Uniform Course Numbering for Career and Technical Education

Public Community and Junior Colleges

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Mississippi Community College Board
3825 Ridgewood Road
Jackson, MS 39211
601-432-6373
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Uniform Course Numbering for Career and Technical Education

SECTION I: Introduction

The system of identifying courses in all college parallel curricula was adopted in 2005 to become implemented in the fifteen public junior college districts during the 2006-2007 school years. The leadership and efforts provided by the Mississippi Community and Junior College Chief Career-Technical Officers and Deans make this course numbering system possible.

A general revision of the numbering system is prepared each year. New courses are constantly reviewed by a screening committee of the Chief Career-Technical Officers & Deans Association. When a new course is added or an existing course revised, the name of the course, a complete course description, the course number, and the SCH breakdown is revised.

Interpreting Course Identifiers
Each course in the numbering system has a three letter prefix which identifies the subject field to which the course belongs. Examples: BOT identifies a Business Office Technology course; DDT identifies a Drafting and Design Technology course, etc.

Process for Requesting Courses for Inclusion in this Document
Each course in the numbering system has a three letter prefix which identifies the subject field to which the course belongs. Examples: BOT identifies a Business Office Technology course; DDT identifies a Drafting and Design Technology course, etc.

First number designates year
Example: 1000 level courses indicate first year's work 2000 level courses indicate second year's work

Second number designates grouping
NOTE: Grouping are consistent for each year but not from year one to year two

Third number designates sequence in a group

Fourth number designates course credit hours
Colleges have the flexibility to adjust the semester credit hours of a course up 1 hour or down 1 hour (after informing the Mississippi Community College Board [MCCB] of the change). Thus, Credit may vary from course credit shown by varying this number up or down 1 credit hour.

Example: 1213 and 1214 with the same letter prefix indicate the same basic course, but with different credit due to more lecture or laboratory time.

Process for requesting a course for inclusion in this document.
Course developed as part of the statewide program approval and curriculum development/revision process(es) will automatically be included in this document. All other career and technical education courses must be approved for inclusion and pay purposes.
1. The requesting college obtains necessary institutional approval(s).
3. The requesting college submits the completed course request form to the Director of Postsecondary Career & Technical Education at the SBCJC.
4. The Director will log the request and forward the form to the Chair of the Chief Career-Technical Officers and Deans’ uniform course numbering committee for committee consideration.
5. The committee chair shall notify (1) the requesting institution, and (2) the Director for Postsecondary Career & Technical Education of the committee’s action on the request.
6. If approved, the Director will forward the course information to the SBCJC Accountability Office for pay purposes.
7. Approved courses will be included in the next scheduled addendum to the Career & Technical Education Uniform Course Numbering document.

SECTION II: COURSES WITHIN THE STATEWIDE CURRICULA

The content of the courses in this section reflects approximately 75 percent of the time allocated to each course. The remaining 25 percent of each course should be developed at the local district level and may reflect:

- Additional competencies and objectives within the course related to topics not found in the State curriculum framework, including activities related to specific needs of industries in the community college district.
- Activities which develop a higher level of mastery on the existing competencies and suggested objectives.
- Activities and instruction related to new technologies and concepts that were not prevalent at the time the current framework was developed/revised.
- Activities which implement components of the Mississippi Tech Prep initiative, including integration of academic and vocational-technical skills and coursework, school-to-work transition activities, and articulation of secondary and postsecondary vocational-technical programs.
- Individualized learning activities, including worksite learning activities, to better prepare individuals in the courses for their chosen occupational area.

Statewide Curricula may be accessed at: http://info.rcu.msstate.edu/services/curriculum.asp?p=/Curricula/Postsecondary/

AAV 1112 Orientation and Safety Procedures
An orientation to the history of accessories marketing, job opportunities, and the physical structure of the industry. Safety procedures including OSHA and EPA regulations, proper use of
hand and power tools, shop hazards, and legal responsibilities are discussed and implemented throughout this course. (2 sch: 2-hr lecture)

**AAV 1126 Operational Procedures**
Everyday operations in the auto parts business, including proper business procedures, customer service, and sales procedures. (6 sch: 3-hr lecture, 6-hr lab)

**AAV 1214 Automotive Systems I**
Function and identification of the power train, including engine, transmission, drive line, and axles. (4 sch: 1-hr lecture, 6-hr lab)

**AAV 1224 Automotive Systems II**
Function and identification of automotive systems, including brake systems, cooling systems, electrical systems, heating and air conditioning systems, and suspension systems (4 sch: 1-hr lecture, 6-hr lab)

**AAV 1316 Catalog Information Systems**
Hard copy, microfiche, and computerized catalogs. Also included are the writing of invoices, interpreting price sheets, and calculating discounts. (6 sch: 3-hr lecture, 6-hr lab)

**AAV 1322 Merchandising**
General parts store layout to include merchandise displays and parts bin layout. (2 sch: 1-hr lecture, 2-hr lab)

**AAV 1414 Internal Operations**
Daily operations of a parts store including shipping and receiving, stocking and storing merchandise, counter operations, and physical inventory. (4 sch: 1-hr lecture, 6-hr lab)

**AAV 1424 Internal Sales**
Sales skills using hard copy and computerized cataloging and pricing. (4 sch: 1-hr lecture, 6-hr lab)

**AAV 192(1-6) Supervised Work Experience in Automotive Vehicles and Accessories Marketing Operations**
A course that is a 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 one semester hour per 45 industrial contact hours. (1–6 sch: 3- to 18-hr externship)

**ABT 1143 Structural Analysis and Damage Repair I**
A course to provide skills and practice in welding and cutting procedures that are used in the collision repair industry. This course also covers the complete inspection and non-structural analysis of damaged vehicles. It is designed to enable the student to determine the conditions and severity of the damage, the repair or replacement of parts, the estimated repair time, and correct use of reference manuals. (3 sch: 2 hr. lecture, 2 hr. lab)

**ABT 1153 Structural Analysis and Damage Repair II**
This course is a continuation of Structural Analysis and Damage Repair I. This course provides instruction and practice in the removal and reinstallation of glass. (3 sch: 2 hr. lecture, 2 hr. lab)

**ABT 1213 Collision Welding and Cutting**
A course to provide skills and practice in welding and cutting procedures that are used in the collision repair industry. This course also covers the complete inspection and non-structural
analysis of damaged vehicles. It is designed to enable the student to determine the conditions and severity of the damage, the repair or replacement of parts, the estimated repair time, and correct use of reference manuals. (3 sch: 2-hr lecture, 2-hr lab)

**ABT 1223 Non-Structural Analysis and Damage Repair I**
A course in the procedures and practices for metal finishing and body filling. This course also covers the complete inspection and non-structural analysis of damaged vehicles. It is designed to enable the student to determine the conditions and severity of the damage, the repair or replacement of parts, the estimated repair time, and correct use of reference manuals. (3 sch: 2 hr. lecture, 2 hr. lab)

**ABT 1233 Non-Structural Analysis and Damage Repair II**
This course is a continuation of Non-Structural Analysis and Damage Repair I. This course provides instruction for preparation principles and practices. (3 sch: 1 hr. lecture, 4 hr. lab)

**ABT 1314 Refinishing I**
A course to provide skills and practices in vehicle preparation, cleaning, sanding, metal treatment, and masking. Included is determining imperfections in paint jobs. Emphasis is placed upon personal safety and environmental concerns. (4 sch: 2 hr. lecture, 4 hr. lab)

**ABT 1323 Refinishing II**
Continuation of Refinishing I. Included are types of paint defects and paint gun application and maintenance procedures. (3 sch: 1 hr. lecture, 4 hr. lab)

**ABT 1443 Mechanical and Electrical Components I**
A course designed to provide theory and practice in the areas of restraint systems, cooling systems, and air conditioning/heating systems. An introduction to small business management techniques as applied to the collision repair shop. Includes computerized information and record systems. Also included are financial responsibilities, shop layout, inventory, and employee-employer relations. (3 sch: 3 hr. lecture)

**ABT 1453 Mechanical and Electrical Components II**
A course designed to provide theory and practice in the areas of brakes and electrical. (3 sch: 3 hr. lecture)

**ABT 2163 Structural Analysis and Damage Repair III**
This course is a continuation of Structural Analysis and Damage Repair II. This course provides instruction and practice in unibody inspection, measurement, and repair. (3 sch: 2 hr. lecture, 2 hr. lab)

**ABT 2173 Structural Analysis and Damage Repair IV**
This course is a continuation of Structural Analysis and Damage Repair III. This course provides the procedures and practices for frame inspection and repair. (3 sch: 2 hr. lecture, 2 hr. lab)

**ABT 2243 Non-Structural Analysis and Damage Repair III**
This course is a continuation of Non-Structural Analysis and Damage Repair II. This course provides instruction for outer body panel repair, replacement, and adjustment principles and practices. (3 sch: 2 hr. lecture, 2 hr. lab)
ABT 2253  Non-Structural Analysis and Damage Repair IV
This course is a continuation of Non-Structural Analysis and Damage Repair III. This course provides instruction and practice for the following areas: Moveable glass, hardware associated with glass, plastics and adhesive. (3 sch: 2 hr. lecture, 2 hr. lab)

ABT 2333  Refinishing III
A continuation of Refinishing II with emphasis on advanced painting techniques including paint mixing, matching, and applying. (3 sch: 1 hr. lecture, 4 hr. lab)

ABT 2343  Refinishing IV
A continuation of Refinishing III, with emphasis on advanced techniques of painting; including, detailing. (3 sch: 1 hr. lecture, 4 hr. lab)

ABT 291(1-3) Special Problem in Collision Repair Technology
A course to provide students with an opportunity to utilize skills and knowledge gained in other Collision Repair Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-3 sch: 2-6 hr. lab)

ABT 292(1-6) Supervised Work Experience in Collision Repair Technology
A course which is a 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 one semester hour per 45 industrial contact hours. (1-6 sch: 3-18 hr. externship)

ACT 1125  Basic Compression Refrigeration
An introduction to the field of refrigeration and air conditioning. Emphasis is placed on principles of safety, first aid, thermodynamics, heat transfer, recovery, and lubricants. (5 sch: 2 hr. lecture, 6 hr. lab)

ACT 1133  Tools and Piping
Various tools and pipe connecting techniques. Covers tools and test equipment required in heating, ventilation, air conditioning, and refrigeration. (3 sch: 2 hr. lecture, 2 hr. lab)

ACT 1213  Controls
Fundamentals of gas, fluid, electrical, and programmable controls. (3 sch: 2 hr. lecture, 2 hr. lab)

ACT 1313  Refrigeration System Components
An in-depth study of the components and accessories of a sealed system including metering devices, evaporators, compressors, and condensers. (3 sch: 2 hr. lecture, 2 hr. lab)

ACT 1713  Electricity for Heating, Ventilation, Air Conditioning, and Refrigeration
Basic knowledge of electricity, power distribution, components, solid state devices, and electrical circuits. (3 sch: 2 hr. lecture, 2 hr. lab)

ACT 1813  Professional Service Procedures
Business ethics necessary to work with both the employer and customer. Includes resumé, record keeping, and service contracts. (3 sch: 3 hr. lecture)

ACT 2324  Commercial Refrigeration
A study of various commercial refrigeration systems. Includes installation, servicing, and maintaining systems. (4 sch: 2 hr. lecture, 4 hr. lab)

ACT 2414  Air Conditioning I
Residential air conditioning including indoor air quality. (4 sch: 2 hr. lecture, 4 hr. lab)

**ACT 2424 A**ir Conditioning II
A continuation of Air Conditioning I as an in-depth course in the installation, startup, and maintenance of air conditioning systems to include residential and commercial. (4 sch: 2 hr. lecture, 4 hr. lab)

**ACT 2433 Refrigerant, Retrofit and Regulations**
Regulations and standards for new retrofit and government regulations. Includes OSHA regulations, EPA regulations, and local and state codes. (3 sch: 2 hr. lecture, 2 hr. lab)

**ACT 2513 Heating Systems**
Various types of residential and commercial heating systems. Includes gas, oil, electric, compression, and hydroponic heating systems. (3 sch: 2 hr. lecture, 2 hr. lab)

**ACT 2624 Heat Load and Air Properties**
Introduction to heat load calculations for residential and light commercial heating, ventilation, air conditioning, and refrigeration systems. Includes air distribution, duct sizing, selection of grills and registers, types of fans, air velocity, and fan performance. Introduces air testing instruments and computer usage. (4 sch: 2 hr. lecture, 4 hr. lab)

**ACT 291(1-3) Special Project in Heating, Ventilation, Air Conditioning, and Refrigeration Technology**
A course designed to provide the student with practical application of skills and knowledge gained in technical courses. The instructor works closely with the student to insure that the selection of a project will enhance the student’s learning experience. (1-3 sch: 2-6 hr. lab)

**ACT 292(1-6) Supervised Work Experience in Heating, Ventilation, Air Conditioning and Refrigeration 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. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours. (1-6 sch: 3-18 hr. externship)

**AGT 1111 Survey of Agricultural Technology**
A course to provide opportunities for students to gain knowledge, practice, and study in agricultural technology. Includes lectures and seminars on current agricultural topics including government programs and policies, current technological trends and practices, international agriculture, agricultural leadership, and employment opportunities in the agribusiness field. (1 sch: 1 hr. lecture)

**AGT 1163 Introduction to Spatial Information Systems**
This course provides an overview of spatial information concepts and the tools of spatial information systems (GPS, GIS, VRT, and remote sensing). Students will recognize the impact of spatial information technology on our lives currently and in the future. They will research potential career opportunities as they relate to the emerging technologies and the basic concepts under which spatial information functions. (3 sch: 3 hr. lecture)
AGT 1214  Applied Principles of Animal Production
A course to provide students with basic principles related to the production of farm animals. Includes instruction in the basic production cycle, breeding, nutrition, and health of beef and dairy cattle, hogs, poultry, and commercial fish. (4 sch: 3-hr. lecture, 2-hr. lab) [Note: Animal Science (AGR 1214) may be substituted for this course.]

AGT 1254  GPS Data Collection
A course to introduce students to the general principles of Global Positioning Systems, their use, and realized and potential value in agriculture. Students will learn to acquire, import and export, and use geo-referenced data. The student will also be able to perform basic troubleshooting, grasp the concepts of spatial variability, and interpret different map projections. (4 sch: 3-hr. lecture, 2-hr. lab)

AGT 1313  Applied Principles of Plant Production
A course to provide information related to the growth, nutrition, and general culture of agricultural and horticultural crops. Includes instruction on photosynthesis and transpiration, plant nutrition, pest control, and reproduction. (3 sch: 2-hr. lecture, 2-hr. lab) [Note: Plant Science (AGR 1313) or Botany I (BIO 1314) may be substituted for this course.]

AGT 1333  Vegetable Crop Production
This course is a study of vegetable crop techniques including conventional and minimal tillage, greenhouse management, planting, pest control, harvesting, and physical marketing practices. (3sch: 2-hr lec, 2-hr lab)

AGT 1354  Remote Sensing
This course provides an overview of remote sensing technologies for agricultural operations. The course will emphasize basic concepts, and satellite-based, airborne, and ground-based sensing methods. Digital image interpretation and analysis will be a major component. The student will understand how remote sensing is used with spatial information and variable-rate technologies for precision agriculture management. (4 sch: 3-hr. lecture, 2-hr. lab)

AGT 1413  Principles of Agricultural Management
This course provides instruction in organization and structure of agricultural businesses, decision-making, and the planning process for farming operations. (3 sch: 2-hr. lecture, 2-hr. lab) [Note: Farm Management (AGR 2413) may be taken in lieu of this course.]

AGT 1513  Principles of Agricultural Marketing
An introduction to general principles of marketing agricultural products. Includes instruction in general marketing practices and the use of futures contracts. (3 sch: 2-hr. lecture, 2-hr. lab)

AGT 1613  Agricultural Records
An introduction to agricultural record keeping techniques including single entry accounting methods, field and enterprise records, credit purchases, and sinking funds. (3 sch: 2-hr. lecture, 2-hr. lab) [Note: Principles of Accounting I (ACC 1213) may be substituted.]

AGT 1714  Applied Soils-Conservation and Use
A course to introduce student to the general principles of soil conservation and safe use. Includes instruction in the soil formation process, properties of soils, soil texture, and soil
management for optimum safe use. (4 sch: 3-hr. lecture, 2-hr. lab) [Note: Basic Soils (AGR 2314) may be substituted for this course.]

**AGT 1813 Fitting/Grooming/Judging**
Provides information and practice on fitting, grooming, and judging livestock products. (3 sch: 2-hr. lecture, 2-hr. lab)

**AGT 1913 Animal Reproduction**
Provides information and laboratory opportunities to assist students in learning about animal reproduction. (3 sch: 2-hr. lecture, 2-hr. lab)

**AGT 2154 Geographic Information Systems I**
This course is an overview of applications of Geographic Information Systems. Commercial software is used to cover user interface, views, themes, tables, and layouts. Basic functions of building, editing, querying, and spatial analysis of layers and databases will be reviewed. Hands-on exercises will encompass several disciplines and will include mobile GIS applications. (4 sch: 3-hr. lecture, 2-hr. lab)

**AGT 2164 Variable Rate Technology**
An introductory course on basic principles of variable rate technology (VRT) (site-specific, precision farming technology). This course will provide instruction on the importance of variable rate technology; data collection techniques for variable rate applications; development of prescription application maps and components; and calibration, installation, and troubleshooting of variable rate equipment. (4 hr: 3-hr. lecture, 2-hr. lab)

**AGT 2174 Agricultural Geographic Information Systems**
This course reviews several agricultural Geographic Information Systems, including the use of spatial data and spatial analysis for record keeping, modeling, and management of an agronomic ecosystem. (4 hr: 3-hr. lecture, 2-hr. lab)

**AGT 2213 Agricultural Sales**
A course in the advertising, sales, and promotion of agricultural supplies and services. (3 sch: 2-hr. lecture, 2-hr. lab)

**AGT 2263 Applied Agricultural Economics**
A course to introduce the student to economic principles as applied to agribusiness operations. (3 sch: 2-hr. lecture, 2-hr. lab) [Note: Principles of Agricultural Economics (AGR 2713) or Principles of Economics (Macroeconomics) (ECO 2113) or Principles of Economics [Microeconomics (ECO 2123)] may be substituted for this course.]

**AGT 2363 Crop Production (General)**
This course is a study of crop production techniques including tillage and planting, pest control, and physical marketing practices for crops in Mississippi. (3 sch: 2-hr. lecture, 2-hr. lab)

**AGT 2373 Fiber and Oilseed Crops**
This course is a study of crop production techniques including tillage and planting, pest control, and physical marketing practices for cotton and soybeans. (3 sch: 2-hr. lecture, 2-hr. lab)
AGT 2383 Grain Crops
This course is a study of grain production techniques including tillage, planting, pest control, and physical marketing practices for grain crops in Mississippi. (Crops included are corn or maize, rice, wheat, and milo.) (3 sch: 2-hr. lecture, 2-hr. lab)

AGT 2413 Weed Control
A course to provide students with information and skills for controlling plant pests in agricultural crops. Includes instruction in the use and application of chemicals for weed control. (3 sch: 2-hr. lecture, 2-hr. lab)

AGT 2434 Crop Management Zones
The focus of this course will be on the identification and management of production zones within crop fields. This course will provide students a working knowledge of geo-spatial tools and remote imaging techniques to identify regions of distinction within a field and methods to develop management strategies to maximize economic gains for cropping systems. The course will introduce the use of various decision support tools available for crop management, including geographic information systems and crop models. (4 sch: 3-hr. lecture, 2-hr. lab)

AGT 2463 Insects and Controls
A course to provide instruction and training in techniques of control of insect pests. Includes instruction in the safe and proper use of chemical and other control methods. (3 sch: 2-hr. lecture, 2-hr. lab)

AGT 2474 Site Specific Pest Management
This course provides instruction and training in conventional and site-specific techniques used in control of agricultural pests including insects, diseases, weeds and nematodes. Students will use pest management techniques and tools including spatial information systems to evaluate impact of pest injury and costs associated with control. Students will learn how variable rate technologies are applied in the field for site specific pest management (4 hr: 3-hr. lecture, 2-hr. lab).

AGT 2483 Agricultural Pest Management
A course to provide students with information and skills for controlling pests. Includes instruction in the use and application of chemicals for control of weeds, insects, and diseases. (3 sch: 2-hr. lecture, 2-hr. lab)

AGT 2513 Fish Management
Practical principles and application techniques in the production, harvesting, and marketing of fish. (3 sch: 2-hr. lecture, 2-hr. lab)

AGT 2563 Agricultural Machinery and Shop Management
A comprehensive course studying operation and management of farm power machinery and shop repairs and maintenance. (3 sch: 2-hr. lecture, 2-hr. lab) [Note: Farm Machinery (AGR 1413) may be taken in lieu of this course.]

AGT 2613 Forage and Pasture Crops
A comprehensive course in the production and management of forage and pasture crops. (3 sch: 2-hr. lecture, 2-hr. lab)
AGT 2663 Applied Animal Nutrition
A comprehensive course of study on the practical principles and applications of nutrition. (3 sch: 2-hr. lecture, 2-hr. lab)

AGT 2713 Beef Production I
A course to provide knowledge and practice in the area of beef production. Includes instruction in animal breeding and nutrition and livestock handling practices. (3 sch: 2-hr lecture, 2-hr lab)

AGT 2723 Beef Production II
A continuation of Beef Production I with emphasis on management, herd health, and marketing. (3 sch: 2-hr lecture, 2-hr lab)

AGT 2813 Swine Production
A comprehensive course in the production and management of swine. (3 sch: 2-hr lecture, 2-hr lab)

AGT 2863 Horse Production
A comprehensive course in the production and management of horses. (3 sch: 2-hr lecture, 2-hr lab)

AGT 291(1-3) Special Problem in Agricultural Business and Management Technology
A course to provide students with an opportunity to utilize skills and knowledge gained in other Agricultural Business and Management courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-3 sch: 2-6 hr lab)

AGT 292(1-6) Supervised Agricultural Experience
This internship course provides actual work experience in an agriculture business under the direction of the employer and the instructor. (1-6 sch: 3-18 hr externship)

AMT 1123 Agricultural Mechanics Fundamentals
A study of safe practices and procedures used in Agricultural Mechanics. Included are personal and shop safety, safe use of tools and equipment, flammable materials and fire safety, disposal of hazardous materials, and a comprehensive safety exam. An introduction to agricultural mechanics occupations, the development of employability skills, the utilization of technical media, and the identification and use of fasteners and hardware identified in the agricultural mechanics industry. (3 sch: 2 hr. lecture 2 hr. lab)

AMT 1213 Basic Electrical/Electronics Systems
A study of electrical/electronic systems and repair as it relates to agricultural power machinery and equipment. (3 sch: 2 hr. lecture, 2 hr. lab)

AMT 1223 Advanced Electrical/Electronics Systems
An advanced study of electrical/electronic systems and repair as it relates to agricultural power machinery and equipment. (3 sch: 1 hr. lecture, 4 hr. lab)

AMT 1313 Basic Power Trains
A study of machines and the principles upon which they operate in the transmission of power. (3 sch: 2 hr. lecture, 2 hr. lab)
AMT 1323  Advanced Power Trains  
Advanced study of machines and the principles upon which they operate in the transmission of power. (3 sch: 1 hr. lecture, 4 hr. lab)

AMT 1413  Basic Engines  
A study of the theory of operation disassembly/assembly, parts identification, service, and repair of gasoline engines used in compact equipment. (3 sch: 2 hr. lecture, 2 hr. lab)

AMT 1423  Advanced Engines  
A study of the theory of operation disassembly/assembly, parts identification, service, and repair of diesel engines. (3 sch: 1 hr. lecture, 4 hr. lab)

AMT 1511  Principles of Air Conditioning  
Principles and service of air conditioning systems used on agricultural equipment. (1 sch: 2 hr. lab)

AMT 1613  Basic Hydraulic Systems  
Basic theory and application of hydraulic systems in agricultural machinery and equipment. (3 sch: 2 hr. lecture, 2 hr. lab)

AMT 2111-3  Grain Harvesting Equipment  
Procedures for the inspection, adjustment, repair, and lubrication of grain harvesting equipment. (1 sch: 2-hr lab; 2 sch: 1-hr lecture, 2-hr lab; 3 sch: 2-hr lecture, 2-hr lab)

AMT 231(1-3)  Cotton Harvesting Equipment  
Functions, maintenance, and repair of cotton picker drums and support systems. (1 sch: 2-hr lab; 2 sch: 1-hr lecture, 2-hr lab; 3 sch: 2-hr lecture, 2-hr lab)

AMT 241(1-3)  Hay Harvesting Equipment  
Procedures for inspection, adjustment, repair, and lubrication of hay harvesting equipment. 1 sch: 2-hr lab; 2 sch: 1-hr lecture, 2-hr lab; 3 sch: 2-hr lecture, 2-hr lab)

AMT 2513  Spray Equipment  
Selection, assembly, inspection, adjustment, calibration, and repair of spray equipment including safety procedures and environmental concerns. (3 sch: 2 hr. lecture, 2 hr. lab)

AMT 2623  Advanced Hydraulic Systems  
Advanced theory and application of hydraulic systems in agricultural machinery and equipment. (3 sch: 1 hr. lecture, 4 hr. lab)

AMT 2712  Row Crop Planting Systems  
Setup, inspection, adjustment, and service of row crop planting equipment including an introduction to variable rate application equipment. (2 sch: 1 hr. lecture, 2 hr. lab)

AMT 2813  Compact Engines and Equipment  
Inspection, adjustment, and repair of compact equipment. (3 sch: 2 hr. lecture, 2 hr. lab)

AMT 2823  Service Repair Center Management and Operations  
Management and daily operation of an agricultural equipment service center including record keeping, reference materials, tool and equipment maintenance, and service scheduling. (3 sch: 2 hr. lecture, 2 hr. lab)
AMT 291(1-3) Special Problem in Agricultural Mechanics Technology
A course to provide students with an opportunity to utilize skills and knowledge gained in other Agricultural Mechanics Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-3 sch: 2-6 hr. lab)

AMT 292(1-6) Supervised Work Experience in Agricultural Mechanics 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. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours. (1-6 sch: 3-18 hr. externship)

APT 1113 Aviation Applied Science
General aviation maintenance practices including orientation to aviation, aircraft maintenance safety procedures, aviation mathematics, aviation physics, and aircraft drawings. (3 sch: 42 clock hr. lecture, 57 clock hr. lab)

APT 1123 Aviation Electricity I
Theory and application of direct and alternating current distribution and utilization of voltage. Practical application of Ohm's Law. (3 sch: 33 clock hr. lecture, 40 clock hr. lab)

APT 1134 Aviation Materials and Processes
Materials and processes used in the construction and repair of aircraft and components, fluid lines and fittings, and corrosion protection. (4 sch: 45 clock hr. lecture, 65 clock hr. lab)

APT 1142 Aircraft Servicing and Weight-and-Balance
Aircraft ground operation and servicing and weight-and-balance checks and records. (2 sch: 28 clock hr. lecture, 46 clock hr. lab)

APT 1153 Maintenance Forms and Regulations
Maintenance publications, maintenance forms and records, and mechanic privileges and limitations. (3 sch: 27 clock hr. lecture, 41 clock hr. lab)

APT 1162 Reciprocating Engine Theory
Theory and principles of operation of reciprocating engines. (2 sch: 37 clock hr. lecture)

APT 1213 Reciprocating Engine Overhaul and Inspection
Actual overhaul of reciprocating engines. Included is a study of the procedures and acceptable techniques used in engine disassembly, inspection, repair, and reassembly. (3 sch: 28 clock hr. lecture, 92 clock hr. lab)

APT 1222 Turbine Engine Theory
Theory of basic gas turbine engines and related accessories including unducted fan systems and turbine-driven auxiliary power units. (2 sch: 37 clock hr. lecture)

APT 1233 Turbine Engine Overhaul and Inspection
Overhaul of basic gas turbine engines and related accessories and components, including disassembly, inspection, assembly, and operation of jet engines. (3 sch: 28 clock hr. lecture, 92 clock hr. lab)
APT 1241  Power Plant Conformity and Airworthiness Inspection
Inspection of aircraft power plants for conformity with airworthiness directives and manufacturer's specifications. Inspections will conform with all Federal Aviation regulations. (1 sch: 14 clock hr. lecture, 18 clock hr. lab)

APT 1254  Lubrication and Fuel Metering Systems
Aircraft lubrication, fuel metering, and fuel system components for reciprocating and turbine engines. Identification and selection of engine fuels and lubricants. (4 sch: 55 clock hr. lecture, 68 clock hr. lab)

APT 1262  Induction, Cooling and Exhaust Systems
Reciprocating and turbine induction and engine airflow systems, engine cooling systems, and engine exhaust and reverser systems. (2 sch: 27 clock hr. lecture, 52 clock hr. lab)

APT 2114  Aviation Electricity II
Aircraft engine systems including instrument, engine fire protection, engine electrical, ignition, and starting. (4 sch: 55 clock hr. lecture, 67 clock hr. lab)

APT 2123  Propellers and Powerplant Review
Inspection, service, and repair of fixed pitch, constant speed, and feathering propellers. Included are propeller governing systems, propeller synchronizing, and ice removal systems. Review of powerplant courses. (3 sch: 36 clock hr. lecture, 45 clock hr. lab)

APT 2135  Structures I
Sheet metal structures and welding processes as applied to aviation mechanics. (5 sch: 43 clock hr. lecture, 131 clock hr. lab)

APT 2143  Structures II
Aircraft wood and non-metallic structures, covering, and finishes. (3 sch: 42 clock hr. lecture, 59 clock hr. lab)

APT 2212  Aircraft Controls
Aircraft rigging and assembly. (2 sch: 17 clock hr. lecture, 42 clock hr. lab)

APT 2222  Aviation Electricity III
Airframe electrical systems and components including wiring, switches, and controls. (2 sch: 28 clock hr. lecture, 41 clock hr. lab)

APT 2232  Hydraulic and Pneumatic Power Systems
Aircraft hydraulic and pneumatic power systems and components. (2 sch: 18 clock hr. lecture, 42 clock hr. lab)

APT 2243  Landing Gear and Protection Systems
Aircraft landing gear systems, position and warning systems, and ice and rain control systems. (3 sch: 32 clock hr. lecture, 42 clock hr. lab)

APT 2251  Environmental Control
Inspecting, troubleshooting, and servicing environmental control systems and cabin atmosphere control systems. (1 sch: 14 clock hr. lecture, 24 clock hr. lab)
APT 2263  Aircraft Instrumentation Systems
Aircraft instrument systems, communications and navigation systems, and aircraft fire protection systems. (3 sch: 42 clock hr. lecture, 42 clock hr. lab)

APT 2271  Aircraft Fuel Systems
Construction, inspection, and maintenance of various fuel systems and components including tanks, pumps, strainers, tubing, and hoses. (1 sch: 18 clock hr. lecture, 18 clock hr. lab)

APT 2282  Airframe Inspection and Review
Airframe conformity and air worthiness inspections and maintenance procedures. Review of all airframe courses. (2 sch: 14 clock hr. lecture, 42 clock hr. lab)

ATV/ATT 1124 Basic Electrical/Electronic Systems
This is a course designed to provide advanced skills and knowledge related to all components of the vehicle electrical system including lights, battery, and charging components. (4 sch: 2 hr. lecture, 4 hr. lab)

ATV/ATT 1134 Advanced Electrical/Electronic Systems
This is a course designed 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. (4 sch: 2 hr. lecture, 4 hr. lab)

ATV/ATT 1214 Brakes
This is a course designed to provide advanced skills and knowledge related to the repair and maintenance of brake systems on automobiles. It includes instruction and practice in diagnosis of braking systems problems and the repair of brake systems. (4 sch: 2 hr. lecture, 4 hr. lab)

ATV/ATT 1314 Manual Drive Trains/Transaxles
This is a course designed to provide advanced skills and knowledge related to the maintenance and repair of manual transmissions, transaxles, and drive train components. It includes instruction in the diagnosis of drive train problems, and the repair and maintenance of transmissions, transaxles, clutches, CV joints, differentials, and other components. (4 sch: 2 hr. lecture, 4 hr. lab)

ATV/ATT 1424 Engine Performance I
This is a course designed to provide advanced skills and knowledge related to the maintenance and adjustment of gasoline engines for optimum performance. It includes instruction, diagnosis, and correction of problems associated within these areas. (4 sch: 2 hr. lecture, 4 hr. lab)

ATV/ATT 1715 Engine Repair
This is a course designed to provide advanced skills and knowledge related to the repair and rebuilding of automotive engines. It includes instruction and practice in the diagnosis and repair of engine components including valve trains, blocks, pistons and connecting rods, crankshafts, and oil pumps. (5 sch: 2 hr. lecture, 6 hr. lab)

ATV/ATT 1811 Introduction, Safety, and Employability Skills
This is a course designed to provide knowledge of classroom and lab policies and procedures. Safety practices and procedures associated with the automotive program and automotive industry. (1 sch: 1 hr. lecture)
ATV/ATT 2334 Steering and Suspension Systems
This is a course designed to provide advanced skills and knowledge related to the inspection and repair of steering and suspension systems of automobiles. Includes instruction and practice in the diagnosis of steering system problems and the repair/replacement of steering components. (4 sch: 2 hr. lecture, 4 hr. lab)

ATV/ATT 2434 Engine Performance II
This is a course designed 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. (4 sch: 2 hr. lecture, 4 hr. lab)

ATT 1314 Manual Drive Trains/Transaxles
This is a course designed to provide advanced skills and knowledge related to the maintenance and repair of manual transmissions, transaxles, and drive train components. It includes instruction in the diagnosis of drive train problems, and the repair and maintenance of transmissions, transaxles, clutches, CV joints, differentials, and other components. (4 sch: 2 hr. lecture, 4 hr. lab)

ATT 2325 Automatic Transmissions/Transaxles
This is a course designed to provide skills and knowledge related to the diagnosis of automatic transmissions and transaxles. Includes instruction and practice of testing, inspecting, and repair of these devices. (5 sch: 2 hr. lecture, 6 hr. lab)

ATT 2444 Engine Performance III
This is a course designed 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. (4 sch: 2 hr. lecture, 4 hr. lab)

ATT 2614 Heating and Air Conditioning
This course is designed to provide advanced skills and knowledge associated with the maintenance and repair of automotive heating and air conditioning systems. It includes instruction and practice in the diagnosis and repair of heating and air conditioning system components, and control systems. (4 sch: 2 hr. lecture, 4 hr. lab)

ATV/TT 291(1-6) Special Problem in Automotive Technology
A basic course to provide students with an opportunity to utilize basic skills and general 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. (1-6 sch: 2-8-hr lab)

ATV/ATT 293(1-6) Special Problem II in Automotive Technology
A continuation of Special Problem I in Automotive Technology. An advanced course to provide students with an opportunity to utilize advanced skills and specific 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. (1-6 sch: 2-8-hr lab)

ATT 292(1-6) Supervised Work Experience in Automotive Technology
A course which is a 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 one semester hour per 45 industrial contact hours. (1-6 sch: 3-18 hr. externship)
AUV 1116 Fundamentals for the Automotive Machinist
This course includes the study and practice of personal hand tools and shop safety; study and practice of measuring; types of calipers, micrometers, and gauges; types and uses of hand tools, mechanical tools, power tools, and coolants; and identification of materials and metals. (6 sch: 2-hr. lecture, 8-hr. lab)

AUV 1216 Cylinder Head Service
This course includes the rebuilding of cylinder heads. Included are valve, guide, and seat reconditioning as well as the resurfacing and assembly of heads. Crack detection and repair are also included in the course. (6 sch: 2-hr. lecture, 8-hr. lab)

AUV 1316 Cylinder Block Service
This course includes the study of cylinder reconditioning, crankshaft renewal, and rod reconditioning. (6 sch: 2-hr. lecture, 8-hr. lab)

AUV 1416 Engine Assembly
This course includes preparation of the block and components for assembly. The individual installation of all internal components is included in the course. (6 sch: 2-hr. lecture, 8-hr. lab)

AUV 1513 Parts and Labor
This course includes training in the use of computerized parts pricing and inventory, labor price guides, the purchasing and recovery of core materials. (3 sch: 1-hr. lecture, 4-hr. lab)

AUV 1613 Crankshaft Balancing and Advanced Crankshaft Grinding
This course includes the balancing of bottom-end rotating and reciprocating parts. Crankshaft indexing, straightening, and stroking are also included. (3 sch: 1-hr. lecture, 4-hr. lab)

AUV 1713 Brake Rotor and Drum Machining
This course includes machining of the brake drum and rotor. (3 sch: 1-hr. lecture, 4-hr. lab)

AUV 191(1-3) Special Problem in Automotive Machinist
This course is designed to provide students with an opportunity to utilize skills and knowledge gained in other courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-3 sch: 2- to 6-hr. lab)

AUV 192(1-6) Supervised Work Experience in Automotive Machinist
This course, which is a cooperative program between industry and education, is designed to integrate the student’s technical studies with industrial experience. Variable credit is awarded on the basis of 1 semester hour per 45 industrial contact hours. (1-6 sch: 3- to 18-hr. externship)

BAV 1118 Basic Practices in Barbering
Basic practices including orientation, safety, and practical experiences in handling tools and hair cutting. Practices are done independently with supervision. (8 sch: 2 hr. lecture, 18 hr. lab)

BAV 1218 Fundamental Practices in Barbering I
Fundamental practices in styling, shampooing, blow drying, perm rolling, and perm processing. Practices are done independently with supervision. (8 sch: 2 hr. lecture, 18 hr. lab)
BAV 1318  Fundamental Practices in Barbering II  
Sanitation, 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. Practices are done independently with supervision. (8 sch: 2 hr. lecture, 18 hr. lab)

BAV 1418  Intermediate Practices in Barbering I  
Theory of colors, classifications of hair color, color preparation and applications, and treatment of damaged hair. Practices are done independently with supervision. (8 sch: 2 hr. lecture, 18 hr. lab)

BAV 1518  Intermediate Practices in Barbering II  
Additional study of the structure and function of the skin, common skin disorders, and scalp and hair disorders. Practices are included in providing facial massages, rendering plain facials, and barbering services previously introduced. (8 sch: 2 hr. lecture, 18 hr. lab)

BAV 1618  Advanced Practices in Barbering  
Mustache and beard trimming. Also includes business management and business law applicable to barber/styling shop management. (8 sch: 2 hr. lecture, 18 hr. lab)

BBV 1115  Brick and Block Laying  
This course is designed to give the student experience in laying brick and block. (5 sch: 1 hr. lecture, 8 hr. lab)

BBV 1215  Masonry Construction  
This course is designed to give the student experience in various types of walls, finishing, and masonry construction techniques. (5 sch: 1 hr. lecture, 8 hr. lab)

BBV 1225  Masonry Math, Estimating, and Blueprint Reading  
This course is designed to give the student experience in calculations, estimating, and blueprint reading. (5 sch: 1 hr. lecture, 8 hr. lab)

BBV 1313  Tools, Equipment, and Safety  
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. (3 sch: 2 hr. lecture, 2 hr. lab)

BBV 1425  Advanced Block Laying  
This course is designed to give the student experience in laying block columns, piers, and various walls. (5 sch: 1 hr. lecture, 8 hr. lab)

BBV 1525  Advanced Bricklaying  
This course is designed to give the student advanced experience in brick columns, piers, and various walls. (5 sch: 1 hr. lecture, 8 hr. lab)

BBV 1623  Chimney and Fireplace Construction  
The student will gain advanced experiences in layout and construction of chimneys, fireplaces, and refractory masonry. (3 sch: 1 hr. lecture, 4 hr. lab)

BBV 1723  Arch Construction  
Students will gain advanced experiences in layout and construction of arches. (3 sch: 1 hr. lecture, 4 hr. lab)
**BBV 1823 Steps, Patios, and Brick Floors**  
Students will gain advanced experiences in layout and construction of steps, patios, and brick floors. (3 sch: 1-hr lecture, 4-hr lab)

**BBV 191(1-3) Special Problem in Brick, Block and Stone Masonry**  
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. (1-3 sch: 2-6 hr. lab)

**BBV 292(1-6) Supervised Work Experience in Brick, Block and Stone Masonry**  
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. (1-6 sch: 3-18 hr. externship)

**BFT 1213 Principles of Banking**  
This course presents the fundamentals of bank functions and operations and is the basic course for further studies in finance and banking. (3 sch: 3 hr. lecture)

**BFT 1223 Money and Banking**  
This course presents the basic economic principles most closely related to the subject of money and banking in a context of related topics to strengthen knowledge and appreciation of the role of financial institutions in the functioning of the American economy. Emphasis is placed on such problems as economic stabilization, limitations of central bank control, and government fiscal policy showing their repercussion on the banking industry. (3 sch: 3 hr. lecture)

**BFT 1233 Law and Banking Principles**  
This course provides an overview of legal and regulatory aspects and functions of banking. Emphasis on sources and applications of banking law, distinguishing between torts and crimes and their relationship to banking, explanation of contracts to include legal capacity, legal objectives, mutual assent, and consideration. Also includes real and personal properties and their application to banking, bankruptcy and liquidation, and the legal implications of electronic banking. (3 sch: 3 hr. lecture)

**BFT 1313 Consumer Lending**  
This course provides specific concepts as well as the role consumer credit plays in a commercial bank. Techniques of installment lending are introduced with emphasis on the loan interview, loan application, investigating credit, evaluating credit risks, making credit decisions, documenting credit, and consumer compliance. (3 sch: 2 hr. lecture, 2 hr. lab)

**BFT 1323 Commercial Lending**  
This course is designed to give an overview of the bank’s commercial lending function and perspective. The course offers the basic definitions, concepts, and principles of commercial lending, and illustrates the involvement of an interactive process that demands human relations skills. (3 sch: 3 hr. lecture)

**BFT 1411 Professional Development in Financial Institutions I**  
This course provides practical exercises in both the technical and social skills necessary for employment in the finance and banking industry. Involvement in a program of leadership and personal development in occupational competencies, and high standards in personal and professional relationships are stressed. (1 sch: 2 hr. lab)
BFT 1421  Professional Development In Financial Institutions II
This course provides practical exercises in both the technical and social skills necessary for employment in the finance and banking industry. Involvement in a program of leadership and personal development in occupational competencies, and high standards in personal and professional relationships are stressed. (1 sch: 2 hr. lab).

