 **Air Conditioning II. (4)** Prerequisite: ACT 2414 Air Conditioning I
An in-depth course in the installation, start-up, maintenance and air quality of complete heating and air conditioning systems. Two lecture and four lab hours per week.
- 2433 **Refrigerant, Retrofit and Regulations. (3)**
Regulations and standards for new retrofit and government regulations. Includes OSHA regulations, EPA regulations, local and state codes. Two lecture and two lab hours per week.
- 2513 **Heating Systems. (3)**
Various types of residential and commercial heating systems. Includes gas, oil, electric, compression and hydroponic heating systems. Two lecture and two lab hours per week.
- 2624 **Heat Load and Air Properties. (4)**
Introduction to heat load calculations for residential and light commercial heating, ventilation, air conditioning and refrigeration systems. Included are air distribution, duct sizing, selection of grills and registers, types of

fans, air velocity and fan performance. An introduction is provided to air testing instruments and computer usage. Two lecture and four lab hours per week.

291(1-3) Special Project in Heating and Air Conditioning Technology. (1-3)

Prerequisite: Consent of instructor

A course designed to provide the student with practical application of skills and knowledge gained in the courses. The instructor works closely with the student to insure that the selection of a project will enhance the student's learning experience. Two to six lab hours per week.

292(1-6) Supervised Work Experience in Heating and Air Conditioning Technology. (1-6) Prerequisite: Consent of instructor

A course which is a cooperative program between industry and education and is designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours. Three to eighteen hours internship.

HISTORY (HIS)

1111 Public History. (1)

1121 This course will introduce students to the professional principles and practices in the care and management of history museum collections, including collections development, museum registration methods, cataloging, collections care, conservation and preservation. Two hours per week

1163 World Civilization I. (3)

This course introduces students to the themes, events, people and ideas that gave shape to human societies and human experiences in every area of the globe during the first 5000 years of human history. From the invention of writing in Mesopotamia (3500 BC) until the conclusion of the first modern war (1648 AD), humans established civilizations and destroyed them, expressed themselves through art, architecture, philosophy and religion, and in every other way imaginable communicated their ideas about family, society and the nature of the universe. These areas are explored as a part of the human story as told by Africans, Middle Easterners, Asians, Europeans and the first Americans through readings, discussions. Three lecture hours per week.

1173 World Civilization II. (3)

This course introduces students to the themes, events, people and ideas that have given shape to human societies and human experience in every area of the globe during the last three and a half centuries of human history. From the conclusion of the Thirty Years War (1648) to the present, humans have been struggling with the problems associated with the intermingling and integrating of different cultures and civilizations in an increasingly complex world. Through their literature, art, architecture, philosophy, and religion, and in every other way imaginable, they have communicated their ideas about family, society, and the nature of the universe. These areas are explored as a part of the human story as told by Africans, Middle Easterners, Asians, Europeans, and Americans through readings, discussions. Three lecture hours per week.

2213 American (U.S.) History I. (3)

This course is a survey of U.S. History from the Colonial and Revolutionary Period to the beginning of the Progressive Era around 1900. The course includes information on the political, economic, social, intellectual, and diplomatic developments during this period of time. Special emphasis is placed on the Federalist Period, Jeffersonian and Jacksonian Democracy, Westward expansion, the growing controversies surrounding the slavery issue and the Civil War and Reconstruction, the post-war industrial growth and the growing demands for reform leading to the Populist movement. The social, political, and economic problems of late 19th Century America are discussed and their relationship to specific Populist reforms is covered. Three lecture hours per week.

2223 American (U.S.) History II. (3)

This course is a survey of U.S. History from the beginning of the Progressive Era to the present. The social, intellectual, and diplomatic developments during the period. Special emphasis is placed upon the social, economic, and political problems in the early 20th Century, and these are related to specific progressive reforms. America's role in both World Wars is covered, with less emphasis on military history than that placed on political and diplomatic aspects. Much attention is given to the Great Depression and the New Deal and to subsequent social, political, and economic reforms that attempt to deal with the problems of mass society. America's role in post-World War II international developments is emphasized, with special effort made to relate our role in the world to our domestic problems. Three lecture hours per week.

HUMANITIES (HUM)

1913 Leadership Honors Forum. (3) Prerequisites: Instructor recommendation and Vice President for Instructions's approval.

This course has as its central focus the development of leadership skills. It is designed to provide a basic understanding of leadership and group dynamics theory and to assist the student in developing a personal philosophy of leadership, an awareness of the moral and ethical responsibilities of leadership, and an awareness of one's own style of leadership. This program integrates readings from the humanities, classic works of literature, and experiential learning exercises with readings and discussions of traditional theories. (Phi Theta Kappa/Phil Hardin Foundation Leadership Development Program.)

JOURNALISM (JOU)

1111 College Publications I. (1)

1121 This laboratory course is designed to give practical experience in working with college **2111** newspaper and yearbook production. Two laboratory hours per week.
2121

MACHINE TOOL OPERATION/MACHINE SHOP TECHNOLOGY (MST)

1113 Introduction to Machine Shop Technology. (3)

This course introduces students to band saws, drill presses, metal cutting lathes, and milling machines. The course is designed to give the student a basic knowledge of manual metal working machines. Two lecture and two lab hours per week.

1115 Power Machinery I. (5)

A course in the operation of power machinery. Includes instruction and practice in the operation of lathes, drill presses and vertical mills. Two lecture and six lab hours per week.

1125 Power Machinery II. (5) Prerequisite: MST 1115

A continuation of Power Machinery I with emphasis on more advanced applications of lathes, mills and precision grinders. Two lecture and six lab hours per week.

1313 Machine Tool Mathematics. (3)

An applied mathematics course designed for machinists. Includes instruction and practice in algebraic and trigonometric operations essential for successful machining. Two hours lecture and two hours per week.

1413 Blueprint Reading. (3)

A course in blueprint reading designed for machinists. Includes instruction and practice in reading and applying industrial blueprints. Two hours lecture and two hours lab per week.

1423 Advanced Blueprint Reading. (3) Prerequisite: MST 1413

A continuation of Blueprint Reading with emphasis on advanced feature of technical prints. Includes instruction on the identification of various projections and views and on different assembly components. Two lecture and two lab hours per week.

1613 Precision Layout. (3)

An introduction to the concepts and practice of precision layout for machining operations. Includes instruction and practice in the use of layout instruments. Two lecture and two lab hours per week.

2135 Power Machinery III. (5) Prerequisite: MST 1125

A continuation of the Power Machinery II course with emphasis on advanced applications of the engine lathe, milling and grinding machine. Two lecture and six lab hours per week.

2144 Power Machinery IV. (4) Prerequisite: MST 2135

A continuation of Power Machinery III with emphasis on highly advanced operations on the radial arm drill, milling machine, engine lathe and precision grinder. Two lecture and four lab hours per week.

2714 Computer Numerical Control Operations I. (4)

An introduction to the application of computer numerical control (CNC) and computer assisted manufacturing (CAM) techniques and practices. Includes instruction and practice related to the use of the Cartesian coordinate system, programming codes and command and tooling requirements for CNC/CAM machines. Three lecture and two lab hours per week.

2725 Computer Numerical Control Operations II. (5) Prerequisite: MST 2714

A continuation of Computer Numerical Control Operations I. Includes instruction in writing and editing CNC programs, machine setup and operation and use of CAM equipment to program and operate CNC machines (CNC lathes, CNC mills, CNC machine centers and wire EDM). Two lecture and six lab hours per week.

2813 Metallurgy. (3)

An introduction to the concepts of metallurgy. Includes instruction and practice in metal identification, heat

treatment and hardness testing. One lecture and four lab hours per week.

291(1-3) Special Problem in Machine Tool Technology. (1-3) Prerequisite: Minimum of twelve scheduled Machine Tool related courses

A course designed to provide the student with practical application of skills and knowledge gained in other Machine Tool Operation/Machine Shop courses. The instructor works closely with the student to insure that the selection of a project will enhance the student's learning experience. One to three lecture hours and two to six lab hours per week.

292(1-6) Supervised Work Experience in Machine Tool Technology. (1-6) Prerequisites: Consent of instructor and completion of at least one semester of advanced course work in Machine Tool Technology

This course is a cooperative program between industry and education and is designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours. Three to eighteen hours internship.

MATHEMATICS (MAT)

1103 Developmental Mathematics. (3) Prerequisite: A score of 1-13 on the mathematic portion of the Enhanced ACT will place student in this course. Fundamental operations in arithmetic, fractions, decimals, percentages, and verbal problems. Three lecture hours per week.

1203 Introductory Algebra. (3) Prerequisite: A score of 14-15 on the mathematic portion of the Enhanced ACT will place student in this course. Integers, first degree equations, products and factors, rational expressions, and systems of linear equations. Three lecture hours per week.

1233 Intermediate Algebra. (3) Prerequisite: High School Algebra (one unit with grade of C or better) and an ACT mathematics subtest score of at least 16 or MAT 1203 with grade of C or better. Linear Equations, algebraic factoring, rational expressions, exponents, radicals, and quadratic equations. Three lecture hours per week.

1313 College Algebra. (3) Prerequisite: A score of 18 on the mathematic portion of the Enhanced ACT, High School Algebra (two units with grade of C or better) or MAT 1233 with grade of C or better. Algebraic operations, linear and quadratic equations, systems of equations, complex numbers, polynomials, rational expressions, logarithms, exponents, determinants, and applications. Three lecture hours per week.

1323 Trigonometry. (3) Prerequisite: High School Algebra (two units with grade of C or better) or MAT 1313. Trigonometric functions and their inverses, trigonometric identities and equations, solutions of triangles, and logarithms. Three lecture hours per week.

1513 Business Calculus. (3) Prerequisite: MAT 1313. This course offers the basics of differential and integral calculus with emphasis on business applications. Three lecture hours per week.

1613 Calculus with Analytic Geometry I. (3) Prerequisite: High School Algebra (two units) and Trigonometry or advanced mathematics. Introductory analytic geometry, functions, limits, continuity, differentiation of algebraic and trigonometric functions, and applications of the derivative. Introduction to integration of algebraic and trigonometric functions. Three lecture hours per week.

1623 Calculus with Analytic Geometry II. (3) Prerequisite: MAT 1613 with a grade of C or better. Further applications of the derivative, integration, applications of the definite integral, differentiation and integration of transcendental functions, and other techniques of integration to include integration by parts, partial fractions, trigonometric substitution, and improper integrals. Three lecture hours per week.

1713 The Real Number System (Mathematics for Elementary Teachers). (3) Prerequisite: MAT 1313. The real number system and its major sub-systems, integers, and rational numbers. Three lecture hours per week.

2113 Linear Algebra. (3) Prerequisite: MAT 1623. Systems of linear equations, vector spaces, linear transformations, matrices, and inner products. Three lecture hours per week.

2613 Calculus III with Analytic Geometry III. (3) Prerequisite: MAT 1623 with a grade of C or better. This course will cover Infinite Series and Sequences including an emphasis on geometric series, power series and Taylor series as well as multiple tests for convergence. We will explore parametric equations and polar equations as well as their applications. Three-dimensional, cylindrical and spherical coordinate systems will be introduced. Vectors and vector functions including motion in space, velocity and normal and tangential acceleration will be covered. Three lecture hours per week.

2623 Calculus IV with Analytic Geometry IV. (3) Prerequisite: MAT 2613 with a grade of C or better. This course will cover partial differentiation including tangent planes and linear approximations, directional

derivatives and the Gradient Vector, finding classifying critical points and Lagrange Multipliers. We will explore multiple integration techniques and applications for use in determining volume, area, center of mass and moments of inertia. Vector calculus including vector fields, line integrals, work, Green's theorem and applications, parameterized surfaces, flux and divergence will also be covered. Three lecture hours per week.

2913 Differential Equations I. (3) Prerequisite: MAT 2613

Basic concepts, theory, methods, and applications of ordinary differential equations, solutions of first and higher order differential equations, existence theorems, solutions by series, Laplace Transforms, and applications in geometry, engineering, physics, and chemistry. Three lecture hours per week.

MEDICAL LABORATORY TECHNOLOGY (MLT)

1112 Fundamentals of MLT/Phlebotomy. (2)

This course includes an overview of the field of Medical Laboratory Technology, familiarization with laboratory safety, microscopes, glassware, and equipment. It also includes laboratory organization, medical ethics, and employment opportunities. Basic laboratory specimen collection techniques are introduced. One lecture and two lab hours per week.

1212 Urinalysis and Body Fluids. (2)

This course is an introduction to urinalysis and laboratory analysis of miscellaneous body fluids. It includes the basic principles of routine and special urine tests, and specimen examination through laboratory work. Theory and test profiles are also presented for miscellaneous body fluids with correlation to diseased states. One lecture and two lab hour per week.

1314 Hematology I. (4)

This course is a study of the function of blood, morphology, and maturation of normal cells, blood cell counts, differentials of white cells, and blood collection and handling. Two lecture and four lab hour per week.

1324 Hematology II. (4) Prerequisite: MLT 1314

This course includes the study of abnormal cell morphology and diseases involving blood cells, test procedures used in laboratory diagnosis of hematological disease, normal and abnormal hemostasis, and diagnostic procedures for evaluation of bleeding abnormalities and anticoagulant therapy. Two lecture and four lab hours per week.

1413 Immunology/Serology. (3)

This course includes basic principles of serology/immunology, theory and performance of routine serology tests. Two lecture and two lab hour per week.

1515 Clinical Chemistry. (5) Prerequisite: Four hour Chemistry elective with lab.

This course is the study of human biochemistry as an aid in the diagnosis of disease processes. It includes chemistry procedures performed on body fluids for aiding in diagnosis of disease processes. Three lecture and four lab hour per week.

2424 Immunohematology. (4) Prerequisite: MLT 1413

This course includes collection, processing, storage, and utilization of blood components. It also includes the study of immunological principles and procedures for blood typing, cross matching, antibody detection, identification, and investigation of hemolytic disease of the newborn. Two lecture and four lab hours per week.

2612 Parasitology. (2)

This course covers the morphology, physiology, life cycles, and epidemiology of parasites of animals with emphasis on human pathogenic parasites. Identification of the parasites from human material is also included. One lecture and two lab hours per week.

2615 Pathogenic Microbiology. (5) Prerequisites: BIO 2923, and BIO 2921

Basic skills, principles, and techniques for the staining, culturing, isolation, and identification of microorganisms of medical importance are emphasized in this course. Included are techniques used in determining the sensitivity of pathogenic bacteria to different antibiotic and other drugs. Three lecture and four lab hours per week.

2712 MLT Seminar. (2) Prerequisite: MLT core courses

This course represents a synthesis of previous didactic, laboratory, and clinical experiences. Students will select and present a case study. Recognition of the importance of employability skills after graduation is included. Four lab hours per week.

2714 Certification Fundamentals for MLT. (4) Prerequisite: MLT core courses

This course is an in-depth study and review of material covered in the MLT curriculum. Designed to prepare student for the national registry/certifying exams. Two lecture and four lab hours per week.

- 2916 Clinical Practice I.** (6) Prerequisite: MLT core courses
This course includes clinical practice and didactic instruction in a Clinical Affiliate. Areas covered are hematology, clinical chemistry, immunohematology, urinalysis, microbiology, coagulation, and serology. Forty clinical hours per week for six weeks.
- 2926 Clinical Practice II.** (6) Prerequisite: MLT core courses
A continuation of Clinical Practice I. Forty clinical hours per week for six weeks.
- 2936 Clinical Practice III.** (6) Prerequisite: MLT core courses
A continuation of Clinical Practice II. Forty clinical hours per week for six weeks.

MEDICAL RADIOLOGIC TECHNOLOGY (RGT)

- 1114 Clinical Education I.** (4) Prerequisites: All core courses as scheduled. CPR-Health Care Provider must be completed before Clinical I experience begins. This course includes clinical practice and instruction in a clinical affiliate. Areas included are patient care and management, radiation protection, operation of equipment, and radiologic procedures. Twelve clinical hours per week.
- 1124 Clinical Education II.** (4) Prerequisites: All core courses as scheduled. This course involves clinical practice and instruction in a clinical affiliate. Areas included are patient care and management, radiation protection, operation of equipment, and radiologic procedures. Twelve clinical hours per week.
- 1139 Clinical Education III.** (9) Prerequisites: All core courses as scheduled. This course is a clinical practice and instruction in a clinical affiliate. Areas included are patient care and management, radiation protection, operation of equipment, and radiologic procedures. Twenty-seven clinical hours per week.
- 1213 Fundamentals of Radiography.** (3)
This course is an introduction to Radiologic Technology including professional, department, and historical aspects. Included are terminology, medical ethics, and fundamental legal responsibilities. Three lecture hours per week.
- 1223 Patient Care and Radiography.** (3)
This course will provide the student with the basic concepts of patient care, including consideration for the physical and psychological needs of the patient and family. Routine and emergency patient care procedures will be described, as well as infection control procedures utilizing standard precautions. The role of the radiographer in patient education will be identified. Two lecture and two lab hours per week.
- 1312 Principles of Radiation Protection.** (2)
This course is designed to present an overview of the principles of radiation protection including the responsibilities of the radiographer for patients, personnel, and the public. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies, and health care organizations are incorporated. Two lecture hours per week.
- 1413 Radiation Exposure I.** (3)
This course is a study of the principles involving manipulation of factors controlling and influencing exposure and radiographic quality. Included are the prime factors of radiographic exposure. Basic technical conversions, problem solving procedures, and the production and nature of x-rays are addressed. Two lecture and two lab hours per week.
- 1423 Radiation Exposure II.** (3) Prerequisites: Radiation Exposure I (RGT 1513)
This course is a continuation of Radiation Exposure I. Included are beam limiting devices, filtration, production and control of scatter and secondary radiation, exposure systems, and advanced technical conversions and problem solving. This course presents an introduction to film processing including darkroom design and equipment. Included are chemistry of developing solutions, procedures of general maintenance, quality control, and silver recovery methods. Two lecture and two lab hours per week.
- 1513 Radiographic Procedures I.** (3) Pre/Corequisite: Anatomy and Physiology I (BIO 1514)
This course includes terminology, principles, and procedures involved in routing radiographic positioning for demonstration of the chest, abdomen, upper extremities and digestive system. Included is a review of radiographic anatomy on each procedure. Two lecture and two lab hours per week.
- 1523 Radiographic Procedures II.** (3) Prerequisites: Radiographic Procedures I (RGT 1513)
This course includes principles and procedures involved in the radiographic positioning of the spinal column, pelvic girdle, lower extremities, bony thorax, and mobile and trauma radiography procedures. Included is a review of radiographic anatomy on each procedure. Two lecture and two lab hours per week.