BFT 1513  Banking and Finance Math
This course is designed to develop competency in math skills for financial services use. (3 sch: 3 hr. lecture).

BFT 2113  Business Policy
This course uses the learn-by-doing approach with activities and cases drawn from the field of finance, business administration, and current economic situation to illustrate how daily tasks are evaluated and performed by business professionals. (3 sch: 2 hr. lecture, 2 hr. lab).

BFT 2431  Professional Development in Financial Institutions III
This course provides practical exercises in both the technical and social skills necessary for employment in the finance and banking industry. Involvement in a program of leadership and personal development in occupational competencies, and high standards in personal and professional relationships are stressed. (1 sch: 2 hr. lab).

BFT 2441  Professional Development in Financial Institutions IV
This course provides practical exercises in both the technical and social skills necessary for employment in the finance and banking industry. Involvement in a program of leadership and personal development in occupational competencies, and high standards in personal and professional relationships are stressed. (1 sch: 2 hr. lab).

BFT 2523  Business Finance
This course introduces the student to business finance management with the principles of finance applied to the operations of the profit-seeking business firm. Fundamental processes of problem solving are emphasized. (3 sch: 2 hr. lecture, 2 hr. lab).

BFT 2533  Financial Management
This course introduces the student to business and personal financial management. The student will learn how to analyze business and personal financial needs. (3 sch: 2 hr. lecture, 2 hr. lab).

BFT 2613  Bank Teller Operations
This course focuses on the skills new tellers need to carry out their daily responsibilities in today’s financial services industry. (3 sch: 2 hr. lecture, 2 hr. lab).

BFT 2914  Special Project in Banking and Finance Technology
This course emphasizes development of concepts, terminology, and theory of Banking and Finance. The student will be assigned projects dealing with current situations in the financial services industry. (4 sch: 3 hr. lecture, 2 hr. lab).

BOT 1013  Introduction to Keyboarding
This course provides an introduction to basic word processing commands and essential skill development using the touch system on the alphabetic keyboard. Course emphasis is on speed and accuracy when keying documents and timed writings. (3 sch: 3 hr. lecture OR 2 hr. lecture, 2 hr. lab)
BOT 1113 Document Formatting and Production
This course focuses on improving keyboarding techniques using the touch method and on production of documents using word processing functions. (3 sch: 3 hr. lecture, OR 2 hr. lecture, 2 hr. lab)

BOT 1123 Keyboard Skillbuilding
This course further develops keyboard techniques emphasizing speed and accuracy. (3 sch: 3 hr. lecture OR 2 hr. lecture, 2 hr. lab)

BOT 1133 Microcomputer Applications
This course will introduce an operating system and word processing, spreadsheet, database management, and presentation software applications. (3 sch: 3 hr. lecture OR 2 hr. lecture, 2 hr. lab)

BOT 1143 Word Processing
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. (3 sch: 3 hr. lecture OR 2 hr. lecture, 2 hr. lab)

BOT 1213 Personal and Professional Development
This course emphasizes an awareness of interpersonal skills essential for job success. (3 sch: 3 hr. lecture OR 2 hr. lecture, 2 hr. lab)

BOT 1313 Applied Business Math
This course is designed to develop competency in mathematics for business use, with emphasis on the touch method. (3 sch: 3 hr. lecture OR 2 hr. lab)

BOT 1413 Records Management
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 and the treatment of these categories in proper management, storage, and retrieval. (3 sch: 3 hr. lecture OR 2 hr. lecture, 2 hr. lab)

BOT 1433 Business Accounting
This course is designed to develop an understanding of analyzing, recording, classifying, and summarizing financial information of a sole proprietorship with insight into interpreting and reporting the resulting effects upon the business. (3 sch: 3 hr. lecture OR 2 hr. lecture, 2 hr. lab)

BOT 1443 Advanced Business Accounting
This course is a continuation of Business Accounting with emphasis in accounting for corporations. (3 sch: 3 hr. lecture OR 2 hr. lecture, 2 hr. lab)

BOT 1513 Machine Transcription
This course is designed to teach transcription of a wide variety of business communications from machine dictation. (3 sch: 3 hr. lecture, OR 2 hr. lecture; 2 hr. lab)

BOT 1613 Medical Office Terminology I
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. (3 sch: 3 hr. lecture)
BOT 1623  Medical Office Terminology II  
This course presents medical terminology pertaining to human anatomy in the context of body systems. Emphasis is directed toward medical terminology as it relates to the medical office. (3 sch: 3-hr. lecture)

BOT 1713  Mechanics of Communication  
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. (3 sch: 3-hr. lecture)

BOT 1813  Electronic Spreadsheet  
This course focuses on applications of the electronic spreadsheet as an aid to management decision making. (3 sch: 3 hr. lecture OR 2 hr. lecture, 2 hr. lab)

BOT 2133  Desktop Publishing  
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 using advanced features of word processing software. (3 sch: 3 hr. lecture OR 2 hr. lecture, 2 hr. lab)

BOT 2323  Database Management  
This course applies database concepts for designing and manipulating data files and formatting output as complex documents and reports. (3 sch: 3 hr. lecture OR 2 hr. lecture, 2 hr. lab)

BOT 2413  Computerized Accounting  
This course applies basic accounting principles using a computerized accounting system. (3 sch: 3 hr. lecture OR 2 hr. lecture, 2 hr. lab).

BOT 2423  Income Tax Accounting  
This course introduces tax accounting including federal income tax laws and report preparation. (3 sch: 3 hr. lecture OR 2 hr. lecture, 2 hr. lab)

BOT 2463  Payroll Accounting  
This course provides an in-depth study of payroll accounting. (3 sch: 3 hr. lecture OR 2 hr. lecture, 2 hr. lab)

BOT 2473  Cost Accounting  
This course provides an in-depth study of cost accounting for manufacturing business. (3 sch: 3 hr. lecture OR 2 hr. lecture, 2 hr. lab)

BOT 2523  Medical Machine Transcription I  
This course is designed to teach transcription of various medical documents. (3 sch: 2-hr. lecture, 2-hr. lab)

BOT 2533  Medical Machine Transcription II  
This course is designed to continue teaching transcription of various medical documents including dictation given by doctors with foreign accents and additional medical specialties. (3 sch: 2-hr. lecture, 2-hr. lab)
BOT 2723 Administrative Office Procedures
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. (3 sch: 3 hr. lecture OR 2 hr. lecture, 2 hr. lab)

BOT 2743 Medical Office Concepts
This course will provide coverage and integration of medical office skills. Problem solving will be emphasized. (3 sch: 2-hr. lecture, 2-hr. lab)

BOT 2753 Medical Information Management
This course will provide coverage of medical office practices using software simulation. (3 sch: 2-hr lecture, 2-hr lab)

BOT 2643/BCT 2123 CPT Coding
This course is an introduction to the field of outpatient procedural coding and requirements for insurance reimbursement. (3 sch: 2-hr. lecture, 2-hr. lab)

BOT 2653/BCT 2133 ICD Coding
This course is an introduction to the field of diagnostic coding and inpatient procedural coding. (3 sch: 2-hr. lecture, 2-hr. lab)

BOT 2663/BCT 2143 Advanced Coding
This course includes advanced analysis of diagnostic and procedural coding systems. (3 sch: 2-hr. lecture, 2-hr. lab)

BOT 2673/BCT 2153 Medical Insurance Billing
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. (3 sch: 2-hr. lecture, 2-hr. lab)

BOT 2813 Business Communication
This course develops communication skills with emphasis on principles of writing business correspondence and reports and preparing presentations using electronic media. (3 sch: 3 hr. lecture OR 2 hr. lecture, 2 hr. lab)

BOT 2823 Communication Technology
This course will present an overview of the resources available for communication using current technology. (3 sch: 3 hr. lecture OR 2 hr. lecture, 2 hr. lab)

BOT 2833 Integrated Computer Applications
This course integrates activities using applications software including word processing, database, spreadsheet, graphics, and multimedia. (3 sch: 3 hr. lecture OR 2 hr. lecture, 2 hr. lab)

BOT 2913 Supervised Work Experience
This course provides related on-the-job training in an office environment. This training must include at least 135 clock hours. (3 sch: 9-hr. externship)

CAT 1113 Graphic Design and Production I
An introduction to the skills of design, typography, and the fundamentals needed of the graphic artist. The course will provide selected experiences involving design, simple renderings, printing
processes, industry specifications, and print production formats for mass distribution. (3 sch: 6 hr. lab)

**CAT 1123 Graphic Design and Production II**  
A continuation of Graphic Design and Production I with concentration on color printing, mechanical processes, color separations, screens, cropping, and scaling photographs/artwork for reproduction with continued emphasis on design, typography, assembly, and binding. The course will utilize both traditional and computer techniques. (3 sch: 6 hr. lab)

**CAT 1133 History of Graphic Design**  
Evolution of graphic communications from prehistoric times through present day. (3 sch: 3 hr. lecture)

**CAT 1143 Typography**  
A comparison of traditional uses of typography with those of a more contemporary approach. This is an in-depth exploration of type in relation to meaning and form with a refined application of drawing skills before final output on the computer. (3 sch: 2 hr. lecture, 2 hr. lab)

**CAT 1213 Fundamentals of Graphic Computers**  
An introduction to graphic interface computers related to the graphic design industry, utilizing current software and related hardware emphasizing print production and digital image manipulation. (3 sch: 1 hr. lecture, 4 hr. lab.)

**CAT 2133 Graphic Design Studio**  
A concentrated study in graphic design specifically related to regional industry needs. Emphasis will be placed on projects according to industry needs. (3 sch: 1 hr. lecture, 4 hr. lab)

**WDT 2263/CAT 2263 Web Graphic Production**  
An in-depth study of producing and utilizing graphic elements designed for Internet or web application. Emphasis is placed equally on aesthetics, technical requirements, and principles of interactive design. The course will provide a concentrated study related to color management, typography, graphic development and manipulation, digital imaging, and creating dynamic web experiences. The focus is on the production and manipulation of individual elements and is recommended as a supplement to a web design application course or previous experience. (3 sch: 1 hr. lecture, 4 hr. lab)

**CAT 2313 Basic Advertising Design**  
Concepts and methodology related to the graphic design industry utilizing current software and related hardware. (3 sch: 6 hr. lab)

**CAT 2323 Advanced Advertising Design**  
A continuation of Basic Advertising Design with emphasis on graphic computers to develop and produce advanced graphic design projects. This course utilizes equipment and software used in industry. (3 sch: 6 hr. lab)

**CAT 2334 Practical Advertising Techniques**  
Performance skills needed for productive employment in the graphic design field. (4 sch: 2 hr. lecture, 4 hr. lab)
CAT 2413  Rendering Techniques
A study of various illustration and rendering techniques with emphasis on rendering in markers and color pencils. The student will learn professional methods of illustration and visual production for mass distribution using electronic, mechanical, and traditional art techniques. (3 sch: 6 hr. lab)

CAT 291(1-6)  Special Project in Graphic Design Technology
Practical applications of skills and knowledge gained in other Graphic Design Technology courses. The instructor works closely with the student to ensure that selection of a special project enhances the student's learning experiences. (1-6 sch: 45 contact hours per sch)

CAT 292(1-6)  Supervised Work Experience in Graphic Design 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. (1-6 sch: 3-18 hr. externship)

CAT 293(1-6)  Special Project in Graphic Design Technology II
Practical applications of skills and knowledge gained in other Graphic Design Technology courses. The instructor works closely with the student to ensure that selection of a special project enhances the student's learning experiences. (1-6 sch: 45 contact hours per sch)

CAV 1116  Foundations
This course includes site selection, site preparation, site layout, building forms, and construction of foundations. (6 sch: 2 hr. lecture, 8 hr. lab)

CAV 1123  Forming Applications
This course includes forming applications for foundations, flatwork, reinforcing concrete, patented forms, and tilt-up wall systems. (3 sch: 2 hr. lecture, 2 hr. lab)

CAV 1133  Blueprint Reading
This course includes the elements of residential plans and how to prepare a bill of materials from a set of plans. (3 sch: 2 hr. lecture, 2 hr. lab)

CAV 1143  Fundamentals of Construction
This course includes basic safety, an introduction to construction math, an introduction to hand and power tools, an introduction to construction drawings, and rigging. (3 sch: 2 hr. lecture, 2 hr. lab)

CAV 1236  Floor and Wall Framing
This course is designed to give the student experience in floor and wall framing. (6 sch: 2 hr. lecture, 8 hr. lab)

CAV 1245  Ceiling and Roof Framing
This course will apply the techniques of cutting and assembly of framing materials based on predetermined specifications. (5 sch: 1 hr. lecture, 8 hr. lab)

CAV 1316  Interior Finishing and Cabinet Making
This course includes thermal and sound protection, types of interior ceilings, wall coverings, floor coverings, trim work, and cabinet construction. (6 sch: 2 hr. lecture, 8 hr. lab)

CAV 1413  Roofing
This course covers types of roofs, types of roofing materials, and their application. Also covered are basic roofing techniques, including material selection, roof styles, cost estimation, and installation procedures. (3 sch: 1 hr. lecture, 4 hr. lab)

**CAV 1513 Exterior Finishing**
This course includes the installation and finishing of wall coverings, cornices, and exterior trim. (3 sch: 1 hr. lecture, 4 hr. lab)

**CAV 2113 Principles of Multi-family and Light Commercial Construction**
This course examines the fundamentals of multi-family and light commercial construction. (3 sch: 2 hr. lecture, 2 hr. lab)

**CAV 2133 Advanced Cabinet Making**
This course includes principles of building and installation of cabinets, drawers, and shelves. (3 sch: 2 hr. lecture, 2 hr. lab)

**CAV 2313 Advanced Interior Finishing**
This course includes procedures for advanced ceiling and wall interior finishing and for stair calculation and construction. (3 sch: 2 hr. lecture, 2 hr. lab)

**CAV 291(1-3) Special Problem in Residential Carpentry Technology**
A course to provide students with an opportunity to utilize skills and knowledge gained in other Residential Carpentry Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-3 sch: 2-6 hr. lab)

**CAV 292(1-6) Supervised Work Experience in Residential Carpentry Technology**
A course which is a 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 one semester hour per 45 industrial contact hours. (1-6 sch: 3-18 hr. externship)

**CAV 2933 NCCER Core Curriculum**
This course follows the “Contren Learning Series.” It includes the following: Basic Safety, Introduction to Construction Math, Introduction to Power Tools, Introduction to Blueprints, and Rigging. This curriculum is endorsed by the national Center for Construction Education and Research (NCCER). (3 SCH = 6-hr. lab)

**CDT 1113 Early Childhood Profession**
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 develop observational skills through laboratory experience. Room arrangements, software, play, and safety are some of the topics explored. (3 sch: 2-hr. lecture, 2-hr. lab)

**CDT 1214 Child Development I**
This course provides knowledge concerning the care and development of infants and toddlers in group settings. Practice is given in infant and toddler caregiving (birth to 36 months) in group settings through classroom laboratory or collaborative centers. (4 sch: 3-hr. lecture, 2-hr. lab)

**CDT 1224 Child Development II**
This course provides knowledge concerning the care and development of preschool children in group settings. Practice is given in preschool children caregiving in group settings through classroom laboratory or collaborative centers. (ages 3–8) (4 sch: 3-hr lecture, 2-hr lab)
CDT 1314  Creative Arts for Young Children
This course is designed to plan and develop creative art activities with children birth to age eight. Activities will be implemented during Student Teaching I and II. (4 sch: 4-hr. lecture)

CDT 1343  Child Health and Safety
This course emphasizes health and safety practices in the care and education of young children that includes health and safety issues required by the Mississippi Department of Health (MDH) Regulations Governing Licensure of Childcare Facilities and referenced in the Infant Toddler Environmental Rating Scale Revised (ITERS-R) and Early Childhood Environmental Rating Scale Revised (ECERS-R). (3 sch: 3-hr lecture)

CDT 1513  Nutrition for Young Children
This course focuses on fundamental principles of child nutrition that include healthy food selections, healthy lifestyle choices, and the practical application of these principles in the early childhood setting. (3 sch: 3 hr. lecture)

CDT 1713  Language and Literacy Development for Young Children
This course includes the study of oral and written language development of young children and the implementation of a developmentally appropriate language arts curriculum. The Mississippi Early Learning Guidelines, Infant Toddler Environmental Rating Scale Revised (ITERS-R), and Early Childhood Environmental Rating Scale Revised (ECERS-R) are utilized. (3 sch: 3-hr lecture)

CDT 2233  Guiding Social and Emotional Behavior
This course focuses on the identification of developmental stages and environmental influences on young children’s behavior. Positive guidance principles are discussed and practiced to ensure a productive learning environment. Resources include the Mississippi Department of Health Regulations Governing Licensure of Childcare Facilities, Mississippi Early Learning Guidelines, Infant Toddler Environmental Rating Scale Revised (ITERS-R), and Early Childhood Environmental Rating Scale Revised (ECERS-R). Lab activities will be implemented during Student Teaching I and II. (3 sch: 3-hr lecture)

CDT 2413  Atypical Child Development
This course focuses on the identification of atypically developing children, family, and classroom intervention strategies and available support services. Legal, ethical, legislative, and family issues will be explored. Resources include Mississippi Early Learning Guidelines, Infant Toddler Environmental Rating Scale Revised (ITERS-R), and Early Childhood Environmental Rating Scale Revised (ECERS-R). (3 sch: 2-hr lecture and 2-hr lab)

CDT 2613  Methods and Materials
The Mississippi Early Learning Guidelines, Infant Toddler Environmental Rating Scale Revised (ITERS-R), and Early Childhood Environmental Rating Scale Revised (ECERS-R) are used to develop classroom curricula in an indoor and outdoor learning environment. Lab activities with the children are implemented during Student Teaching I and II. (3 sch: 3-hr lecture)

CDT 2714  Social Studies, Math, and Science for Young Children
This course provides instructional and hands-on techniques in planning developmentally appropriate activities in social studies, math, and science for young children. Lab activities with the children are implemented during Student Teaching I and II. (4 sch: 4-hr lecture)
CDT 2813  Administration of Programs for Young Children
This course provides an overview of the development and administration of programs for young children. Emphasis is placed on evaluation of policies and procedures, organizational structure, management, and the Mississippi Childcare Quality Steps System (MCCQSS). (3 sch: 3-hr lecture)

CDT 2915  Student Teaching I
This laboratory experience provides opportunities for students to implement experiences planned in the prerequisites and ensures a balance of all curriculum areas. (5 sch: 10-hr lab)

CDT 2925  Student Teaching II
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 provides 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. (5 sch: 10 hr. lab)

CET 1113  Satellite Systems
Service, repair, and install home satellite receiving systems. (3 sch: 1-hr. lecture, 4-hr. lab)

CET 2223  Diagnostics and Troubleshooting Lab
Laboratory course in applying skills and knowledge gained in other communications electronics courses in repairing various electronic devices. Isolate, locate, and repair devices in a simulated industry setting. (3 sch: 6-hr. lab)

CET 2323  Video Recording Systems Lab
Maintenance and repair of consumer-type video recording, videocassette recorders, and playback equipment. (3 sch: 6-hr. lab)

CET 2823  Video Systems Repair Lab
Troubleshooting, repairing, and maintenance of consumer video equipment and television receivers. (3 sch: 6-hr. lab)

CET 291(1-3)  Special Project
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. (1-3 sch: 2- to 6-hr. lab)

CET 292(1-6)  Supervised Work Experience
This cooperative program between industry and education is designed to integrate the student’s technical studies with industrial experience. Variable credit is awarded on the basis of 1 semester hour per 45 industrial contact hours. (1-6 sch: 3- to 18-hr. externship)

CEV 1212  Safety I
Personal safety, fire safety, and rules for safety of each machine to include pre-start, operational, and post-operation, and traffic. (2 sch: 1 hr. lecture, 2 hr. lab)
CEV 1222 Safety II
Pedestrian safety, safety communications, and safety procedures in working near utilities. (2 sch: 1 hr. lecture, 2 hr. lab)

CEV 1313 Service and Preventive Maintenance I
Characteristics of oils and greases, fuel handling procedures, and performing minor mechanical maintenance. Practice includes servicing a fuel filter system and changing engine oil. (3 sch: 2 hr. lecture, 42 hr. lab)

CEV 1323 Service and Preventive Maintenance II
Lubrication procedures; servicing air filters; servicing cooling systems; servicing hydraulic systems; and installation, removal, and storage of batteries. (3 sch: 1 hr. lecture, 4 hr. lab)

CEV 1416 Equipment Operation I
Operation of the backhoe, scraper, and grader. Includes operating the controls and basic skills done with each machine and performance of assignments by verbal and written instructions. (6 sch: 1 hr. lecture, 10 hr. lab)

CEV 1426 Equipment Operation II
Operation of the dozer, loader, and excavator. Includes the controls and basic skills performed with each machine and completing assignments by verbal and written instructions. (6 sch: 1 hr. lecture, 10 hr. lab)

CEV 1514 Grade Work I
Setting and checking of grade stakes which are used on job sites. Instruction and practice of transferring elevations are also included. (4 sch: 1 hr. lecture, 6 hr. lab)

CEV 1524 Grade Work II
Additional instruction and practice regarding the setting and checking grades. Also instruction and practice on the compaction of various materials. (4 sch: 1 hr. lecture, 6 hr. lab)

CIT 1114 Route Surveying
This course teaches highway route design and factors in route location. The calculation and layout of simple horizontal and vertical curves, grades, and related earthwork are covered. Modern surveying, measuring, and mapping instruments, including electronic total stations with data collectors, are used. (4 sch: 2 hr. lecture, 4 hr. lab)

CIT 1213 Road Design and Construction Methods and Materials
A study of equipment, construction methods, and materials used in the construction of roadways and drainage structures. (3 sch: 3 hr. lecture)

CIT 1223 Road Construction Plans and Specifications
A course to provide students with an introduction to the plans and specifications for the construction of streets and highways. Includes instruction in the interpretation of plans and specifications, the bidding process, and estimation of material and labor costs. (3 sch: 3 hr. lecture)

CIT 1413 Elementary Surveying
Basic course dealing with principles of geometry, theory, and use of instruments, mathematical calculations, and the control and reduction of errors. (3 sch: 1 hr. lecture, 4 hr. lab)
CIT 2113/DDT 2433  Legal Principles of Surveying
A study of the legal aspects of boundary controls for the survey and resurvey of real property. (3 sch: 2 hr. lecture, 2 hr. lab)

CIT 2124/DDT 2443  Advanced Surveying Practices
A course designed to provide the student with practical applications of skills and knowledge gained in other surveying and related courses. (4 sch: 2 hr. lecture, 4 hr. lab)

CIT 2313  Soil Mechanics
Elementary study of exploring, sampling, testing, and evaluating sub-surface materials and their effect on types of foundations and construction. (3 sch: 2 hr. lecture, 2 hr. lab)

CIT 2413  Concrete and Hot-Mix Asphalt Testing
A course which emphasizes standard procedures for sampling, testing, and evaluating materials used in concrete and hot-mix asphalt mixtures. (3 sch: 2 hr. lecture, 2 hr. lab)

CIT 2423  Mapping and Topography
Selected drafting techniques are applied to the problem of making maps, traverses, plot plans, plan drawings, and profile drawings using maps, field survey data, aerial photographs, and related references and materials including symbols, notations, and other applicable standardized materials. (3 sch: 2 hr. lecture, 2 hr. lab)

CIT 2434  Land Surveying
This course teaches aspects of boundary controls, principles for land surveying, methods of land boundary location, and land description in accordance with original surveys and re-surveys. (4 sch: 2 hr. lec., 4 hr. lab)

CIT 2444/DDT 2463  GPS Surveying
This course teaches principles of surveying utilizing artificial earth orbit satellites. (4 sch: 2 hr. lecture, 4 hr. lab)

CIT 2453 /GIT 2123  Fundamentals of Geographical Information Systems
This course includes the use of computer mapping and databases in multiple applications. Included is incorporation of imagery and data into a graphical oriented database system. Also included are the fundamentals of geographical information systems techniques, approaches, and applications. (3 sch: 2 hr. lecture, 2 hr. lab)

CIT 2513  Water and Water Distribution
A study of the hydrological principles in the distribution and movement of water on and under the earth's surface and in water distribution systems. (3 sch: 2 hr. lecture, 2 hr. lab)

CIT 291(1-3)  Special Project
A course designed to provide the student with practical application of skills and knowledge gained in other Civil Technology courses. The instructor works closely with the student to insure that the selection of a project will enhance the student's learning experience. (1-3 sch: 2-6 hr. lab)

CIT 292(1-6)  Supervised Work Experience in Civil 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. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours. (1-6 sch: 3-18 hr. externship)
CRTC 2344 Introduction to MS SQL
This course is designed to generate an experience for the student in administering a MS SQL
Server; including initial installation, backup methods, user maintenance and log management.
This course also targets the programming skills needed by a Data Base Administrator; including
the creation of tables and relationships, SQL syntax and functions or stored procedures. (4 sch: 2
hr. lecture, 4 hr. lab)

CRTC 2423/CPT 2383 System Maintenance
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. (3 sch: 2-hr. lecture, 2-hr. lab)

CON 1113 Survey of Modern Construction
Fundamentals of the construction environment, methods, materials, and processes from a
historical perspective, and the impact on the construction industry. (3 sch: 2-hr. lecture, 2-hr.
lab)

CON 1213 Construction Materials
Study and testing of the various materials used in the construction industry including wood, steel,
concrete, and soils (3 sch: 2-hr. lecture, 2-hr. lab)

CON 1223 Plans and Document Interpretation
Graphic techniques used in the construction industry. This course includes computation of areas
and volumes, interpretation of construction plans and specifications, and symbols and terms used
in the residential, and commercial, and heavy construction industry. (3 sch: 2-hr. lecture, 2-hr.
lab)

CON 1233 Construction Systems I
Common practices of engineering principles and construction methods. (3 sch: 2-hr. lecture, 2-
hr. lab)

CON 1313 Construction Drawing
This course is designed to give construction students the background needed for understanding
and interpreting construction drawings. (3 sch: 2-hr lecture, 2-hr lab)

CON 2113 Construction Jobsite Management
Basic techniques of the modern methods of managing construction projects including scheduling,
resource allocation, and funds flow. Practical applications are made through simulated projects.
(3 sch: 2-hr. lecture, 2-hr. lab)

CON 2123 Construction Cost Estimation
Estimating, quantity survey, unit cost synthesis and analysis, bid organization and planning, and
competitive simulations and exercises. (3 sch: 2-hr. lecture, 2-hr. lab)

CON 2233 Construction Systems II
Common practices of construction using engineering techniques to determine relations between
equipment production and design criteria. (3 sch: 2-hr. lecture, 2-hr. lab)

CON 2243 Construction Systems III
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. (3 sch: 2-hr. lecture, 2-hr. lab)

**CON 2313 Construction Layout**
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. (3 sch: 1-hr. lecture, 4-hr. lab)

**CON 2413 Construction Safety Standards**
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). (3 sch: 2-hr. lecture, 2-hr. lab)

**CON 2513 Leadership and Organization**
Study of the effective leadership and management styles in the construction industry. Organization of the construction industry at the local, state, and national levels. (3 sch: 2-hr. lecture, 2-hr. lab)

**CON 261(3-6) Internship in Construction Engineering Technology I**
This cooperative program between the construction industry and education is designed to integrate the student’s technical studies with on-site construction experiences. It is offered only in the summer term. Credit is awarded on the basis of 1 semester hour per 45 hours of on-site experience. (3-6 sch: 135-270 work hr)

**CON 262(3-6) Internship in Construction Engineering Technology II**
This is a continuation of CON 261 with advanced placement in the on-site construction. It is offered only in the summer term. Credit is awarded on the basis of 1 semester hour per 45 hours of on-site experience. (3-6 sch: 135-270 work hr)

**CON 291(1-3) Special Problem in Construction Engineering Technology**
This course is designed 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. (1-3 sch: 2- to 6-hr. lab)

**CON 292(1-6) Supervised Work Experience in Construction Engineering Technology**
This course is a cooperative program between the industry and education and is designed to integrate the student’s technical studies with industrial experience. Variable credit is awarded on the basis of 1 semester hour per 45 contact hours. (1-6 sch: 3- to 18-hr. externship)

**COV 1245 Cosmetology Sciences I**
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 practices and safety precautions associated with each. (5 sch: 2 hr. lecture, 9 hr. clinical lab)

**COV 1255 Cosmetology Sciences II**
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 regulations involved in
cosmetology practices and safety precautions associated with each. (5 sch: 2 hr. lecture, 9 hr. clinical lab)

**COV 1263 Cosmetology Sciences III**
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. (3 sch: 2 hr. lecture, 3 hr. clinical lab)

**COV 1426 Hair Care I**
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 extensions; 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. (6 sch: 2 hr. lecture, 12 hr. clinical lab)

**COV 1436 Hair Care II**
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 extensions; 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. (6 sch: 2 hr. lecture, 12 hr. lab)

**COV 1443 Hair Care III**
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 practice as governed by Mississippi cosmetology laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. (3 sch: 9 hr. clinical lab)

**COV 1522 Nail Care I**
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. (2 sch: 6 hr. clinical lab)

**COV 1532 Nail Care II**
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. (2 sch: 6 hr. clinical lab)

**COV 1542 Nail Care III**
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. (2 sch: 6 hr. clinical lab)
COV 1622 Skin Care I
This course consists of the introduction to 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 laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. (2 sch: 6 hr. clinical lab)

COV 1632 Skin Care II
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 laws, rules, and regulations involved in cosmetology practices and safety precautions associated with each. (2 sch: 1 hr. lecture, 3 hr. clinical lab)

COV 1642 Skin Care III
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 practices and safety precautions associated with each. (2 sch: 6 hr. clinical lab)

COV 1722 Salon Business I
This course will cover preparing to operate a successful salon. 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. (2 sch: 6 hr. clinical lab)

COV 1732 Salon Business II
This course will cover operating a successful salon and seeking employment. 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. (2 sch: 1 hr. lecture, 3 hr. clinical lab)

COV 2816 Cosmetology Teacher Training I
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. (6 sch: 2 hr. lecture, 2 hr lab, 9 hr. clinical lab)

COV 2826 Cosmetology Teacher Training II
Instruction will be given in development of instructional methods, development of visual aids, development of effective evaluation, and practical application of cosmetology instruction. (6 sch: 2 hr. lecture, 2 hr lab, 9 hr. clinical lab)

COV 2836 Cosmetology Teacher Training III
Instruction will be given in development of appropriate lesson plans and practical application of cosmetology instruction. (6 sch: 2 hr. lecture, 2 hr lab, 9 hr. clinical lab)

COV 2846 Cosmetology Teacher Training IV
Instruction will be given in classroom management techniques; cosmetology laws, rules, and regulations; and practical application of cosmetology instruction. (6 sch: 3 hr. lecture, 9 hr. lab)

COV 2917 Cosmetology Internship I
Under the supervision of a company trainer, this course will enable the student to apply the training he or she received at the Community/Junior College program the student attended with the company of his or her choice. The successful completion of this course will enable the
student to perform/observe independently with minimum supervision with the company of his or her choice. (7 sch: 21 hr. clinical lab)

**COV 2927 Cosmetology Internship II**
Under the supervision of a company trainer, this course will enable the student to apply the training he or she received at the Community/Junior College program the student attended with the company of his or her choice. The successful completion of this course will enable the student to perform/observe independently with minimum supervision with the company of his or her choice. (7 sch: 21 hr. clinical lab)

**COV 2937 Cosmetology Internship III**
Under the supervision of a company trainer, this course will enable the student to apply the training he or she received at the Community/Junior College program the student attended with the company of his or her choice. The successful completion of this course will enable the student to perform/observe independently with minimum supervision with the company of his or her choice. (7 sch: 21 hr. clinical lab)

**COV 2947 Cosmetology Internship IV**
Under the supervision of a company trainer, this course will enable the student to apply the training he or she received at the Community/Junior College program the student attended with the company of his or her choice. The successful completion of this course will enable the student to perform/observe independently with minimum supervision with the company of his or her choice. (7 sch: 21 hr. clinical lab)

**CPT 1113 Fundamentals of Microcomputer Applications**
This course will introduce information processing concepts to including word processing, spreadsheet, and database management software. (3 sch: 2-hr lecture, 2-hr lab)

**CPT 1143 Programming Development Concepts**
This course is an introduction to programming logic and computer systems. Students will gain hands-on experience in the development of computer programs. (3 sch: 2-hr. lecture, 2-hr lab).