- 1613 Physics of Imaging Equipment.** (3) Prerequisites: All core courses as scheduled. This course is designed to establish a knowledge base in radiographic, fluoroscopic, mobile, and tomographic equipment requirements and design. The content will also provide a basic knowledge of quality control. Computer applications in the radiologic sciences related to image capture, display, storage and distribution are presented. Three lecture hours per week.
- 2132 Social and Legal Responsibilities.** (2) Prerequisites: Fundamentals of Radiography (RGT 1213) Legal terminology, concepts, and principles will be presented in this course. Topics include misconduct, malpractice, legal and professional standards, and the ASRT scope of practice. The importance of proper documentation and informed consent is emphasized. This course will prepare students to better understand their patient, the patient's family, and professional peers through comparison of diverse populations based on their value systems, cultural and ethnic influences, communication styles, socio-economic influences, health risks, and life stages. Two lecture hours per week.
- 2147 Clinical Education IV.** Prerequisites: All core courses as scheduled. This course is a clinical practice and instruction in a clinical affiliate. Areas included are patient care and management, radiation protection, operation of equipment, and radiologic procedures. Twenty-one clinical hours per week.
- 2157 Clinical Education V.** (7) Prerequisites: All core courses as scheduled. This course is a clinical practice and instruction in a clinical affiliate. Areas included are patient care and management, radiation protection, operation of equipment, and radiologic procedures. Twenty-one clinical hours per week.
- 2532 Radiographic Procedures III.** (2) Prerequisites: Radiographic Procedures II (RGT 1523) This course includes principles and procedures involved in radiographic positioning of the entire cranium, facial bones, and reproductive systems. Included is a review of radiographic anatomy on each procedure. One lecture and two lab hours per week.
- 2542 Radiographic Procedures IV.** (2) Prerequisites: Radiographic Procedures III (RGT 2532) This course is a study of special radiographic procedures which utilize sterile techniques and/or specialized equipment. It also includes basic concepts of pharmacology. One lecture and two lab hours per week.
- 2911 Radiation Biology.** (1) Prerequisites: All core courses as scheduled. This course is a study of the biological effects of radiation upon living matter. It includes genetic and somatic effects, instrumentation for detection, and measurement and calculation of dosage. One lecture hour per week.
- 2921 Radiographic Pathology.** (1) Prerequisites: All courses as scheduled. This course is designed to introduce theories of disease causation and the pathophysiologic responses, clinical manifestations, radiographic appearance, and management of alteration in body systems will be presented. One lecture hour per week.
- 2933 Certification Fundamentals.** (3) Prerequisites: All courses as scheduled. This course is designed to correlate scientific components of radiography to entry level knowledge required by the profession. Three lecture hours per week.

MEDICAL TERMINOLOGY (AHT)

- 1113 Medical Terminology.** (3) This course is a study of medical terminology and abbreviations. There is emphasis on how medical terms are used documenting and reporting patient care procedures. This will also highlight allied health care careers and the program requirements for each program as well as job opportunities. Three lecture hours per week.

MUSIC, Applied (MUA)

- 1141 Brass for Non-Majors.** (1)
- 1151** Individual instruction on a brass instrument with emphasis on
- 2141** technique, reading, and interpretation. One-half hour lesson per
- 2151** week and one hour of daily practice. One semester hour credit. Permission of instructor and participation in band are required. A course fee may be assessed.
- 1171 The Voices.** (1)
- 1181** "The Voices" is a highly select vocal ensemble (audition only) consisting of seven
- 2171** women and seven men. The ensemble performs widely each semester for campus, civic,
- 2181** and church functions. Three rehearsal hours per week.
- 1172 Brass for Music Education Majors.** (2)
- 1182** Individual instruction on the brass instrument in which the
- 2172** student is majoring. Intensive study of scales, technique, and liter-
- 2182** literature are emphasized. One performance in recital class each

semester and participation in band are required. One hour lesson per week and one hour of daily practice.

- 1241 Guitar for Non-Majors. (1)**
1251 Individual instruction in classical guitar with emphasis on
2241 technique, reading, and interpretation. One half-hour lesson per
2251 week and one hour of daily practice. A course fee will be assessed.
- 1272 Guitar for Music Majors. (1)**
1282 Individual instruction in classical guitar with emphasis on
2272 technique, reading, and interpretation. Intensive study of literature.
2282 One performance in recital class each semester and participation in an ensemble is required. One hour lesson per week and one hour daily practice. A course fee may be assessed.
- 1441 Percussion for Non-Majors. (1)**
1451 Individual instruction on percussion instruments with emphasis
2441 on rudimental snare drum, timpani, and mallet percussion. One-
2451 half hour lesson per week and one hour of daily practice. Permission of instructor and participation in band are required. A course fee may be assessed.
- 1472 Percussion for Music Education Majors. (2)**
1482 Individual instruction on percussion instruments for the student
2472 majoring in percussion. Intensive study of scales, technique, and
2482 literature are emphasized. One performance in recital class each semester and participation in band are required. One hour lesson per week and one hour of daily practice.
- 1511 Class Piano. (1)**
1521 Piano instruction for music education majors with no previous
2511 piano experience. Emphasis is on scales, reading and fingering.
2521 Two lab hours per week, one-half hour of daily practice. A lab fee may be assessed.
- 1541 Piano for Non-Majors. (1)**
1551 Piano instruction for non-majors. Beginners will be given class
2541 instruction, more advanced students will receive one-half hour
2551 lesson per week. One hour of daily practice is expected. A course fee may be assessed.
- 1572 Piano for Music Education Majors. (2)**
1582 Individual instruction in piano for the music education major
2572 emphasizing scales, keyboard technique, and interpretation of
2582 literature from the Baroque, Classical, and Romantic periods of music. One hour lesson per week and one hour of daily practice. One recital class performance per semester is required.
- 1772 Voice for Music Education Majors. (2)**
1782 Individual instruction in the study of voice emphasizing
2772 principles of relaxation, breath management, distinct enunciation and
2782 interpretation. Participation in Choir is required. One recital class performance per semester. One hour lesson per week. One hour of daily practice.
- 1841 Woodwinds for Non-Majors. (1)**
1851 Individual instruction on a woodwind instrument with emphasis
2841 on technique, reading, and interpretation One-half hour lesson
2851 per week and one hour of daily practice. Permission of the instructor and participation in band are required. A course fee may be assessed.
- 1872 Woodwinds for Music Education Majors. (2)**
1882 Individual instruction on the woodwind instrument in which the
2872 student is majoring. Intensive study of scales, techniques, and
2882 literature is emphasized. One performance in recital class each semester and participation in band are required. One hour lesson per week and one hour of daily practice.

MUSIC FOUNDATIONS (MUS)

- 1113 Music Appreciation (Non-Music Majors). (3)**
Introductory music course designed to develop critical listening skills to understand and appreciate many different styles of music as well as to understand music in political, social, and cultural periods of history. Three lecture hours per week.