**CPT 1323 Survey of Microcomputer Applications**
Introduces microcomputer operation, word processing, spreadsheets, and database management. (3 sch: 2 hr. lecture, 2 hr. lab)

**CPT 1333 Operating Platforms**
This course will provide experience in a variety of operating platforms. Emphasis will be placed on support personnel interaction with the platform to assist users in business environments. (3 sch: 2-hr lecture, 2-hr lab)

**CPT 2133 Career Development**
This course provides practical exercises in both the technical and social skills necessary for employment. Interpersonal skills, the job search process, and the importance of high standards of personal and professional relationships are stressed. (3 sch: 2 hr. lecture, 2 hr. lab)

**CPT 2354 Web Site and Systems Development**
This course introduces techniques used in systems analysis and design, maintenance, security, and evaluation. Emphasis will be placed on the design and development of Web-based systems. (4 sch: 2-hr lecture, 4-hr lab)
CPT 2364 Team Project Management
This course is designed to generate experience for the student in working in a team environment. This course involves working as a team to develop an efficient network design for a corporate infrastructure while taking into account the hardware needed and its projected lifespan. Also involved in this course is the design of an application as a team taking into account who the projected users are, what their level of expertise is and the infrastructure of the network it is designed for use on. (4 sch: 2 hr. lecture, 4 hr. lab)

CPT 2383/CNT 2423 System Maintenance
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. (3 sch: 2-hr lecture, 2-hr lab)

CPT 2454 Game Programming Using Flash and ActionScript
This course is designed to further introduce the student to creating interactive applications, through the format of a game. This course will help the student become more adept at creating functional user interfaces and help them deal with program paths based on user input through the use of the Stage and Timeline combined with programming code added to the elements providing full functionality through an animated user interface. (4 sch: 2 hr. lecture, 4 hr. lab)

CRM 1113 Fundamentals of Maintenance Services
Emphasis on basic concepts and practices in the maintenance programs for commercial and residential facilities including scheduling, work order systems, workforce management, inventory control, and safety and right-to-know programs. (3 sch: 2 hr. lecture, 2 hr. lab)

CRM 1122 Maintenance Regulations
Basic information on the various federal, state, and local regulations agencies that govern maintenance operations and practices, including Occupational and Safety Health Act (OSHA), Environmental Protection Agency (EPA), and American with Disabilities Act (ADA.) (2 sch: 2 hr. lecture)

CRM 1134 Mathematics and Blueprint Interpretation
Basic instruction in mathematics and the methods of interpreting information and the relationship of details and sections to an overall blueprint utilizing scale drawings, symbols, abbreviations, floor plans, elevations, and specifications tables. (4 sch: 2 hr. lecture, 4 hr. lab)

CRM 1214 Carpentry
Basic course in carpentry skills required to perform building maintenance activities. Covers the installation methods and materials available to make repairs to building structures using accepted trade practices. (4 sch: 1 hr. lecture, 6 hr. lab)

CRM 1222 Surface Finishes
Various techniques and processes of surface cleaning, preparation, and repair. (2 sch: 1 hr. lecture, 2 hr. lab)

CRM 1313 Masonry
Techniques of brick, block, and ceramic tile laying and repair processes to include safety practices. (3 sch: 1 hr. lecture, 4 hr. lab)

CRM 1414 Plumbing
Basic design, function, maintenance, repair, and replacement of all types of light commercial and residential plumbing fixtures. (4 sch: 1 hr. lecture, 6 hr. lab)

**CRM 1422 Pool and Spa Maintenance**
Basic skills and techniques for the safe and proper maintenance of pools and spas. (2 sch: 1 hr. lecture, 2 hr. lab)

**CRM 1432 Landscape Irrigation**
Basic use of irrigation in residential and light commercial applications. Sprinkler designs and plans, practices, equipment, and maintenance for single-family dwellings, light commercial buildings, and apartment/townhouse complexes. (2 sch: 1 hr. lecture, 2 hr. lab)

**CRM 1514 Electrical**
Basic electrical diagnosis and repair techniques including basic circuit theory, safety and grounding essentials, wiring systems, circuitry, and electrical troubleshooting. (4 sch: 1 hr. lecture, 6 hr. lab)

**CRM 1616 Heating, Ventilating, and Air Conditioning (HVAC)**
Basic principles, operation, maintenance, and repair of heating, ventilation, air conditioning, ice machines, and refrigerators in residential and light commercial buildings. (6 sch: 2 hr. lecture, 8 hr. lab)

**CRM 1713 Welding**
Basic course in the development of welding skills in the safe use of the oxyfuel and arc welding techniques. (3 sch: 1 hr. lecture, 4 hr. lab)

**CRM 291(1-3) Special Project in Commercial/Residential Maintenance**
Practical application of skills and knowledge gained in other building maintenance courses. The instructor works closely with the student to insure that the selection of a project will enhance the student's learning experience. (1-3 sch: 2-6 hr. lab)

**CRM 292(1-6) Supervised Work Experience in Commercial/Residential Maintenance**
A cooperative program between industry and education designed to integrate the student's technical studies with work experience. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours. (1-6 sch: 3-18 hr. externship)

**CRT 1114 Stenotype Machine Shorthand I**
This course provides instruction in writing the spoken word with punctuation using a stenotype realtime translation theory to provide instantaneous English translation with speed and accuracy development. (4 sch: 2-hr lecture, 4-hr lab)

**CRT 1123 Stenotype Machine Shorthand II**
This course is a continuation of Stenotype Machine Shorthand I. Emphasis is placed on machine theory reinforcement, vocabulary, dictionary building, and speed development using carefully graded and timed practice material. (3 sch: 1-hr lecture, 4-hr lab)

**CRT 1133 Speed Building I**
This course is an initial course for building speed using the stenotype machine in taking dictation at speeds of 20–100 wpm through live, online, or electronic media not limited to two-voice and multi-voice testimony, literary, jury charge, and current events. Salable transcription of dictated material through stenotype notes is required. (3 sch: 2-hr lecture, 2-hr lab)
CRT 1143  Speed Building II
This is a continuation course for building speed using the stenotype machine in taking dictation at speeds of 120–140 wpm through live, online, or electronic media not limited to two-voice and multi-voice testimony, literary, jury charge, and current events. Salable transcription of dictated material through stenotype notes is required. (3 sch: 2-hr lecture, 2-hr lab)

CRT 1154  Court Reporting Procedures
This course is a study of the criminal and civil law process. The role of the reporter in trials, depositions, and congressional and administrative hearings; transcript preparation and formatting; proofreading; marking exhibits; indexing and storing notes; judicial and freelance reporting techniques; and proper use of library and reference materials; instruction in the National Court Reporters Association (NCRA) Code of Professional Ethics; and an introduction to captioning and Communication Access Realtime Translation (CART) are included. (4 sch: 2-hr lecture, 4-hr lab)

CRT 1173  Court Reporting English and Grammar
This course is an in-depth analysis and application of punctuation, capitalization, and numbers usage of the spoken rather than written English language and proofreading of printed dictated material. (4 sch: 2-hr lecture, 4-hr lab)

CRT 2114  Stenotype Machine Shorthand III
This is a continuation course of Stenotype Machine Shorthand II. Emphasis is placed on advanced vocabulary, dictionary building, and speed development of medical and technical dictation using carefully graded and timed practice material. (4 sch: 2-hr lecture, 4-hr lab)

CRT 2124  Stenotype Machine Shorthand IV
This course is a continuation of Stenotype Machine Shorthand III. Emphasis is placed on speaker identification, transcript formatting, and proofreading through computer-access transcription of actual judicial transcripts, public hearings, literary dictation, and congressional record. (4 sch: 2-hr lecture, 4-hr lab)

CRT 2133  Speed Building III
This is a continuation course for building speed in taking dictation using a stenotype machine at speeds of 160–180 wpm through live, online, or electronic media not limited to two-voice and multi-voice testimony, literary, jury charge, and current events. Salable transcription of dictated material through stenotype notes is required. (3 sch: 2-hr lecture, 2-hr lab)

CRT 2144  Speed Building IV
This is a continuation course for building speed in taking dictation using a stenotype machine at speeds of 200–240 wpm through live, online, or electronic media not limited to two-voice and multi-voice testimony, literary, jury charge, and current events. Salable transcription of dictated material through stenotype notes is required. (4 sch: 2-hr lecture, 4-hr lab)

CRT 2162  Judicial Reporting Technology
This course is an in-depth analysis of judicial reporter-related technology concepts in realtime reporting, communication access realtime translation (CART), captioning and legal videography, and the vocabulary associated therewith. Emphasis is placed on the process of realtime transcription through the use of computer-aided transcription systems and video applications for the court reporter. (2 sch: 1-hr lecture, 2-hr lab)
CRT 2172 Judicial Dictionary Development
In this course, the student will continue to build a dictionary for judicial reporting. Emphasis is placed on development of briefs and phrases, application through speed development, realtime transcription of dictated material through live, online, or electronic media not limited to two-voice and multi-voice testimony, literary, jury charge, and current events. (2 sch: 1-hr lecture, 2-hr lab)

CRT 2514 CART I
This course provides instruction in writing the spoken word with punctuation using a realtime translation theory for communication access realtime translation (CART). (4 sch: 2-hr. lecture, 4-hr. lab)

CRT 2524 CART II
This course is a continuation of CART I and provides instruction in writing the spoken word with punctuation using a realtime translation theory for communication access realtime translation (CART). (4 sch: 2-hr lecture, 4-hr lab)

CRT 2562 CART Technology
This course is an overview in communication access realtime translation (CART) technology, concepts, and vocabulary. Emphasis is on basic equipment setup for maximum benefit of CART recipients and knowledge of the NCRA CART Provider’s Manual. (2 sch: 1-hr lecture, 2-hr lab)

CRT 2572 CART Dictionary Development
In this course, the student will continue to build a dictionary for communication access realtime translation (CART). (2 sch: 1-hr lecture, 2-hr lab)

CRT 2714 Captioning I
This course provides instruction in writing the spoken word with punctuation using a realtime translation theory to provide instantaneous, realtime translation for broadcast captioning. (4 sch: 2-hr lecture, 4-hr lab)

CRT 2724 Captioning II
This course is a continuation of Captioning I, providing instruction in writing the spoken word with punctuation using a realtime translation theory to provide instantaneous, realtime translation for broadcast captioning. (4 sch: 2-hr lecture, 4-hr lab)

CRT 2762 Captioning Technology
This course is an overview in captioning technology, concepts, and vocabulary. Emphasis is on basic equipment setup for broadcast captioning. (2 sch: 1hr lecture, 2-hr lab)

CRT 2772 Captioning Dictionary Development
In this course, the student will continue to build a dictionary for captioning. (2 sch: 1-hr lecture, 2-hr lab)

CRT 2911 Internship for Judicial Reporters
This course provides supervised practical experience in courts and freelance court reporting firms. (1 sch: 45 clock hours)

CRT 2921 Internship for CART
This course provides supervised practical experience in communication access realtime translation (CART). (1 sch: 45 clock hours)
CRT 2931  **Internship for Captioning**  
This course provides supervised practical experience in broadcast captioning. (1 sch: 45 clock hours)

**CST 1114 Basic Electronics**  
Concepts of electronics. Topics include DC and AC fundamentals, instrument and test equipment familiarization, soldering, and terminology. (4 sch: 2-hr lecture, 4-hr lab)  
Prerequisites: None

**CST 1123 Basic Computer Hardware**  
A survey of computer components. Topics include hardware compatibility, system architecture, memory, input devices, video displays, disk drives, modems, and printers. (3 sch: 2-hr lecture, 2-hr lab)  
Prerequisites: None

**CST 1333 Operating Systems**  
Study of operating systems. Emphasis will be placed on support personnel interaction with operating systems. (3 sch: 2-hr lecture, 2-hr lab)  
Prerequisites: None

**CST 1214 Networking I**  
Concepts of telephony, local area networks, wide area networks, data transmission, and topology methods. (4 sch: 2-hr lecture, 4-hr lab)  
Prerequisites: None

**CSR 2113 Computer Servicing Lab I**  
Fundamentals of computer servicing. Includes configuration, test equipment usage, basic disassembly and assembly methods, preliminary tests and diagnostics, schematic interpretation, and building cables. (3 sch: 6-hr lab)  
Pre/Corequisites: Basic Computer Hardware (CST 1123) and Basic Electronics (CST 1114)

**CST 2123 Computer Servicing Lab II**  
Continuation of Computer Servicing Lab I (CST 2113) with an increased emphasis on system analysis and diagnosis of component and device failures in a laboratory environment. (3 sch: 6-hr lab)  
Prerequisites: Computer Servicing Lab I (CST 2113)

**CST 2223 Networking II**  
This course focuses on network connectivity, architectures, topologies, protocols, and transport methods of a network. (3 sch: 2-hr lecture, 2-hr lab)  
Prerequisite: Networking I (CST 1214)

**CST 2134 PC Diagnostics and Troubleshooting**  
Diagnostic techniques and troubleshooting methodologies of operating systems, common hardware problems, and system malfunctions, including peripherals. (4 sch: 2-hr lecture, 4-hr lab)  
Pre/Corequisite: Computer Servicing Lab I (CST 2113)
CST 29(1-3) Special Project
Practical application of skills and knowledge gained in computer servicing and technical-related courses. The instructor works closely with the student to ensure that the selection of a project will enhance the student’s learning experience. (1–3 sch: 2- to 6-hr lab)
Prerequisites: Consent of instructor

CST 292(1–6) Supervised Work Experience
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 contact hours. (1–6 sch: 3- to 18-hr externship)
Prerequisites: Consent of instructor

CTE 1001 CPAS Prep
The CPAS Prep class will consist of an extensive review of individual class blueprints provided by the RCU. This class is specifically for review of first year course material in preparation for the first year CPAS test. (CTE 1001= 1sch: 1 hr lecture)

CTE 200(1-3) CPAS Prep
This course will focus on four major areas: Reading Strategies, Understanding Key Testing Terms, Reading Diagrams and an extensive review of the CPAS course blueprint. (CTE 2001= 1sch: 1 hr lecture, CTE 2002=2sch: 2 hrs lecture, CTE 2003= 3sch: 3 hrs lecture)

CTV 1114 Garment Construction
An application of principles, techniques, and skills with emphasis on working with problem fabrics (plaid, stripes, velvets, and other pile problem fabrics and design) and on fitting and construction of garments for men, women, and children, and for different figure types. (4 sch: 2-hr lecture, 4-hr lab)

CTV 1123 Alterations
Recognition of problems in garment fitting in relation to grain line, figure, and fashion and techniques to fitting and solving fitting problems through alterations by hand and on the machine. (3 sch: 2-hr lecture, 2-hr lab)

CTV 1134 Tailoring
Application of tailoring techniques and skills in the construction of garments using various fabrics (4 sch: 2-hr lecture, 4-hr lab)

CTV 1143 Fashion Design
This course focuses on creating original garment design starting with the most basic and progressing towards the most complex. Emphasis is placed on the recognition of the history of fashion, basic silhouettes, lines, styles, and detail in design and garment construction. (3 sch: 1-hr lecture, 4-hr lab)

CTV 1213 Equipment Use and Care
Use and care of equipment in production, instructions in the use and care of all equipment basic to garment construction, safety practices, and proper storage. Emphasis is on the use of industrial sewing and computerized equipment. (3 sch: 2-hr lecture, 2-hr lab)
CTV 1223  Textiles
Relationship of raw materials, construction, and finish to quality and cost of textiles. Also considered are the identification of fibers, yarns, weave, colorants (dyeing and printing), and fabrics; selection of appropriate fabrics for various uses; and wearing quality and care required for textiles. (3 sch: 2-hr lecture, 2-hr lab)

CTV 1233  Fabric and Accessory Design
This course is a study of fabric decoration, textiles, and accessory design. Emphasis is placed on printing and dyeing techniques and garment embellishments. (3 sch: 2-hr lecture, 2-hr lab)

CTV 1313  Modeling and Grooming
Basic concepts of modeling through exercise, grooming, poise, walking, facial expression, makeup, and photography. (3 sch: 2-hr lecture, 2-hr lab)

CTV 1414  Home Furnishings
Principles and elements of design related to the selection and arrangement of furniture; use of fabrics, accessories, and wall and window treatments; and other facets of interior designs. Drapery making and construction of home furnishing goods are also included. (4 sch: 2-hr. lecture, 4-hr lab)

CTV 291(1-3)  Special Problems in Clothing and Textiles Services
A course designed to provide the student with practical application of skills and knowledge gained in other vocational-technical courses. The instructor works closely with the student to insure that the selection of a project will enhance the student’s learning experience. (1-3 sch: 2-6 hr lab)

CTV 292(1-6)  Supervised Work Experience in Clothing and Textiles Services
A course that 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. (1-6 sch: 3-18 hr externship)

HRT/CUT 1114-5  Culinary Principles I
Fundamentals of food preparation and cookery emphasizing high standards for preparation of meat, poultry, seafood, vegetables, soups, stocks, sauces, and farinaceous items. (4 sch: 2-hr lecture, 4-hr lab or 3-hr lecture, 4-hr lab)

CUT 1124-5  Culinary Principles II
This course offers advanced study and application of Culinary Principles I to polish and perfect the techniques of food preparation and cookery emphasizing high standards for food preparation. (4 sch: 2-hr lecture, 4-hr lab or 3-hr lecture, 4-hr lab)

CUT 1134-5  Principles of Baking
This course focuses on fundamentals of baking science, terminology, ingredients, weights and measures, and formula conversion and storage. Students will prepare yeast goods, pies, cakes, cookies, and quick breads; and use and care for equipment. (4 sch: 2-hr. lecture, 4-hr. lab or 3-hr lecture, 4-hr lab)
CUT 1513-4  Garde Manger
This course provides orientation to garnishing, preparation of charcuterie items, cold foods, and buffet presentation. It explores the various duties of the modern garde manger. (3 sch: 1-hr. lecture, 4-hr. lab or 2-hr lecture, 4-hr lab)

CUT 2223  Menu Planning and Facilities Design
This course focuses on the principles and concepts of menu planning, menu formats, and layout with regard to a wide variety of eating habits and taste of the dining public. Emphasis will be on pricing, menu design, merchandising, tools, nutritional considerations, schedules, and profitability. Effective planning and layout of kitchen and equipment will also be emphasized. (3 sch: 3-hr lecture)

CUT 2243-4  Dining Room Management
This course focuses on management of a restaurant dining room including good housekeeping technique, fine food, and efficient service. It covers French, Russian, American, and English waited table service, limited service, counter, tray, service, and catering. Emphasis will be placed on staffing, scheduling, controls and skills required to effectively supervise a dining room operation. (3 sch: 1-hr. lecture, 4-hr. lab or 2-hr lecture, 2-hr lab or 3-hr lecture, 2-hr lab)

CUT 2314  American Regional Cuisine
This exploration of the American Cuisine concept emphasizing freshness, seasonality, nutrition, indigenous ingredients, and presentation. It is a thorough study into the cuisine characteristics and traditions of the various regions of the United States of America. (4 sch: 2-hr. lecture, 4-hr. lab)

CUT 2424  International Cuisine
This course is a study of cuisines of the world with emphasis on use of authentic ingredients, methods, and terminology. (4 sch: 2-hr. lecture, 4-hr. lab)

CUT 292(1-6)  Supervised Work Experience in Culinary Arts 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. (1-6 sch: 3- to 18-hr. externship)

CVT 1113  Foundation of Cardiovascular Technology
This course is designed to introduce the student to the fundamental elements in cardiovascular technology, including terminology, important to the delivery of health care in a safe, efficient, and professional manner. (3 sch: 3-hr lecture)

CVT 1214  Cardiovascular Anatomy and Physiology
A study of anatomy and physiology in relation to the practice of cardiovascular technology. (4 sch: 3-hr lecture, 2-hr lab)

CVT 1312  Cardiovascular Pharmacology
This course is designed to provide the students with the pharmacology needed to function in clinical experiences. This includes classifications of medications, modes of action, indications, contraindications, and their effect on cardiac output and its determinates. (2 sch: 2-hr lecture)

CVT 2414  Invasive Cardiology I
Introduces the students to the specific procedures performed in the cardiac catheterization laboratory and the use of the resulting data for patient diagnosis. Additional topics include
aseptic techniques, sterilization, patient assessment, radiography, pharmacology, cardiac wave forms, coronary artery anatomy, equipment and tools utilized in cardiac catheterization, hemodynamic data and analysis, right and left heart caths, and complications and treatment of cardiac catheterization. (4 sch: 3-hr lecture, 2-hr lab)

**CVT 2424 Invasive Cardiology II**
This course is designed to tie together cardiac diseases as well as to continue teaching the students classifications and the use of equipment and techniques used in invasive cardiology. An in-depth presentation of various cardiac diseases including coronary artery disease, angina, myocardial infarction, heart failure, valve diseases, cardiomyopathies, pericardial disorders, arrhythmias, congenital anomalies, and repair procedures is used. Additionally students will learn the various calculations performed in the cath lab including cardiac outputs, vascular resistance, valve areas, and shunts. (4 sch: 3-hr lecture, 2-hr lab)

**CVT 2512 Critical Care Application**
This course is designed to familiarize students with characteristics of critically ill cardiopulmonary patients and specific needs of such patients in relation to their particular illness. Patient case studies will be presented for student discussion and will address the specific diagnostic and therapeutic modalities available to the cardiovascular patient for palliative and corrective results. (2 sch: 2-hr lecture)

**CVT 2614 Non-Invasive Cardiology I**
An introduction to noninvasive cardiology and those tests performed in this area. In addition, normal and abnormal heart rhythm and patient safety are presented along with stress tests, Holter monitoring, and an introduction in echocardiography. (4 sch: 3-hr lecture, 2-hr lab)

**CVT 2624 Non-Invasive Cardiology II**
This course is designed to be a continuation of Non-Invasive Cardiology I. More in-depth study is completed in the area of noninvasive cardiac testing, and a greater view of echocardiography is presented. A firm didactic foundation of echocardiography is presented with provisions available for further study of this complex technique including 2-D, M-Mode, continuous, pulse wave, and color Doppler techniques. (4 sch: 3-hr lecture, 2-hr lab)

**CVT 2716 Cardiovascular Clinical I**
Patient assessment and care plan formation are presented in the hospital environment. Clinical experience in all procedures performed in the cardiovascular laboratories, including use of equipment, performing tests, and patient care as it relates to the cardiovascular areas with emphasis on cardiac catheterization, ECG, stress testing, Holter monitoring, and introduction to echocardiography. (6 sch: 18 hr clinical)

**CVT 2728 Cardiovascular Clinical II**
This course is designed for students to gain more in-depth clinical experience in invasive cardiology including pre and post cath activities, cardiovascular techniques, hemodynamic monitoring, intra-aortic balloon pump, and cardiac output measurements. Clinical practice in the cardiac catheterization lab includes circulating, scrubbing, recoding, and manipulating the imaging equipment during both diagnosis and interventional catheterization procedures. (8 sch: 24-hr clinical)
CVT 2738  Cardiovascular Clinical III
Designed for students to gain additional clinical experience and polish their skills in the cath lab performing all duties involved in diagnostic and interventional cases. (8 sch: 24-hr clinical)

DAT 1111 Dental Orientation
The development, function, status, and organization of the dental profession; and the professional, legal, and ethical responsibilities of the dental assistant. Terminology emphasizing prefixes, suffixes, roots, abbreviations, spelling, and definitions of medical and dental terms. (1 sch: 1-hr lecture)

DAT 1214 Dental Assisting Materials
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. (4 sch: 2-hr lecture, 4-hr lab)

DAT 1313 Dental Science I
Physiology, anatomy, and morphology as related to the oral cavity. Content organized to include a study of the body systems, the anatomy of the head and neck, and the form of each of the 32 teeth. (3 sch: 3 hr. lecture)

DAT 1323 Dental Science II
Embryology, pharmacology, microbiology, and pathology as related to dentistry. Content organized to give the student basic information required for effective dental assisting. (3 sch: 3 hr. lecture)

DAT 1415 Chairside Assisting I
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 in the treatment room. (5 sch: 2 hr. lecture, 6 hr. lab)

DAT 1423 Chairside Assisting II
Continuation of the study of information related to assisting at the dental chair. Emphasis on techniques utilized in performing all dental procedures at the chair. Special consideration to assisting in the dental specialties. (3 sch: 2 hr. lecture, 2 hr. lab)

DAT 1433 Chairside Assisting III
Continuation of Chairside Assisting II. (3 sch: 2 hr. lecture, 2 hr. lab)

DAT 1513 Dental Radiology I
Principles and safety precautions in dental radiology. Laboratory sessions include positioning, exposing, processing, and mounting bite-wing, occlusal, and periapical dental radiographs on a manikin. (3 sch: 2 hr. lecture, 2 hr. lab)

DAT 1522 Dental Radiology II
Continuation of Dental Radiology I. Emphasis placed on clinical competence in exposing periapical radiographs. (2 sch: 4 hr. lab)
**DAT 1612 Dental Health Education**
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. (2 sch: 2 hr. lecture)

**DAT 1714 Practice Management**
Comprehensive study of the dental office business procedures. Topics covered: patient contact, patient records, insurance, financial records, telephone usage, office management, basic skills in psychology, and professional ethics. (4 sch: 3 hr. lecture, 2 hr. lab)

**DAT 1815 Clinical Experience I**
Supervised clinical experience in an authorized dental clinic. (5 sch: 1 hr. lecture, 12 hr. clinical)

**DAT 1822 Clinical Experience II**
Continuation of supervised clinical experience in an authorized dental clinic. (2 sch: 6 hr. clinical)

**DBT 1113 SQL Programming**
This course is the first of a two-part series which offers students an extensive introduction to data server technology, covering the concepts of both relational and object relational databases and the Structured Query Language (SQL). Students are taught to store, retrieve, and manipulate data. (3 sch: 2 hr. lecture, 2 hr. lab)

**DBT 1123 Advanced SQL Programming**
This course is the second of a two-part series which offers students an extensive introduction to data server technology. Students are taught advanced concepts of both relational and object relational databases and the Structured Query Language (SQL). Students are taught to create and maintain database objects and control user access. (3 sch: 2 hr. lecture, 2 hr. lab)

**DBT 1214 Database Architecture and Administration**
This course is designed to give students a firm foundation in basic database tasks enabling them to design, create, and maintain a database. Students will gain a conceptual understanding of database architecture and how its components work and interact with one another. Students will also learn how to create an operational database and properly manage the various structures. (4 sch: 3 hr. lecture, 2 hr. lab)

**DBT 2224 Advanced Database Architecture and Administration**
This course is a continuation of Database Architecture and Administration. It is designed to provide a firm foundation in basic database tasks enabling students to design, create, and maintain a database. Students will gain a conceptual understanding of database architecture and how its components work and interact with one another. Students will also learn how to create an operational database and properly manage the various structures. (4 sch: 3 hr. lecture, 2 hr. lab)

**DBT 2313 Database Design Concepts**
This course is a theoretical study of the database design concepts. Emphasis is placed on Database Management Systems (DBMS) functions, the relational model, and Query-by-Example (QBE) applications. (3 sch: 2 hr. lecture, 2 hr. lab)
DBT 2324  Advanced Database Design Concepts
This course will introduce programming using a database management software application. Emphasis will be placed on manipulating data using advanced features and customizing the user interface. (4 sch: 2 hr. lecture, 4 hr. lab)

DBT 2614  Linux Operating System Fundamentals
In this course, students develop proficiency in using and customizing a Linux operating system for common command line processes and desktop productivity roles. (4 sch: 2 hr. lecture, 4 hr. lab)

DBT 2714  IT Project Management
In this course, students develop proficiency in using and customizing a Linux operating system for common command line processes and desktop productivity roles. (4 sch: 2 hr. lecture, 4 hr. lab)

DBT 2913  Supervised Work Experience for Database Development Technology
A course which is a 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 one semester hour per 45 industrial contact hours. (1-6 sch: 3-18 hr. externship)

DBT 292(1-3) Special Problem in Database Administration Technology
A course to provide students with an opportunity to utilize skills and knowledge gained in other Database Administration Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-3 sch: 2-6 hr. lab)

DDT 100(3-6) DDT 1013, DDT 1023 Introduction to Drafting and Design Cluster, Introduction to Drafting and Design Cluster I, or Introduction to Drafting and Design Cluster II
These courses contain the baseline competencies and suggested objectives from the high school curriculum which directly relate to the community college program. The courses are designed for students entering the community college who have had no previous training or documented experience in the field. (3-6 semester hours based upon existing skills for each student, may be divided into 2 courses for a maximum total of 6 hours of institutional credit.)

DDT 1113  Fundamentals of Drafting
Fundamentals and principles of drafting to provide the basic background needed for all other drafting courses. (3 sch: 2 hr. lecture, 2 hr. lab)

DDT 1123  Computational Methods for Drafting
Study of computational skills required for the development of accurate design and drafting methods. (3 sch: 1 hr. lecture, 4 hr. lab)

DDT 1133  Machine Drafting I
Emphasizes methods, techniques, and 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. (3 sch: 1 hr. lecture, 4 hr. lab)

DDT 1143  Geometric Dimensioning and Tolerancing
A continuation of conventional dimensioning with emphasis on concepts as adopted by the American National Standards Institute (ANSI). A study of international dimensioning symbols used to control tolerances of form, profile, orientation, runout, and location of features on an object. (3 sch: 2 hr. lecture, 2 hr. lab)
DDT 1153  Descriptive Geometry
Theory and problems designed to develop the ability to visualize points, lines, and surfaces of space. (3 sch: 1 hr. lecture, 4 hr. lab)

DDT 1213  Construction Materials
Physical properties of the materials generally used in the erection of a structure, with a brief description of their manufacture. (3 sch: 2 hr. lecture, 2 hr. lab)

DDT 1313  Principles of CAD
Basic operating system and drafting skills on CAD. (3 sch: 2 hr. lecture, 2 hr. lab)

DDT 1323  Intermediate CAD
Continuation of Principles of CAD. Subject areas include dimensioning, sectional views, and symbols. (3 sch: 2 hr. lecture, 2 hr. lab)

DDT 1413  Elementary Surveying
Basic course dealing with principles of geometry, theory, and use of instruments, mathematical calculations, and the control and reduction of errors. (3 sch: 1 hr. lecture, 4 hr. lab)

DDT 1513  Blueprint Reading I
Terms and definitions used in reading blueprints. Basic sketching, drawing, and dimensioning of objects will be covered. (Enrollment in this course is limited to vocational certificate students in other disciplines.) (3 sch: 2 hr. lecture, 2 hr. lab)

DDT 1523  Blueprint Reading II
Continuation of Blueprint Reading I with emphasis placed on reading and interpreting blueprints for different types of structures and performing basic calculations. (Enrollment in this course is limited to vocational certificate students in other disciplines.) (3 sch: 2 hr. lecture, 2 hr. lab)

DDT 1613  Architectural Design I
This course is a study and development of architectural design principles for a residential structure. (3 sch: 1 hr. lecture, 4 hr. lab)

DDT 1713  Fundamentals of Machining Processes
Basic machining equipment and safety procedures. Emphasis is placed on measurement techniques, machine technology, machine tools, and applications. (A course for drafting students with no previous machining experience.) (3 sch: 2 hr. lecture, 2 hr. lab)

DDT 1813  Design for Manufacturing
Instruction in various methods of manufacturing with emphasis on the drafter’s role in manufacturing. (3 sch: 2 hr. lecture, 2 hr. lab)

DDT 2153  Civil Drafting
Course dealing with basic principles of surveying and the development of topographical maps. (3 sch: 2 hr. lecture, 2 hr. lab)

DDT 2163  Machine Drafting II
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. (3 sch: 2 hr. lecture, 2 hr. lab)
DDT 2213 Structural Drafting II
Study of the miscellaneous areas of structural drafting including stairs, handrails, and cage ladders. (3 sch: 1 hr. lecture, 4 hr. lab)

DDT 2233 Structural Drafting I
Structural section, terms, and conventional abbreviations and symbols used by structural fabricators and erectors are studied. Knowledge is gained in the use of the A.I.S.C. Handbook. Problems are studied that involve structural designing and drawing of beams, columns, connections, trusses, and bracing (steel, concrete, and wood). (3 sch: 1 hr. lecture, 4 hr. lab)

DDT 2243 Cost Estimating
Preparation of material and labor quantity surveys from actual working drawings and specifications. (3 sch: 2 hr. lecture, 2 hr. lab)

DDT 2253 Statics and Strength of Materials
Study of forces acting on bodies; moments of forces; stress of materials; basic machine design; beams, columns, and connections. (3 sch: 2 hr. lecture, 2 hr. lab)

DDT 2263 Quality Assurance
The application of statistics and probability theory in quality assurance programs. Various product sampling plans will be studied as well as the development of product charts for defective units. (3 sch: 2 hr. lecture, 2 hr. lab)

DDT 2273 Facilities Planning
This course deals with the techniques and procedures for developing an efficient facility layout and introduces some of the state-of-the-art tools involved, such as 3D design and computer simulation. (3 sch: 2 hr. lecture, 2 hr. lab)

DDT 2343 Advanced CAD
A continuation of Intermediate CAD. Emphasis is placed on the user coordinate system and 3D modeling. (3 sch: 1 hr. lecture, 4 hr. lab)

DDT 2353 CAD Management
Topics include technical and business aspects of CAD. Standards, customization, networking, Internet integration, and employee support will be covered. (3 sch: 2 hr. lecture, 2 hr. lab)

DDT 2363 Computer Numerical Control (CNC) Drafting
Basics of numerical control machines. (3 sch: 2 hr. lecture, 2 hr. lab)

DDT 2423 Mapping and Topography
Selected drafting techniques are applied to the problem of making maps, traverses, plot plans, plan drawings, and profile drawings using maps, field survey data, aerial photographs, and related references and materials including symbols, notations, and other applicable standardized materials. (3 sch: 2 hr. lecture, 2 hr. lab)

DDT 2523 Pipe Drafting
Instruction in the basic knowledge needed to create process piping drawings using individual piping components. (3 sch: 2 hr. lecture, 2 hr. lab)
DDT 2533  **Highway Drafting**
A basic study of highway drafting. Horizontal alignment of route surveys in the plan view, vertical alignment of route surveys in the profile view, typical sections, cross sections, and area calculations and estimation of quantities. (3 sch: 2 hr. lecture, 2 hr. lab)

DDT 2543  **Steel Ship Building and Design**
Instruction in the basic steel ship building and the process of ship design and planning. (3 sch: 2 hr. lecture, 2 hr. lab)

DDT 2623  **Architectural Design II**
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. (3 sch: 1 hr. lecture, 4 hr. lab)

DDT 2713  **Fundamentals of Multimedia**
A general overview of current issues in multimedia. Study of how multimedia can assist in the work environment; provides a basis for further study in multimedia design and production. (3 sch: 1 hr. lecture, 4 hr. lab)

Pre/Corequisite: DDT 2623 Architectural Design II

DDT 291(1-3)  **Special Project**
Practical application of skills and knowledge gained in other drafting courses. The instructor works closely with the student to insure that the selection of a project will enhance the student's learning experience. (1-3 sch: 2-6 hr. lab)

DDT 292(1-6)  **Supervised Work Experience in Drafting and Design Technology**
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 one semester hour per 45 industrial contact hours. (1-6 sch: 3-18 hr. externship)

DET 100(3-6), DET 1013, DET 1023  
Introduction to Diesel Equipment Repair and Service, Introduction to Diesel Equipment Repair and Service I or Introduction to Diesel Equipment Repair and Service II

These courses contain the baseline competencies and suggested objectives from the high school Diesel Equipment Repair and Services curriculum which directly related to the community college Diesel Equipment Repair and Service program. The courses are designed for students entering the community college who have had no previous training or documented experience in the field. (3-6 semester hours based upon existing skills for each student. May be divided into 2 course for a maximum total of 6 hours of institutional credit.)