- 1133 Fundamentals of Music.** (3)
A one semester course providing the student with basic knowledge of melodic, harmonic and rhythmic notation, scales, keys, intervals, triads, and musical terms. Lab will consist of basic skills in piano, sight-reading and ear-training. Open to both music majors and non-music majors. Two Lecture and one lab hour per week.
- 1213 Music Theory I.** (3)
The basic materials of music composition including scales, intervals, part-writing, chord structure, and analyzation. Three lecture hours per week.
- 1211L Music Theory I Lab.** (1) Corequisite: MUS 1213
Laboratory instruction in sight-singing, ear training, and dictation. Two lab hours per week. A lab fee may be assessed.
- 1223 Music Theory II.** (3) Prerequisite: MUS 1213
A continuation of Music Theory I. Three lecture hours per week.
- 1221L Music Theory II Lab.** (1) Prerequisite: MUS 1211L Corequisite: MUS 1223
A continuation of Music Theory Lab I. Two laboratory hours per week. A lab fee may be assessed.
- 2213 Music Theory III.** (3) Prerequisite: MUS 1223
Further study of musical composition through harmonic structure. Three lecture hours per week.
- 2211L Music Theory III Lab.** (1) Prerequisite: MUS 1221L Corequisite: MUS 2213
A continuation of Music Theory Lab II. Two lab hours per week. A lab fee may be assessed.
- 2223 Music Theory IV.** (3) Prerequisite: MUS 2213
A continuation of Music Theory III. Three lecture hours per week.
- 2221L Music Theory Lab IV.** (1) Prerequisite: MUS 2211L Corequisite: MUS 2223
A continuation of Music Theory Lab III. Two lab hours per week. A course fee may be assessed.
- 2413 Survey of Music Literature (Music Majors).** (3)
A detailed study of the literature and composers of the various periods of music history. Three lecture hours per week. (Spring semester only).
- 2513 Music for Elementary Education Majors. (Music for Children).** (3)
A hands-on workshop experience featuring songs, instruments, activities, methods of teaching, appropriate materials and disciplinary approaches for the teaching of music in the elementary school. Three lecture hours per week. (Fall Semester only).
- 1911 Recital Class.** (1)
1921 Presented by students, faculty, and/or guest artists. All music
2911 majors are required to attend. Recital dates are announced each
2921 semester.

MUSIC ORGANIZATIONS (MUO)

- 1111 Band.** (1)
1121 The HSpirit of the RiverF Marching Band performs at football
2111 games, parades, band festivals, and various community events
2121 during the fall semester. Six rehearsal hours per week. The Concert Band performs a minimum of two concerts during the spring semester. Three rehearsal hours per week. An audition or consent of the band instructor is required.
- 1141 Ensemble Class.** (1)
1151 Percussion, Brass, and Woodwind ensemble instruction. Con-
2141 sent of instructor is required. Three lab rehearsal hours per
2151 week.
- 1171 Jazz Band.** (1)
1181 The PRCC Jazz Band is an auditioned group consisting of saxophone,
2171 trombone, trumpet, and rhythm sections. Performances
2181 include concerts at district schools, community events, and school activities. Three rehearsal hours per week.
- 1211 Choir.** (1)
1221 Required of all vocal and piano majors. The choir is open to
2211 other students who demonstrate skill at matching pitches and
2221 sight-reading. The performing group makes numerous appearances during the year, both on campus and

throughout the state. Three rehearsal hours per week.

- 1241 RiverRoad.** (1)
1251 The PRCC Showchoir is a select performing group (audition
2241 only) made up of men and women singing a variety of popular
2251 music with choreography. The performing group makes numerous performances throughout the year on campus, the state, and nation. Three rehearsal hours per week.

OCCUPATIONAL THERAPY ASSISTANT TECHNOLOGY (OTA)

- 1113 Foundations of Occupational Therapy.** (3) Prerequisite: Admission to OTA program.
This intake course is an introduction to the field of occupational therapy including history, role orientation, professional organizational structure, legal and ethical implications, legislation, specific practice arenas, and the process of service delivery. Three lecture hours per week.
- 1134 Anatomy and Physiology for Therapy Assistants.** (4) Prerequisite: Admission to OTA program.
This intake course will focus upon the structures and systems of the human body and their respective functions. Emphasis will be placed upon areas that are most vital to practice within the field of occupational therapy, particularly the skeletal, muscular, and nervous systems. Three lecture hours and two lab hours per week.
- 1142 Wellness Systems.** (2) Prerequisite: Admission to OTA program.
This intake course is designed to examine the context of service delivery for occupational therapy. Various models of health care, education, community, and social systems will be examined. Professional language utilized in these systems will be included. In addition to term definitions, emphasis is placed on uniform terminology. Two lecture hours per week.
- 1213 Pathology of Psychiatric Conditions.** (3) Prerequisite: Admission to OTA program.
This intake course provides a basic knowledge of psychiatric disorders encountered in occupational therapy practice. Emphasis is on etiology, prognosis and management of various psychiatric conditions. The role and function of the OTA in the treatment process is also emphasized. Three lecture hours per week.
- 1223 Pathology of Physical Disability Conditions.** (3) Prerequisite: Admission to OTA program.
This intake course provides a basic knowledge of selected diseases and conditions encountered in occupational therapy practice. Emphasis is on etiology, prognosis and management of various pathological physical conditions. The role and function of the OTA in the treatment process is also emphasized. Three lecture hours per week.
- 1233 Pathology of Developmental Conditions.** (3) Prerequisite: Admission to OTA program
This intake course provides a basic knowledge of selected diseases and conditions encountered in occupational therapy practice. Emphasis is on etiology, prognosis and management of various pathological developmental conditions. The student will compare and contrast normal and abnormal developmental patterns. The role and function of the OTA in the treatment process is also emphasized. Three lecture hours per week.
- 1314 Kinesiology.** (4) Prerequisites: OTA 1134 or administrative approval.
This intake course studies individual muscles and muscle functions, biomechanical principles of joint motion, gait patterns, normal movement patterns and goniometry. Three lecture and two lab hours per week.
- 1413 Therapeutic Media.** (3) Prerequisites: OTA 1113, OTA 1142
This manipulation course provides knowledge and use of tools, equipment and basic techniques of therapeutic media. Emphasis is given to analyzation and instruction of activities frequently used as occupational therapy media. One lecture and four lab hours per week.
- 1423 Occupational Therapy Skills I.** (3) Prerequisite: Admission to OTA program.
This manipulative course provides fundamental knowledge of practice skills used with patients/clients across the life span and with various diagnoses. Observation and documentation techniques will be introduced. Two lecture and two hours lab per week.
- 1433 Occupational Therapy Skills II.** (3) Prerequisite: OTA 1423.
This manipulation course provides intermediate practice skills used with patients/clients across the lifespan and with various diagnoses. Two lecture and two lab hours per week.
- 1513 Group Process.** (3) Prerequisite: OTA 1113
This manipulative course introduces theory and research findings explaining group dynamics. The course teaches the student how to facilitate group effectiveness and the skills to apply that knowledge in practical situations. Methods and skills necessary to plan, write and lead an occupational therapy group will be taught. The course focuses on the importance of group activity intervention primarily with the psychiatric population.

Two lecture and two lab hours per week.

- 1913 “Fieldwork IA: Psychosocial/Specialty”.** (3) Prerequisite: OTA 1423
This application course is designed to provide the student with an opportunity to apply their knowledge of the occupational therapy process in clinical fieldwork. The student will also begin to develop professional work habits. Students are expected to function as participant observers in the occupational therapy evaluation and intervention process. One lecture and six clinical hours per week.
- 2443 Occupational Therapy Skills III.** (3) Prerequisites: OTA 1423 and OTA 1433.
This manipulation course provides more advanced practice skills used with patients/clients across the lifespan and with various diagnoses. Two lecture and two lab hours per week.
- 2713 Concepts in Occupational Therapy.** (3) Prerequisite: OTA 1314
This manipulation course studies the theoretical basis for occupational therapy treatment techniques seen in the rehabilitation setting. Two lecture and two lab hours per week.
- 2935 “Fieldwork IB: Physical Dysfunction/Pediatrics”.** (5) Prerequisite: OTA 1423
This application course is designed to provide the student with an opportunity to apply their knowledge in clinical fieldwork. The student will also begin to develop professional work habits. Students are expected to function as participant observers in the clinical setting. One lecture and twelve clinical hours per week.
- 2946 “Fieldwork IIA”.** (6) Prerequisites: All previously offered OTA courses
This application course synthesizes previous didactic instruction and clinical experiences obtained in Fieldwork I. In Level 11A, the student may encounter a variety of populations in a traditional or non-traditional based setting, the student will assume increasing responsibilities under supervision as appropriate for the setting. Eighteen clinical hours per week for eight weeks.
- 2956 “Fieldwork IIB”:** (5) Prerequisites: All previously offered OTA courses
This application course synthesizes previous didactic instruction and clinical experiences obtained in previous fieldwork experiences. In Level IIB, the student may encounter a variety of populations in a traditional or non-traditional based setting, the student will be placed in a setting that is different from Fieldwork IIA. The student will assume increasing responsibilities under supervision as appropriate for the setting. Eighteen clinical hours per week for eight weeks.
- 2961 Occupational Therapy Transitions.** (1) Prerequisites: Three semesters of OTA course work
This intake course is designed to develop pre-employment skills, promote awareness of legal aspects of occupational therapy, and prepare for the national certification examination. One lecture hour per week.