DET 1114  **Fundamentals of Equipment Mechanics**
Review and update of safety procedures; tools and equipment usage; handling, storing, and disposing of hazardous materials; and operating principles of diesel engines. (4 sch: 4 hr. lecture)

DET 1213  **Hydraulic Brake Systems**
Diagnosis and repair of hydraulic brake systems. Includes instruction in hydraulic and mechanical systems, power assist units, and anti-lock braking systems. (3 sch: 2 hr. lecture, 2 hr. lab)
DET 1223 Electrical/Electronic Systems I
Diagnosis, service, and repair of electrical and electronic systems on diesel engines. Includes instruction in general systems diagnosis, starting and charging system. (3 sch: 2 hr. lecture, 2 hr. lab)

DET 1263 Electrical/Electronic Systems II
Diagnosis, service, and repair of electrical and electronic systems on diesel engines. Includes instruction on lighting systems, gauges and warning devices, and related electrical systems. (3 sch: 1 hr. lecture, 4 hr. lab)

DET 1364 Diesel Systems I
Diagnosis, service, and repair of basic engine operating principles, with an emphasis on cylinder head and valve train engine block). (4 sch: 2 hr. lecture, 4 hr. lab)

DET 1513 Hydraulics
Basic operation and maintenance of hydraulic systems associated with diesel powered equipment, includes instruction in safety, system components, operation, and repair. (3 sch: 1 hr. lecture, 4 hr. lab)

DET 1613 Preventive Maintenance and Service
Practice in the preventive maintenance of diesel powered equipment. Includes instruction in general preventive maintenance of vehicles and equipment. (4 sch: 2 hr. lecture, 4 hr. lab)

DET 1713 Power Trains
Diagnosis, service, maintenance, and repair of power train units on diesel equipment. Includes instruction on clutch, manual transmissions, drive shafts, and drive axles. (3 sch: 2 hr. lecture, 2 hr. lab)

DET 2113 Welding for Diesel Equipment Technology
Basic welding and cutting techniques which includes fundamental procedures and safety, oxyacetylene welding and cutting, shielded metal-arc welding, and metal inert gas welding procedures. (3 sch: 1 hr. lecture, 4 hr. lab)

DET 2253 Steering and Suspension Systems
Operation, maintenance, and repair of heavy duty steering and suspension systems. Includes instruction in steering column and steering gear, power steering unit, steering linkage, suspension, wheel alignment, and related components diagnosis and repair. (3 sch: 2 hr. lecture, 2 hr. lab)

DET 2273 Electrical/Electronic Systems III
Diagnosis, service, and repair of electrical and electronic systems on diesel engines. Includes instruction in electronic fuel management systems. (3 sch: 1 hr. lecture, 4 hr. lab)

DET 2374 Diesel Systems II
Diagnosis, service, and repair of lubrication systems, cooling system, and air induction and exhaust systems. (4 sch: 2 hr. lecture, 4 hr. lab)

DET 2383 Diesel Systems III
Diagnosis, service, and repair of general engine operations and fuel system operations. (3 sch: 2 hr. lecture, 2 hr. lab)
**DET 2523 Fluid Power Trains**  
Maintenance and repair of fluid power trains used on heavy equipment to include operation and diagnosis and repair of system components. (3 sch: 1 hr. lecture, 4 hr. lab)

**DET 2623 Advanced Brake Systems (Air)**  
Instruction and practice in the maintenance and repair of air brake systems commonly used on commercial diesel powered equipment. Includes instruction in maintenance and repair of the air supply system, mechanical system, anti-lock braking system, and traction control system. (3 sch: 2 hr. lecture, 2 hr. lab)

**DET 2813 Air Conditioning and Heating Systems**  
Operation, maintenance, and repair of air conditioning and heating systems used in commercial equipment. Includes instruction in theories and operating principles, A/C system diagnosis and repair, clutch and compressor repair, evaporator and condenser repair, and heating system repair. (3 sch: 1 hr. lecture, 4 hr. lab)

**DET 291(1-3) Special Project in Diesel Equipment Technology**  
A course to provide students with an opportunity to utilize skills and knowledge gained in other Diesel Equipment Repair and Service courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-3 sch: 2-6 hr. lab)

**DET 292(1-3) Supervised Work Experience in Diesel Equipment Technology**  
A course which is a 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 one semester hour per 45 industrial contact hours. (1-6 sch: 3-18 hr. externship)

**DHT 1115 Fundamentals of Dental Hygiene**  
This course will provide the dental hygiene student with the fundamental knowledge and skills necessary for interaction with clients. The lecture portion will focus on the history, philosophy, and theories relevant to the profession of dental hygiene. Lecture highlights will include discussion of the latest health care settings, trends, and approaches to comprehensive care. The preclinical portion will provide the student with opportunities for the development of psychomotor skills and opportunities for interaction with clients, which will provide emphasis on trust, care, and responsibility as part of becoming a professional. (5 sch: 2 hr. lecture, 6 hr. lab)

**DHT 1212 Dental Anatomy**  
A study of the morphological characteristics of the teeth and supporting structures. (2 sch: 2 hr. lecture)

**DHT 1222 Head and Neck Anatomy**  
A detailed study of skeletal, muscular, vascular, and neural features of the face, head, and neck. (2 sch: 2 hr. lecture)

**DHT 1232 Oral Histology and Embryology**  
This course studies 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. (2 sch: 2 hr. lecture)
**DHT 1314 Dental Radiology**
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 with safety for hygienist and patient, the processing and mounting of exposed film and their interpretation, and study of anatomical landmarks evident in periapical films. (4 sch: 3 hr. lecture, 2 hr. lab)

**DHT 1415 Clinical Dental Hygiene**
The student will apply the principles and techniques learned from previous didactic and preclinical experiences. (5 sch: 1 hr. lecture, 12 hr. clinical)

**DHT 1512 Periodontics**
An in-depth study of the supporting structures of the teeth is covered in this course. Also included is a 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 prosthesis is also studied. (2 sch: 2 hr. lecture)

**DHT 1911 Dental Hygiene Seminar I**
This course provides the student with the opportunity to discuss managing dental office emergencies and professional development. (1 sch: 1 hr. lecture)

**DHT 1921 Dental Hygiene Seminar II**
This course provides the student with the opportunity to discuss patient care and treatment plans and professional development. (1 sch: 1 hr. lecture)

**DHT 2233 General/Oral Pathology**
A study of the etiology and symptomatology of the pathological conditions affecting the head and neck with emphasis on the oral cavity. (3 sch: 3 hr. lecture)

**DHT 2425 Clinical Dental Hygiene II**
This course is a 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. (5 sch: 1 hr. lecture, 12 hr. clinical)

**DHT 2436 Clinical Dental Hygiene III**
This course offers a culmination of practice and the clinical procedures and theoretical knowledge needed to provide preventive, interceptive, and definitive dental hygiene treatment. (6 sch: 2 hr. lecture, 12 hr. clinical)

**DHT 2613 Dental Hygiene Materials**
This course offers the study of materials used in dentistry, their physical and chemical properties, and proper manipulation as used in the operatory and laboratory. (3 sch: 2 hr. lecture, 2 hr. lab)

**DHT 2712 Dental Pharmacology**
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. (2 sch: 2 hr. lecture)
DHT 2813  Community Dental Health
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. (3 sch: 2 hr. lecture, 3 hr. clinical)

DHT 2922  Dental Ethics/Law
Focus on the ethical and legal aspects of providing dental health care. (2 sch: 2 hr. lecture)

DHT 2931  Dental Hygiene Seminar III
This course provides the student with the opportunity to discuss dental disciplines and professional development. (1 sch: 1 hr. lecture)

DHT 2941  Dental Hygiene Seminar IV
This course provides the student the opportunity to discuss the written registry exam, the clinical simulation exam format, and professional development. (1 sch: 1 hr. lecture)

DMS 1114  Introduction to Ultrasound
Students will be introduced to ultrasound equipment. Cleaning and disinfectant procedures will be shown. Types of film, paper printers, video recorders, scanning tables, ultrasound probes, and recording methods will be discussed. Legal/ethical issues and patient contact within the ultrasound department, as well as scanning protocols, are included. Students will learn the sonographer’s role in patient care. (4 sch: 3 hr. lecture, 2 hr. lab)

DMS 1213  Sectional Anatomy
This course provides students with ultrasound appearance of abdominal and pelvic sectional anatomy. It includes a description of gross sectional anatomy and identification of sonographic appearance of normal anatomy. (3 sch: 3 hr. lecture)

DMS 1313  Ultrasound Physics and Instrumentation I
In-depth presentation of basic principles of diagnostic medical ultrasound physics and instrumentation. Description of diagnostic ultrasound transducers and ultrasound interaction with human tissue will be presented. (3 sch: 2 hr. lecture, 2 hr. lab)

DMS 1323  Ultrasound Physics and Instrumentation II
A continuation of Ultrasound Physics and Instrumentation I (DMS 1313). This class includes an in-depth presentation of image display modes, Doppler, color, and hemodynamics of diagnostic ultrasound. The causes of artifacts and how to scan safely, conduct instrument performance measurements, and prepare for registry examinations. (3 sch: 2 hr. lecture, 2 hr. lab)

DMS 1414  Clinical Experience I
This class includes clinical instruction in the scanning lab and in clinical site institutions. Students will first receive hands-on experience in the scanning lab and then in clinical site rotations. (4 sch: 12 hr. clinical)

DMS 1426  Clinical Experience II
This course includes clinical practice and instruction in a clinical rotation site. (6 sch: 18 hr. clinical)
DMS 1436 Clinical Experience III
This course is a clinical practice and instruction in a clinical affiliate. Areas included are patient care and management, operation of equipment, and sonographic procedures. All procedures will be performed under direct supervision. (6 sch: 18 hr. clinical)

DMS 1513 Abdominal Sonography
Presentation of pathology, pathophysiology of abdominal anatomy including liver, kidneys, spleen, gallbladder, pancreas, and vascular structures associated with organs, as well as the abdominal cavities and the non-cardiac chest. Normal aging changes and laboratory values are presented. (3 sch: 3 hr. lecture)

DMS 1523 Obstetrical and Gynecological Sonography
This class discusses pathology/pathophysiology associated with female anatomy and obstetrical sonographic examinations. Sonographic appearance of the female pelvis premenopausal through postmenopausal and evaluation of pregnancy from conception to delivery will be discussed. Evaluating infertility and related laboratory values, as well as other imaging procedures, will be included. (3 sch: 3 hr. lecture)

DMS 1533 Advanced Sonography Procedures
Neurosonology, ophthalmology, adult cardiac, pediatric cardiac, and vascular technology will be discussed. Superficial structures scanning including prostate, thyroid, scrotum and breast will be included. (3 sch: 3 hr. lecture)

DMS 1613 Sonography Seminar
This course will prepare students for ARDMS/ARRT certification examinations. (3 sch: 3 hr. lecture)

DMS 1623 Ultrasound Examination Critique
This course will present case studies of normal and abnormal sonographic exams. Students will attend presentations of guest lecturers. (3 sch: 3 hr. lecture)

DTV 111(4-6) Commercial Truck Driving I
Fundamental 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. (4 sch: 1 lecture, 6 - 10 hr. lab)

DTV 112(4-6) Commercial Truck Driving II
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. (4 sch: 1 lecture, 6 - 10 hr. lab)

DTV 1137 Commercial Truck Driving Internship
Under the supervision of a company trainer, this course will enable the student to apply the training he/she received at Meridian Community College with the trucking company of his/her choice. The student will earn a salary during this internship (OJT). The successful completion of this course will enable the student to drive solo with the company of his/her choice.
Prerequisites: DTV 1116, 1126. (7 sch; 200 lab)
EET 100(3-6), EET 1013, EET 1023 Introduction to Electronics Technology, Introduction to Electronics Technology I, or Introduction to Electronics Technology II
These courses contain the baseline competencies and suggested objectives from the high school Electronics curriculum which directly related to the community college Electronics-based programs. The courses are designed for students entering the community college who have had no previous training or documented experience in the field. (3-6 semester hours based upon existing skills for each student. May be divided into 2 courses for a maximum total of 6 hours of institutional credit.)

EET 1114 DC Circuits
Principles and theories associated with DC circuits. This course includes the study of electrical circuits, laws and formulae, and the use of test equipment to analyze DC circuits. (4 sch: 2-hr lecture, 4-hr lab)

EET 1123 AC Circuits
Principles and theories associated with AC circuits. Includes the study of electrical circuits, laws and formulae, and the use of test equipment to analyze AC circuits. (3 sch: 2-hr lecture, 2-hr lab)

EET 1192 Fundamentals of Electronics
Fundamental skills associated with all electronics courses. Safety, breadboarding, use of calculator, test equipment familiarization, soldering, electronic symbols, and terminology. (2 sch: 1-hr lecture, 2-hr lab)

EET 1214 Digital Electronics
Number systems, logic circuits, counters, registers, memory devices, combination logic circuits, Boolean algebra, and a basic computer system. (4 sch: 2-hr lecture, 4-hr lab)

EET 1311 Orientation to Biomedical Equipment Repair
Orientation to the biomedical equipment repair field. Topics covered are the different career paths open to students, types of biomedical equipment, and the organization and operation of the hospital environment. (1 sch: 1-hr lecture)

EET 1324 Microprocessors
Microprocessor architecture, machine and assembly language, timing, interfacing, and other hardware applications associated with microprocessor systems. (4 sch: 2-hr lecture, 4-hr lab)

EET 1334 Solid State Devices and Circuits
Active devices which include PN junction diodes, bipolar transistors, bipolar transistor circuits, and unipolar devices with emphasis on low frequency application and troubleshooting. (4 sch: 2-hr lecture, 4-hr lab)

EET 1413 Mathematics for Electronics
Coverage of those areas of arithmetic, algebra, geometry, and trigonometry that have applications in electronics (3 sch: 2-hr lecture, 2-hr lab)
EET 1613  Computer Fundamentals for Electronics/Electricity
Basic computer science as used in electricity/electronics areas. Computer nomenclature, logic, numbering systems, coding, operating system commands are covered. (3 sch: 2-hr lecture, 2-hr lab)

EET 1713  Drafting for Electronic/Electrical Technology
Preparation and interpretation of schematics. (3 sch: 1-hr lecture, 4-hr lab)

EET 211(3-6) Supervised Work Experience in Biomedical Equipment Repair Technology I
This cooperative program between the health care facility and education is designed to integrate the student’s technical studies with health-care experience. (NOTE: Biomedical equipment used in this course is for instructional purposes ONLY and not to be used in patient’s care.) Variable credit is awarded on the basis of 1 semester hour per 45 health-care contact hours. (1-6 sch: 3- to 18-hr externship)

EET 222(3-6) Supervised Work Experience in Biomedical Equipment Repair Technology II
Continuation of EET 211(3-6) with advanced study in the repair and maintenance of biomedical equipment. (3–6 sch: 6- to 18-hr externship)

EET 2334  Linear Integrated Circuits
Advanced semiconductor devices and linear integrated circuits. Emphasis is placed on linear integrated circuits used with operational amplifiers, active filters, voltage regulators, timers, and phase-locked loops. (4 sch: 3-hr lecture, 2-hr lab)

EET 2414  Electronic Communications
This course is designed to provide the student with concepts and skills related to analog and digital communications. Topics covered include amplitude and frequency modulation, transmission, and reception, data transmission formats and codes, and modulation-demodulation of digital communications. (4 sch: 2-hr lecture, 4-hr lab)

EET 2423  Fundamentals of Fiber Optics
Fiber optic cable in modern industry applications. (3 sch: 2-hr lecture, 2-hr lab)

EET 2514  Interfacing Techniques
Data acquisition devices and systems including their interface to microprocessors and other control systems. (4 sch: 2-hr lecture, 4-hr lab)

EET 2823  Digital Television Systems
Circuits and systems used in the production, transmission, and reception of video information to include color systems and computer-video interfacing. (3 sch: 2-hr lecture, 2-hr lab)

EET 291(1-3) Special Project
Practical application of skills and knowledge gained in other technical courses. The instructor works closely with the student to insure that the selection of a project will enhance the student’s learning experience. (1-3 sch: 2- to 6-hr lab)

EET 292(1-6) Supervised Work Experience in Electronics Technology
This cooperative program between industry and education 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. (1-6 sch: 3- to 18-hr externship)
ELT 100(3-6), ELT 1013, ELT 1023 Introduction to Electrical Technology, Introduction to Electrical Technology I, or Introduction to Electrical Technology II
These courses contain the baseline competencies and suggested objectives from the high school curriculum which directly relate to the community college program. The courses are designed for students entering the community college who have had no previous training or documented experience in the field. (3-6 semester hours based upon existing skills for each student, may be divided into 2 courses for a maximum total of 6 hours of institutional credit.)

ELT 1113 Residential/Light Commercial Wiring
Advanced skills related to the wiring of multi-family and small commercial buildings. Includes instruction and practice in service entrance installation, specialized circuits, and the use of commercial raceways. (3 sch: 2-hr lecture, 2-hr lab)

ELT 1123 Commercial and Industrial Wiring
Instruction and practice in the installation of commercial and industrial electrical services including the types of conduit and other raceways, NEC code requirements, and three-phase distribution networks. (3 sch: 2-hr lecture, 2-hr lab)

ELT 1133 Introduction to the National Electric Code
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. (3 sch: 2-hr lecture, 2-hr lab)

ELT 1144 AC and DC Circuits for Electrical Technology
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. (4 sch: 2-hr lecture, 4-hr lab)

ELT 1163 Drafting for Electrical Technology
Preparation and interpretation of schematics and electrical drawing and electrical blueprints (3 sch: 1-hr lecture, 4-hr lab)

ELT 1192-3 Fundamentals of Electricity
Fundamental skills associated with all electrical courses. Safety, basic tools, special tools, equipment, and introduction to simple AC and DC circuits. (2 sch: 1-hr lecture, 2-hr lab)

ELT 1213 Electrical Power
Electrical motors and their installation. Instruction and practice in using the different types of motors, transformers, and alternators. (3 sch: 2-hr lecture, 2-hr lab)

ELT 1223 Motor Maintenance and Troubleshooting
Principles and practice of electrical motor repair. Includes topics on the disassembly/assembly and preventive maintenance of common electrical motors. (3 sch: 2-hr lecture, 2-hr lab)

ELT 1253 Branch Circuit and Service Entrance Calculations
Calculating circuit sizes for all branch circuits and service entrances in residential installation. (3 sch: 2-hr lecture, 2hr lab)
ELT 1263  Blueprint Reading/Planning in Residential Installation
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. (3 sch: 2-hr lecture, 2-hr lab)

ELT 1273  Switching Circuits for Residential, Commercial, and Industrial Applications
Introduction to various methods by which single pole, 3-way, and 4-way switches are used in residential, commercial, and industrial installations. Also includes installation and operation of low voltage, remote control switching. (3 sch: 2-hr lecture, 2-hr lab)

ELT 1283  Estimating the Cost of a Residential Installation
Cost of an electrical installation. Specifications set forth for a particular structure. (3 sch: 2-hr lecture, 2-hr lab)

ELT 1313  Automated Manufacturing Controls for Electrical Technology
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, solid state motor controls, and other similar devices. (3 sch: 2-hr lecture, 2-hr lab)

ELT 1324  Calibration and Measurement Principles Used in the Electrical Industry
This course introduces the students to various terms related to measurement principles and calibration techniques used in the electrical industry. With PLCs, the topic also includes the procedures and calibration of various instruments and PLCs used in industry. (4 sch: 3-hr lecture, 2-hr lab)

ELT 1334  Flexible Manufacturing Systems for Electrical Technology
This course is a production project that 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. (4 sch: 2-hr lecture, 4-hr lab)

ELT 1343  Fundamentals of Instrumentation
This course provides students with a general knowledge of instrumentation principles as they relate to the electrical industry. This course includes instruction in the basis of hydraulics and pneumatics and the use of electrical circuits in the instrumentation process. (3 sch: 2-hr lecture, 2-hr lab)

ELT 1353  Fundamentals of Robotics for Electrical Technology
This course is designed to introduce the student to industrial robots. Topics to be covered include robotics history, industrial robot configurations, operation, and basic programming and how they relate to the electrical industry. (3 sch: 2-hr lecture, 2-hr lab)
ELT 1363 Industrial Hydraulics for Electrical Technology
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, electrical interfacing techniques, and troubleshooting. (3 sch: 2-hr lecture, 2-hr lab)

ELT 1373 Industrial Pneumatics for Electrical Technology
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, electromechanical control of fluid power, and troubleshooting techniques. (3 sch: 2-hr lecture, 2-hr lab)

ELT 1383 Industrial Robotics for Electrical Technology
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. (3 sch: 2-hr lecture, 2-hr lab)

ELT 1393 Servo Control Systems for Electrical Technology
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. (3 sch: 2-hr lecture, 2-hr lab)

ELT 1413 Motor Control Systems
Installation of different motor control circuits and devices. Emphasis is placed on developing the student's ability to diagram, wire, and troubleshoot the different circuits and mechanical control devices. (3 sch: 2-hr lecture, 2-hr lab)

ELT 1434 Solid State Devices and Circuits for Electrical Technology
Active devices that include PN junction diodes, bipolar transistors, bipolar transistor circuits, and unipolar devices with emphasis on low frequency application and troubleshooting. (4 sch: 2-hr lecture, 4-hr lab)

ELT 1513 Data Acquisition and Communications
This is a course in acquisition and communication of systems data in industrial automated applications. (3 sch: 2-hr lecture, 2-hr lab)

ELT 1523 Fundamentals of Fiber Optics for Electrical Technology
Fiber-optic cable in modern industry applications (3 sch: 2-hr lecture, 2-hr lab)

ELT 1533 Fundamentals of Data Communications for Electrical Technology
Concepts of telephony, local area networks, wide area networks, data transmission, and topology methods (3 sch: 2-hr lecture, 2-hr lab)

ELT 1544 Network Systems for Electrical Technology
Networking fundamentals, voice networking, LANs, and Internet. Also, upgrading of computers to support LAN technology (4 sch: 2-hr lecture, 4-hr lab)
**ELT 1553 Satellite Systems**
Service, repair, and installation of residential and commercial satellite receiving systems and how they are used in the electrical industry (3 sch: 1-hr lecture, 4-hr lab)

**ELT 1564 Telephone Systems for Special Systems Electrical Technology**
Information and hands-on experience in installation, operation, troubleshooting, and repair of residential and commercial use telephone systems including analog and digital key systems (4 sch: 3-hr lecture, 2-hr lab)

**IMM 1314/ELT 1614 Principles of Hydraulics and Pneumatics**
Instruction in basic principles of hydraulics and pneumatics and the inspection, maintenance, and repair of hydraulic and pneumatic systems (4 sch: 1-hr lecture, 6-hr lab) [May be taught as a 90 contact hour lab in open entry open exit vocational programs]

**IMM 2114/ELT 2114 Equipment Maintenance, Troubleshooting, and Repair**
Maintenance and troubleshooting techniques, use of technical manuals and test equipment, and inspection/evaluation/repair of equipment (4 sch: 1-hr lecture, 6-hr lab)

**ELT 2424 Solid State Motor Control**
Principles and operation of solid state motor control. Also, the design, installation, and maintenance of different solid state devices for motor control. (4 sch: 2-hr lecture, 4-hr lab)

**ELT 2613 Programmable Logic Controllers**
Use of programmable logic controllers (PLC's) in modern industrial settings. Also, the operating principles of PLC's and practice in the programming, installation, and maintenance of PLC's. (3 sch: 2-hr lecture, 2-hr lab)

**ELT 2623 Advanced Programmable Logic Controllers**
Advanced PLC 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. (3 sch: 2-hr lecture, 2-hr lab)

**ELT 291(1-3), ELT 293(1-3) Special Project I, II**
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. (1-3 sch: 2-6 hr lab)

**ELT 292(1-6), ELT 294(1-6) Supervised Work Experience I, II**
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. (1-6 sch: 3-18 hr. externship)

**EMT 100(3-6), EMT 1013, EMT 1023 Introduction to Emergency Medical Technology-Basic, Introduction to Emergency Technology Basic I, or Introduction to Emergency Medical Technology Basic II**
These courses contain the baseline competencies and suggested objectives from the high school curriculum which directly relate to the community college program. The courses are designed for students entering the community college who have had no previous training or documented experience in the field. (3-6 semester hours based upon existing skills for each student. The course may be divided into 2 courses for a maximum total of 6 hours of institutional credit.)
EMT 1118  EMT Basic
This course includes responsibilities of the EMT during each phase of an ambulance run, patient assessment, emergency medical conditions, appropriate emergency care, and appropriate procedures for transporting patient. (8 sch: 5-hr lecture, 4-hr lab, 3-hr clinical)(135 clock hr – lecture and lab; 48 clock hr – clinical and field)

EMT 1122  Fundamental of Pre-hospital Care
This course introduces the student to the EMS systems, roles and responsibilities of the paramedic, well-being of the paramedic, illness and injury prevention, medical/legal issues, ethical issues, therapeutic communications, and life span development. This course was formerly taught as Preparatory (EMT 1122). (2 sch: 1 hr. lecture, 2 hr. lab)

EMT 1213  Pathophysiology
This course provides information on abnormal functions of illness and disease processes in the human body. This course may not be taught after July 1, 2005. (3 sch: 2 hr. lecture, 2 hr. lab)

EMT 1315  Airway Management and Ventilation
This course will provide the student with the essential knowledge to attain a airway and manage the respiratory system using advanced techniques. (5 sch: 2 hr. lecture, 6 hr. lab)

EMT 1415  Patient Assessment
This course will teach comprehensive history taking and physical exam techniques. (5 sch: 2 hr. lecture, 6 hr. lab)

EMT 1423  EMS Special Considerations
This course will provide a comprehensive overview of providing care for the patient with special needs. This course was taught as Special Considerations. (3 sch: 1 hr. lecture, 4 hr. lab)

EMT 1513  EMS Clinical Internship I
This course will provide clinical training on the skills and knowledge obtained in the classroom. This will be a supervised activity carried out in the clinical and field setting at approved sites. This course was formerly taught as Clinical Internship I (EMT 1513). (3 sch: 9 hr. clinical)

EMT 1523  EMS Clinical Internship II
This course will provide clinical training on the skills and knowledge obtained in classroom. This will be a supervised activity carried out in the clinical and field setting at approved site. This course was formerly taught as Clinical Internship II (EMT 1523). (3 sch: 9 hr. clinical)

EMT 1613  Pre-hospital Pharmacology
This course will teach comprehensive pharmodynamics and pharmacokinetics. This course was formerly taught as Pharmacology (EMT 1613). (3 sch: 1 hr. lecture, 4 hr. lab)

EMT 1825  Pre-hospital Cardiology
This class will teach a comprehensive approach to the care of patients with acute and complex cardiovascular compromise. This course is a combination of the courses formerly taught as Acute Cardiology (EMT 1814) and Advanced Cardiology (EMT 2824). (5 sch: 2 hr. lecture, 6 hr. lab)

EMT 2412  Pre-hospital OB/GYN
This course will provide a detailed understanding of the anatomic structures, physiology, and pathophysiology encountered when providing care in gynecological and obstetrical emergencies.
The course called Maternal/Child Emergencies (EMT 1435) was divided into Pre-hospital OB/GYN (EMT2412) and Pre-hospital Pediatrics (EMT 2423). (2 sch: 1 hr. lecture, 2 hr. lab)

**EMT 2423 Pre-hospital Pediatrics**
This course will provide a detailed understanding of the anatomic structures, physiology, and pathophysiology encountered when providing care in pediatric emergencies. The course called Maternal/Child Emergencies (EMT 1435) was divided into Pre-hospital OB/GYN (EMT 2412) and Pre-hospital Pediatrics (EMT 2423). (3 sch: 1 hr. lecture, 4 hr. lab)

**EMT 2552 EMS Field Internship I**
This course will provide clinical training in the skills and knowledge obtained in the classroom. These will be supervised activities carried out in the out-of-hospital field setting at approved sites with an approved preceptor. This course was formerly called Field Internship I. (2 sch: 6 hr. clinical)

**EMT 2564 EMS Field Internship II**
This course will provide advanced clinical training in the skills and knowledge obtained in the classroom with an emphasis on leadership skills. These will be supervised activities carried out in the out-of-hospital field setting at approved sites with an approved preceptor. (4 sch: 12 hr. clinical)

**EMT 2714 Pre-hospital Trauma**
This course will provide advanced instruction in the integration of pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for a suspected trauma patient. This course is a combination of the courses formerly taught as Trauma I (EMT 1714) and Trauma II (EMT 2724). (4 sch: 2 hr. lecture, 4 hr. lab)

**EMT 2855 Pre-hospital Medical Care**
This course will provide a detailed understanding of the anatomic structures, physiology, and pathophysiology encountered when providing care in medical emergencies involving pulmonary, allergy and anaphylaxis, gastroenterology, renal urology, and hematology. This course is a combination of the courses formerly taught as Medical Emergencies I (EMT 2834) and Medical Emergencies II (EMT 2845). (5 sch: 2 hr. lecture, 6 hr. lab)

**EMT 2923 Professional Development Seminar**
This course is incorporated into the alternate entry EMT-P program to provide the leadership qualities required of a paramedic to manage the EMS System and/or shift. (3 sch: 2 hr. lecture, 2 hr. lab)

**EMS 2913 EMS Team Management**
This course teaches the leadership skills necessary to manage complex situations including patient care, management of the hazardous and crime scene, supervision, mentoring, and leading other personnel. (3 sch: 1 hr. lecture, 4 hr. lab)

**EVT 1114 Environmental Science**
Basic course covering air, water, and soil resources, ecosystems, energy, pollution, and how pollution affects the local and global environment. (4 sch: 3 hr. lecture, 2 hr. lab)
EVT 1215  **Fundamentals of Hazardous Materials**  
Basic components of hazardous materials and wastes (HMW); regulations and regulatory agencies; determination and classification of HMW; and handling, storing, monitoring, and disposal of HMW. (5 sch: 4 hr. lecture, 2 hr. lab)

**EVT 1314  Wastewater Treatment Operations**  
Safe and effective operation and maintenance of municipal and industrial wastewater treatment plants. Preparation for the wastewater certification exam administered by the Mississippi Department of Environmental Quality. (4 sch: 3 hr. lecture, 2 hr. lab)

**EVT 1414  Fundamentals of Air Quality**  
Air pollution and its effects on society and the environment with specific emphasis on sources of air pollution, control systems, pollution dynamics, air quality analysis, and regulatory compliance. **This course was formerly titled Air Quality.** (4 sch: 3 hr. lecture, 2 hr. lab)

**EVT 1514  Water Treatment Operations**  
Safe and effective operation and maintenance of drinking water systems and treatment plants. Preparation for the water certification exam administered by the Mississippi State Department of Health. (4 sch: 3 hr. lecture, 2 hr. lab)

**EVT 2124  Environmental Engineering Technology**  
Advanced course which utilizes the “systems approach” to environmental problem solving in areas such as hydrology, water quality management, noise pollution, and ionizing radiation. In-depth coverage with emphasis on the mathematical and chemical principles involved. (4 sch: 3 hr. lecture, 2 hr. lab)

**EVT 2224  Hazardous Materials Regulations**  
Environmental regulations in Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA), and Department of Transportation (DOT), as they relate to the storing, handling, and disposal of hazardous materials and wastes. Students will identify, interpret, and apply the regulations. (4 sch: 3 hr. lecture, 2 hr. lab)

**EVT 2234  Environmental Earth Science**  
This course examines geological history, soils, fresh and salt waters, the atmosphere, and natural disasters. The student will examine the compositions of soils, sands, waters, and vapors. The student will then analyze the study of impacts caused by civilization and determine methods to improve and/or correct contaminations. **This course was formerly titled Environmental Geology.** (4 sch: 3 hr. lecture, 2 hr. lab)

**EVT 2614  Solid Waste Management**  
Principles of solid waste collection and disposal including recycling and other environmental management issues. (4 sch: 3 hr. lecture, 2 hr. lab)

**EVT 2714  Environmental Safety**  
Health and safety issues, risk assessment, control strategies, and implementation with hazardous materials. Students will develop a site-specific health and safety plan and learn to properly use personal protective equipment. (4 sch: 3 hr. lecture, 2 hr. lab)
EVT 291(1-3) Special Problem in Environmental Technology
A course to provide students with an opportunity to utilize skills and knowledge gained in other Environmental Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-3 sch: 2-6 hr. lab)

EVT 292(1-6) Supervised Work Experience in Environmental 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. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours. (1-6 sch: 3-18 hr. externship)

FMT 1113 Fashion Design Fundamentals
Examines factors influencing fashion color, line, and design. Includes applications of principles of art to clothing creation and selection. (3 sch: 2-hr lecture, 2-hr lab)

FMT 1213 Fashion Marketing
An introduction to the fashion industry including fashion terminology; nature of fashion; and the creating, manufacturing, and marketing of fashion. (3 sch: 2-hr lecture, 2-hr lab)

FMT 1223 Product Knowledge
Study of the buying and selling function with emphasis on the origin and composition of products, methods of production, quality indicators, the sale of merchandise, and the care of merchandise. (3 sch: 2-hr lecture, 2-hr lab)

FMT 1233 Buying
Study of the functions of the buyer within the retail operation including logical sequences for activities and information necessary for buying merchandise. (3 sch: 2-hr lecture, 2-hr lab)

FMT 1313 Textiles in Fashion
Examination of fibers, yarns, fabric construction, finishes, and design as applied to the selection of clothing and household fabrics. (3 sch: 2-hr lecture, 2-hr lab)

FMT 2414 Visual Merchandising
Application of fundamental principles of design, perspective, and color theory to advanced projects in merchandise presentation. (4 sch: 2-hr lecture, 4-hr lab)

FMT 2513 Image and Wardrobe Consulting
Assessing and developing an appropriate client image for individuals in a variety of occupations and careers. Emphasis on solving figure problems, makeup techniques, wardrobe coordination, and use of modeling techniques to improve image. (3 sch: 1-hr lecture, 4-hr lab)

FMT 2613 Fashion Sales Direction
Principles and application of retail sales promotion with emphasis on in store activities, advertising, publicity, fashion shows, and other special events (3 sch: 1-hr lecture, 4-hr lab)

FMT 2913, FMT 2923, or FMT 2936 Internship in Fashion Marketing Technology
Direct application of concepts, terminology, and theory of fashion marketing. Students must be employed in a work environment where they must solve problems as encountered in industry. (Credit is awarded at the rate of 1 sch per 3 hr. externship.) (3-6 sch: 9- to 18-hr externship)
FOT 1114  Forest Mensuration I
A course covering fundamentals of forest measurements. Includes instruction in locating land on a map, applying sampling techniques, and processing and summarizing field data. (4 sch: 2 hr. lecture, 4 hr. lab) (Formerly Forest Mensuration I)

FOT 1124  Forest Mensuration II
A continuation of Forest Mensuration I with emphasis on electronic and computer applications in forest measurement. (4 sch: 2 hr. lecture, 4 hr. lab) (Formerly Forest Mensuration II)

FOT 1314  Forest Protection
A course in methods and techniques for protecting forests from fire, insect, and disease damage. Includes instruction in prescribed burning procedures. (4 sch: 2 hr. lecture, 4 hr. lab)

FOT 1414  Forest Products Utilization
A survey of wood and forest products processing. Includes instruction in principles related to forest products processing and their applications. (4 sch: 2 hr. lecture, 4 hr. lab)

FOT 1714  Applied Dendrology
A study of trees including their classification and commercial uses. (4 sch: 2 hr. lecture, 4 hr. lab)

FOT 1813  Introduction to Forestry
A study of the development of the forest industry in Mississippi and the United States. An exploration of occupational careers in forestry including forest products industries. Includes common terms used in forest occupations. (Previously taught as Survey of Forestry) (3 sch: 3 hr. lecture)

FOT 2124  Forest Surveying and Spatial Applications
A course to provide land surveying skills required in the forest industry. Includes instruction in interpreting legal descriptions, deeds, maps, and spatial imagery. Includes demonstration of surveying practices and spatial imagery practices and equipment. (4 sch: 2 hr. lecture, 4 hr. lab) (Formerly Forest Surveying)

FOT 2214  Advanced GPS/GIS in Forestry
A course that includes use of remote sensing imagery and geographic information systems software in forest operations. (4 sch: 2 hr. lecture, 4 hr. lab) (Formerly Applications of GIS/GPS in Forestry)

FOT 2424  Timber Harvesting
A course dealing with harvesting practices including development of timber harvesting, regulations, harvesting plans, best management practices, and timber contracts (legal terminology). Includes observations of logging operations. (4 sch: 1 hr. lecture, 6 hr. lab)

FOT 2614  Silviculture I
A course dealing with the growth and development of trees and stands. Includes instruction in principles of tree and stand growth and development, regeneration, and intermediate cuttings. (4 sch: 2 hr. lecture, 4 hr. lab)

FOT 2624  Silviculture II
A continuation of Silviculture I with emphasis on regeneration and site preparation practices. (4 sch: 2 hr. lecture; 4 hr. lab)
FOT 291(1-3) Special Problem in Forestry Technology
A course designed to provide the student with practical application of skills and knowledge gained in other Forest Technology courses. The instructor works closely with the student to insure that the selection of a project will enhance the student’s learning experience. (1-3 sch: 2-6 hr. lab)

FOT 292(1-6) Supervised Work Experience in Forestry Technology
A course which is a cooperative program involving students, employers, and educational staff and is designed to integrate the student’s technical studies with real world situations. Variable credit is awarded on the basis of one semester hour per 45 contact hours. (1-6 sch: 3-18 hr. externship)

FOT 294(1-6) Special Problem in Conservation Law
A course designed to provide the student with practical application of skills and knowledge gained in other Conservation Law courses. The instructor works closely with the student to insure that the selection of a project will enhance the student’s learning experience. (1-6 sch: 2-6 hr. lab)

FPV 1113 Fundamentals of Operational Procedures in Food Service
Operational procedures for food service personnel with emphasis on using math skills for standard weights and measures, portion control, converting recipes, production formulas, and utilizing manual and computerized applications. (3 sch: 2 hr. lecture, 2 hr. lab)

FPV 1123 Management Procedures and Recordkeeping
A continuation of Fundamentals of Operational Procedures in Food Service. Essentials in food service recordkeeping and managerial math. (3 sch: 2 hr. lecture, 2 hr. lab)

FPV 1213 Food Service Sanitation
Instruction in the area of sanitation to aid in the prevention of food poisoning and foodborne diseases including the Hazard Analysis Critical Control Point (HACCP) system. (3 sch: 2 hr. lecture, 2 hr. lab)

FPV 1315 Culinary Arts I
Study of principles, techniques, and practices of food preparation and their effects on food products with emphasis on the performance of culinary techniques, use of equipment, and quality controls in preparing and serving meals. (5 sch: 2 hr. lecture, 6 hr. lab)

FPV 1326 Culinary Arts II
A continuation of the study of principles, techniques, and practices of food preparation and their effects on food products with emphasis on the performance of culinary techniques, use of equipment, and quality controls in preparing and serving meals. (6 sch: 2 hr. lecture, 8 hr. lab)

FPV 1413 Front of the House
Management of the front of the house in order to fulfill the needs of the guest and the establishment. Emphasis is placed on the types and styles of dining service merchandising, customer service, and employee training techniques. (3 sch: 2 hr. lecture, 2 hr. lab)

FPV 2223 Purchasing and Storage
An introduction to selection and procurement of food and non-food materials in hospitality and related industries. (3 sch: 2 hr. lecture, 2 hr. lab)
FPV 2336  Bakery Production and Management
Skills needed for baking and bakery merchandising. Emphasis is placed on preparation, advertising, marketing, garnishing, costing, and plating baked products. (6 sch: 2 hr. lecture, 8 hr. lab)

FPV 2515  Catering Management
An overview of the background of catering and banquet management. Offers options in catering styles, pricing, menu design, operational controls, computerized management programs, and marketing. (5 sch: 2 hr. lecture, 6 hr. lab)

FPV 2613  Menu Planning and Cost Control
A study of the principles of menu management and cost control with emphasis on foodservice operation and marketing design, nutritional adequacy, trends, cost analysis, and profit as they relate to menu design. (3 sch: 2 hr. lecture, 2 hr. lab)

FPV 2713  Nutrition
A study of nutrients as related to personal health, foods and food preparation, recipe or menu modification for special customer needs, and merchandising techniques associated with nutritious meals. (3 sch: 1 hr. lecture, 4 hr. lab)

FPV 2813  Food Service Management
Management duties such as recruiting, interviewing, hiring, scheduling, job evaluations, employee orientation and training, payrolls, and rating employee performance. This course will explore the process by which the manager can enable his or her employees to function efficiently and effectively. These processes will include incentive and benefit programs, discipline, and termination. (3 sch: 2 hr. lecture, 2 hr. lab)

FPV 291(1-3)  Supervised Work Experience in Food Production and Management Technology I
A course that 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. (1-3 sch: 3-9 hr. externship)

FPV 292(1-3)  Supervised Work Experience in Food Production and Management Technology II
This course is a continuation of Supervised Work Experience in Food Production and Management Technology I. It 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. (1-3 sch: 3-9 hr. externship)

FST 1113  Mortuary Anatomy
This course focuses on the study of the human body with particular emphasis on those systems providing the foundation for embalming, pathology, public health, and restorative arts. (3 sch: 3-hr lecture)

FST 1123  Mortuary Anatomy II
This course is a continuation of Mortuary Anatomy I, including all remaining body systems. Major emphasis is on circulatory system. (3 sch: 3 hr. lecture)

FST 1214  Embalming I
This course is a basic orientation to embalming. Included are the terminology, safety procedures, and ethical protocols in preparation of human remains, physical and chemical
changes in the dying process, and a study of the chemical compositions of embalming fluid. (4 sch: 3 hr. lecture, 2 hr. lab)

**FST 1225 Embalming II**
This course is a continuation of FST 1214 with emphasis placed on the principles and techniques of embalming. Topics covered include linear and anatomical guides, case analyses, handling special case problems, formulating chemical solutions, a complete analysis of the circulatory system, an explanation of the equipment used in the embalming process, and methods of injection and drainage. (5 sch: 3-hr lecture, 2-hr lab, 3-hr clinical).

**FST 1231 Clinical Embalming I**
Practically apply the theoretical principles taught in the Funeral Service Technology curriculum in the funeral establishment/commercial mortuary. (1 sch: 3-hr clinical)

**FST 1241 Clinical Embalming II**
Practically apply the theoretical principles taught in the embalming curriculum. (1 sch: 3-hr clinical)

**FST 1313 Funeral Directing**
This course is a study of the total funeral service environment, including history, duties, responsibilities, ethical obligations, and communication skills. (3 sch: 3-hr. lecture)

**FST 1413 Funeral Service Ethics and Law**
Comprehensive review of the ethical and legal aspects involved in funeral service. (3 sch: 3-hr. lecture)

**FST 1523 Restorative Art**
An in-depth study of anatomical modeling, including familiarization with instruments, materials, and techniques of rebuilding human features, this course focuses on the study of color theory and application of restorative techniques in the funeral setting, which includes cosmetics and hair treatment. (3 sch: 2-hr lecture, 2-hr lab)

**FST 2251 Clinical Embalming III**
Practically apply the theoretical principles taught in Funeral Service Technology curriculum in the funeral establishment/commercial mortuary. (1 sch: 3-hr clinical)

**FST 2261 Clinical Embalming IV**
Practically apply the theoretical principles taught in the Funeral Service Technology curriculum in the funeral establishment/commercial mortuary. (1 sch: 3-hr clinical)

**FST 2273 Thanatochemistry**
A course is a survey of the principles of general, organic, biological, and embalming chemistry as they relate to the embalming process. (3 sch: 3-hr lecture)

**FST 2323 Funeral Merchandising and Management**
This course is a study of merchandising and management procedures necessary to operate a successful funeral practice. (3 sch: 3-hr lecture)

**FST 2423 Business Law**
This course is designed to introduce the student to the bodies of law and the judicial system as applied to day-to-day operations of a funeral home. (3 sch: 3-hr lecture)
FST 2623 Microbiology
This course is designed to present the basic principles of microbiology and prevention of the spread of microorganisms as related to the embalming procedure and protection of the public health. (3 sch: 3 hr. lecture).

FST 2633 Pathology
This course focuses on the study of pathological disease conditions and how they affect various parts of the body, with particular emphasis on those conditions that relate to or affect the embalming or restorative art process. (3 sch: 3-hr lecture)

FST 2713 Psychosocial Aspects of Grief and Death
A study of various social groups and their relationships to the funeral, death, and disposition, this course includes psychological aspects of emotions with emphasis on counseling techniques and grief resolution. (3 sch: 3-hr lecture)

FST 2811 Comprehensive Review
This course offers a review of the entire curriculum, culminating with an exam designed to prepare students for the National Board or various State Board examinations. (1 sch: 1 hr. lecture).

GER 100(3-6); GER 1013; GER 1023 Introduction to Gerontology Technology, Introduction to Gerontology Technology I, or Introduction to Gerontology Technology II
These courses contain the baseline competencies and suggested objectives from the high school curriculum which directly relate to the community college program. The courses are designed for students entering the community college who have had no previous training or documented experience in the field. (3-6 semester hours based upon existing skills for each student, may be divided into 2 courses for a maximum total of 6 hours of institutional credit.)

GER 1113 Social Gerontology
This course is an introduction to the field of aging. It includes the scope of Social Gerontology, the demography of aging, an overview of the history of aging in America, basic aspects of individual aging, aging in everyday life, aging and the societal relationship, and aging in the future. (3 sch: 3 hr. lecture)

GER 1223 Human Services for the Elderly
This course provides the student with in-depth knowledge of community resources for older adults. The delivery and use of community resources will be explored along with issues of confidentiality, values, and ethics. (3 sch: 3 hr. lecture)

GER 1323 Social Work with the Elderly
This course provides a basic framework for entry-level practice with older adults. The Stages of the General Method as related to older adults will be presented and applied. The course will also examine issues of professional values, ethics, and human diversity. (3 sch: 1 hr. lecture, 4 hr. lab)

GER 2131 Seminar I
Seminar I is a forum for Gerontology students to explore ideas and experiences related to the Gerontology Practicum. The course allows students to develop skills in critical thinking, problem solving, reading and locating information, and the analysis of information. Students will be encouraged to use written and oral communication skills through research and the exploration of current issues related to practice and the field of aging. (1 sch: 1 hr. lecture)
**GER 2141 Seminar II**
Continuation of Seminar I with emphasis on research assignments referencing AGHE publications. (1 sch: 2 hr. lab)

**GER 2233 Practicum I**
This practicum will permit gerontology students to apply learned concepts and to gain experience in a professional setting with actual client/worker interaction. (3 sch: 9 hr. clinical)

**GER 2243 Practicum II**
This is a continuation of Practicum I with emphasis on data collection, assessment, and intervention (3 sch: 9 hr. clinical)

**GER 2433 Social Policy and Aging**
This course offers the student an overview of aging social policy issues and the major programs impacting the older adults in America. This course includes the policy process, aging policy development, social support programs on behalf of older adults, the legislative process, and the future of aging social policy. (3 sch: 3 hr. lecture)

**GER 2536 Activities Programming for the Elderly I**
This course will provide the student with a practical and theoretical framework from which to develop and manage a comprehensive program of activities for older adults. This is the first half of the Modular Education Program for Activity Professionals, Part I as described by the National Certification Council for Activity Professionals. This course will provide an overview of the activity profession and an exploration of human development in the later years. (6 sch: 4 hr. lecture, 4 hr. lab)

**GER 2546 Activities Programming for the Elderly II**
This course will provide the student with a practical and theoretical framework from which to develop and manage a comprehensive program of activities for older adults. This is the second half of the Modular Education Program for Activity Professionals, Part I as described by the National Certification Council for Activity Professionals. Included in this course are the standards of practice, practitioner’s behavior, activity care planning for a quality of life, and methods of service delivery in the activity profession. (6 sch: 4 hr. lecture, 4 hr. lab)

**GER 2643 Aging and Mental Health**
This course is an overview of aging and the mental health issues related to older adults. Psychosocial theories will be explored as well as common emotional problems, common psychiatric and cognitive problems experienced by older adults. The course will explore issues related to suicide, death, dying and bereavement. The course will conclude with units exploring the mental health assessment and intervention processes for older adults. (3 sch: 3 hr. lecture)

**GER 2743 Aging and Physical Health**
This course provides the student with an understanding of the interactive nature of biological and psychosocial processes that occur in aging. Basic instructions of the body systems, age changes in each system, common diseases, and the social and emotional ramifications related to the aging process. Basic information on decline in functioning as well as preventive, wellness, and nutritional issues will be addressed. (3 sch: 3 hr. lecture)
GIT 1253  Cartography and Computer Map Reading
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. (3 sch: 2 hrs. lecture, 2 hrs. lab)

GIT 2113  Database Construction and Maintenance
A course designed to introduce database concepts and goals of database management systems, and relational, hierarchical, and network models of data. Methods for organizing data are introduced and discussed. (3 sch: 2 hr. lecture, 2 hr. lab)

GIT 2123  Fundamentals of Geographical Information Systems (GIS)
This course includes the use of computer mapping and databases in multiple applications. Included are incorporation of imagery and data into a graphical oriented database system. Also included are the fundamentals of geographical information systems techniques, approaches, and applications. (3 sch: 2 hr. lecture, 2 hr. lab)

GIT 2133  Principles of Image Processing
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. (3 sch: 2 hr. lecture, 2 hr. lab)

GIT 2263  Advanced Geographical Information Systems
This is an integrated course that encompasses geographical data inputs, processing, analyses, and presentation. (3 sch: 1 hr. lecture, 4 hr. lab)

GIT 2273  Remote Sensing
This course includes a discussion of a variety of remote sensing data collections methods. The course deals with manual interpretation data from photographs and other imagery. (3 sch: 1 hr. lecture, 4 hr. lab)

GIT 2423  Mapping and Topography for GIS
Selected drafting techniques are applied to the problem of making maps, traverses, plot plans, plan drawings, and profile drawings using maps, field survey data, aerial photographs, and related references and materials including symbols, notations, and other applicable standardized materials. (3 sch: 2 hr. lecture, 2 hr. lab)

GIT 291(1-3)  Special Problem in Geographical Information Systems Technology
A course to provide students with an opportunity to utilize skills and knowledge gained in other Geographical Information Systems courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-3 sch: 2-6 hr. lab)

GIT 292(1-6)  Supervised Work Experience in Geographical Information Systems Technology
A course to provide students with an opportunity to utilize skills and knowledge gained in other Geographical Information Systems courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-3 sch: 2-6 hr. lab)
GPV 1212  Overview of Graphics and Print Communications  
This course is an overview of the graphic arts. Students will study the major historical events and copyright restrictions. An overview of the general safety practices, measurements, and printing processes is included. (2 sch: 1 hr. lecture, 2 hr. lab)

GPV 1314  Pasteup and Layout  
This course includes production techniques for preparing copy for reproduction. (4 sch: 2 hr. lecture, 4 hr. lab)

GPV 1414  Graphic Design I  
This course is an introduction to graphic design. Students will compare conventional typesetting with desktop publishing systems. This course includes the editing and layout of jobs, basic computer terminology, installation and use of software, proofreading and markup for correction, and the study of type sizes, styles, leading, and line length. (4 sch: 2 hr. lecture, 4 hr. lab)

GPV 1424  Graphic Design II  
This course is advanced graphic design. Basic skills learned in Graphic Design I will be used to create more complex layouts with closer tolerances and broader use of colors. (4 sch: 2 hr. lecture, 4 hr. lab)

GPV 1712  Press Operations I  
This course is an introduction to printing operations with emphasis on safety practices, fundamental setup and operational procedures. (2 sch: 1-hr lecture, 2-hr lab)
Prerequisite: None

GPV 1723  Press Operations II  
This course is a continuation of Press Operations I with emphasis on 2-color printing operations, maintenance and troubleshooting, and new trends and technologies in printing. (3 sch: 2 hr. lecture, 2 hr. lab)

GPV 1733  Press Operations III  
This course is a continuation of GPV 1712 and GPV 1723 with emphasis on multi-color printing. (3 sch: 6 hr. lab)

GPV 1744  Digital Printing I  
This course will introduce the student to the digital printing process. Emphasis will be placed on the characteristics and special capabilities of digital printing equipment as well as its limitations.

GPV 1752  Digital Printing II  
A study of the xerographic process and its impact on the design and use of modern digital printing equipment. (2 sch: 1 hr. lecture, 2 hr. lab)

GPV 1814  Binding and Finishing Operations  
This course includes instruction and practice in binding and finishing techniques including folding, padding, drilling, and stitching. (4 sch: 2 hr. lecture, 4 hr. lab)

GPV 191(1-3)  Special Project in Graphics and Print Communications  
This course provides students with practical application of skills and knowledge related to a specific instructor-approved topic. Instructor and student work closely together in planning and conducting the project. (1-3 sch: 2-6 hr. lab)
GPV 192(1-3) Supervised Work Experience in Graphics and Print Communications
A supervised on-site work experience in which the student works under the supervision of industry and community college personnel. Competencies and objectives for this course are determined by a mutual agreement between the student, employer, and teacher. (1 3 sch: 3-9 hr. internship)

GTT 1614 Golf Course Equipment Operation and Maintenance
A course to provide instruction and practice in the safe and proper operation and maintenance of golf course equipment. (4 sch: 2 hr. lecture, 4 hr. lab)

GTT 2313 Golf Course Business Management
A course to provide instruction and practice regarding the management of a golf course operation. Includes instruction in estimating and bidding; personnel management and supervision; and business practices. (3 sch: 3 hr. lecture)

GTT 2813 Turfgrass Management for Golf Courses
A course to provide instruction and practice in the identification, selection, installation, and management/maintenance of turfgrass for golf courses. (3 sch: 2 hr. lecture, 2 hr. lab)

GTT 2824 Irrigation Systems: Design and Maintenance
A course designed to investigate the types of irrigation systems. Discussion will include the installation and maintenance of these systems. (4 sch: 2 hr. lecture, 4 hr. lab)

HCA 1115 Basic Health Care Assisting
This course includes orientation to program policies, developing employability and job-seeking skills, applying legal aspects of health care, applying safety considerations, communication and observation skills, medical terminology, and basic health care procedures. (5 sch: 2 hr. lecture, 4 hr. lab, 3 hr. clinical)

HCA 1125 Special Care Procedures
This course includes specialized procedures for admitting, transferring, and discharging clients; assisting with diagnostic procedures; assisting with treatments; assisting with elimination needs of clients; assisting in meeting hydration and nutritional needs of the client; basic emergency procedures to include CPR/first aid; and basic knowledge and skills required to care for the long-term care resident. Safety is emphasized throughout each procedure. (5 sch: 2 hr. lecture, 2 hr. lab, 6 hr. clinical)

HCA 1214 Body Structure and Function
This course includes study of the structure, function, common disorders, and normal aging-related changes of the integumentary, musculoskeletal, nervous, circulatory, respiratory, digestive, urinary, reproductive, endocrine, and sensory systems; stages of human growth and development; and nutritional needs through the life cycle. (4 sch: 3 hr. lecture, 2 hr. lab)

HCA 1312 Home Health Aide and Homemaker Services
This course includes basic knowledge and skills required to care for the homebound client; and basic knowledge and skills required to provide homemaker services. (2 sch: 1-hr. lecture, 2-hr. lab)
HIT 1114  Health Record Systems
This course is an introduction to health record systems including an overview of health data structure, content and standards, health-care information requirements and standards, and health-care delivery systems. (4 sch: 3-hr lecture, 2-hr lab)

HIT 1213  Medical Terminology
This course is a study of medical language relating to the various body systems including diseases, procedures, clinical specialties, and abbreviations. In addition to term definitions, emphasis is placed on correct spelling and pronunciation. (3 sch: 3 hr. lecture)

HIT 1323  Health Care Law and Ethics
This course is a study of the principles of law as applied to health information systems with emphasis on health records, release of information, confidentiality, consents, and authorizations. (3 sch: 3-hr. lecture)

HIT 1413  Pathophysiology I
This course covers structural and functional changes caused by disease in tissues and organs, clinical manifestations, and principles of treatment with emphasis on general concepts and diseases affecting the body as a whole. (3 sch: 3-hr. lecture)

HIT 2123  Alternate Care Systems
This course is a study of health record systems in alternative settings; cancer program records; medical staff organization; and regulatory, accreditation and licensure standards. (3 sch: 2-hr lecture, 2-hr. lab)

HIT 2133  Health Statistics
This course includes sources and use of health data, definitions of statistical terms, and computation of commonly used rates and percentages used by health care facilities. (3 sch: 3-hr. lecture)

HIT 2212  Pharmacology
This course is designed to develop understanding of pharmacy therapy available for clinical management of patient care. (2 sch: 2-hr lecture)

HIT 2423  Pathophysiology II
This course is a continuation of Pathophysiology I with emphasis on conditions relating to specific body systems, manifestations, and principles of treatment. (3 sch: 3-hr. lecture)

HIT 2513  Professional Practice Experience I
In this course, students rotate through health information management areas in hospitals and other health facilities for application of principles and procedural practice to attain competency. Specific content is dependent on placement in curriculum and site availability. (3 sch: 9 hr-clinical)

HIT 2523  Professional Practice Experience II
In this course, students rotate through health information management areas in hospitals and other health facilities for application of principles and procedural practice to attain competency. Specific content is dependent on placement in curriculum and site availability. (3 sch: 9 hr-clinical)
**HIT 2615  Coding Systems I**
This course includes principles of coding and classification systems with emphasis on ICD-9-CM including lab applications and practice. (5 sch: 3-hr lecture, 4-hr lab)

**HIT 2625  Coding Systems II**
This course is a continuation of the study of principles of ICD-9-CM coding; introduction to coding with the Health Care Financing Administration’s Common Procedural Coding System (HCPCS) with emphasis on Current Procedural Coding (CPT); and review of current reimbursement mechanisms. (5 sch: 3-hr. lecture, 4-hr lab)

**HIT 2633  Reimbursement Methodologies**
This course is design to identify the uses of coded data and health information in reimbursement and payment systems appropriate to all health-care settings and managed care. (3 sch: 3-hr lecture)

**HIT 2713  Health Care Supervision**
This course includes basic principles of management and supervision with emphasis on the health information setting. (3 sch: 3-hr lecture)

**HIT 2812  Performance Improvement Techniques**
This course covers principles of performance improvement techniques in health care facilities; trends in utilization and risk management; and the use of quality monitors in the health information department. (2 sch: 1-hr lecture, 2-hr lab)

**HIT 2913  Computers in Health Care**
This course is an overview of computer use in health-care facilities with an emphasis on applications for health information services, including the electronic health record. (3 sch: 2-hr lecture, 2-hr lab)

**HIT 2142  Electronic Health Records**
This course covers the aspects of electronic health records (EHR) in the health-care environment. In addition, it explores implementation of EHR in various health-care settings. (2 sch: 2-hr lecture)

**HLT 100(3-6), HLT 1013, HLT 1023  Introduction to Horticulture Cluster, Introduction to Horticulture Cluster I, or Introduction to Horticulture Cluster II**
These courses contain the baseline competencies and suggested objectives from the high school Agricultural and Environmental Science and Technology curriculum which directly relate to the community college Horticulture Cluster programs. The courses are designed for students entering the community college who have had no previous training or documented experience in the field. (3-6 semester hours based upon existing skills for each student. May be divided into 2 courses for a maximum total of 6 hours of institutional credit.)

**HLT 1113  Plant Materials I**
A survey of common ornamental plants used in landscaping including deciduous and evergreen trees, shrubs, vines, ground covers, and annuals and perennials, this course includes instruction in basic classification and identification procedures and in identifying characteristics, maintenance, and use of the plants in a horticulture setting. This course is designed to be offered in the fall semester. (4 sch: 1-hr lecture, 4 hr. lab)
**HLT 1123  Plant Materials II**
A continuation of Plant Materials I with emphasis on foliage and interior and flowering plants. This course is designed to be taught in the spring semester. (3 sch: 1-hr lecture, 4 hr. lab)

**HLT 1213  Applied Principles of Plant Propagation**
This course develops expertise and knowledge of plant propagation methods including seeding, separation, division, grafting, and layering. This course also includes an introduction to tissue culture methods. (3 sch: 1-hr lecture, 4 hr. lab).

**HLT 1222  Green Industry Seminar**
A course designed to provide an overview of current Green Industry events and job opportunities in the industry and specific landscape and horticulture related topics. (2 sch: 2-hr lecture) (Previously listed as HLT 1222 Horticulture Principles.)

**HLT 1313  Greenhouse and Nursery Production I**
A course which develops skills and expertise in the selection, equipping, and management of a greenhouse facility. Emphasis is placed on different media, supplies, and chemicals used in greenhouses and on the scheduling and production of greenhouse crops. (3 sch: 1-hr lecture, 4-hr lab)

**HLT 1411, HLT 1421, HLT 1431, HLT 1441  Leadership Management**
This course develops an awareness of interpersonal skills essential for job success. Topics include self-image, team building, leadership skills, time and stress management, and human resources management. (1 sch: 2-hr lab)

**HLT 1513  Landscape Design I**
An introduction to the concepts, principles, and elements of landscape design. This course includes instruction and practice in the use of drawing instruments and supplies and in conducting a site analysis. (3 sch: 1-hr lecture, 4-hr lab)

**HLT 1614  Landscape Equipment Operation and Maintenance**
This course aims to provide instruction and practice in the safe and proper operation and maintenance of landscape and turf equipment. (4 sch: 2-hr lecture, 4-hr lab)

**HLT 2113  Turfgrass Management**
A course to provide instruction and practice in the identification, selection, installation, and management/maintenance of turfgrass. (3 sch: 2-hr lecture, 2-hr lab)

**HLT 2124  Landscape Maintenance and Weed Control**
This course aims to provide instruction and practice in the maintenance of trees, shrubs, and other greenscape features. This course includes instruction in the use of herbicides and other weed control measures. (4 sch: 2-hr lecture, 4-hr lab)

**HLT 2133  Entomology**
This course provides instruction and practice in the identification and control of ornamental turf pests. This course includes instruction in pest identification, pesticide use and safety, and legal aspects of pest control. Entomology (HLT 2133) AND Plant Pathology (HLT 2143) may be taken in lieu of Ornamental and Turf Pest Management (HLT 2813). (3 sch: 2-hr lecture, 2hr lab)
**HLT 2143 Plant Pathology**
Provides instruction and practice in the identification and control of ornamental & turf diseases. This course includes instruction in pest identification, pesticide use and safety, and legal aspects of pest control. Entomology (HLT 2133) AND Plant Pathology (HLT 2143) may be taken in lieu of Ornamental and Turf Pest Management (HLT 2813). (3 sch: 2-hr lecture, 2-hr lab)

**HLT 2313 Landscape Business Management**
This course aims to provide instruction and practice regarding the management of a landscape operation. Includes instruction in estimating and bidding; personnel management, supervision, and development; and business practices. (3 sch: 3-hr lecture)

**HLT 2323 Greenhouse and Nursery Production II**
This course is a continuation of Greenhouse and Nursery Production I with emphasis on production practices associated with fertilization, pest control, environment control, and marketing. (3 sch: 1-hr lecture, 4-hr lab)

**HLT 2413 Floral Design**
A course to develop knowledge and skills associated with retail floristry, this course includes instruction in preparing arrangements with fresh and dried materials, seasonal pieces, funeral sprays, and the use of floral wire services. (3 sch: 1-hr lecture, 4-hr lab)

**HLT 2423 Advanced Floral Design**
A course designed to continue to build on techniques from Floral Design, this course will include instruction on developing business skills needed in every day and specialty design skills needed in every day and specialty designs used in the floral industry.

**HLT 2513 Garden Center Management**
A course to develop knowledge and skills associated with management of a retail garden center. This course includes instruction in basic principles of entrepreneurship as applied to garden centers, product display and advertising, and facilities. (3 sch: 2-hr lecture, 2hr lab)

**HLT 2523 Landscape Design II**
This course is a continuation of Landscape Design I with emphasis on planting design and preparation and presentation of landscape plans using computer-aided landscape software. (3 sch: 1-hr lecture, 4-hr lab)

**HLT 2713 Landscape Construction**
This course provides instruction and practice in the installation of a landscape plan to include site preparation, installation of site amenities, bed preparation and planting, and shrub and tree planting. (3 sch: 1-hr lecture, 4-hr lab)

**AQC/HLT 2724 Integrated Production Systems**
This course utilizes basic horticulture practices and aquaculture facilities to provide techniques and procedures to maintain a recirculating hydroponic system. (4 sch: 1-hr lecture, 6-hr lab)

**AQC/HLT 2734 Water Garden Design**
This course is a study of the design and construction of water gardens. (4 sch: 1-hr lecture, 6-hr lab.)
AQC/HLT 2744 Aquarium and Water Garden Production
This course includes basic production of the aquarium trade and water garden trade species. (4 sch: 1-hr lecture, 6-hr lab)

HLT 2813 Ornamental and Turf Pest Management
This course provides instruction and practice in the identification and control of ornamental turf pests and diseases. This course includes instruction in pest identification, pesticide use and safety, and legal aspects of pest control. (3 sch: 2-hr lecture, 2-hr lab)

HLT 2824 Irrigation and Lighting Systems
This course is designed to investigate the types of irrigation and lighting systems. Discussion will include the installation and maintenance of these systems. (4 sch: 2-hr lecture, 2-hr lab)

HLT 291(1-3) Special Problem in Horticulture Cluster
This course is designed to provide the student with practical application of skills and knowledge gained in other vocational-technical courses. The instructor works closely with the student to ensure that the selection of a project will enhance the student’s learning experience. (1-3 sch: 2- to 6-hr lab)

HLT 292(1-6) Supervised Work Experience in Horticulture Cluster
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 1 semester hour per 45 industrial contact hours. (1–6 sch: 3- to 18-hr externship)

HRT 1123 Introduction to the Hospitality and Tourism Industry
This course is designed as an introduction to the hospitality and tourism industry. The course includes discussions and industry observations to discover the opportunities, trends, problems, and organizations in the field. (3 sch: 3-hr lecture)

HRT 1213-4 Sanitation and Safety
Basic principles of microbiology, sanitation, and safety procedures for a foodservice operation. Implementation of sanitation procedures, cost control, and risk reduction standards in a hospitality operation are covered. ServSafe Sanitation Certification from the National Restaurant Association or equivalent is offered as a part of this course. (3-4 sch: 3- to 4-hr lec or 2-hr lecture, 2-hr lab or 3-hr lecture, 2-hr lab)

HRT 1223-4 Restaurant and Catering Operations
This course focuses on principles of organizing and managing food and beverage facilities and catering operations. (3–4 sch: 3- to 4-hr lecture or 2-hr lecture, 2-hr lab or 2-hr lecture, 4-hr lab)

HRT 1413 Rooms Division Management
This course offers an operational approach to rooms division management in the hospitality industry including front office management and housekeeping operations. (3 sch: 3-hr lecture or 2-hr lecture, 2-hr lab)

HRT 1511, HRT 1521, HRT 1531, HRT 1541, or 1552, 1562, or 1573, or HRT 1514 Hospitality Seminar
In this course, students will learn leadership and management skills necessary for success in hospitality and tourism management. (For HRT 1511, HRT 1521, HRT 1531, HRT 1541: 1 sch: 2-hr lab or 1 sch: 1-hr lecture; for HRT 1552 and HRT 1562: 2-hr lecture; for HRT 1573:3-hr lecture; and for HRT 1514: 4 sch: 2-hr lecture, 4-hr lab)
**HRT 1813 The Professional Tour Guide**
This course covers activities associated with organizing, booking, and conducting group tours. (3 sch: 3-hr lecture or 2-hr lecture, 2-hr lab)

**HRT 1823 The Travel Agency**
A detailed exploration of travel agency operation, this course includes physical structure, staffing needs, client needs, legal implications, interaction with travel and lodging, and accreditation. (3 sch: 3-hr lecture or 2-hr lecture, 2-hr lab)

**HRT 1833 Travel and Tourism Geography**
Location, currency, port of entry, and form of governments in various countries around the world are discussed. Exercises involve itinerary planning, knowledge of time zones, and familiarity with the countries’ natural, cultural, and entertainment attractions. (3 sch: 3-hr lecture or 2-hr lecture, 2-hr lab)

**HRT 2233 Food and Beverage Control**
This course focuses on principles and procedures involved in an effective food and beverage control system, including standards determination, the operating budget, cost-volume-profit analysis, income and cost control, menu pricing, labor cost control, and computer applications. (3 sch: 3-hr lecture or 2-hr lecture, 2-hr lab)

**HRT 2323 Hospitality Facilities Management and Design**
Design and manage the physical plant of a hotel or restaurant and work effectively with the engineering and maintenance department. (3 sch: 3-hr lecture or 2-hr lecture, 2-hr lab)

**HRT 2423 Hospitality Security Management & Law**
This course explains issues surrounding the need for individualized security programs, examines a variety of security equipment and procedures, and discusses internal security for food service and lodging operations. This course provides awareness of the rights and responsibilities that the law grants to or imposes upon a hotelier and consequences of failure to satisfy legal obligations. (3 sch: 3-hr lecture or 2-hr lecture, 2-hr lab)

**HRT 2613 Hospitality Supervision**
This course focuses on supervisory skills in leadership styles, communication skills, motivational techniques, employee training techniques, and evaluation methods. (3 sch: 3-hr lecture or 2-hr lecture, 2-hr lab)

**HRT 2623 Hospitality Human Resource Management**
This course is designed to explore the principles of hospitality human resource management with an emphasis placed on the study of human behavior and human relations in the hospitality industry. (3 sch: 3-hr lecture or 2-hr lecture, 2-hr lab)

**HRT 2713 Marketing Hospitality Services**
This course covers the application of marketing methodologies and terms to the hospitality and tourism industry, the use of sales techniques for selling to targeted markets, and developing marketing plans for hospitality and tourism operations. (3 sch: 3-hr lecture or 2-hr lecture, 2-hr lab)

**HRT 2843 Fundamentals of Travel and Tourism**
This course offers simulations of activities related to travel and tourism including reservation tasks and services. (3 sch: 3-hr lecture or 2-hr lecture, 2-hr lab)
HRT 2853  Convention and Meeting Planning
Planning, promotion, and management of meetings, conventions, expositions, and events. (3 sch: 3-hr. lecture or 2-hr lecture, 2-hr lab)

HRT 2863  Tourism Planning and Development
This course is designed to provide the knowledge to plan and implement the marketing and management of special events and tourism events. (3 sch: 3-hr lecture or 2-hr lecture, 2-hr lab)

HRT 291(3-6) Supervised Work Experience in Hotel and Restaurant Management
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. (1-6 sch: 3- to 18-hr externship)

HRT 292(3-6) Supervised Work Experience in Travel and Tourism
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. (1-6 sch: 3- to 18-hr externship)

HRT/CUT 1114-5 Culinary Principles I
Fundamentals of food preparation and cookery emphasizing high standards for preparation of meat, poultry, seafood, vegetables, soups, stocks, sauces, and farinaceous items. (4 sch: 2-hr lecture, 4-hr lab or 3-hr lecture, 4-hr lab)

IET1114 Fundamentals of Industrial Measurement I
A study of the concepts, principles and devices for the measurement of industrial pressure and level variables. The student will learn to apply the principles of process instruments and devices as applied to control and detection of pressure and level. The student will perform industrial pressure and level measurements. (4 sch: 2-hr lecture, 4-hr lab)

IET 1214 Fundamentals of Industrial Measurement II
A study of the concepts, principles and devices for the measurement of industrial temperature and flow variables. The student will apply the principles of process instruments and devices as applied to control and detection of temperature and flow. The student will perform industrial temperature and flow measurements. (4 sch: 2-hr lecture, 4-hr lab) Pre/Corequisite: Fundamentals of Industrial Measurement I (IET 1114) or by instructor consent

IET 1314 Industrial Controls I
A review of measurement theory and includes the principles of operation, connection, maintenance, testing, calibration, troubleshooting and repairing/replacing of pneumatic and electronic analog process controllers, signal transmitters, recorders, alarms and associated test equipment along with annunciator/shutdown systems and introduce the concepts of proportional, integral, and derivative control modes, loop tuning, and documentation. (4 sch: 2-hr lecture, 4-hr lab)

IET 2414 Industrial Controls II
A study of process controllers, implementing PID (Proportional, Integral, Derivative) feedback, cascade, ratio, feed forward and auto select/override and introduce other advanced control strategies; study techniques for loop tuning and calibrating process loop components including smart transmitters and field communicators. Loop documentation and drawings will also be used.
IET 2114 Final Control Elements
A study of the various designs of control valves including principles of operation, sizing, selection, servicing pneumatic and electric actuators, positioners, solenoid operated valves, self-contained regulators, louvers, dampers, metering pumps and required documentation. Includes instruction in basic techniques and calculations for proper liquid and gas valve sizing and introduces concepts of variable speed drives and frequency speed circuitry. (4 sch: 2-hr lecture, 4-hr lab) Pre/Corequisite: Industrial Controls I (IET 1314) or by instructor consent.

IET 2911-4 Special Project
Practical application of skills and knowledge gained in instrumentation and other technical courses. The instructor works closely with the student to ensure that the selection of a project will enhance the student’s learning experience. (1–4 sch: 2- to 8-hr lab) Prerequisite: Consent of Instructor.

IET 2921-6 Supervised Work Experience
This cooperative program between industry and education is designed to integrate the student’s technical studies with industrial experience. Variable credit is awarded on the basis of 1 semester hour per 45 industrial contact hours. (1–6 sch: 3- to 18-hr externship) Prerequisites: Consent of instructor and completion of at least one semester of advanced course work in electrical/electronics-related programs.

IMM 1112 Industrial Maintenance Safety
General safety practices, personal safety, electrical safety practices, and power equipment safety. (2 sch: 1 hr. lecture, 1 hr. lab) [May be taught as a 60 contact hour lab in open entry-open exit vocational programs.]

IMM 1122 Industrial Maintenance Math and Measurement
Mathematical and measurement procedures and instruments related to industrial maintenance. (2 sch: 1 hr. lecture, 2 hr. lab) [May be taught as a 60 contact hour lab in open entry-open exit vocational programs.]

IMM 1132 Industrial Maintenance Blueprint Reading
Blueprints, schematics, and plans used in industrial maintenance including instruction in nomenclature, different views, and symbols and notations. (2 sch: 1 hr. lecture, 2 hr. lab) [May be taught as a 60 contact hour lab in open entry-open exit vocational programs.]

IMM 1213 Industrial Hand Tools and Mechanical Components
Safe and proper use of hand tools and mechanical components commonly used by industrial maintenance mechanics and technicians. Includes instruction in the selection, use, and care of common hand tools and in the identification and maintenance of mechanical components such as belts and pulleys, chains and sprockets, and bearings and seals used to transmit mechanical power. (3 sch: 1 hr. lecture, 4 hr. lab) [May be taught as a 90 contact hour lab in open entry-open exit vocational programs.]

IMM 1224 Power Tool Applications
Safe and proper use of various hand and stationary power tools. Includes instruction in the use of hand power tools, bench grinders, threading machines, cut-off saws, and drill presses. (4 sch:
IMM 1235 Precision Machining Operations
Safe and proper use of various precision tools. Includes instruction in the use of drill presses, engine lathes, and milling machines. (5 sch: 2 hr. lecture, 6 hr. lab)

IMM 1314 Principles of Hydraulics and Pneumatics
Instruction in basic principles of hydraulics and pneumatics, and the inspection, maintenance, and repair of hydraulic and pneumatic systems. (4 sch: 1 hr. lecture, 6 hr. lab) [May be taught as a 90 contact hour lab in open entry-open exit vocational programs.]

IMM 1415 Pump and Valve Operations
Instruction on the different types of pumps and valves used in industry and their disassembly, inspection, and repair/replacement. (5 sch: 2 hr. lecture, 6 hr. lab) [May be taught as a 120 contact hour lab in open entry-open exit vocational programs.]

IMM 1515 Equipment Installation and Alignment
Instruction in preinstallation checks, assembly, location and layout of equipment, preparation of foundations and anchoring procedures, rigging and hoisting, and alignment and initial setup of equipment. (5 sch: 2 hr. lecture, 6 hr. lab) [May be taught as a 120 contact hour lab in open entry-open exit vocational programs.]

IMM 1524 Preventive Maintenance and Service of Equipment
Instruction in basic maintenance and troubleshooting techniques, use of technical manuals and test equipment, and inspection/evaluation/repair of equipment. (4 sch: 1 hr. lecture, 6 hr. lab) [May be taught as a 90 contact hour lab in open entry-open exit vocational programs.]

IMM 1615 Principles of Piping and Hydro-Testing
Instruction on basic principles of piping and pipe fitting, basic pipe fitting procedures, and basic hydro-testing of pipe systems. (5 sch: 2 hr. lecture, 6 hr. lab) [May be taught as a 150 contact hour lab in open entry-open exit vocational programs.]