PHILOSOPHY (PHI)

- 1113 Old Testament Survey.** (3)
A study of the Old Testament covering the recorded events prior to Abraham and the history of the Hebrew nation as revealed in the books of history, prophecy, and poetry. Three lecture hours per week.
- 1133 New Testament Survey.** (3)
A study of the New Testament covering the life of Christ and the establishment of the early church as presented in the Gospels, Acts, and the other New Testament books. Three lecture hours per week.
- 1163 Acts and the Epistles.** (3)
This course is designed to give the student an introduction to the background, content, and development of the New Testament church. This course will provide a study of the first century church and the working relationship the Apostle Paul had with the churches that were beginning to form during this period in history. Three lecture hours per week.

PHYSICAL THERAPIST ASSISTANT TECHNOLOGY (PTA)

- 1101 Survey of Physical Therapy.** (1)
This course introduces the role of the Physical Therapist Assistant in the health care system, and the purpose, philosophy, and history of the profession and the American Physical Therapy Association. One lecture hour per week.
- 1111 Health Care Experience I.** (1)
This course is designed to provide the student with observation of physical therapy activities. The student has the opportunity to gain a knowledge of the health care delivery system and physical therapy's place within that system. Practicum is offered as an optional course at the discretion of the advisor. It may be taken independently or in conjunction with PTA Practicum I (PTA 1132) and PTA Practicum II (PTA 1143). In addition to the three hours weekly in the clinic, the student reports in conference or on individual basis.

- 1151 Health Care Experience II. (1)**
This course is designed to provide the student with extended observational time with limited participation in physical therapy activities. The student has the opportunity to gain knowledge of the health care delivery system and physical therapy's place within that system. Practicum is offered as an optional course at the discretion of the advisor. In addition to the three hours weekly in the clinic, the student reports in conference or on individual basis.
- 1132 Practicum I. (2)**
This course is designed to provide the student with observation time with participation in selected physical therapy activities. Practicum is offered as an optional course at the discretion of the advisor. It may be taken independently or in conjunction with Health Care Experience I(PTA 1111) and PTA Practicum II (PTA 1143). In addition to the six hours weekly in the clinic, the student reports in conference or on individual basis.
- 1143 Practicum II. (3)**
This course is designed to provide the student with extended observation time with participation in selected physical therapy and/or related activities. Practicum is offered as an optional course at the discretion of the advisor. It may be taken independently or in conjunction with Health Care Experience I (PTA 1111) and PTA Practicum I(PTA 1132). In addition to the nine hours weekly in the clinic, the student reports in conference or on individual basis.
- 1123 Fundamental Concepts of Physical Therapy. (3)**
This course in an introduction to the field of physical therapy including role orientation, professional organization structure, legal and ethical implications, and legislation. Historical patterns in the development of the profession will be explored and medical terminology introduced. Basic safety and OSHA requirements for blood borne pathogens will be discussed. Three lecture hours per week.
- 1213 Fundamental Skill for Physical Therapist Assistants. (3)** Prerequisite: PTA 1123 Corequisite: PTA 1315, PTA 2233
This course provides a knowledge of topics utilized in the practice of physical therapy. Topics covered include patient positioning and transfers, body mechanics, gait training, use of ambulatory devices, length and girth measurements, aseptic techniques, dressing and bandaging, and handling the patient with special needs. Massage, documentation, first aid, and emergency techniques are also covered. Two lecture and two lab hours per week.
- 1224 Therapeutic Modalities (4)** Prerequisites: PTA 1123, PTA 2233, PTA 1315, PTA 1213 Corequisite: none
Introduction to the theory and practical application of hydrotherapy, thermotherapy, cryotherapy, light therapy, and mechanotherapy. Emphasis will be placed on the technique of application, indications, and contraindications of modalities. Three lecture and two lab hours per week.
- 1315 Kinesiology. (5)** Prerequisite: PTA 1123 Corequisite: PTA 1213, PTA 1224, PTA 2233
This course studies individual muscles and muscle functions, biomechanical principles of motion, gait analysis, goniometry, and postural assessment. Four lecture and two lab hours per week.
- 1325 Therapeutic Exercise and Rehabilitation I. (5)** Prerequisites: PTA 1123, PTA 1213, PTA 2414, PTA 1224, PTA 1315, PTA 2233 Corequisites: PTA 2335, PTA 2513, PTA 2111
This course provides an overview of the biochemical and neurophysiological basis and application of various therapeutic exercises. The basics of therapeutic exercises are correlated with specific conditions. Manual muscle testing is introduced. This course focuses on rehabilitation techniques in the treatment of a variety of selected conditions. Specialized exercise procedures are emphasized. Four lecture and two lab hours per week.
- 2414 Clinical Education I. (4)** Prerequisites: PTA 1123, PTA 1213, PTA 1224, PTA 2233, PTA 1315
This course provides supervised clinical experiences in demonstrating the attributes and applying the skills for which students have been deemed competent for the clinical setting. Forty clinical hours per week for three weeks.
- 2111 Clinical Skills. (1)** Prerequisites: PTA 1123, PTA 1213, PTA 1315, PTA 1224, PTA 2233, PTA 2414. Corequisites: PTA 1325, PTA 2335, PTA 2513
Offers practical clinical application of skills and modalities while in a supervised laboratory setting. Principles and techniques used in therapeutic exercise and rehabilitation are applied in this clinical laboratory setting as they are covered in the corequisite courses. Two laboratory hours per week.
- 2233 Electrotherapy. (3)** Prerequisites: PTA 1123, PTA 1213, Corequisites: PTA 1224, PTA 1315
This course emphasizes theory and practical application of electrotherapy and other therapeutic procedures and discusses pain theories and pain control. Indications and contraindications of modalities are discussed. Two lecture and two lab hours per week.

- 2335 Therapeutic Exercise and Rehabilitation II.** (5) Prerequisites: PTA 1123, PTA 1213, PTA 1224, PTA 1315, PTA 2414, PTA 2233 Corequisites: PTA 1325, PTA 2111, PTA 2513
This course presents theory, principles, and techniques of therapeutic exercise and rehabilitation for primarily neurological conditions. Methods of functional, motor, and sensory assessment and intervention techniques are introduced. Principles of prosthetics and orthotics, wheelchair prescription, functional training and other techniques are covered. Four lecture and two lab hours per week.
- 2425 Clinical Education II.** (5) Prerequisites: PTA 1123, PTA 1213, PTA 1315, PTA 1224, PTA 2414, PTA 2111, PTA 1325, PTA 2233, PTA 2335, PTA 2513 Corequisite: PTA 2523
This is the first of three culminating clinical education experiences (identified in a Normative Model of PTA Education as the first full time clinical experience) which provides supervised clinical experiences in demonstrating the attributes and applying the skills which prepare students for entry into the Physical Therapy profession. Forty clinical hours per week for five weeks.
- 2435 Clinical Education III.** (5) Prerequisites: PTA 1123, PTA 1213, PTA 1315, PTA 1224, PTA 2414, PTA 2111, PTA 1325, PTA 2233, PTA 2335, PTA 2513, PTA 2425 Corequisite: PTA 2523
This is the second of three culminating clinical education experiences which provides supervised clinical experiences in demonstrating the attributes and applying the skills which prepare students for entry into the Physical Therapy profession. Forty clinical hours per week for five weeks.
- 2445 Clinical Education IV.** (5) Prerequisites: PTA 1123, PTA 1213, PTA 1315, PTA 1224, PTA 2414, PTA 2111, PTA 1325, PTA 2233, PTA 2335, PTA 2513, PTA 2424, PTA 2435 Corequisite: PTA 2523
This is the third of three culminating clinical education experiences (identified in a Normative Model of PTA Education as the last full time clinical experience) which provides supervised clinical experiences in demonstrating the attributes and applying the skills which prepare students for entry into the Physical Therapy profession. Forty clinical hours per week for five weeks.
- 2513 Medical Conditions and Related Pathology.** (3) Prerequisites: PTA 1123, PTA 1315, PTA 1213, PTA 2414, PTA 1224, PTA 2233 Corequisites: PTA 2335, PTA 1325, PTA 2111
This course provides a basic knowledge of selected diseases and conditions encountered in physical therapy practice. Emphasis is on etiology, pathology, and clinical picture of diseases studied. Various physical therapy procedures in each disability are discussed. Three lecture hours per week.
- 2523 Physical Therapy Seminar.** (3) Prerequisite: Four semesters of core PTA coursework
This course represents a synthesis of previous didactic, laboratory, and clinical experiences. Students are directed to explore a topic or area of interest in physical therapy practice. Recognition of the importance of employability skills after graduation is included. Fifty-one lecture hours per semester.