IMM 1713 Methods of Layout
Layout and development of various sheet metal problems using the principles of parallel line and triangulation development. (3 sch: 6 hr. lab) [May be taught as a 90 contact hour lab in open entry-open exit vocational programs.]

IMM 1723 Structural Repair
Estimating and making repairs of wood, metal, and masonry structures. (3 sch: 6 hr. lab) [May be taught as a 90 contact hour lab in open entry-open exit vocational programs.]

IMM 1734 Maintenance Welding and Metals
Instruction in different metals and their properties, and in basic SMAW welding and oxy-fuel cutting and brazing. (4 sch: 1 hr. lecture, 6 hr. lab) [May be taught as a 120 contact hour lab in open entry-open exit vocational programs.]

IMM 1813 Industrial Electricity for Industrial Maintenance Mechanics
Instruction in terminology and basic principles of electricity, use of test equipment, safety practices for working around and with electricity, and basic electrical procedures. (3 sch: 1 hr.
lecture, 4 hr. lab) [May be taught as a 90 contact hour lab in open entry-open exit vocational programs.]
Pre/Corequisite: Fundamentals of Electricity (ELT 1192) or Industrial Maintenance Math and Measurement (IMM 1122) or approval by the instructor.

**IMM 1823 Advanced Industrial Electricity for Industrial Maintenance Mechanics**
Advanced skills and knowledge associated with electrical systems in an industrial setting. Content includes instruction in the National Electrical Code, electrical circuits, motors, and estimating expenses for a given project. (3 sch: 6 hr. lab) [May be taught as a 90 contact hour lab in open entry-open exit vocational programs.]

**IMM 191(1-3) Special Project in Industrial Maintenance Mechanics**
Practical applications of skills and knowledge gained in other Industrial Maintenance Mechanics courses. The instructor works closely with the student to insure that selection of a special project enhances the student's learning experiences. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours. (1-3 sch: 45-135 contact hours)

**IMM 192(1-6) Supervised Work Experience in Industrial Maintenance Mechanics**
A course which is a 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 one semester hour per 45 industrial contact hours. (1-6 sch: 3-18 hr. externship)

**IMM 1933 Manufacturing Skills**
Manufacturing Skills is the initial course designed to provide the student with the basic skills needed to be successful in a high-performance manufacturing environment. The course covers five major areas of knowledge that are considered critical for employment in a high-performance manufacturing company. The topics covered include: Basic Computer Literacy, Safety and CPR, Blueprint Reading, Precision Measurement, and an introduction to manufacturing improvement methods that covers Lean Manufacturing, Quick Changeover, 5S, Teamwork and Problem-solving. (3 sch: 3 hours lecture)
Prerequisite: Consent of instructor. Other pre/co requisites may be required by the local community college.

**IMM 2114 Equipment Maintenance, Troubleshooting and Repair**
Maintenance and troubleshooting techniques, use of technical manuals and test equipment, and inspection/evaluation/repair of equipment. (4 sch: 1 hr. lecture, 6 hr. lab)

**INT 1113 Fundamentals of Instrumentation**
This course provides students with a general knowledge of instrumentation principles. This course includes instruction in the basis of hydraulics and pneumatics and the use of electrical circuits in the instrumentation process. (3 sch: 2 hr. lecture, 2 hr. lab)
**INT 1214 Fluid Power**
This basic course provides instruction in hydraulics and pneumatics. The course covers actuators, accumulators, valves, pumps, motors, coolers, compression of air, control devices, and circuit diagrams. Emphasis is placed on the development of control circuits and troubleshooting techniques. (4 sch: 3 hr. lecture, 2 hr. lab)

**INT 2114 Control Systems I**
This is an introductory course to provide information on various instrumentation components and processes. Topics include analyzing pressure processes, temperatures, flow, and level. (4 sch: 3 hr. lecture, 2 hr. lab)

**INT 2124 Control Systems II**
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 and needed diagrams, utilizing various controlling processes and demonstrating loop troubleshooting techniques. (4 sch: 3 hr. lecture, 2 hr. lab.)

**INT 2214 Calibration and Measurement Principles**
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. (4 sch: 3 hr. lecture, 2 hr. lab)

**IRM 1112 Introduction to Irrigation**
The course introduces irrigation practices and technologies. Includes instruction in the history of irrigation, regions of water management, and the basic components of agricultural, large turf, golf, commercial, and residential irrigation systems. (2 sch: 2-hr lecture)

**IRM 1123 Residential Irrigation Design**
The course is designed to teach students the proper techniques for designing irrigation systems to achieve an effective and efficient irrigation system (3 sch: 2-hr lecture, 2-hr lab)

**IRM 1144 Irrigation Systems Installation I**
An introductory course on the installation of irrigation systems. Includes instruction in basic components, site inspections, blueprint interpretation, methods and procedures for installation, and lighting system installation. (4 sch: 2-hr lecture, 4-hr lab) (HLT 2824 may be taken in lieu of this course.)

**IRM 1223 Irrigation Troubleshooting and Repair**
A course designed to introduce students to basic fundamental and step processes to troubleshoot existing irrigation systems. (3 sch: 1-hr lecture, 4-hr lab)

**IRM 1243 Irrigation Systems Installation II**
A continuation of IRM 1144 with emphasis on irrigation auditing and contracting procedures such as system installation, site inspection, uniform efficiency measures, and calculation of base watering schedules for a specific site. (3 sch: 2-hr lecture, 2-hr lab)

**IRM 2233 Irrigation Pumps, Controls, and Relays**
A study of the basic function, operation, and maintenance of water pumps for irrigation systems. Includes instruction in determining pump size and providing backflow protection. (3 sch: 2-hr lecture, 2-hr lab)
IRM 2123  Green Industry Cost Estimating
A course designed to introduce budgeting and estimating fundamentals used in the landscape and irrigation industries. (3 sch: 2-hr lecture, 2-hr lab) (Also taught as HLT 2123, Green Industry Cost Estimating)

IRM 2312  Irrigation Auditing
A course to prepare students to take the Irrigation Association’s Certified Landscape Auditor examination. Includes instruction on site inspection, system inspection, and tune-up of irrigation systems, data collection, base water scheduling, and irrigation management practices. Students will perform an audit following approved practices. (2 sch: 1-hr lecture, 2-hr lab)

IRM 29(1-3)  Special Problem in Irrigation Management Technology
A course to provide students with an opportunity to utilize skills and knowledge gained in other Irrigation Management Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1–3 sch: 2- to 6-hr lab)

IRM 292(1-6)  Supervised Work Experience in Irrigation Management Technology
A course that is a 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 one semester hour per 45 industrial contact hours. (1–6 sch: 3- to 18-hr externship)

IST 1113  Fundamentals of Information Technology
This course introduces microcomputer operation, word processing, spreadsheets, database management, and online applications. It is designed for students with limited computer proficiency and is to be taken by those students in addition to the courses listed in the course sequence (3 sch: 2-hr lecture, 2-hr lab).

IST 1124  IT Foundations
This course covers the diagnosis, troubleshooting, and maintenance of computer components and interpersonal communications for IT professionals. Topics include hardware compatibility, system architecture, memory, input devices, video displays, disk drives, modems, printers, safety and environmental issues, communication, and professional behavior (4 sch: 2-hr lecture, 4-hr lab).

IST 1134  Fundamentals of Data Communications
This course presents basic concepts of telephony, local area networks, wide area networks, data transmission, and topology methods (4 sch: 2-hr lecture, 4-hr lab).

IST 1143  Security Principles and Policies
This course is an introduction to the various technical and administrative aspects of information security and assurance. This course provides the foundation for understanding the key issues associated with protecting information assets, determining the levels of protection and response to security incidents, and designing a consistent, reasonable information security system with appropriate intrusion detection and reporting features (3 sch: 2-hr lecture, 2-hr lab).

IST 1154  Web and Programming Concepts
This course is an introduction to Web site development and programming logic. Students will gain hands-on experience in the development of computer programs. Upon completion of this course, students will be able to create a Web site and post it on the Internet (4 sch: 2-hr lecture, 4-hr lab).
**IST 1163 Concepts of Database Design**
This course is an introduction to the design and manipulation of relational databases. Emphasis is placed on creation, manipulation, extraction, and display of data from existing databases. QBE and SQL are explored (3 sch: 2-hr lecture, 2-hr lab).

**IST 1213 Client Installation and Configuration**
This course is designed to help the student install, support, and troubleshoot a current client operating system. Emphasis will be placed on common user operations as well as the network administrator’s support of the client (3 sch: 2-hr lecture, 2-hr lab).

**IST 1223 Network Components**
This course presents local area network and wide area network connectivity. It focuses on architectures, topologies, protocols, and transport methods of a network (3 sch: 2-hr lecture, 2-hr lab).

**IST 1234 Network Administration Using Novell**
This course focuses on the management of a computer network using the Novell network operating system. Emphasis will be placed on daily administrative tasks performed by a network administrator (4 sch: 2-hr lecture, 4-hr lab).

**IST 1244 Network Administration Using Microsoft Windows Server**
This course focuses on the management of a computer network using the Microsoft Windows Server network operating system. Emphasis will be placed on daily administrative tasks performed by a network administrator (4 sch: 2-hr lecture, 4-hr lab).

**IST 1254 Network Administration Using Linux**
This course focuses on the management of a computer network using the Linux operating system. Emphasis is placed on installation, configuration, implementation, and administrative tasks of a functional server (4 sch: 2-hr lecture, 4-hr lab).

**IST 1314 Visual BASIC Programming Language**
This introduction to the Visual BASIC programming language introduces the student to object-oriented programming and a graphical integrated development environment (4 sch: 2-hr lecture, 4-hr lab).

**IST 1324 RPG Programming Language**
This course is designed to introduce the student to the RPG language for the creation of business applications (4 sch: 2-hr lecture, 4-hr lab).

**IST 1334 COBOL Programming Language**
This course is designed to introduce the student to the use of the COBOL language in business applications to include arithmetic operations, report editing, control break processing, and table processing techniques (4 sch: 2-hr lecture, 4-hr lab).

**IST 1414 Client-side Programming**
This course offers a comprehensive understanding of programming using JavaScript (4 sch: 2-hr lecture, 4-hr lab).
IST 1424 Web Design Applications
Application of various professional and personal Web design techniques. Students will work with the latest WYSIWYG editors, HTML editors, animation/multimedia products, and photo editors (4 sch: 2-hr lecture, 4-hr lab).

IST 1513 SQL Programming
This course is the first of a two-part series that offers students an extensive introduction to data server technology, covering the concepts of both relational and object relational databases and the Structured Query Language (SQL). Students are taught to store, retrieve, and manipulate data (3 sch: 2-hr lecture, 2-hr lab).

IST 1523 Advanced SQL Programming
This course is the second of a two-part series that offers students an extensive introduction to data server technology. Students are taught advanced concepts of both relational and object relational databases and the Structured Query Language (SQL). Students are taught to create and maintain database objects and control user access (3 sch: 2-hr lecture, 2-hr lab).

IST 1534 Database Architecture and Administration
This course is designed to give students a firm foundation in basic database tasks enabling them to design, create, and maintain a database. Students will gain a conceptual understanding of database architecture and how its components work and interact with one another. Students will also learn how to create an operational database and properly manage the various structures (4 sch: 3-hr lecture, 2-hr lab).

IST 1613 Computer Forensics
This course is an introduction to the various technical and administrative aspects of computer forensics and laws pertaining to cybercrime. This course provides the foundation for understanding the key issues associated with computer forensic investigations, understanding the boot processes and disk structure for multiple operating systems, and understanding the processes related to data acquisition during investigations (3 sch: 2-hr lecture, 2-hr lab).

IST 1624 Network Security Fundamentals
This course provides the fundamental understanding of network security principles, implementations, and the technologies and principles involved in creating a secure computer network environment. Topics include authentication, types of attacks and malicious code against Web applications, e-mail, and file and print services (4 sch: 2-hr lecture, 4-hr lab).

IST 1633 Wireless Security and Privacy
This course provides the fundamental understanding of wireless architecture, security principles, and the technologies and principles involved in creating a secure wireless computer network environment. Topics include wireless hardware, protocols, encryption, and how to prevent weaknesses in wireless technology (3 sch: 2-hr lecture, 2-hr lab).

IST 1643 Network Defense and Countermeasures
This course provides a solid foundation of network security and the understanding of the process to create a network defense and countermeasure policy obtained from intrusion detection. Topics include Network Address Translation, packet filtering, proxy servers, firewalls, and Virtual Private Networks used to design a network defense strategy (3 sch: 2-hr lecture, 2-hr lab).
**IST 1714  Java Programming Language**
This introduction to the Java Programming Language is to include sort, loops, arrays, and applets (4 sch: 2 hr. lecture, 4 hr. lab).

**IST 2213  Network Security**
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 (3 sch: 2-hr lecture, 2-hr lab).

**IST 2224  Network Planning and Design**
This course involves applying network concepts in planning and designing a functioning network. Emphasis is placed on recognizing the need for a network, conducting an analysis, and designing a solution (4 sch: 2-hr lecture, 4-hr lab).

**IST 2234  Network Implementation**
This course is the culmination of all concepts learned in the network curriculum. Topics include planning, installation, evaluation, and maintenance of a network solution (4 sch: 2-hr lecture, 4-hr lab).

**IST 2244  Advanced Network Administration Using Novell**
This course is a continuation of Network Administration Using Novell. Emphasis is placed on installation, configuration, and implementation of a Novell network (4 sch: 2-hr lecture, 4-hr lab).

**IST 2254  Advanced Network Administration Using Microsoft Windows Server**
This course is a continuation of Network Administration Using Microsoft Windows Server. Emphasis is placed on installation, configuration, and implementation of a functional server (4 sch: 2-hr lecture, 4-hr lab).

**IST 2264  Advanced Network Administration Using Linux**
This course is a continuation of Network Administration Using Linux. This is an advanced administration course in network services for Linux users who wish to increase their skills. Students will learn how to apply security to network users and resources, manage and compile the Linux kernel, manage network clients, and troubleshoot network processes and services (4 sch: 2-hr lecture, 4-hr lab).

**IST 2314  Systems Analysis and Design**
This course introduces techniques used in systems analysis and design. Emphasis will be placed on the design, development, and implementation of an information system (4 sch: 2-hr lecture, 4-hr lab).

**IST 2324  Script Programming Language**
This course is an introduction to the use of integrating scripts to add functionality to Web pages (4 sch: 2-hr lecture, 4-hr lab).

**IST 2334  Advanced Visual BASIC Programming Language**
This course is a continuation of the Visual BASIC programming language (4 sch: 2-hr lecture, 4-hr lab).
**IST 2344 Database Programming and Design**
This course will introduce programming using a database management software application. Emphasis will be placed on menus and file maintenance (4 sch: 2-hr lecture, 4-hr lab).

**IST 2354 Advanced RPG Programming Language**
This course is a continuation of the RPG programming language. Emphasis is placed on advanced table processing, file maintenance, and interactive programming (4 sch: 2-hr lecture, 4-hr lab).

**IST 2364 Advanced COBOL Programming Language**
This course is a continuation in the study of COBOL. Emphasis is placed on advanced table processing, file maintenance, and interactive programming (4 sch: 2-hr lecture, 4-hr lab).

**IST 2374 C Programming Language**
This course is designed to introduce the student to the C programming language and its basic functions (4 sch: 2-hr lecture, 4-hr lab).

**IST 2384 Advanced C Programming Language**
This course is a continuation of the study of the C programming language (4 sch: 2-hr lecture, 4-hr lab).

**IST 2424 XML Programming**
This course provides a comprehensive understanding of the Extensible Markup Language (XML) (4 sch: 2-hr lecture, 4-hr lab).

**IST 2434 Server-side Programming**
An introduction to creating dynamic Web applications using Server-side technologies (4 sch: 2-hr lecture, 4-hr lab)

**IST 2444 Server-side Programming II**
Continuation of Server-side Programming I with increased emphasis on data-driven content (4 sch: 2-hr lecture, 4-hr lab)

**IST 2473 E-commerce Strategies**
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 (3 sch: 2-hr lecture, 2-hr lab).

**IST 2483 Web Server**
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 (3 sch: 2-hr lecture, 2-hr lab).

**IST 2514 Advanced Database Architecture and Administration**
This course is a continuation of Database Architecture and Administration. It is designed to provide a firm foundation in basic database tasks enabling students to design, create, and maintain a database. Students will gain a conceptual understanding of database architecture and
how its components work and interact with one another. Students will also learn how to create an operational database and properly manage the various structures (4 sch: 3-hr lecture, 2-hr lab).

**IST 2524 Linux Operating Systems Fundamentals**  
In this course, students develop proficiency in using and customizing a Linux operating system for common command line processes and desktop productivity roles (4 sch: 2-hr lecture, 4-hr lab).

**IST 2534 IT Project Management**  
In this course, students develop proficiency in using and customizing a Linux operating system for common command line processes and desktop productivity roles (4 sch: 2-hr lecture, 4-hr lab).

**IST 2613 Windows Security**  
This course provides the knowledge and fundamental understanding of Windows security, how to harden current Windows operating systems, and how to defend against attacks. Topics include designing Active Directory, authentication for Windows, group security and policy, service security, remote access security, planning a public key infrastructure, securing file resources, Internet Protocol Security, and additional Windows security topics (3 sch: 2-hr lecture, 2-hr lab).

**IST 2623 Linux/Unix Security**  
This course provides the knowledge and fundamental understanding of Linux/Unix security, how to harden Linux/Unix, and how to defend against potential attacks against vulnerabilities and unused system services. Topics include how to protect password files, monitor log files, and use port scanners and network scanners, and additional Linux/Unix security topics (3 sch: 2-hr lecture, 2-hr lab).

**IST 2634 Security Testing and Implementation**  
This course provides an in-depth exploration of various methods for gaining unauthorized access and explores network security concepts from the point of view of hackers and their methodologies. Topics include hackers, crackers, ethical hackers, attacks, intrusion detection systems, malicious code, computer crime, and industrial espionage (4 sch: 2-hr lecture, 4-hr lab).

**IST 291(1-6) Supervised Work Experience in Information Systems Technology**  
This course is a 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 one semester hour per 45 industrial contact hours (1–6 sch: 3- to 18-hr externship).

**IST 292(1-3) Special Problem in Information Systems Technology**  
This course provides students with an opportunity to utilize skills and knowledge gained in other Information Systems Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project (1–3 sch: 2- to 6-hr lab).
LET 100(3-6), LET 1013, LET 1023 Introduction to Paralegal Technology, Introduction to Paralegal Technology I, or Introduction to Paralegal Technology II
These courses contain the baseline competencies and suggested objectives from the high school curriculum which directly relate to the community college program. The courses are designed for students entering the community college who have had no previous training or documented experience in the field. (3-6 semester hours based upon existing skills for each student, may be divided into 2 courses for a maximum total of 6 hours of institutional credit.)

LET 1113 Introduction to Law
This course provides an overview of major principles and functions of the state and federal legal systems, introduces various legal fields for professional opportunities, presents legal vocabulary, gives an overview of different areas of law, and presents ethics. (3 sch: 3 hr. lecture)

LET 1213 Legal Research
This course is an introduction to basic sources of law and the methods of legal research, including ethics. (3 sch: 2 hr. lecture, 2 hr. lab)

LET 1513 Family Law
This course is a study of the areas of law pertaining to domestic relations, emphasizing ethics. (3 sch: 3 hr. lecture)

LET 1523 Wills and Estates
This course is an introduction to the laws of inheritance and estates, basic concepts of estates and wills, probate procedures, and preparation of documents while emphasizing ethics. (3 sch: 3 hr. lecture)

LET 1713 Legal Writing
This course includes composition of legal communications, briefs, memoranda, and other legal documents with an emphasis on ethical considerations. (3 sch: 2 hr. lecture, 2 hr. lab)

LET 2313 Civil Litigation I
This course presents the litigation process. Emphasis is on the structure of the Mississippi Court System and on gathering information and evidence, summarizing and arranging materials, maintaining docket and file control, developing a litigation case, and interviewing clients and witnesses, using ethical standards. (3 sch: 3 hr. lecture)

LET 2323 Torts
This course provides instruction in the area of law which deals with civil wrongs and injuries as distinguished from breach of contract. It concentrates on the elements of a tort, type of tort, damages, ethics, and remedies. (3 sch: 3 hr. lecture)

LET 2333 Civil Litigation II
This course is designed to continue the study of the litigation process from discovery through appeal. Emphasis is placed on collecting and organizing discovery materials and demonstrating knowledge of the limits placed on discovery by the federal and states rules of civil procedure. The course also includes the trial and appeal phases of litigation, with emphasis on trial preparation and appellate procedure. (3 sch: 3-hr lecture)
Prerequisite: Civil Litigation I (LET 2313)
**LET 2353 Criminal Law and Procedure**
This course provides an overview of criminal law and the procedures involved in the criminal process. The course focuses on the Mississippi court system, legal terminology involved in a criminal practice, and on gathering information and evidence, using ethical standards. (3 sch: 3hr. lecture)
Prerequisite: Local College Requirement

**LET 2343 Contracts**
This course provides instruction in the area of contact law, concentrating on the elements of a valid contract, various types of contracts, the Uniform Commercial Code, and ethical issues in contract law. (3 sch: 3-hr lecture)
Prerequisite: Local College Requirement

**LET 2453 Real Property I**
This course is an introduction to real property law including ownership, transfer of property, liens and encumbrances, and the various types of deeds. (3 sch: 3 hr. lecture)

**LET 2463 Real Property II**
This course examines legal documents related to real property as recorded in the chancery clerk’s office, the tax assessor’s office, and the circuit clerk’s office. It includes compiling a title abstract and completing an assignment to prepare a real estate file from transaction through closing and post-closing implementing ethics. (3 sch: 3-hr lecture)
Prerequisite: Real Property I (LET 2453)

**LET 2523 Bankruptcy Law**
This course is an introduction to federal bankruptcy law. Emphasis is placed on federal bankruptcy statutes, chapters, and forms. (3 sch: 3 hr. lecture)

**LET 2633 Law Office Management**
This course provides practical application of daily legal office skills needed in the legal field, professional enrichment presentations, history of the profession, professional ethics through fact analysis, and an overview of law office management. (3 sch: 3 hr. lecture)

**LET 291(1-3) Special Problem in Paralegal Technology**
A course to provide students with an opportunity to utilize skills and knowledge gained in other Paralegal Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-3 sch: 2-6 hr. lab)

**LET 2923 Internship for Paralegal**
Supervised practical experience in a private law office, courts, government offices, or businesses. Provides students the opportunity to apply theory presented in the classroom in a supervised work setting. (3 sch: 135 clock hours)

**MAV 100(3-6), MAV 1013, MAV 1023 Introduction to Marine Engine Mechanics, Introduction to Marine Engine Mechanics I or Introduction to Marine Engine Mechanics II**
These courses contain the baseline competencies and suggested objectives from the high school Outboard Marine Engine Mechanics curriculum which directly relate to the community college Marine Engine Mechanics (Gasoline) program. The courses are designed for students entering the community college who have had no previous training or documented experience in the field.
(3-6 semester hours based upon existing skills for each student. May be divided into 2 courses for a maximum total of 6 hours of institutional credit.)

**MAV 1115 Fundamentals of Outboard Marine Engine Repair**
Theory, operation, and skills related to the repair and maintenance of the basic outboard marine engine. (5 sch: 2 hr. lecture, 6 hr. lab)

**MAV 1126 Advanced Outboard Marine Engine Repair**
This course is a continuation of Fundamentals of Outboard Marine Engine Repair to include the inspection, repair, and rebuilding of 2-stroke outboard engines. (6 sch: 2 hr. lecture, 8 hr. lab)

**MAV 1216 Inboard Gasoline Engines**
This course includes the maintenance and repair of the basic engine block of a four-stroke cycle inboard marine engine to include engine disassembly, inspection, maintenance/repair, and reassembly. (6 sch: 2 hr. lecture, 8 hr. lab)

**MAV 1222 Marine Fuel Systems**
This course includes the functions, maintenance, and service of fuel tanks, pumps, carburetors, intake manifolds, flame arresters, filters, and fuel injection systems of marine engines. (2 sch: 1 hr. lecture, 2 hr. lab)

**MAV 1232 Marine Engine Lubrication Systems**
This course covers lubrication systems used on 2-stroke and 4-stroke marine engines to include the types of lubrication systems, lubricants, service, and maintenance of the systems. (2 sch: 1 hr. lecture, 2 hr. lab)

**MAV 1242 Marine Engine Cooling Systems**
This course covers maintenance of cooling systems for marine engines including open-style and closed-style systems. (2 sch: 1 hr. lecture, 2 hr. lab)

**MAV 1253 Inboard Transmission**
This course covers disassembly, maintenance, repair, and reassembly/installation of the three major types of transmissions commonly associated with inboard marine engines. (3 sch: 1 hr. lecture, 4 hr. lab)

**MAV 1264 Outdrives**
This course includes the operation and maintenance of outdrive units associated with inboard marine engines including components, functions, outdrive steering, shifting systems, alignment, and repair. (4 sch: 1 hr. lecture, 6 hr. lab)

**MAV 1312 Marine Accessories**
This course includes the installation and repair of accessories commonly found on a pleasure craft including bilge pumps, ventilation systems, horns, instruments, lights, and other accessories. (2 sch: 1 hr. lecture, 2 hr. lab)

**MAV 1424 Boat Maintenance and Repair**
This course covers the repair of boats including instruction in the minor repair of hull and structure damage. (4 sch: 1 hr. lecture, 6 hr. lab)
MAV 1511 Trailers
This course covers rigging and maintenance of trailers used to transport a pleasure craft including rigging, wheel bearings, lighting, and positioning boats. (1 sch: 2 hr. lab)

MAV 1612 Electrical Systems
This course covers electrical systems associated with marine engines to include theory of operation and maintenance/repair. (2 sch: 1 hr. lecture, 2 hr lab)

MAV 1718 Tune-up and Troubleshooting
This course covers tune-up and diagnosis of problems associated with a variety of marine engines including operation of test equipment, system diagnosis, and tune-up procedures. (8 sch: 16 hr. lab)

MAV 191(1-3) Special Project in Marine Engine Mechanics (Gasoline)
This course is a practical application of skills and knowledge related a specific instructor-approved topic. Teacher and student work closely together in planning and conducting the project. (1-3 sch: 2-6 hr. lab)

MAV 192(1-6) Supervised Work Experience in Marine Engine Mechanics (Gasoline)
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 hour. (1-6 sch: 3-18 hr. internship)

MDT 1214 Broadcast Writing
Principles of broadcast writing to include scripts for television and radio news, commercials, and programs. (4 sch: 3 hr. lecture, 2 hr. lab)

MDT 1244 Principles of Mass Communications
Introduction to the field of radio/television broadcasting and the history of mass media. Emphasis is placed on the role of communication systems in our society. Job characteristics and opportunities are also emphasized. (4 sch: 4 hr. lecture)

MDT 1314 Fundamentals of Television Production
Introduction to the operation of a television studio. (4 sch: 3 hr. lecture, 2 hr. lab)

MDT 1413 Principles of Audio Production
Operations of audio taping as well as actual production. A discussion of the different types of equipment used in audio production will also be emphasized. (3 sch: 2 hr. lecture, 2 hr. lab)

MDT 1423 Advanced Audio Production
Continuation of Principles of Audio Production with further study in the development of and the use of equipment in audio production with emphasis placed on actual projects. (3 sch: 2 hr. lecture, 2 hr. lab)

MDT 2114 Broadcast Announcing
Introduction to the basic principles of broadcasting announcing. (4 sch: 3 hr. lecture, 2 hr. lab)

MDT 2213 Station Administration
Study of radio, television, and cable stations which includes: organization, operations, regulations, and the duties/responsibilities of station personnel. (3 sch: 3 hr. lecture)
MDT 2314 Intermediate Television Production
Operations of a television control room. (4 sch: 2 hr. lecture, 4 hr. lab)

MDT 2324 Advanced Television Production
Operations of original television productions. Directions, productions, layouts, and organization will be stressed. (4 sch: 2 hr. lecture, 4 hr. lab)

MDT 2414 Basic Editing
Student’s basic projects are emphasized and include basic principles, procedures, and techniques of audio and video editing. (4 sch: 2 hr. lecture, 4 hr. lab)

MDT 2424 Advanced Editing
Student’s continuation of Basic Editing with emphasis placed on the development and use of the broadcasting industry editing standards. Student’s projects are emphasized and include advanced principles, procedures, and techniques of audio and video editing. (4 sch: 2 hr. lecture, 4 hr. lab)

MDT 2513 Basic Photography
Use of photography as a communication medium. Principles of picture taking and darkroom Techniques are emphasized. (3 sch: 2 hr. lecture, 2 hr. lab)

MDT 291(1-3) Special Project in Media Technology
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. (1-3 sch: 2-6 hr. lab)

MET 1113 Medical Terminology
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 and the use of computer assisted software. (3 sch: 2- hr lecture, 2 hr lab)

MET 1214 Medical Business Practices
This course presents the administrative medical assistant procedures with office management written and oral communications. Emphasis is placed on clerical functions, billing, collecting, bookkeeping, and creating and maintaining medical records. The goal is to provide the student with practice situations through demonstration and simulated office settings utilizing electronic health-care record software. (4 sch: 2- hr lecture, 2-hr lab)

MET 1313 Clinical Procedures I
The purpose of this course is to introduce the student to basic clinical skills Occupational Safety and Health Administration (OSHA) Standards, infection control, vital signs, patient preparation, and assisting with examinations, emphasizing the importance of being proficient in all of these areas. This course also provides students with opportunities to practice and demonstrate proficiency in simulated settings and check-offs. (3 sch: 3 hr. lecture, 2 hr. lab)

MET 1323 Clinical Procedures II
This course is a continuation of Clinical Procedures I and will further the student’s knowledge of the more complex activities encountered in the physician’s office. The clinical duties include maintaining surgical asepsis, instructing patients in preparation for radiologic and sonographic studies, performing ECGs, preparing and administering medications as directed by the physician, and providing mobility assistance. (3 sch: 2-hr lecture, 2-hr lab)
MET 1413 Medical Law and Ethics
This course covers medical law, ethics, and bioethics; the legal relationship of the physician and patient; legal responsibilities of the healthcare team including the patient; and the importance of professional liability. (3 sch: 3-hr lecture)

MET 1513 Pharmacology for Medical Assistants
The course reflects basic theory and clinical information related to drugs including classifications, source, dosages and measurements, regulatory requirements, and basic principles of drug administration. At all times, safety is emphasized for the health professional administering the medication and the patients receiving the medication. Accuracy is stressed. (3 sch: 3-hr lecture)

MET 2224 Computer Concepts for Medical Assistants
This course will introduce students to the capabilities of a medical practice management software program typical of those currently used in doctors’ offices. After completion of this course, students will have knowledge about working with patient accounts, insurance claim forms, and handling reports dealing with management of the medical practice. (4 sch: 2-hr lecture, 4-hr lab)

MET 2234 Medical Insurance
The purpose of this course is to acquaint the student with different types of insurance plans including commercial plans, government plans, disability, worker’s compensation, and managed care plans. Practical approach to insurance billing, basic medical and insurance abbreviations, terminology, and ICD-9-CM and CPT coding will be presented. (4 sch: 3-hr lecture, 2-hr lab)

MET 2334 Medical Laboratory for Medical Assistants
This course covers techniques of the clinical laboratory including competent use of the microscope and understanding the theory and knowledge of the common laboratory tests performed in the physician’s office. Students will develop proficiency in laboratory and quality assurance procedures including collection, preparation and processing of specimens, urinalysis, hematology, and accurate reporting of test results. (4 sch: 3-hr lecture, 2-hr lab)

MET 2613 Clinical Review
This summary course is designed to review the skills, knowledge, and abilities acquired during the didacticum. This course will serve to assist the student in preparing for the certification exam, with a review of critical clinical skills and professional development issues. (3 sch: 3 hr. lecture)

MET 2716 Practicum
This course includes supervised experience in medical offices to provide the student with a comprehensive application of administrative and clinical skills. This course is designed to give the student an opportunity to discuss, evaluate, and share learning experiences and to strengthen learning situations brought up in the practicum setting. (6 sch: 1-hr lecture, 15-hr clinical)

MFT 1112 Introduction to Automation and Controls
Introduction to manufacturing/industrial technology with emphasis on safe work practices, manufacturing dynamics, use of test equipment, and fundamentals of automation and control technology. (2 sch: 1 hr. lecture, 2 hr. lab)
MFT 1123 Electrical Wiring for Automation and Control Technology
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, subpanels, feeder circuits, and branch circuits according to electrical codes. (3 sch: 2 hr. lecture, 2 hr. lab)

MFT 2013 Automated Motion Control
This course is designed to develop advanced skills in the setup of servo motion controller systems, troubleshooting and maintenance of servo motion control systems, and programming of servo motion control. (3 sch: 2 hr. lecture, 2 hr. lab)

MFT 2113 Materials Requirement Planning (MRP)
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. (3 sch: 2 hr. lecture, 2 hr. lab)

MFT 2313 Statistical Process Control
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. (3 sch: 2 hr. lecture, 2 hr. lab)

MFT 2413 Computer Integrated Manufacturing
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). (3 sch: 2 hr. lecture, 2 hr. lab)

MFT 2513 Data Acquisition and Communications
This is a course in acquisition and communication of systems data in automated applications. (3 sch: 2 hr. lecture, 2 hr. lab)

MFT 2614 Flexible Manufacturing Systems
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. (4 sch: 2 hr. lecture, 4 hr. lab)

MFT 291(1-3) Special Problem in Automation and Control Technology
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. (1-3 sch: 2-6 hr. lab)

MFT 292(1-6) Supervised Work Experience in Automation & Control 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. Variable credit is awarded on the basis of one semester hour per 45 industrial contact hours. (1-6 sch: 3-18 hr. externship)

MLT 1111 Fundamentals of Medical Laboratory Technology/Phlebotomy
The course includes an overview of the field of Medical Laboratory Technology, as well as 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. (1 sch: 2 hr. lab)

MLT 1212 Urinalysis/Body Fluids
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. (2 sch: 1 hr. lecture, 2 hr. lab)

MLT 1313 Hematology I
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. (3 sch: 2 hr. lecture, 2 hr. lab)

MLT 1324 Hematology II
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. (4 sch: 2 hr. lecture, 4 hr. lab)

MLT 1413 Immunology/Serology
This course covers the science of immunology and serology through the study of theories and processes related to natural body defenses. Included are basic antigen-antibody reactions, complement action, cellular response, humoral immune response, and the basic serological procedures used to aid in the detection of certain diseases. Throughout this course, special emphasis is placed on correlating laboratory results with the patient’s probable condition. (3 sch: 2 hr. lecture, 2 hr. lab)

MLT 1515 Clinical Chemistry
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. (5 sch: 3 hr. lecture, 4 hr. lab)

MLT 1523 Principles of Organic and Biochemistry
A study of the basic mathematical formulas and organic chemistry (3 sch: 2 hr. lecture, 2 hr. lab)

MLT 2424 Immunohematology
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. (4 sch: 2 hr. lecture, 4 hr. lab)

MLT 2512 Parasitology
This course covers the morphology, physiology, life cycles, and epidemiology of parasites with emphasis on human pathogenic parasites. Identification of the parasites from human material is also included. (2 sch: 1 hr. lecture, 2 hr. lab)

MLT 2614 Pathogenic Microbiology
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. (4 sch: 2 hr. lecture, 4 hr. lab)

**MLT 2711 Medical Laboratory Technology Seminar**
This course represents a synthesis of previous didactic, laboratory, and clinical experiences. It is designed to facilitate activities incorporated in student and professional organizations and to allow students to select and present a case study. (1 sch: 2 hr. lab)

**MLT 2723 Certification Fundamentals for Medical Laboratory Technology**
This course is an in-depth study and review of material covered in the MLT curriculum. It is designed to prepare the student for the national registry/certifying exams. (3 sch: 3 hr. lecture)

**MLT 2812 Clinical Instrumentation**
A review of various types of instruments found in the clinical laboratory is emphasized in this course. Included are operation, calibration, quality control, and troubleshooting. (2 sch: 2 hr. lecture)

**MLT 2916, MLT 2926, MLT 2936 Clinical Practice I, II, III**
This course includes clinical practice and didactic instruction in a clinical affiliate. Areas covered are hematology, clinical chemistry, immunochemistry, urinalysis, microbiology, coagulation, and serology. (6 sch: 18 hr. clinical for each Clinical Practice)

**MMT 1113 Principles of Marketing**
Study of principles and problems of marketing goods and services and methods of distribution from producer to consumer. Types, functions, and practices of wholesalers and retailers and efficient techniques in the development and expansion of markets. (3 sch: 3-hr lecture)

**MMT 1123 Marketing Management**
A project based course is a continuation of MMT 1113. (3 sch: 3-hr lecture)

**MMT 1313 Personal Selling**
Basic principles and techniques of professional sales and their practical application. Topics include basic elements of consumer behavior, developing selling strategies, closing and servicing a sale, and developing consumer relations. (3 sch: 2-hr lecture)

**MMT 1323 Advertising**
The role of advertising as a promotional tool. Topics included are product and consumer analysis, media selection, and creation of advertising. (3 sch: 2-hr lecture)

**MMT 1413 Merchandising Math**
Study of the mathematical calculations involved in the merchandising process. Fundamental principles and operations in buying, pricing, and inventory control. (3 sch: 2-hr lecture)

**MMT 1753 or MMT 1711, MMT 1721, MMT 1731, MMT 1741 Marketing Seminar or Marketing Seminar I, II, III, IV**
Develops leadership skills and human relations skills necessary for success in the field of marketing management. Special programs and activities will address topics directly related to marketing careers and career development. Emphasis will be placed on developing civic, social, and business responsibilities. (3 sch: 6-hr lab or 1 sch: 2-hr lab)
MMT 2213  Principles of Management
Study of the basic principles and functions of organizations management with special emphasis on planning, organizing, directing, staffing, and controlling. (3 sch: 3-hr lecture)

MMT 2233  Human Resource Management
Objectives, organization, and functions of human resource management. Emphasis is placed on selection and placement, job evaluation, training, education, safety, health, employer-employee relationships, and employee services. (3 sch: 3-hr lecture)

MMT 2243  Marketing Case Studies
The study of effective marketing management decision making through case study analysis. (3 sch: 3-hr lecture)

MMT 2313  E-Commerce Marketing
This course introduces the fundamental opportunities and challenges associated with e-commerce activities. Topics include designing the user interface, Web security, electronic payment systems, promotion, and legal issues involved in creating a functioning on-line business. (3 sch: 3-hr lecture)

MMT 2333  Multimedia Presentations for Marketing
Design and deliver multimedia marketing presentations through the use of appropriate multimedia software and tools. Topics include marketing design concepts and related marketing communication strategies. (3 sch: 2-hr lecture, 2-hr lab)

MMT 2343  Marketing Web Page Design
Use creative marketing strategies, concepts, and techniques to design web sites that will reach designated target markets. (3 sch: 2-hr lecture, 2-hr lab)

MMT 2423  Retail Management
Study of retailing processes including functions performed, principles governing effective operation, and managerial problems resulting from current economic and social trends. (3 sch: 3-hr lecture)

MMT 2513  Entrepreneurship
Overview of activities that are involved in planning, establishing, and managing a small business enterprise. Topics to be covered include planning, location, analysis, financing, and development of a business plan. (3 sch: 3-hr lecture)

MMT 2523  Event Marketing
Design a plan for special events, trade and consumer shows, exhibitions, and conventions. (3 sch: 2-hr lecture, 2-hr lab)

MMT 2613  International Marketing
Provide students with an overview and understanding of international marketing. This 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. (3 sch: 3-hr lecture)

MMT 291(1-6)  Internship in Business and Marketing Management Technology
Direct application of concepts and theory of business and marketing management technology. Students will work in a marketing related environment. (1-6 sch: 3- to 18-hr externship)
MST 100(3-6), MST 1013, MST 1023  Introduction to Machine Tool, Introduction to Machine Tool I, or Introduction to Machine Tool II
These courses contain the baseline competencies and suggested objectives from the high school curriculum which directly relate to the community college program. The courses are designed for students entering the community college who have had no previous training or documented experience in the field. (3-6 semester hours based upon existing skills for each student. May be divided into 2 courses for a maximum total of 6 hours of institutional credit.)