PHYSICS (PHY)

- 1311 Scientific Reasoning.** (1)
A seminar to provide an introduction to the basic methods underlying scientific research. Includes a brief, non-technical introduction to logic. Provides students with practice in observation, proposing explanations and testing explanations. Two hour seminar per week.
- 1114 General Astronomy** (4)
An introduction to stellar astronomy, galaxies, cosmology, and the solar system. Observations with the naked-eye, binoculars, and telescopes will be an important part of the course. Four semester hours credit, one hour of which is laboratory credit. (Offered only as a night class during the summer term.)
- 2241 Physical Science Survey Laboratory I.** (1) Corequisite: PHY 2243
Selected experiments illustrating scientific principles discussed in PHY 2243. Two laboratory hours per week.
- 2243 Physical Science Survey I.** (3) Corequisite: PHY 2241
A survey of laws of physics, astronomy, and meteorology. Three lecture hours per week.
- 2251 Physical Science Survey Laboratory II.** (1) Corequisite: PHY 2253
Selected experiments illustrating scientific principles discussed in PHY 2253. Two laboratory hours per week.
- 2253 Physical Science Survey II.** (3) Corequisite: PHY 2251
A survey of chemistry, geology, and environmental science. Three lecture hours per week.
- 2414 General Physics I.** (4) Prerequisite: High School Algebra (two units) and Trigonometry or College Trigonometry, which may be taken concurrently. Corequisite: PHY 1311.
Primarily for pre-medical, dental, pharmacy, and other pre-professional majors. Mechanics, waves, and sound. Three lecture hours and three laboratory hours per week.

2424 General Physics II. (4) Prerequisite: PHY 2414
Heat, thermodynamics, electricity and magnetism, and optics. Three lecture and three laboratory hours per week.

2515 Physics for Engineering, Science, and Mathematics I. (5) Prerequisites: MAT 1623 and High School Chemistry, or High School Physics, or CHE 1223 with laboratory.
Primarily for students majoring in physics, engineering, mathematics, chemistry, and other sciences. General physics taught using methods of calculus to formulate natural laws. Mechanics, waves, and sound. Four lecture hours and three laboratory hours per week.

2525 Physics for Engineering, Science, and Mathematics II. (5) Prerequisite: PHY 2515, PHY 1311.
Thermodynamics, electricity and magnetism, and optics. Four lecture hours and three laboratory hours per week.

POLITICAL SCIENCE (PSC)

1113 American National Government. (3)
A survey of the organization of the institutions of American government and the processes by which government policies are made and changed. Three lecture hours per week.

1123 American State and Local Government. (3)
A survey of the structure and functions of political institutions at the state, county, and municipal levels as these agencies attempt to resolve conflicts among individuals and groups in society. Emphasis is placed on the relationship of states and the national government in our federal system. Emphasis is also devoted to the discussion of popular participation in the democratic process, political parties and voting, public opinion and interest groups, legislative organization and functions, executive branch structure and functioning, and state court organization and operations. Time is especially devoted to political institutions at the county and municipal levels of government, as this is the level of political activity most of our citizens and students come into contact with most frequently. Three lecture hours per week.

PRACTICAL NURSING (PNV)

1113 Basic Nutrition. (3)
This course consists of a study of nutrition for all individuals. Digestion, metabolism and diet therapy are introduced. Three lecture hours per week.

1213 Body Structure and Function. (3)
This course is a study of body structure and function essential to safe and effective nursing care. Each system of the body is covered with applications to nursing. Two lecture and two laboratory hours per week.

1312 Growth and Development. (2)
This course is a study of the normal developmental processes of humans from conception to death, including physical, emotional, social and intellectual aspects. Two lecture hours per week.

1412 Geriatric Nursing. (2)
This course uses the nursing process to teach the care of the geriatric patient. Clinical experience in a long-term facility is a component of this course. One lecture and three clinical hours per week.

1425 Fundamentals of Nursing. (5) Concurrent registration in PNV 1434. (It also requires a passing grade in PNV 1425 and PNV 1434 to receive credit for these courses.) If a passing grade is not maintained, both courses must be repeated concurrently upon re-admission. This course provides the student with knowledge and skills necessary to care for the individual. Study includes beginning use of the nursing process; cause and prevention of illness; patient, family and community health care provision; resource agencies available. The course also includes personal health care, medical terms, and preparation to assist the patient in meeting basic living needs. Five lecture hours per week.

1434 Fundamentals of Nursing Laboratory. (4) Concurrent registration in PNV 1425
A passing grade in PNV 1425 and PNV 1434 is required in order to progress in the practical nursing program. If a passing grade is not maintained, both courses must be repeated concurrently upon re-admission. This course provides demonstrations, supervision and practice for the student to master fundamental nursing skills. Six hours lab and three clinical hours.

1513 Pharmacology. (3) Prerequisites: All first semester PNV courses
This course is designed to provide the student with appropriate basic theoretical and clinical information related to drugs, including: classifications, sources, dosages, basic mathematics and measurements, regulatory requirements and basic principles of drug administration. Two lecture and two laboratory hours per week.

- 1615 Medical/Surgical Nursing . (5)** Prerequisites: PNV 1113, PNV 1213, PNV 1312, PNV 1412, PNV 1425 and PNV 1434. Concurrent registration PNV 1624 is required.
A passing grade in PNV 1615 and PNV 1624 is required in order to progress in the practical nursing program. If a passing grade is not maintained, the courses must be repeated concurrently upon readmission.
This course introduces theory for the following medical-surgical disorders: cancer, neurological, respiratory, cardiovascular, and digestive. Emphasis is placed on developing and demonstrating an understanding of the role of the practical nurse functioning as an effective team member. Five lecture hours.
- 1624 Medical/Surgical Nursing Laboratory and Clinical . (4)** Prerequisites: PNV 1113, PNV 1213, PNV 1312, PNV 1412, PNV 1425, PNV 1434. Concurrent registration in PNV 1615 is required. It also requires a passing grade in PNV 1615 and PNV 1624 in order to progress in the practical nursing program. If a passing grade is not maintained, both courses must be repeated concurrently upon readmission.
This course includes supervised laboratory and clinical experiences for application of medical surgical theory and the development of skill, and the use of the nursing process. Two lab and nine clinical hours.
- 1633 Alteration in Adult health. (3)** Prerequisites: PNV 1113, PNV 1213, PNV 1312, PNV 1412, PNV 1425, PNV 1434 Concurrent registration in PNV 1644 is required. A passing grade in PNV 1633 and PNV 1644 is required in order to progress in the practical nursing program. If a passing grade is not maintained, both the courses must be repeated concurrently upon readmission.
This course introduces nursing theory or the following medical-surgical disorders: urological, endocrine, reproductive, musculoskeletal, and skin and special senses. Emphasis is placed on developing and demonstrating an understanding of the role of the practical nurse functioning as an effective team member. 5 hours lecture.
- 1644 Alteration in Adult Health Lab and Clinical. (4)** Prerequisites: PNV 1113, PNV 1213, PNV 1312, PNV 1412, PNV 1425, and PNV 1434. Concurrent registration in PNV 1633 is required. It also requires a passing grade in PNV 1633 and PNV 1644 in order to progress in the practical nursing program. If a passing grade is not maintained, both the courses must be repeated concurrently upon readmission.
This course includes supervised laboratory and clinical experiences for application of medical/surgical theory and the development of skill, and the use of the nursing process. Two laboratory and nine clinical hours per week.
- 1717 Maternal-Child Nursing. (7)** Prerequisites: All first semester PNV courses
This course uses the nursing process to teach care for the expectant mother from conception to delivery, including newborn, child and the family unit during normal and complicated conditions. Clinical experience includes perinatal labor and delivery, postpartum, newborn and pediatrics. Five lecture and six clinical hours per week.
- 1813 Psychiatric Concepts. (3)** Prerequisites: All first semester PNV courses
This course provides an introduction to mental health concepts. Emphasis is placed on normal as well as abnormal behavior in application of principles of effective therapeutic communication. Clinical experience will provide application of previously learned theory. Two lecture and three clinical hours per week.
- 1912 Nursing Transition. (2)** Prerequisites: All first semester PNV courses
This course further develops decision making skills and promotes an interest in continued professional development. Legal aspects of nursing and employment opportunities and responsibilities as well as preparation for the State Board Exam will be included. One lecture and three clinical hours per week.

PSYCHOLOGY (PSY)

- 1513 General Psychology I. (3)**
This course provides an introduction to the scientific study of behavior, and is designed to survey the basic theories, concepts, principles, and research findings in the field. Includes history and methods, sensation and perception, principles of learning, thinking and intelligence, motivation, emotion, growth and development, personality, and abnormal behavior. Three lecture hours per week.

READING (REA)

- 1103 Developmental Reading . (3)** A score of 1-15 on the reading portion of the Enhanced ACT will place student in this course.
This course is designed to stress mastery of skills most needed for literal and critical comprehension: vocabulary in context, main idea, inference, argument, understanding propaganda, purpose and tone. Three lecture hours and one laboratory hour per week.
- 1213 Vocabulary Improvement. (3)**
This course provides intensive study of general vocabulary with an emphasis on phonics. Root words, etymologies (word origins) and written as well as spoken application is emphasized. Three lecture hours per

week.

RELATED STUDIES MATHEMATICS (VOM)

- 1103 Related Studies Mathematics.** (3 non-transferable)
This course is designed to provide the fundamental mathematical skills necessary for successful completion of the vocational-technical program in which the student is enrolled. Individualized computer assisted instruction is given in basic mathematical skills identified through diagnostic testing. Three laboratory hours per week.

RELATED STUDIES READING (VOR)

- 1103 Related Studies Reading.** (3 non-transferable)
This course is designed to provide the fundamental reading skills necessary for successful completion of the vocational-technical program in which the student is enrolled. Instruction is computer based with supplemental methods used as necessary. Each student follows an individualized plan of study as identified through diagnostic testing. Three laboratory hours per week.

RESPIRATORY CARE TECHNOLOGY (RCT)

- 1113 Respiratory Care Practicum.** (3)
This course is designed to provide the student with extended observational time with limited participation in respiratory care modalities. The student gains knowledge of health care providers and of the respiratory care practitioner's role. Nine clinical hours per week.
- 1214 Respiratory Care Science.** (4) Prerequisites: BIO 1513, BIO 1511, BIO 1523, BIO 1521, completion of all Preprofessional courses.
This course is designed to introduce the student respiratory care practitioner to fundamental elements important to the delivery of health care in a safe, efficient and professional manner. The holistic approach to patient care will be emphasized. Three lecture and two laboratory hours per week.
- 1223 Patient Assessment and Planning.** (3) Prerequisites: Preprofessional acceptance.
This course is a fundamental approach to subjective and objective evaluation, assessment and care plan formation for the individual needs of the patient. It is an introduction to cardiopulmonary diseases including etiology, pathophysiology, complications, occurrences, clinical manifestations, treatment and prevention. Two lecture and two laboratory hours per week.
- 1313 Cardiopulmonary Anatomy and Physiology.** (3) Prerequisites: BIO 1513, BIO 1511, BIO 1523, BIO 1521, consent of Instructor. This course is a study of cardiopulmonary and renal physiology in relation to the practice of respiratory care. Three lecture hours per week.
- 1322 Pulmonary Function Testing.** (2) Prerequisites: consent of instructor, RCT 1313, RCT 1114
This course is an introduction to pulmonary function technique and testing equipment. One lecture and two laboratory hours per week.
- 1416 Respiratory Care Practitioner I.** (6) Prerequisites: BIO 1513, BIO 1511, BIO 1523, BIO 1521, completion of all Preprofessional courses. This course is a study of respiratory treatments and equipment design and operation related to the clinical objectives incorporating airway management, suctioning and basic life support. Two lecture and eight laboratory hours per week.
- 1424 Respiratory Care Technology II.** (4) Prerequisite: RCT 1416
This course is a continuation of Respiratory Care Technology I. It is a study of general classifications of adult and neonatal mechanical ventilators to include identification and treatment of respiratory failure and methods of ventilator weaning processes. Three lecture and two laboratory hours per week.
- 1516 Clinical Practice I.** (6) prerequisites: RCT 1416, RCT 1114
Patient assessment and care plan formation are presented in the hospital environment. A procedural guide is utilized to evaluate stationed competencies and performance of respiratory care procedures. Eighteen clinical hours.
- 1523 Clinical Practice II.** (3) Prerequisite: RCT 1516
In this course students rotate through various respiratory care sub-specialty areas for evaluation of competency and performance of respiratory care procedures. It is a review of all aspects of respiratory care. Nine clinical hours.
- 1613 Respiratory Care Pharmacology.** (3) Prerequisites: RCT 1114, RCT 1313, RCT 1213
This course is designed to introduce the student to the pharmacology related to cardiopulmonary disorders.

Three lecture hours per week

- 2333 Cardiopulmonary Pathology.** (3) Prerequisites: RCT 1313, consent of instructor
This course is a study of the anatomical alterations of the lungs caused by different disease processes. It includes etiology, clinical manifestations, diagnostics and treatment of various cardiopulmonary diseases. Three lecture hours per week.
- 2435 Respiratory Care Practitioner III.** (4) Prerequisites: RCT 1523, consent of instructor.
This course is a study of adult mechanical ventilation and cardiac and pulmonary monitoring techniques that are used in critical care settings. Three lecture and four lab hours per week.
- 2534 Clinical Practice III.** (2) Prerequisites: RCT 1516, RCT 1523, consent of instructor.
In this course students rotate through various clinical areas for evaluation of competency and performance of respiratory care procedures. Six clinical hours.
- 2548 Clinical Practice IV.** (8) Prerequisites: RCT 1516, RCT 1523, RCT 2532
In this course students rotate through respiratory care specialty areas. A procedural guide is utilized to evaluate student competency and performance. Twenty-four clinical hours.
- 2613 Neonatal/Pediatrics Management.** (3) Prerequisites: RCT 2434, consent of instructor.
This course is a study of fetal development and the transition to extrauterine environment. It includes the most common cardiopulmonary birth defects, neonatal and pediatric disease process and the mode of treatment. Three lecture hours per week.
- 2714 Respiratory Care Seminar.** (2) Prerequisite: consent of instructor.
This course is designed to integrate the essential elements of respiratory care practice through the use of care plans, case studies and clinical simulations in a laboratory environment. Students develop an analytical approach to problem solving. Critical thinking is emphasized. Three lecture and two lab hours per week.

ROBOTICS TECHNOLOGY (ROT)

- 1113 Fundamentals of Robotics.** (3)
This course is designed to introduce the student o industrial robots. Topics to be covered include robotics history, industrial robot configurations, operation, and basic programming. Two lecture and two lab hours per week.
- 1213 Industrial Hydraulics.** (3)
This course introduces the students to basic hydraulics, hydraulic actuators, accumulators, valves, pumps, motors, fluids, coolers, and filters. Emphasis is placed on development of hydraulic control circuits and troubleshooting. Two lecture and two lab hours per week.
- 1223 Industrial Pneumatics.** (3)
This course introduces the students to basic pneumatic principles, compression of air, work devices, control devices, and circuit diagrams. Emphasis is placed on development of pneumatic control circuits, electro-mechanical control of fluid power, and troubleshooting techniques. Two lecture and two lab hours per week.
- 1313 Industrial Robotics.** (3)
this course teaches the operating systems and advanced programming methods of industrial robots. Actual industrial grade robots are used to train the student in the areas of operation, maintenance, troubleshooting, service procedures, and robotics applications. Two lecture and two lab hours per week.
- 2413 Automated Manufacturing Controls.** (3) Prerequisite: ROT 1313
This course is designed to teach the students the integrated control systems found in automated systems. Emphasis will be placed on encoders, optical devices, servo motors, stepper motors, computerized numerical control (CNC), vision and sensing systems, lasers, programmatic controllers, motor speed controls, and other similar devices. Two lecture and two lab hours per week.
- 2423 Servo Control Systems.** (3)
This course is designed to teach servo components, servo valves, velocity servos, positional servos, force, pressure, and torque servos, servo amplifiers, programmers, and servo analysis. Emphasis is placed on servo trim and maintenance and the applications of servo systems. Two lecture and two lab hours per week
- 2613 Mechanical Systems.** (3)
This course introduces the students to mechanical components and drive systems commonly used in the industry. Emphasis is placed on installation, maintenance, and troubleshooting of these components and systems. Two lecture and two lab hours per week.

SCIENCE AND TECHNOLOGY (ATE)

- 1113 Science and Technology.** (3) A course designed to introduce scientific principles and applications of technology to Mississippi community/junior college students. A survey of scientific concepts and modern technology applications with specific emphasis on problem solving and career opportunities. One lecture and four lab hours per week.

SOCIOLOGY (SOC)

- 2113 Introduction to Sociology.** (3)
An introductory course designed to give a general overview of the perspectives, concepts, and methodology of sociology. Students will be encouraged to think critically about social life. Three lecture hours per week.
- 2133 Social Problems.** (3)
A study of contemporary social problems, with emphasis on their sociocultural causes and preventative and curative social actions. SOC 2113 is recommended preparation. Three lecture hours per week.
- 2143 Marriage and Family.** (3)
A survey of the nature and functions of family as a cultural unit, the institution of marriage, and the factors that make for change in family relationships. Offers students the opportunity to think critically about dating, mating, parenting, and making choices in relationships. SOC 2113 is recommended preparation. Three lecture hours per week.
- 2243 Cultural Anthropology.** (3)
Cultural Anthropology provides a comparative approach to the analysis of human cultural and social diversity. Emphasis is placed on the application of anthropological concepts, theories, and research toward understanding human societies and solving social problems. Three lecture hours per week.