MST 1114-6  Power Machinery I
This course provides instruction of general shop safety as well as the operation of power machinery which includes instruction and practice in the safe operation of lathes, power saws, drill presses, and vertical mills. (4-6 sch: 2 hr. lecture, 4-8 hr. lab)

MST 1115  Power Machinery I
Operation of power machinery which includes instruction and practice in the safe operation of lathes, drill presses, and vertical mills. (5 sch: 2 hr. lecture, 6 hr. lab)

MST 1124-6  Power Machinery II
A continuation of Power Machinery I with emphasis on advanced applications of lathes, mills, shapers, and precision grinders. (4-6 sch: 2 hr. lecture, 4-8 hr. lab)

MST 1313  Machine Tool Mathematics
An applied mathematics course designed for machinists which includes instruction and practice in algebraic and trigonometric operations. (3 sch: 2 hr. lecture, 2 hr. lab)

MST 1413  Blueprint Reading
Plans and specifications interpretation designed for machinists. Includes instruction and practice in reading plans and applying specifications. (3 sch: 2 hr. lecture, 2 hr. lab)

MST 1423  Advanced Blueprint Reading
A continuation of Blueprint Reading with emphasis on advanced features of plans and specifications. Includes instruction on the identification of various projections, views, and assembly components. (3 sch: 2 hr. lecture, 2 hr. lab)

MST 1613  Precision Layout
Precision layout for machining operations which includes instruction and practice in the use of layout instruments. (3 sch: 2 hr. lecture, 2 hr. lab)

MST 1625  Fundamentals of Geometric Dimensioning and Tolerancing
This course is designed to provide the students with a solid foundation in the fundamentals of geometric dimensioning and tolerancing. It includes emphasis on measurement theory, common terms and definitions, profile tolerances, orientation tolerances, locational tolerances, runout tolerances and form tolerances as they relate to Machine Tool Technology. (3 sch: 3 hrs. lecture, 2 hrs. lab)

MST 2135  Power Machinery III
A continuation of Power Machinery II with emphasis on safety, and advanced applications of the engine lathe, milling, and grinding machine. (5 sch: 2 hr. lecture, 6 hr. lab)
MST 2144 Power Machinery IV
A continuation of Power Machinery III with emphasis on highly advanced safe operations on the radial arm drill, milling machine, engine lathe, and precision grinder. (4 sch: 2 hr. lecture, 4 hr. lab)

MST 2714 Computer Numerical Control Operations I
An introduction of computer numerical control (CNC) and computer assisted manufacturing (CAM) techniques and practices. Includes the use of the Cartesian coordinate system, programming codes and command, and tooling requirements for CNC/CAM machines. (4 sch: 3 hr. lecture, 2 hr. lab)

MST 2724-5 Computer Numerical Control Operations II
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). (4-5 sch: 2 hr. lecture, 4-6 hr. lab)

MST 2735 Introduction to CAD/CAM
This course is designed to provide the students with the fundamental knowledge and skills of Computer Aided Design Manufacturing using various CAD/CAM software packages as they relate to Machine Tool Technology. (3 sch: 3 hr. lecture, 2 hrs. lab)

MST 2812 Metallurgy
Concepts of metallurgy including instruction and practice in safety, metal identification, heat treatment, and hardness testing. (2 sch: 1 hr. lecture, 2 hr. lab)

MST 291(1-3) Special Problem in Machine Tool Technology
A course to provide students with an opportunity to utilize skills and knowledge gained in other Machine Tool Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-3 sch: 2-6 hr. lab)

MST 292(1-6) Supervised Work Experience in Machine Tool Technology
This course is a 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 1 semester hour per 45 industrial contact hours. (1-6 sch variable: 3-18 hr. externship).

MTV 1114 Fundamentals of Meat Merchandising
This course covers the basic fundamentals of meat merchandising including career opportunities, safety requirements, sanitation, equipment and its maintenance, and government regulations. (4 sch: 8 hr. lab)

MTV 1214 Identification of Wholesale and Retail Cuts
This course consists of the identification of wholesale and retail cuts of meat. The course also includes preparation and serving of meat products. Background information is provided on dressing, chilling, storage, sanitation, inspection, grading, curing, and smoking procedures for different types of meat products. (4 sch: 8 hr. lab)

MTV 1224 Preparation of Wholesale and Retail Cuts
This course is the study of breaking carcasses into wholesale boxed cuts of beef, pork, and lamb; preparing basic retail cuts from wholesale boxed cuts; boning procedures; and packaging. (4 sch: 8 hr. lab)
MTV 1234 Merchandising of Poultry, Fish, Seafood, and Smoked Meats
This course includes cutting and merchandising poultry and fish products; merchandising of smoked meat counter; refrigeration; and display techniques of poultry, fish, seafood, and smoked meats. (4 sch: 8 hr. lab)

MTV 1314 Display Pricing and Marketing Techniques I
This course includes advanced merchandising techniques including wholesale purchasing, wholesale and retail meat pricing and gross profit control yield data. (4 sch: 8 hr. lab)

MTV 1324 Display Pricing and Marketing Techniques II
This course includes advanced merchandising procedures including conducting cutting tests and forecasting gross profits. (4 sch: 8 hr. lab)

MTV 1414 Advanced Meat Merchandising I
This course is a study of portion control, nutritional values of red meat and poultry, steps and cycles associated with marketing red meat and poultry, and factors that affect meat prices. (4 sch: 8 hr. lab)

MTV 1424 Advanced Meat Merchandising II
This course is a special study of meat merchandising as it affects the many different phases of the meat industry. The course includes salesmanship and customer relations. (4 sch: 8 hr. lab)

MTV 1514 Catering, Food Preparation, and Value Added Products
This course includes basic information about the catering industry including types of catering services, how to start a business, selling catering services, food safety, and arranging specific catering events. The course also includes basic information about the trend toward marketing value-added products. (4 sch: 8 hr. lab)

MTV 1522 Food Safety
This course includes basic information related to food safety. (2sch: 2 hrs lecture)

OPT 1113 Ophthalmic Optics I
This course is a study of basic principles of light. Topics covered include anatomy and physiology of the eye, visual conditions of the human eye, and appropriate lens to correct these conditions. (3 sch: 3 hr. lecture)

OPT 1123 Ophthalmic Optics II
This course is a continuation of Ophthalmic Optics I. Topics include the theory of optical instruments, positive and negative cylinders, prisms, vertex distance, and frame selection. (3 sch: 3 hr. lecture)

OPT 1214 Optics Laboratory Techniques I
This course will introduce the student to all basic equipment necessary to process the lens through the surface operation. Emphasis will be placed on basic safety and on how to prepare, operate, and maintain equipment. (4 sch: 8-hr lab)

OPT 1224 Optics Laboratory Techniques II
This course is a continuation of Optics Laboratory Techniques I. Emphasis will be placed on lens inspection, cutting and edging, heat treatment, lens insertion, inspection, and tinting. (4 sch: 8-hr lab)
**OPT 1313 Laboratory Management and Inventory Control**
This course will serve as an introduction to supplies and materials used in the ophthalmic laboratories and an introduction to mathematical optical calculations. Laboratory safety procedures will be discussed. Laboratory inventory and management skills will be demonstrated using computer software. (3 sch: 3-hr lecture)

**OPT 1323 Business Management for Opticians**
This course is a continuation of Laboratory Management and Inventory Control I. Emphasis of this course will be on small business management concepts as related to an optical business. (3 sch: 3-hr lecture)

**OPT 1413 Ophthalmic Dispensing I**
This course is a foundation course that will serve as a lecture introduction to ophthalmic dispensing and related areas. Topics include frame parts, selection, lens positioning and insertion, frame fitting, and progressive lenses. (3 sch: 3-hr lecture)

**OPT 2423 Ophthalmic Dispensing II**
This course is an introduction to prescription analysis and interpretation. Various types of Rx’s will be discussed as to what types of lens and frames should be considered for the final product. Emphasis will be placed on the effect of the Rx as related to the patient’s needs and wants. Tints, thickness factor, cosmetic considerations, and the overall of the final product will be discussed. Business communication skills will also be introduced. (3 sch: 3-hr lecture)

**OPT 2433 Ophthalmic Dispensing III**
This course is a continuation of Ophthalmic Dispensing II. Emphasis will be placed on the more advanced and unusual prescription related to ophthalmic dispensing and on sales techniques. Topics to improve the ophthalmic dispenser’s relationship with fellow opticians, optometrists, ophthalmologists, wholesalers, manufacturers, and employees will be discussed. (3 sch: 3-hr lecture)

**OPT 2513 Optical Theory and Instrumentation**
This course is an in-depth look into the basic theoretical principles of optical theory, as related to lenses, fitting problems, and instrumentation. Such topics as reflection, refraction, magnification, and object-location will be discussed. (3 sch: 3-hr lecture)

**OPT 2613 Dispensing Clinic I**
This course is an on-campus clinical experience operated by the Ophthalmic Dispensing students. Practical clinical procedures will be practiced and proficiency demonstrated. (3 sch: 6-hr lab)

**OPT 2623 Dispensing Clinic II**
This course is a continuation of Dispensing Clinic I. Continuous evaluations will be done to study the clinic operation in terms of its efficiency and effectiveness of operations. Additional adjustments and delivery will be done. Emphasis will be placed on developed cases of special Rx’s and pediatric dispensing. Advanced projects, such as multifocal lens fitting, will be completed. (3 sch: 6-hr lab)
**OPT 2916 Internship**
This course will be conducted off-campus at a clinical location. The student will be under the direct supervision of the manager or clinical director. Evaluations will be completed by the instructors and off-campus clinical participants. (6 sch: 18-hr clinical)

**OTA 1113 Foundations of Occupational Therapy**
This intake course is an introduction to the field of occupational therapy including history, role orientation, professional organizational structure, legal and ethical implications, legislation, practice arenas, and the process of service delivery. (3 sch: 3 hr. lecture)

**OTA 1121 Medical Terminology**
This intake course is a study of medical language relating to body systems including diseases, physical conditions, abbreviations, and symbols as applied to occupational therapy. Professional language for occupational therapy will be included. (1 sch: 1 hr. lecture)

**OTA 1132 Therapeutic Anatomy**
This intake course will focus upon the structures of the human body and their respective functions. Emphasis will be placed upon muscular, skeletal, and nervous systems. (2 sch: 2-hr lecture)

**OTA 1213 Pathology of Psychiatric Conditions**
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. (3 sch: 3 hr. lecture)

**OTA 1223 Pathology of Physical Disability Conditions**
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. (3 sch: 3 hr. lecture)

**OTA 1233 Pathology of Developmental Conditions**
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 occupational therapy assistant (OTA) in the treatment process is also emphasized. (3 sch: 3 hr. lecture)

**OTA 1242 Pathology of Orthopedic Conditions**
This intake course provides a basic knowledge of selected orthopedic conditions encountered in occupational therapy practice. Emphasis is placed upon mechanisms of pathology and basic treatment approaches. The role and function of the occupational therapy assistant (OTA) in the treatment process is also emphasized. (2 sch: 2 hr. lecture)

**OTA 1315 Kinesiology**
This intake course studies individual muscles and muscle functions, biomechanical principles of joint motion, gait patterns, normal movement patterns, and goniometry. (5 sch: 4 hr. lecture, 2 hr. lab)
OTA 1413 Therapeutic Media
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 in multiple community and clinical settings. (3 sch: 2 hr. lecture, 2 hr. lab).

OTA 1423 Occupational Therapy Skills I
This manipulation 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. (3 sch: 2 hr. lecture, 2 hr. lab)

OTA 1433 Occupational Therapy Skills II
This manipulation course provides intermediate practice skills used with patients/clients across the lifespan and with various diagnoses. (3 sch: 2 hr. lecture, 2 hr. lab)

OTA 1513 Group Process
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, lead, and evaluate an occupational therapy group will be taught. The course focuses on the importance of group activity intervention primarily with the psychiatric population. (3 sch: 2 hr. lecture, 2 hr. lab)

OTA 1913 Fieldwork IA
This course is designed to provide the student with an opportunity to observe and participate in clinical fieldwork. The student will also begin to develop professional work habits. Students are expected to function as participant observers in the assigned clinical setting. (3 sch: 1 hr. lecture, 6 hr. clinical)

OTA 2443 Occupational Therapy Skills III
This manipulation course provides advanced practice skills used with patients/clients across the lifespan and with various diagnoses. (3 sch: 2 hr. lecture, 2 hr. lab)

OTA 2714 Concepts in Occupational Therapy
This manipulative course studies occupational therapy treatment techniques for a variety of diagnoses while incorporating theoretical concepts. (4 sch: 3 hr. lecture, 2 hr. lab)

OTA 2812 Healthcare Systems
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. (2 sch: 2 hr. lecture)

OTA 2935 Fieldwork IB
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. (5 sch: 1 hr. lecture, 12 hr. clinical)

OTA 2946 Fieldwork IIA
This application course synthesizes previous didactic instruction and clinical experiences obtained in Fieldwork I. In Level IIA, the student may encounter a variety of populations in a
traditional or non-traditional based setting. Student will assume increasing responsibilities under supervision as appropriate for the setting. (6 sch: 18 hr. clinical)

**OTA 2956  Fieldwork IIB**
This application course synthesizes previous didactic instruction and experiences obtained in Fieldwork IIA. In Fieldwork IIB, the student may also encounter a variety of populations in a traditional or non-traditional setting. The student will be placed in a setting different from Fieldwork IIA. Student will assume increasing responsibilities under supervision as appropriate for the setting. (6 sch: 18 hr. clinical)

**OTA 2961  Occupational Therapy Transitions I**
This course provides information and guidance to the student for their transitional process of becoming an Occupational Therapy Practitioner. This course will encompass a variety of professional skills and concepts. In addition, vital life skills will be discussed. (1 sch: 1 hour lecture)

**OTA 2971  Occupational Therapy Transitions II**
This course provides final preparation to the student for the transitional process of becoming an Occupational Therapy Practitioner. (1 sch: 1 hour lecture)

**PLT 1112  Trends in Manufacturing**
During this course, students will cover topics including trends in industrial organizational structure, plastics machining, welding, stamping, and casting. Special emphasis will be given to recent developments such as robots, numerical control, industrial computer applications, and CAD/CAM as applied to the plastics industry (2 sch: 1 hr. lecture, 2 hr. lab)

**PLT 1213  Introduction to Plastics Materials and Processing**
This course is designed to introduce the student to the world of plastics. Topics include the history of plastics; basic polymer chemistry; identification of plastics, thermoset, and thermoplastics uses, applications, and manufacturing processes; and health and safety considerations of plastics. (3 sch: 2 hr. lecture, 2 hr. lab)

**PLT 1223  Polymer Material Properties**
Topics included are atomic structure, periodic table, elements, electrons and shell structure, bonds and bonding, hydrocarbons, polymers, copolymers, molecular structure, polymerization, thermoset resins, thermoplastic resins, additives, and polymer physical properties. (3 sch: 2 hr. lecture, 2 hr. lab)

**PLT 1313  Injection Molding I**
This course provides lecture and hands-on experiences in the injection molding process. Areas covered are safety, machine identification, setup procedures, operation, troubleshooting, and machine adjustment. Students are introduced to computer monitoring of the molding process as a quality control method to increase productivity. (3 sch: 2 hr. lecture, 2 hr. lab)

**PLT 1333  Process Control for Injection Molding**
Topics include variables affecting the injection molding process, controlling the structure of molded parts, measures for control of the molding process, operation of automatic process control systems, and problem solving using automatic process control systems. (3 sch: 2 hr. lecture, 2 hr. lab)
PLT 2213  Plastics Tooling Construction Principles
Covers construction methods necessary to build tooling for injection molding and blow molding. Includes an introduction to extrusion dies and thermoforming tools. (3 sch: 2 hr. lecture, 2 hr. lab)

PLT 2324  Injection Molding II
This course is an extension of Injection Molding I (PLT 1313). Subjects include insert molding and accessory equipment associated with injection molding such as drying and pneumatic conveying. (4 sch: 2 hr. lecture, 4 hr. lab)

PLT 2413  Plastics Extrusion
This course describes the operating principles of an extruder with emphasis on profile, tubing, and sheet and film extrusion. Also covered are the setup, operation, troubleshooting, and safety aspects of extruder systems. (3 sch: 2 hr. lecture, 2 hr. lab)

PLT 2514  Troubleshooting Plastic Processes
This course is designed to train plastics technicians in process diagnosis and corrective action. Minor repair procedures of plastics processing equipment is included. (4 sch: 2 hr. lecture, 4 hr. lab)

PLT 2614  Plastics Quality Control
This course provides the skills necessary to read and interpret blueprints for inspection purposes of plastic parts. Geometric dimensioning and tolerancing and hands-on setup using modern inspection tools and gages are emphasized. Use of statistical analysis for process control will be introduced. (4 sch: 2 hr. lecture, 4 hr. lab)

PLT 2713  Blow Molding/Thermoforming
This course is designed to introduce blow molding and thermoforming processes. Areas covered include safety, troubleshooting, setup procedures, machine operations, machine adjustments, and tooling. During the lab portion of the course, students learn to set up and operate the blow molding and thermoforming equipment to produce defect-free parts. (3 sch: 2 hr. lecture, 2 hr. lab)

PLT 291(1-3)  Special Problem in Plastics Technology
A course designed to provide the student with practical application of skills and knowledge gained in other Polymer Technology courses. The instructor works closely with the student to insure that the selection of a project will enhance the student's learning experience. (1-3 sch: 2-6 hr. lab)

PLT 292(1-6)  Supervised Work Experience in Plastics 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 1 semester hour per 45 contact hours. (1-6 sch variable: 3-18 hr. externship)

PNV 1213  Body Structure and Function
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. (3 sch: 3 hr. lecture)

PNV 1426  Fundamentals of Nursing
This course provides the student with the basic knowledge and skills necessary to care for the individual in wellness and illness and is applicable across the life span. (6 sch: 6 hr. lecture)
PNV 1436  **Fundamentals of Nursing Lab/Clinical**  
This course provides demonstration of and supervised practice in the fundamental skills related to practical nursing. (6 sch: 9 hr. lab, 4.5 hr. clinical)

PNV 1524  **IV Therapy Concepts**  
This course is designed to prepare the practical nurse to perform the expanded role of IV therapy as outlined in the Mississippi Nursing Practice Law, Rules, and Regulations. The student, upon completion of the practical nursing program and successful passage of the licensure examination, is eligible to apply for IV certification as outlined in the above mentioned rules and regulations. (4 sch: 3 hr. lecture, 2 hr. lab)

PNV 1614  **Medical/Surgical Nursing**  
This course provides the student with the basic nursing theory and skills to provide safe and effective care for a client experiencing an alteration in health in systems selected from the following: vascular; respiratory; sensory and integumentary; musculoskeletal; gastrointestinal; blood, lymphatic, and immunosuppressive; urinary; reproductive; endocrine; and neurological. The systems not covered in this course are taught in Alterations in Adult Health (PNV 1634). Pharmacological and nutritional therapy, as well as oncological considerations, for various disorders is included. (4 sch: 4 hr. lecture)

PNV 1622  **Medical/Surgical Nursing Clinical**  
This course includes supervised clinical experiences for application of medical/surgical theory, the development of skills and the use of nursing process. (2 sch: 6 hr. clinical)

PNV 1634  **Alterations in Adult Health**  
This course provides the student with the basic nursing theory and skills to provide safe and effective care for a client experiencing an alteration in health in systems selected from the following: vascular; respiratory; sensory and integumentary; musculoskeletal; gastrointestinal; blood, lymphatic, and immunosuppressive; urinary; reproductive; endocrine; and neurological. The systems not covered in this course are taught in Medical/Surgical Nursing (PNV 1614). Pharmacological and nutritional therapy, as well as oncological considerations, for various disorders is included. (4 sch: 4 hr. lecture)

PNV 1642  **Alterations in Adult Health Clinical**  
This course includes supervised clinical experiences for application of medical/surgical theory, the development of skill, and the use of nursing process. (2 sch: 6 hr. clinical)

PNV 1715  **Maternal-Child Nursing**  
This course provides the student with basic knowledge and skills to provide safe and effective care for clients and families during pregnancy, postpartum, infancy, and childhood. (5 sch: 4.7 hr. lecture, 1 hr. clinical)

PNV 1813  **Mental Health Concepts**  
This course provides an introduction to mental health concepts. Clinical experience will provide application of learned theory. (3 sch: 2.7 hr. lecture, 1 hr. clinical)
PNV 1914 Nursing Transition
Nursing Transition promotes the development of clinical decision making skills and an interest in continued professional development. Legal aspects of nursing and employment opportunities and responsibilities as well as preparation for the National Council Licensure Examination (NCLEX-PN®) are included. (4 sch: 2 hr. lecture, 2 hr. lab, 3 hr. clinical)

PPV/PCT 1113 Fundamentals of Plumbing/Pipefitting
Job safety and health, including first aid. Also, occupational hazards and the scope of the OSHA law. Includes pipefitting and plumbing fittings, valves, hangers, and general trade fitting identification. Included are screwed, welded, flanged, soldered, brazed, glued, compression, and flared fittings. Identification and use of pipefitting and plumbing tools used in today’s piping industry. (3 sch: 1-hr lecture, 4-hr lab)

PPV/PCT 1213 Tacking, Brazing and Burning
Striking an arc, tacking metal together, setting up an oxyacetylene torch and burning, brazing and soldering, and cutting straight and bevel angles on flat steel and pipe. Safety procedures will be covered and emphasized. (3 sch: 1-hr lecture, 4-hr lab)

PPV 1313 Blueprint Reading for Piping Trades
An in-depth understanding of blueprint reading related to pipefitting. (3 sch: 1-hr lecture, 4-hr lab)

PPV/PCT 1323 Sketching
Sketching, measuring, and recording required information to supplement oral descriptions and organize ideas to include individual piping components. (3 sch: 1-hr lecture, 4-hr lab)

PPV/PCT 1333 Blueprint Reading for Plumbing
An in-depth understanding of blueprint reading related to plumbing profession (3 sch: 1-hr lecture, 4-hr lab)

PPV 1411 Pressure Boilers
Introduction to safe operation of pressure boilers for heating, steam production, and water heating. (1 sch: 2-hr lab)

PPV/1426 Basic Fabrication for Pipefitting
Use of pipefitting tools and equipment, different ways of cutting and fitting pipes, methods of calculating pipe fittings, and various types of fit-ups for different types of pipe. (6 sch: 2-hr lecture, 8-hr lab)

PPV 1432 Pipe Specifications and Systems
Different metals used in making pipe; their sizes, weights, and strengths; and how they are manufactured. The pipe systems on ships and industrial plants are studied. (2 sch: 1-hr lecture, 2-hr lab)

PPV/PCT 1443 Piping Level/Transit
Applications of the leveling instruments, shooting elevations, and grading pipes. (3 sch: 1-hr lecture, 4-hr lab)

PPV 1456 Advanced Pipefitting Lab
Advanced pipefitting layout, fabrication, and testing of piping systems. (6 sch: 2-hr lecture, 8-hr lab)
PPV/PCT 1513 Drainage and Sewer Systems
Information and practical aspects of drainage and disposal systems and the International Plumbing Code. Included are the installation of the drainage system in a residential unit covering health aspects and the disposal of poisonous gases arising from the discharge of traps. Instruction is provided on elements of disposal systems, including sewer, septic tanks, tank size calculations, maintenance causes, and removal of sewer obstructions. (3 sch: 1 hr. lecture, 4 hr. lab)

PPV/PCT 1612 Heating Devices
Information on local codes for installing and repairing water heaters, force air units, and floor furnaces. (2 sch: 1 hr. lecture, 2 hr. lab)

PPV/PCT 1622 Gas Piping
Information on standard gas codes. The safe installation of gas appliances and gas lines, according to codes, will be included. (2 sch: 1 hr. lecture, 2 hr. lab)

PPV/PCT 1712 Domestic Systems
Information on the installation of a hot water system according to the unit fixture system. Also information on sizing and installation of a potable cold water system. (2 sch: 4-hr lab)

PPV/PCT 1722 Plumbing Fixtures Lab
Information on the installation of the rough-in and finish fixtures used in the plumbing construction according to International Plumbing Code. (2 sch: 4-hr lab)

PPV/PCT 1732 Backflow Cross Connection
Information on the different types of backflow devices, and the installation and testing of the devices. (2 sch: 1-hr lecture, 2-hr lab)

PPV/PCT 1743 Advanced Plumbing Lab
Additional study in the area of advanced plumbing in the commercial area. (3 sch: 1-hr lecture, 4-hr lab)

PPV/PCT 1812 Rigging and Signaling
Basic use of hand signals, rigging, and equipment. (2 sch: 1-hr lecture, 2-hr lab)

PPV 1823 Steel Ship Building and Marine Construction
Structure of a ship and abbreviation of parts and sections of ships. Also, various types of piping systems, including both building and marine pipefitting systems. (3 sch: 2-hr lecture, 2-hr lab)

PPV/PCT 191(1-3) Special Project in Plumbing
Practical application of skills and knowledge gained in other technical courses. The instructor works closely with the student to insure that the selection of a project will enhance the student’s learning experience. (1-3 sch: 2- to - hr lab)

PPV/PCT 192(1-6) Supervised Work Experience in Plumbing
This course is a cooperative program between industry and education and is designed to integrate the student’s studies with industrial experience. Variable credit is awarded on the basis of semester hour per 45 industrial contact hours. (1–6 sch: 3- to 18-hr externship)
PPV 291(1-3) Special Project in Pipefitting
Practical application of skills and knowledge gained in other technical courses. The instructor works closely with the student to insure that the selection of a project will enhance the student’s learning experience. (1-3 sch: 2- to 6-hr lab)

PPV 292(1-6) Supervised Work Experience in Pipefitting
A cooperative program between industry and education and is designed to integrate the student’s studies with industrial experience. Variable credit is awarded on the basis of semester hour per 45 industrial contact hours. (1-6 sch: 3- to 18-hr externship)

PPT 1124 Pulping and Bleaching
This course provides an introduction to major pulping and bleaching processes and chemistry used. This is a lecture–laboratory class covering the basic types of laboratory techniques used in the pulp and paper industry. The main emphasis is the practical aspects of techniques, procedures, and use of equipment, calibration of equipment, and the interpretation of data. (4 sch: 3-hr lecture, 2-hr lab)
Prerequisite: Process Chemistry (PPT 1214), Introduction to Process Technology (PPT 1133), or Conditional Approval from Administration

PPT 1133 Introduction to Process Technology
An introduction to process operations within the process industry. Topics include technician duties, responsibilities, and expectations; plant organizations; the plant process and utility system; and the physical and mental requirements of the process technician. (3 sch: 3-hr lecture)

PPT 1214 Process Chemistry
An introduction to general and organic chemistry as applied to the process industry. Includes instruction on matter, energy, atoms, chemical reactions, and chemical bonding (4 sch: 3-hr lecture, 2-hr lab)

PPT 1424 Process Technology I (Equipment)
Instruction in the use of common process equipment including piping, valves, pumps, compressors, drivers, and fixed equipment such as exchangers, tanks, drums, and vessels (4 sch: 3-hr lecture, 2-hr lab)

PPT 1434 Process Technology II (Systems)
Study of the interrelation of process equipment and process systems including related scientific principles (4 sch: 3-hr lecture, 2-hr lab)
Pre/Corequisite: Process Technology I (Equipment) (PPT 1424)

PPT 1444 Process Technology III (Operations)
A course that combines equipment systems into operational units with an emphasis on instruction for start-up, normal operation, abnormal/emergency operations, and shutdown of an entire process (4 sch: 3-hr lecture, 2-hr lab)

PPT 1513 Safety, Health, and Environment
Development of knowledge and skills to reinforce attitudes and behaviors required for safe and environmentally sound work habits. Emphasis is placed on safety, health, and environmental issues in the performance of all job tasks and regulatory compliance issues. (3 sch: 3-hr lecture)
PPT 1613 Technical Communication
An application of written, oral, and other forms of communication to the process technology industry. Includes instruction and practice in written communications (reports and presentations, procedures, resumes, documentation, training materials, etc.) and oral communications (presentations, directions/instructions, feedback, etc.) (3 sch: 3-hr lecture)

PPT 1714 Process Instrumentation I
A study of the instruments and instrument systems used in chemical processing industry including terminology, primary variables, symbols, and control loops (4 sch: 3-hr lecture, 2-hr lab)

PPT 2113 Oil and Gas Production I
An overview of the petroleum industry including exploration and geology, well drilling, wellhead operations, and product distribution. Emphasis is placed on oil and gas production. (3 sch: 3-hr lecture)

PPT 2123 Oil and Gas Production II
A continuation of Oil and Gas Production I with emphasis on oil and natural gas production and processing (3 sch: 3-hr lecture)
Prerequisite: Oil and Gas Production I (PPT 2113)

PPT 2154 Machine Operations for Pulp and Paper Operations
This course concentrates on the functions and capability of all critical equipment in the paper mill including stock preparation, approach flow, fourdrinier, press section, drier section, calendaring, winding, and finishing operations. Primary process flows, consistency control, stock blending, stock refining, wet end chemistry, stock cleaning, approach flow systems, and the cause and effect relationships each of these has with the various papermaking parameters are discussed. Components of the machine fourdrinier and the concepts of formation, retention, drainage, and pressing are also explored. (4 sch: 3-hr lecture, 2-hr lab)
Prerequisite: Process Chemistry (PPT 1214) and Introduction to Process Technology (PPT 1133)

PPT 2234 Power Plant and Chemical Recovery for Pulp and Paper Operations
The purpose of this course is to present fundamental principles of boiler operation for both power boilers and chemical recovery boilers. Emphasis is on the basic requirements for steam production and chemical recovery. Topics explored include the basic design of water tube and fire tube boilers, the concept of heat transfer, the concepts of natural and forced circulation, air and fuel supply systems, condensate and feedwater systems, the concept of chemical recovery, evaporation and deposition, and plugging problems. (4 sch: 3-hr lecture, 2-hr lab)

PPT 2313 Quality Concepts
A course to provide an introduction to the field of quality in the process industry. Students are introduced to industry-related process concepts including operating consistency, continuous improvement, plant economics, team skills, and statistical process control (SPC). (3 sch: 3-hr lecture)

PPT 2323 Process Troubleshooting
A course to apply knowledge of process variables, indicators and controllers, troubleshooting tools, and troubleshooting steps to solve problems in a simple process system (3 sch: 3-hr lecture)
Prerequisite: Introduction to Process Technology (PPT 1133) and Process Instrumentation I (PPT 1714)

**PPT 2724 Process Instrumentation II**
A continuation of the study of varied instruments and instrument systems used in the processing industry, including terminology, primary variables, symbols, control loops, and troubleshooting (4 sch: 3-hr lecture, 2-hr lab)
Prerequisite: Process Instrumentation I (PPT 1714)

**PPT 291(1–3) Special Project in Process Operations Technology**
A course designed to provide the student with practical application of skills and knowledge gained in other vocational—technical courses. The instructor works closely with the student to ensure that the selection of a project will enhance the student’s learning experience. (1–3 sch: 2-to 6-hr lab)
Prerequisite: Consent of the Instructor

**PPT 292(1–6) Supervised Work Experience in Process Operations Technology**
A course that is a 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 one semester hour per 45 industrial contact hours. (1–6 sch: 3- to 18-hr externship)
Prerequisite: Consent of the Instructor

**PTA 100(3-6), PTA 1013, PTA 1023 Introduction to Physical Therapist Assistant Technology, Introduction to Physical Therapist Assistant Technology I, or Introduction to Physical Therapist Assistant Technology II**
These courses contain the baseline competencies and suggested objectives from the high school Allied Health curriculum which directly relate to the community college Physical Therapist Assistant program. The courses are designed for students entering the community college who have had no previous training or documented experience in the field. (3-6 semester hours based upon existing skills for each student. May be divided into 2 courses for a maximum total of 6 hours of institutional credit.)

**PTA 1111 Health Care Experience I**
This course is designed to provide the student with observation of 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. (1 sch: 3 hr. clinical)

**PTA 1123 Fundamental Concepts of Physical Therapy**
This course is an introduction to the field of physical therapy including role orientation, professional organizational structure, legal and ethical implications, and legislation. Historical patterns in the development of the profession will be explored and medical terminology introduced. (3 sch: 3 hr. lecture)

**PTA 1132 PTA Practicum I**
This course is designed to provide the student with observational time with participation in selected physical therapy activities. (2 sch: 6 hr. clinical)

**PTA 1143 PTA Practicum II**
This course is designed to provide the student with extended observation time with participation in selected physical therapy and/or related activities. (3 sch: 9 hr. clinical)
PTA 1151 Health Care Experience II
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 additional knowledge of the health care delivery system and physical therapy’s place within that system. (1 sch: 3 hr. clinical)

PTA 1213 Fundamental Skills for Physical Therapist Assistants
This course provides knowledge of topics utilized in the practice of physical therapy. Topics covered will include positioning, draping, transfers, body mechanics, gait training, and standard precautions. Vital signs, first aid, and emergency techniques will also be covered. (3 sch: 2 hr. lecture, 2 hr. lab)

PTA 1224 Therapeutic Modalities
This course is an 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. (4 sch: 3 hr. lecture, 2 hr. lab)

PTA 1314 Kinesiology
This course studies individual muscles and muscle functions, biomechanical principles of joint motion, gait analysis, goniometry, and postural assessment. (4 sch: 3 hr. lecture, 2 hr. lab)

PTA 1324 Therapeutic Exercise and Rehabilitation I
This course provides an overview of the biochemical and neurophysiological basis and application of various therapeutic exercises. The basics of therapeutic exercise are correlated with specific conditions. This course focuses on rehabilitation techniques in the treatment of a variety of selected conditions. Specialized exercise procedures are emphasized. (4 sch: 3 hr. lecture, 2 hr. lab)

PTA 1911 Seminar I
This course presents the opportunity for group assembly on a regular basis to work toward achievement of course objectives. Leadership skills, an understanding of group dynamics, community service, interaction with other health education students, and the practice of reading and interpreting professional literature are emphasized. A desire to continue development of knowledge and skills is stressed.

PTA 1921 Seminar II
This course provides the opportunity for group assembly on a regular basis to work to achieve course objectives. Demonstration of leadership skills, an understanding of group dynamics, community service, interaction with other health education students, and the practice of reading and interpreting professional literature are further developed. A desire to continue development of knowledge and skills is emphasized.