SPEECH AND THEATRE (SPT)

- 1113 Oral Communication.** (3)
Oral Communication is the foundation course in the study of Speech Communication. Emphasis is placed on communication principles and practice in the preparation and delivery of public speech. Three lecture hours per week.
- 1213 Fundamentals of Theatre.** (3)
A basic course in the theatre arts. An introduction of the cultural, historical, and social aspects of drama; investigation of essential elements of play production. Three lecture hours per week.
- 1233 Acting.** (3)
An introduction to the theatre and the art of acting. Emphasis is placed on the technical aspects of acting and on the expressive use of the body in stage movement. Classroom work in mime and the presentation of scenes from plays prepare the student for performance.
- 1241 Drama Production I.** (1)
Participation in college drama. Selection as cast or crew member for semester production. Two laboratory hours per week.
- 1251 Drama Production II.** (1)
Participation in college drama. Selection as cast or crew member for semester production. Two laboratory hours per week.
- 2241 Drama Production III.** (1)
Participation in college drama. Selection as cast or crew member for semester production. Two laboratory hours per week.
- 2251 Drama Production IV.** (1)
Participation in college drama. Selection as cast or crew member for semester production. Two laboratory hours per week.
- 2163 Public Speaking.** (3)
A course in the study of the elements of the human communication process. Emphasis of the course is an analysis of different forms of communication experiences with appropriate deliver techniques. Three lecture hours per week.

- 2223 Introduction to Dramatic Arts (Stagecraft). (3)**
A basic study of various production techniques which includes stagecraft, lighting, make-up, and acting. Students are required to work on a production as either cast or crew during the semester.
- 2233 Theatre Appreciation. (Non-Majors) (3)**
Appreciation of the theatre as performance art; developing audience standards through demonstration of the unique characteristics of theatre. A fine arts elective. Three hours lecture.

SURGICAL TECHNOLOGY (SUT)

- 1113 Fundamentals of Surgical Technology. (3) Prerequisite: CPR-C**
This is a basic introductory course including hospital and surgical suite organization and environment, history, legal responsibilities, terminology, interpersonal relationships, pharmacology, and anesthesia. Three lecture hours per week.
- 1216 Principles of Surgical Techniques. (6) Prerequisite: CPR-C certification.**
This course is a comprehensive study of aseptic technique, safe patient care, and surgical techniques. One hour lecture and 10 lab hours per week.
- 1314 Surgical Anatomy. (4) Prerequisite: CPR-C Certification**
Emphasis is placed on structure and function of the human body as related to surgery. Application of the principle of surgical anatomy to participation in clinical experience. Four lecture hours per week.
- 1413 Surgical Microbiology. (3) Prerequisite: CPR-C**
This is an introduction to pathogenic microorganisms related to surgery and their effect on wound healing and infection. It includes principles of sterilization and disinfection. Three lecture hours per week.
- 1518 Basic and Related Surgical Procedures. (8) Prerequisites: CPR-C Certification, SUT 1314, SUT 1113, SUT 1216, SUT 1413**
This course includes instruction in regional anatomy, pathology, instrumentation, and surgical techniques in general surgery, gynecology, obstetrics, and urology. It requires clinical experience in area hospital surgical suites and related departments. Four lecture and twelve clinical hours per week.
- 1528 Specialized Surgical Procedures. (8) Prerequisites: CPR-C certification, SUT 1314, SUT 1113, SUT 1216, SUT 1413.**
This course includes instruction in regional anatomy, pathology, instrumentation, and techniques in surgical specialty areas of ear, nose, and throat; ophthalmology; plastic; oral and maxiofacial; and pediatrics. This course requires clinical experience in area hospital surgical suites and related departments. Four lecture and twelve clinical hours per week.
- 1538 Advanced Surgical Procedures. (8) Prerequisites: SUT 1518, SUT 1528, CPR-C certification, SUT 1314, SUT 1113, SUT 1216, SUT 1413.**
This course includes instruction in regional anatomy, pathology, instrumentation, and techniques in surgical specialty areas of orthopedics, neurosurgery, thoracic, vascular, cardiovascular surgery, and employability skills. This course requires clinical experience in area hospital surgical suites and related departments, and a comprehensive final examination.

WEB DEVELOPMENT TECHNOLOGY (WDT)

- 1123 Web Development Concepts. (3)**
This course is an introduction to the Internet and its uses in the world of business. It includes basic and advanced features of the Internet, World Wide Web, browsers, listservers, and creating web pages. Upon completion of this course, students will be able to create a personalized home page and post it on the Internet, download files using a browser and an FTP program, and send e-mail messages. Two lecture and two lab hours per week.
- 1314 Client-Side Programming. (4) Prerequisite: WDT 1123**
This course offers a comprehensive understanding of programming using JavaScript and CSS. Two lecture and four lab hours per week.
- 1414 Web Design Applications. (4) Prerequisites: WDT 1123 or CNT 1513 or CPT 1513**
Application of various professional and personal web design techniques. Students will work with the latest WYSIWYG editors, HTML editors, animation/multi-media products, and photo editors. Two lecture and four lab hours per week.

- 2214 Server-Side Programming I.** (4) Prerequisite: WDT 1314
This course is an introduction to creating dynamic web applications using server-side technologies. Two lecture and four lab hours per week.
- 2224 Server-Side Programming II.** (4) Prerequisite: WDT 2214
This course is a continuation of Server-Side Programming I with increased emphasis on data-driven content. Two lecture and four lab hours per week.
- 2614 Website Development.** (4) Prerequisite: WDT 2214
This course is the culmination of all concepts learned in the Web Development Technology curriculum. Emphasis will be placed on portfolio development, web design and development, maintenance, security, and evaluation. Two lecture and four lab hours per week.
- 2723 E-Commerce Strategies.** (3) Prerequisite: WDT 2214
This course provides opportunities for students to examine strategies and products available for building electronic commerce sites, examine how such sites are managed, and explore how they can complement an existing business infrastructure. Students get hands-on experience implementing the technology to engage cardholders, merchants, issues, payment gateways, and other parties in electronic transactions. Two lecture and two lab hours per week.
- 2823 Web Server.** (3) Prerequisite: CPT 1333
This course introduces students to web, e-mail, and proxy servers and the platforms on which they reside. Students will be able to install and configure web, e-mail, and proxy servers. Two lecture and two lab hours per week.

WELDING AND CUTTING (WLV)

- 1115 Shielded Metal Arc Welding I.** (5)
This course is designed to teach students welding techniques using E-6010 electrodes. 135 hours.
- 1123 Gas Metal Arc Welding (SMAW).** (3)
This course is designed to give the student experience in various welding applications with the GMAW welder including short circuiting and pulsed transfer. One lecture and six lab hours per week.
- 1135 Gas Tungsten Arc Welding.** (5)
This course is designed to give the student experience in various welding applications with the GTAW welder. One lecture and eight lab hours per week.
- 1143 Flux Cored Arc Welding.** (3)
This course is designed to give the student experience in FCAW. One lecture and four lab hours per week.
- 1171 Welding Inspection and Testing Principles.** (1)
This course is designed to give the student experience in inspection and testing of welds. One lecture and two lab hours per week.
- 1225 Shielded Metal Arc Welding II** (5)
This course is designed to teach students welding techniques using E-7018 electrodes. 135 hours.
- 1232 Drawing and Welding Symbol Interpretation.** (2)
This course is designed to give the student advanced experience in reading welding symbols. One lecture and two lab hours per week.
- 1155 Pipe Welding.** (5)
This course is designed to give the student experience in pipe welding procedures. One lecture and eight lab hours per week.
- 1162 Gas Metal Arc Aluminum Welding.** (2)
This course is designed to give the student experience in Gas Metal Aluminum Welding. One lecture and two lab hours per week.
- 1252 Advanced Pipe Welding.** (2)
This course is designed to give the student advanced pipe welding techniques using shielded metal arc and gas tungsten arc welding processes. One lecture and two lab hours per week.
- 1314 Cutting Processes** (4)

This course is designed to give the student experience in oxyfuel cutting principles and practices, air carbon cutting and gouging, and plasma arc cutting. Ninety hours.

191(1-3) Special Problem in Welding and Cutting. (1-3)

A course designed to provide the student with practical application of skills and knowledge gained in other Welding and Cutting courses. The instructor works closely with the student to insure that the selection of a project will enhance the student's learning experience.

192(1-6) Supervised Work Experience in Welding and Cutting.

This course is a cooperative program between industry and education and is designed to integrate the student's technical studies with industrial experience. Variable credit is awarded on the basis of one semester hour per 45 contact hours.