PTA 2234 Electrotherapy
This course emphasizes theory and practical application of electrotherapy and other therapeutic procedures. Indications and contraindications of modalities are also discussed. (4 sch: 3 hr. lecture, 2 hr. lab)
**PTA 2334 Therapeutic Exercise and Rehabilitation II**
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 included. Principles of prosthetics and orthotics, functional training, and other techniques are covered. (4 sch: 3 hr. lecture, 2 hr. lab)

**PTA 2413 Clinical Education I**
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. (3 sch: 9 hr. clinical)

**PTA 2424 Clinical Education II**
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 provide supervised clinical experiences in demonstrating the attributes and applying the skills which prepare students for entry into the physical therapy profession. (4 sch: 12 hr. clinical)

**PTA 2434 Clinical Education III**
This is the second of three culminating clinical education experiences which provide supervised clinical experiences in demonstrating the attributes and applying the skills which prepare students for entry into the Physical Therapy profession. (4 sch: 12 hr. clinical)

**PTA 2444 Clinical Education IV**
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 provide supervised clinical experiences in demonstrating the attributes and applying the skills which prepare students for entry into the Physical Therapy profession. (4 sch: 12 hr. clinical)

**PTA 2513 Medical Conditions and Related Pathology**
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. (3 sch: 3 hr. lecture)

**PTA 2523 Physical Therapy Seminar**
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. (3 sch: 3 hr. lecture)

**PTA 2911 Seminar III**
This course further develops the principles and characteristics presented in PTA 1911 and PTA 1921.

**RCT 111(1-3) Respiratory Care Practicum**
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. This is an elective course for the first year students. (1-3 sch: 3-9 hr. clinical)
RCT 1213  Respiratory Care Science
This course is designed to introduce the student respiratory care therapist to fundamental elements important to the delivery of health care in a safe, efficient, and professional manner. (3 sch: 3-hr lecture)

RCT 1223  Patient Assessment and Planning
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. (3 sch: 2-hr lecture, 2-hr lab)

RCT 1313  Cardiopulmonary Anatomy and Physiology
This course is a study of cardiopulmonary physiology in relation to the practice of respiratory care. (3sch: 3-hr lecture)

RCT 1322  Pulmonary Function Testing (PFT)
This course is an introduction to pulmonary function technique and testing equipment. (2 sch: 1-hr lecture, 2-hr lab)

RCT 1416  Respiratory Care Technology I
This course is a study of respiratory treatments and equipment design and operation related to non-critical care procedures. (6 sch: 2 hr. lecture, 8 hr. lab)

RCT 1424  Respiratory Care Practitioner II
This course is a continuation of Respiratory Care Practitioner. It is a study of the management of respiratory failure, including mechanical ventilation, pulmonary rehabilitation, and home care. (4 sch: 3-hr lecture, 2-hr lab)

RCT 1516  Clinical Practice I
Patient assessment, performance of respiratory care procedures, and care plan formation are practiced in the hospital environment. A procedural guide is utilized to evaluate student competencies and performance of respiratory care procedures (6 sch: 18-hr clinical)

RCT 1524  Clinical Practice II
In this course, students rotate through various respiratory care subspecialty areas for evaluation of competency and performance of respiratory care procedures (4 sch: 12-hr clinical)

RCT 1613  Respiratory Care Pharmacology
This course is designed to introduce the student to the pharmacology related to cardiopulmonary disorders. (3 sch: 3-hr lecture)

RCT 2333  Cardiopulmonary Pathology
This course is a study of cardiopulmonary pathophysiology. It includes etiology, clinical manifestations, diagnostics and treatment of various cardiopulmonary diseases incorporating clinical practice guidelines and therapist driven protocols. Case studies and/or clinical simulations will be utilized to enforce learning and evaluate progress. (3 sch: 3-hr lecture)

RCT 2434  Respiratory Care Practitioner III
This course is an advanced study of respiratory care in the critical care setting. Topics include non-conventional modes of mechanical ventilation, hemodynamics, special procedures, and advanced cardiac life support. (4 sch: 3-hr lecture, 2-hr lab)
RCT 2534 Clinical Practice III
In this course, students rotate through various clinical areas for evaluation of competency and performance of respiratory care procedures. (4 sch: 12-hr clinical)

RCT 2546 Clinical Practice IV
This course is a continuation of Clinical Practice III. In this course, students rotate through respiratory care areas. A procedural guide is utilized to evaluate student competency and performance (6 sch: 18-hr clinical).

RCT 2613 Neonatal/Pediatrics Management
This course is a study of fetal development and the transition to extrauterine environment. It includes the most common cardiopulmonary disorders, neonatal and pediatric disease processes, and the modes of treatment. (3 sch: 3-hr lecture)

RCT 2713 Respiratory Care Seminar
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. (3 sch: 2-hr lecture, 2-hr lab)

RGT 1114 Clinical Education I
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. (4 sch: 12-hr clinical)

RGT 1124 Clinical Education II
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. (4 sch: 12-hr clinical)

RGT 1139 Clinical Education III
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. (9 sch: 27-hr clinical)

RGT 1213 Fundamentals of Radiography
This course is an introduction to Radiologic Technology including professional, departmental, and historical aspects. Included are terminology, medical ethics, and fundamental legal responsibilities. (3 sch: 3-hr lecture)

RGT 1223 Patient Care and Radiography
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. (3 sch: 2-hr lecture, 2-hr lab)

RGT 1312 Principles of Radiation Protection
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. (2 sch: 2-hr lecture)

**RGT 1413 Imaging Principles**
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, beam limiting devices, filtration, production and control of scatter and secondary radiation, exposure systems, 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. (3 sch: 2-hr lecture, 2-hr lab)

**RGT 1423 Digital Imaging**
This course is designed to impart an understanding of the components, principles, and operation of digital imaging systems found in diagnostic radiology. Included are factors that impact image acquisition, display, archiving, and retrieval. In addition, principles of digital system quality assurance and maintenance are introduced along with guidelines for selecting exposure factors and evaluation images within a digital system to assist students to bridge between film-based and digital imaging systems. (3 sch: 2-hr lecture, 2-hr lab)

**RGT 1513 Radiographic Procedures I**
This course includes terminology, principles, and procedures involved in routine radiographic positioning for demonstration of the chest, abdomen, upper extremities and digestive system. Included is a review of radiographic anatomy on each procedure. (3 sch: 2-hr lecture, 2-hr lab)

**RGT 1523 Radiographic Procedures II**
This course includes principles and procedures involved in the radiographic positioning of the spinal column, urinary system, pelvic girdle, lower extremities, bony thorax, and mobile and trauma radiography procedures. Included is a review of radiographic anatomy on each procedure. (3 sch: 2-hr lecture, 2-hr lab)

**RGT 1613 Physics of Imaging Equipment**
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. (3 sch: 3-hr lecture)

**RGT 2943 Fundamentals of Computerized Tomography**
This course is designed to provide the student with an introduction to the fundamental principles of Computerized Tomography to include historical aspects of CT, common imaging procedures and protocols, physical and technical principles of image production, characteristics and quality, basic introduction to sectional anatomy, physics and instrumentation, and a review of patient care and contrast usage pertaining to CT. (3 sch: 3 hr. lecture)

**RGT 2953 Fundamentals of Magnetic Resonance Imaging**
This course is designed to provide the student with an introduction to the fundamental principles of Magnetic Resonance Imaging to include historical aspects, common imaging procedures and protocols, a review of patient care and MRI safety, introduction to sectional anatomy, physical and technical principles of image production and quality, imaging sequences, artifacts, clinical applications and system components. (3 sch: 3 hr. lecture)
RGT 2113 Mammography
This course is designed to provide the professional community with a cognitive online base of entry-level education in the practice of Mammography. (3 sch: 3 hr. lecture)

RGT 2123 Section Anatomy
This course is designed to study human sectional anatomy including location, structure, and function, as well as relationships among structures. Radiographs, CT images, and MRI images may be used to demonstrate the characteristic appearance of anatomic structures. (3 sch: 3 hr. lecture) Course Prerequisite Numbers: Bio 2513 & Bio 2511, Bio 2523 & Bio 2521
Course Prerequisite Name: A&P I & A&P II

RGT 2132 Social and Legal Responsibilities
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 patients, the patient’s families, and professional peers through comparison of diverse populations based on their value systems, cultural and ethnic influences, communication styles, socioeconomic influences, health risks, and life stages. (2 sch: 2-hr lecture)

RGT 2133 Computed Tomography
This course is designed to explore the technical principles of CT. A review of patient care, contrast media, and adverse reactions, common CT procedures and protocols, image characteristics, and image quality control methods are taught. (3 sch: 3 hr. lecture) Course Prerequisite Number: RGT 2123
Course Prerequisite Name: Sectional Anatomy

RGT 2134 Computed Tomography Clinical
This course is designed to offer the radiographer or student radiographer instruction and clinical experience in Computed Tomography (CT). The student will provide patient care, provide radiation protection and safety, perform imaging procedures, and perform image post-processing and evaluation. Students should be knowledgeable in sectional anatomy. Additional competencies beyond this course are required for students seeking ARRT certification. (4 sch: 12 hr. clinical) Course Prerequisite Number: RGT 2133
Course Prerequisite Name: Computed Tomography

RGT 2143 Magnetic Resonance Imaging
This course provides a basic foundation of Magnetic Resonance Imaging (MRI). The physical and technical principles, imaging sequences, image artifacts, clinical applications, system components, and safety issues will be discussed. Images of sectional anatomy related to MRI will also be explored. (3 sch: 3 hr. lecture) Course Prerequisite Number: RGT 2123
Course Prerequisite Name: Sectional Anatomy
RGT 2144 Magnetic Resonance Imaging Clinical
This course is designed to offer the radiographer or student radiographer instruction and clinical experience in Magnetic Resonance Imaging (MRI). The student will provide patient care, protection, and MRI safety; and perform imaging procedures, data acquisition, image post-processing, and evaluation. Students should be knowledgeable in sectional anatomy. Additional competencies beyond this course are required for students seeking ARRT certification. (4 sch: 12 hr. clinical)
Course Prerequisite Number: RGT 2143
Course Prerequisite Name: Magnetic Resonance Imaging

RGT 2147 Clinical Education IV
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. (7 sch: 21-hr clinical)

RGT 2157 Clinical Education V
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. (7 sch: 21-hr clinical)

RGT 2533 Radiographic Procedures III
This course includes principles and procedures involved in radiographic positioning of the entire cranium and facial bones. Included is a review of radiographic anatomy on each procedure. (3 sch: 2-hr lecture, 2-hr lab)

RGT 2542 Radiograph Procedures IV
This course is a study of special radiographic procedures which utilizes sterile techniques and specialized equipment. It also includes basic concepts of pharmacology. In addition, it also includes principles and procedures involved in radiographic positioning of the reproductive system. (2 sch: 2-h. lecture)

RGT 2911 Radiation Biology
This course is a study of the biological effects of radiation upon living matter. It includes genetic and somatic effects. (1 sch: 1-hr lecture)

RGT 2921 Radiographic Pathology
This course is designed to introduce theories of disease causation and the pathophysiologic disorders that compromise healthy systems. Etiology, pathophysiologic responses, clinical manifestations, radiographic appearance, and management of alterations in body systems will be presented. (1 sch: 1-hr lecture)

RGT 2933 Certification Fundamentals
This course is designed to correlate scientific components of radiography to entry-level knowledge required by the profession. (3 sch: 3-hr lecture)

RGT 2943 Fundamentals of Computerized Tomography
This course is designed to provide the student with an introduction to the fundamental principles of Computerized Tomography to include historical aspects of CT, common imaging procedures and protocols, physical and technical principles of image production, characteristics and quality,
basic introduction to sectional anatomy, physics and instrumentation, and a review of patient care and contrast usage pertaining to CT. (3 sch: 3 hr lecture)

**RGT 2953 Fundamentals of Magnetic Resonance Imaging**
This course is designed to provide the student with an introduction to the fundamental principles of Magnetic Resonance Imaging to include historical aspects, common imaging procedures and protocols, a review of patient care and MRI safety, introduction to sectional anatomy, physical and technical principles of image production and quality, imaging sequences, artifacts, clinical applications and system components. (3 sch: 3 hr lecture)

**ROT 1113 Fundamentals of Robotics**
This course is designed to introduce the student to industrial robots. Topics to be covered include robotics history, industrial robot configurations, operation, and basic programming. (3 sch: 2 hr. lecture, 2 hr. lab)

**ROT 1213 Industrial Hydraulics**
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. (3 sch: 2 hr. lecture, 2 hr. lab)

**ROT 1223 Industrial Pneumatics**
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. (3 sch: 2 hr. lecture, 2 hr. lab)

**ROT 1313 Industrial Robotics**
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. (3 sch: 2 hr. lecture, 2 hr. lab)

**ROT 2413 Automated Manufacturing Controls**
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. (3 sch: 2 hr. lecture, 2 hr. lab)

**ROT 2423 Servo Control Systems**
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. (3 sch: 2 hr. lecture, 2 hr. lab)

**ROT 2613 Mechanical Systems**
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. (3 sch: 2 hr. lecture, 2 hr. lab)
**SET 1114 Small Engine Mechanics I**
Introduces students to the basic principles of engine mechanics. Includes instruction on lubrication, fuel, and ignition systems (4 sch: 0-hr lecture, 8-hr lab)

**SET 1124 Small Engine Mechanics II**
A continuation of Small Engine Mechanics I with emphasis on cooling systems, engine governance, multi-cylinder engines, and diesel fuel systems (4 sch: 0-hr lecture, 8-hr lab)

**SET 1212 Measurements**
A course to develop skills and knowledge related to measurement tools, measurement tool usage, and fasteners of small engine and equipment components (2 sch: 1-hr lecture, 2-hr lab)

**SET 1313 Four-Cycle Engines**
A course to develop skills and knowledge related to four-cycle small engine and equipment repair and maintenance. Includes instruction in assembly, lubrication, and fuel systems (3 sch: 2-hr lecture, 2-hr lab)

**SET 1322 Two-Cycle Engines**
A course to develop skills and knowledge related to two-cycle small engine and equipment repair and maintenance. Includes instruction in assembly, lubrication, and fuel systems (2 sch: 1-hr lecture, 2-hr lab)

**SET 1413 Small Engine Shop Management**
Provides students with skills and knowledge related to management and operation of a small engine repair shop. Includes instruction in shop safety and OSHA regulations, shop tools and equipment, shop design, overall shop maintenance, and inventory control (3 sch: 2-hr lecture, 2-hr lab)

**SET 1512 Frame Inspection and Maintenance**
A course to develop skills and knowledge related to small equipment frame (chassis) repair and maintenance. Includes instruction in oxyfuel cutting and arc welding as well as painting and other frame (chassis) maintenance (2 sch: 1-hr lecture, 2-hr lab)

**SET 2134 Small Engine Mechanics III**
A continuation of Small Engine Mechanics II with emphasis on steering and suspension systems (4 sch: 0-hr lecture, 8-hr lab) None

**SET 2144 Small Engine Mechanics IV**
A continuation of Small Engine Mechanics III with emphasis on troubleshooting and performing maintenance on a variety of systems (4 sch: 0-hr lecture, 8-hr lab) None

**SET 2155 Small Engine and Equipment Analysis and Repairs I**
A course to provide skills and knowledge related to the operation, troubleshooting, and repair of systems related to equipment. Includes instruction on a variety of equipment and troubleshooting techniques related to equipment (5 sch: 0-hr lecture, 10-hr lab) Pre/Corequisite: Consent of the instructor

**SET 2165 Small Engine and Equipment Analysis and Repairs II**
A course to provide advanced skills and knowledge related to the operation, troubleshooting, and repair of systems related to equipment. Includes instruction on a variety of equipment and advanced troubleshooting techniques related to equipment. (5 sch: 0-hr lecture, 10-hr lab)
Prerequisite: Consent of instructor and completion of at least one semester of advanced coursework in Program Name

SET 2353 Engine Troubleshooting
A course to develop skills and knowledge associated with the basics of equipment diagnostics and troubleshooting. Instruction is provided on tools and equipment used in diagnosis, fasteners, fluids, and measurement devices. (3 sch: 2-hr lecture, 2-hr lab)

SET 2523 Maintenance and Repair of Cutting Mechanisms
A course to develop skills and knowledge related to the maintenance and repair of cutting mechanisms used in landscape and turf operations including mowers, trimmers, edgers, and saws. Includes instruction in drive systems, blade sharpening and height adjustment, reel grinding and adjustment, and chain saw chain sharpening and adjustment (3 sch: 2-hr lecture, 2-hr lab)

SET 2533 Hydraulics
A course to develop skills and knowledge related to small equipment chassis repair and maintenance. Includes instruction on hydraulics will be components, diagnosis, and repair of the hydraulic system (3 sch: 2-hr lecture, 2-hr lab)

SET 2543 Transmissions and Transaxles
A course to develop skills and knowledge related to small equipment transmissions and transaxles. Includes instruction for transmission and transaxle service, diagnosis, and repair (3 sch: 2-hr lecture, 2-hr lab)

SET 2613 Small Engine Electrical Systems
A course to develop skills and knowledge related to the operating principles of direct current circuits. Includes instruction on basic electrical principles, safety procedures, batteries, conductors, and switches (3 sch: 2-hr lecture, 2-hr lab)

SET 2811-3 Special Problem in Small Engine and Equipment Repair Technology
A course designed to provide the student with practical application of skills and knowledge gained in other Small Engine and Equipment Repair Technology courses through the use of a special problem. The instructor works closely with the student to insure that the selection of a project will enhance the student’s learning experience. (1-3 sch: 2-6-hr lab) Pre/Corequisite: Consent of the instructor

SET 2911-6 Supervised Work Experience in Small Engine and Equipment Repair Technology
A course that is a 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 one semester hour per 45 industrial contact hours. (1-6 sch: 3-18-hr externship) Prerequisite: Consent of instructor and completion of at least one semester of advanced coursework in Program Name

SET 2313 Small Engine and Equipment Project I
A course designed for establishment of skills and knowledge for introductory projects related to small engine and equipment (3 sch: 6-hr lab) Prerequisite: Consent of instructor and completion of at least one semester of advanced coursework in Program Name
SET 2323 Small Engine and Equipment Project II
A course designed for establishment of skills and knowledge for basic projects related to small
engine and equipment (3 sch: 6-hr lab) Prerequisite: Consent of instructor and completion of at
least one semester of advanced coursework in Program Name

SET 2333 Small Engine and Equipment Project III
A course designed for establishment of skills and knowledge for intermediate projects related to
small engine and equipment (3 sch: 6-hr lab) Prerequisite: Consent of instructor and completion
of at least one semester of advanced coursework in Program Name

SET 2343 Small Engine and Equipment Project IV
A course designed for establishment of skills and knowledge for advanced projects related to
small engine and equipment. (3 sch: 6-hr lab) Prerequisite: Consent of instructor and completion
of at least one semester of advanced coursework in Program Name

SMT 1112 Orientation and Shop Safety
An overview of the occupations in the sheet metal industry and personal and shop safety
practices of the sheet metal industry. (2 sch: 1-hr lecture, 2-hr lab)

SMT 1212 Measurement
Selection and use of measuring tools and basic mathematics pertaining to the sheet metal
industry. (2 sch: 1-hr lecture, 2-hr lab)

SMT 1315 Methods of Layout I
Layout and development of various sheet metal problems using the principles of parallel line and
triangulation development. (5 sch: 2-hr lecture, 6-hr lab)

SMT 1326 Methods of Layout II
A continuation of Methods of Layout I to include radial line layout and architectural/roofing
sheet metal and specialty sheet metal. (6 sch: 3-hr lecture, 6-hr lab)

SMT 1414 Hand Processes I
Selection and use of hand tools in the sheet metal trade. (4 sch: 2-hr lecture, 4-hr lab)

SMT 1424 Hand Processes II
A continuation of Hand Processes I that includes the selection and correct and safe use of the
specialty hand and power tools of the sheet metal trade. (4 sch: 2-hr lecture, 4-hr lab)

SMT 1613 Sheet Metal Welding
Selection and use of welding machines such as manual metal arc, gas metal arc welding
(GMAW), oxyacetylene, shielded metal arc (SMAW), and plasma arc cutting (PAC) as used in
the sheet metal trade. (3 sch: 1-hr lecture, 4-hr lab)

SMT 2213 Plans and Specifications I
Terms and definitions used in reading blueprints and specifications. Basic sketching, drawing,
and dimensioning of objects will be covered. Also, specifications of blueprints and building
codes will be covered. (3 sch: 2-hr lecture, 2-hr lab)

SMT 2223 Plans and Specifications II
Continuation of Plans and Specifications I with emphasis placed on reading and interpreting
blueprints and performing calculations. (3 sch: 2-hr lecture, 2-hr lab)
SMT 2324 Methods of Layout III
A continuation of Methods of Layout II with the use of CNC cutting methods for various layout of sheet metal projects. (4 sch: 1-hr lecture, 6-hr lab)

SMT 2514 Machine Processes I
Selection and the safe use of hand-and-foot operated machines of the sheet metal trade. (4 sch: 2-hr lecture, 4-hr lab)

SMT 2524 Machine Process II
A continuation of Machine Processes I that includes the use of power-operated machines of the sheet metal trade. (4 sch: 2-hr lecture, 4-hr lab)

SMT 2614 Advance Sheet Metal Welding
Advanced sheet metal welding using various welding machines, processes, and techniques. (4 sch: 2-hr lecture, 4-hr lab)

SMT 291(1-3) Special Project in Sheet Metal
Provides the student with practical application of skills and knowledge gained in other technical courses. The instructor works closely with the student to ensure that the selection of a project will enhance the student's learning experience. (1-3 sch: 2- to 6-hr lab)

SMT 292(1-3) Supervised Work Experience in Sheet Metal
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. (1-3 sch: 3- to 9-hr externship)

SUT 100(3-6), SUT 1013, SUT 1023 Introduction to Surgical Technology, Introduction to Surgical Technology I, or Introduction to Surgical Technology II
These courses contain the baseline competencies and suggested objectives from the high school curriculum which directly relate to the community college program. The courses are designed for students entering the community college who have had no previous training or documented experience in the field. (3-6 semester hours based upon existing skills for each student. May be divided into 2 courses for a maximum total of 6 hours of institutional credit.)

SUT 1113 Fundamentals of Surgical Technology
This is a basic introductory course including hospital and surgical suite organization and environment, history, legal responsibilities, terminology, interpersonal relationships, pharmacology, and anesthesia. (3 sch: 3 hr. lecture)

SUT 1216 Principles of Surgical Technique
This course is a comprehensive study of aseptic technique, safe patient care, and surgical techniques. (6 sch: 2 hr. lecture, 8 hr. lab)
Corequisites: All first semester courses or other courses determined by the local college and/or program director.

SUT 1314 Surgical Anatomy
Emphasis is placed on the structure and function of the human body as related to surgery. Application of the principles of surgical anatomy to participation in clinical experience. (4 sch: 4 hr. lecture)
SUT 1413 Surgical Microbiology
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. (3 sch: 3 hr. lecture)

SUT 1518 Basic and Related Surgical Procedures
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. (8 sch: 4 hr. lecture, 12 hr. clinical)
Prerequisites: CPR-Health Care Provider and all first semester courses or other courses determined by the local college and/or program director.

SUT 1528 Specialized Surgical Procedures
This course includes instruction in regional anatomy, pathology, instrumentation, and techniques in surgical specialty areas of ear, nose, and throat; eye; oral and maxillofacial surgery; pediatrics; and plastics. This course requires clinical experience in area hospital surgical suite and related departments. (8 sch: 4 hr. lecture, 12 hr. clinical)
Prerequisites: CPR-health care provider and all first semester courses or other courses determined by the local college and/or program director.

SUT 1538 Advanced Surgical Procedures
This course includes instruction in regional anatomy, pathology, instrumentation, and techniques in surgical specialty areas of orthopedics, neurosurgery, thoracic, peripheral vascular, cardiovascular surgery, and employability skills. This course requires clinical experience in area hospital surgical suites and related departments and a comprehensive final examination. (8 sch: 4 hr. lecture, 12 hr. clinical)
Prerequisites: CPR-health care provider and all second semester courses.

SUT 1703 Certification and Role Transition
An in-depth study of the role of the surgical technologist and review for the certification examination. The course examines liability and legal issues of practice, adapting critical thinking skills to a variety of practice settings, effective team and professional behaviors, continuing education, and ethical issues. Practice on computer simulations is required. (3 sch: 3 hr. lecture)

TAH 1113 Medical Terminology in Allied Health
A general medical terminology course applicable to students seeking a career in allied health, word structure, pronunciation, and application of medical terms of the body and systems of the body. (3 sch: 3 hr. lecture)

TAT 1113 Early Childhood Education for Teacher Assistant
This course is a continuation of Supervised Work Experience in Food Production and Management Technology I. It 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. (1-3 sch: 3-9 hr. externship)

TAT 1213 Assisting with the Special Child
A review of the characteristics of the normal, exceptional, abused, and/or neglected child. (3 sch: 2 hr. lecture, 2 hr. lab)
TAT 1313  Receptive and Expressive Language Arts Skills
A course designed for personal skills development in the areas of oral reading, reading comprehension, effective listening, nonverbal communication, oral and written language, and oral presentations. (3 sch: 2 hr. lecture, 2 hr. lab)

TAT 1413  Health, Nutrition, and Safety for the Elementary Child
An introduction to the concepts of health, safety, and nutrition and their relationship to early childhood education. It is intended to help adults assist children to develop good habits and attitudes, and to assume lifelong responsibility for their own well-being. (3 sch: 2 hr. lecture, 2 hr. lab)

TAT 1513  Direction Activities for the Elementary Child
A course designed to familiarize the students with an understanding of the artistic, physical, and musical development of the elementary child and the appropriate applications of methods and materials used for activities in the elementary classroom. (3 sch: 2 hr. lecture, 2 hr. lab)

TAT 1613  Methods and Materials in Handwriting for the Teacher Assistant
A course designed to familiarize the students with the methods and materials used in handwriting instruction and the appropriate applications. (3 sch: 1 hr. lecture, 4 hr. lab)

TAT 1624  Methods and Materials in Reading for the Teacher Assistant
This course is designed to introduce the student to the methods and materials used in reading instruction and the appropriate applications in the elementary classroom. (4 sch: 3 hr. lecture, 2 hr. lab)

TAT 1634  Methods and Materials in Mathematics for the Teacher Assistant
A course designed to familiarize the student with the methods and materials used in mathematics instruction and appropriate applications. The student will understand and apply basic math concepts. (4 sch: 2 hr. lecture, 4 hr. lab)

TAT 1713  Effective Use of Media and Resources for the Teacher Assistant
A course designed to teach the student to create and use resource materials effectively. Emphasis will be placed on proper use of audiovisual and office equipment for development and use of instructional materials. (3 sch: 2 hr. lecture, 2 hr. lab)

TAT 1813  Educational Planning for the Teacher Assistant
This course will introduce the student to the scope and sequence of elementary curricula. Emphasis will be placed on the educational planning process, the use of written, audiovisual, and computer based instructional materials, and classroom organization. (3 sch: 2 hr. lecture, 2 hr. lab)

TAT 1914  Practicum I for the Teacher Assistant
The student will spend scheduled time in classrooms for supervised learning experiences and will observe and record the daily aspects of the elementary instructional program within the classroom. (4 sch: 8 hr. lab)

TAT 1924  Practicum II for the Teacher Assistant
The student will spend scheduled time in the elementary classroom for supervised learning experiences and will observe and record the daily aspects of the elementary instructional program within the classroom. (4 sch: 2 hr. lecture, 4 hr. lab)
TCT 1114  Fundamentals of Telecommunications
History of voice/data communication, fundamental concepts of analog and digital communications, and basic telephone service. (4 sch: 3-hr lecture, 2-hr lab)

TCT 2214  Telephone Systems
Information and hands-on experience in installation, operation, troubleshooting, and repair of commercial use telephone systems including analog and digital key systems. (4 sch: 3-hr lecture, 2-hr lab)

TCT 2224  PBX Systems
This course is a continuation of the PBX section of Telephone Systems (TCT 2214). Further emphasis will be placed on the installation, programming, and troubleshooting of PBX systems. Maintenance, cleaning, and paperwork will be covered. (4 sch: 2-hr. lecture, 4-hr lab)

TCT 2314  Digital Communications I
Theories and applications of digital communications and analog pulse modulation. (4 sch: 2-hr lecture, 4-hr lab)

TCT 2324  Digital Communications II
Theories and applications of digital modulation methods and digital pulse modulation methods. (4 sch: 2-hr lecture, 4-hr lab)

TCT 2414  Microwave and Satellite Systems
Theories and applications of microwave and satellite communications. (4 sch: 3-hr lecture, 2-hr lab)

TCT 2424  Network Systems
Networking fundamentals, voice networking, LANs, and Internet. Also covered is upgrading of computers to support LAN technology. (4 sch: 2-hr lecture, 4-hr lab)

TCT 2433  Physics for Electronics
Coverage of those areas of physics that have applications in electronics (3 sch: 2-hr lecture, 2-hr lab)

TCT 291(1-4)  Special Project
Practical application of skills and knowledge gained in other telecommunications or telecommunications-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. (1-4 sch: 2- to 8-hr lab)

TCT 292(1-6)  Supervised Work Experience
This 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 1 semester hour per 45 industrial contact hours. (1-6 sch: 3- to 18-hr externship)

TDT 1113  Safety and Fundamentals of Die Fabrication
Fundamentals of tool and die fabrication procedures including an orientation to metallurgy and instruction of die fabrication. (3 sch: 1-hr lecture, 4-hr lab)
TDT 1123 Die Repair
Repair and maintenance of industrial dies, including practice using industrial dies. (3 sch: 1-hr lecture, 4-hr lab)

TDT 1133 Die Design I
Basic design of industrial dies that includes instruction and practice in calculations and processes of die design. (3 sch: 2-hr lecture, 2-hr lab)

TDT 1144 Die Fabrication I
Die fabricating procedures which includes instruction and safe practice in fabrication, heat treatment, and finishing dies. (4 sch: 1-hr lecture, 6-hr lab)

TDT 2153 Die Design II
Continuation of Die Design I which includes instruction and practice in designing different types of dies used in industry. (3 sch: 1-hr lecture, 4-hr lab)

TDT 2164 Die Fabrication II
Continuation of Die Fabrication I with emphasis on safe fabrication of complex types of dies. (4 sch: 1-hr lecture, 6-hr lab)

TDT 2174 Die Fabrication III
Specialized skills associated with the design and fabrication of work holding devices including jigs, fixtures, and other tools. (4 sch: 2-hr lecture, 4-hr lab)

TDT 2183 Jigs, Fixtures and Tools
Specialized skills associated with the design and fabrication of work holding devices including jigs, fixtures, and other tools. (3 sch: 1-hr lecture, 4-hr lab)

TDT 2233 Computer Numerical Control Operations III
Continuation of Computerized Numerical Operations II with special emphasis on die fabrication. The course includes instruction and safe practices in the use of the wire electrical discharge machine (WEDM). (3 sch: 1-hr lecture, 4-hr lab)

TDT 291(1-3) Special Problem in Tool and Die Technology
A course to provide students with an opportunity to utilize skills and knowledge gained in other Tool and Die Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-3 sch: 2-6 hr. lab)

TDT 292(1-6) Supervised Work Experience in Tool and Die Technology
A course which is a 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 1 semester hour per 45 industrial contact hours. (1-6 sch: 3-18 hr. externship)

ULT 1112 Interpersonal Skills for Line Workers
This course is designed to cover the basic communication skills for interaction with others. (2 sch: 2-hr lecture)

ULT 1122 Line Worker Safety
This course is designed to provide fundamental safety rules and procedures needed in performing basic line worker skills. (2 sch: 2-hr lecture)
ULT 1133 Safety for Line Workers
This course is designed to provide fundamental safety rules and procedures needed in performing basic line worker skills. (3 sch: 2-hr lecture, 2-hr lab)

ULT 1144 AC and DC Circuits for Utility Line Worker Technology
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 (4 sch: 3-hr lecture, 2-hr lab)
Pre/Corequisite: Fundamentals of Electricity for Line Workers (ULT 1192) or Fundamentals of Electricity (ELT 1192) or by consent of instructor

ULT 1152 AC and DC Circuits for Line Workers
Principles and theories associated with AC and DC circuits used in the line worker trade. Includes the study of electrical circuits, laws and formulas, and the use of test equipment to analyze AC and DC circuits (2 sch: 1-hr lecture, 2-hr lab)
Pre/Corequisite: Fundamentals of Electricity for Line Workers (ULT 1192) or Fundamentals of Electricity (ELT 1192) or equivalent course or Consent of the instructor

ULT 1192 Fundamentals of Electricity for Line Workers
Fundamental skills associated with all electrical courses. Safety, basic tools, special tools, equipment, and introduction to AC and DC circuits (2 sch: 1-hr lecture, 2-hr lab)

ULT1213 Electric Power
Electrical motors and their installation. Instruction and practice in using the different types of motors, protection devices, switches, transformers, and alternators found in utility transmission (3 sch: 2-hr lecture, 2-hr lab) Pre/Corequisite: Fundamentals of Electricity for Line Workers (ULT 1192) or Fundamentals of Electricity (ELT 1192) or by consent of instructor

ULT 1223 Transformer Operation and Banking
This course is designed to cover basic single phase operations and Delta and “Wye” Transformer Banks including hookups for 120/208—240/480/—120/240—277/480. (3 sch: 2-hr lecture, 2-hr lab) Pre/Corequisite: Fundamentals of Electricity for Line Workers (ULT 1192) or Fundamentals of Electricity (ELT 1192) AND AC and DC for Utility Line Worker Technology (ULT 1144) or AC and DC Circuits (ELT 1144), AND Electric Power (ULT 1213) OR By consent of the instructor

ULT 1232 Electrical Power and Transformer Banking for Line Workers
This course is designed to cover basic single phase operations and Delta and “Wye” Transformer Banks including hookups for 120/208—240/480/—120/240—277/480. (2 sch: 1-hr lecture, 2-hr lab) Pre/Corequisite: Fundamentals of Electricity for Line Workers (ULT 1192) or Fundamentals of Electricity (ELT 1192) or by consent of instructor

ULT1313 Line Worker Truck Driving
This course is designed to provide a line worker with fundamental skills needed to obtain a Class A CDL (Commercial Drivers License) with air brake endorsement. (3 sch: 2-hr lecture, 2-hr lab. Pre/Corequisite: Consent of the instructor
ULT 1324 Truck Driving for Line Workers
This course is designed to provide a line worker with fundamental skills needed to obtain a Class A CDL (Commercial Drivers License) with air brake endorsement. (4 sch: 1-hr lecture, 6-hr lab)
Pre/Corequisite: Consent of the instructor

ULT 1333 Basic Utility Equipment Operation
This course is designed to prepare students in the basic operation of line worker equipment. (3 sch: 2-hr lecture, 2-hr lab)

ULT 1413 Pole Climbing
This course is designed to provide a line worker with fundamental skills needed to perform basic pole climbing. (3 sch: 1-hr lecture, 4-hr lab) Pre/Corequisite: Consent of the instructor

ULT 1514 Overhead, Underground, and Substation Construction
This course is designed to provide further fundamental training in the field of electric line work dealing with the overhead/underground line construction and substation construction. (4 sch: 2-hr lecture, 4-hr lab) Pre/Corequisite: Pole Climbing (ULT 1413) or by consent of the instructor

ULT 1523 National Electric Safety Code (Safety Code)
The course is designed to introduce the students to the basic fundamentals and safety requirements as set forth in the National Electric Safety Code for the power line industry. (3 sch: 2-hr lecture, 2-hr lab)

ULT 1612 Computer Fundamentals for Line Workers
This course is designed to introduce students to basic computer skills. (2 sch: 1-hr lecture, 2-hr lab)

ULT 1623 Lineworker Computer Fundamentals
This course is designed to introduce students to basic computer skills. (3 sch: 2-hr lecture, 2-hr lab)

ULT 2133 Overhead Construction
This course is designed to provide further fundamental training in the field of electric line work dealing with the overhead line construction. (3 sch: 1-hr lecture, 4-hr lab) Pre/Corequisite: Pole Climbing (ULT 1413) or by consent of the instructor

ULT 2143 Underground Construction
This course is designed to provide further fundamental training in the field of electric line work dealing with the overhead to the underground line construction. (3 sch: 1-hr lecture, 4-hr lab) Pre/Corequisite: Pole Climbing (ULT 1413) or by consent of the instructor

ULT 2233 System Design and Operation
This course includes operation basics for protection of the electrical system overhead, underground, and substation. (3 sch: 1-hr lecture, 4-hr lab) Pre/Corequisite: Pole Climbing (ULT 1413) AND Overhead Construction (ULT 2133) AND Underground Construction (ULT 2143) or by consent of the instructor

ULT 2244 Working in Elevated Work Sites
This course is designed to provide a line worker with fundamental skills needed to perform basic pole climbing. (4 sch: 1-hr lecture, 6-hr lab) Pre/Corequisite: Pole Climbing (ULT 1413) AND
Overhead Construction (ULT 2133) AND Underground Construction (ULT 2143) or by consent of the instructor

**ULT 2333 Advanced Utility Equipment Operation**
This course provides an in-depth understanding of the operation of line worker equipment. (3 sch: 2-hr lecture, 2-hr lab) Pre/Corequisite: Basic Utility Equipment Operation (ULT 1333) or by consent of the instructor

**ULT 2911-3 Special Project I**
Practical application of skills and knowledge gained in other electrical or electrical-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. (1-3 sch: 2-6-hr lab) Prerequisites: Completion of one semester of course work in Utility Lineworker Technology OR Consent of instructor

**ULT 2921-3 Special Project II**
Practical application of skills and knowledge gained in other electrical or electrical-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. (1-3 sch: 2-6-hr lab) Prerequisites: Completion of one semester of course work in Utility Lineworker Technology OR Consent of instructor

**ULT 2931-3 Special Project III**
Practical application of skills and knowledge gained in other electrical or electrical-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. (1-3 sch: 2-6-hr lab) Prerequisites: Completion of one semester of course work in Utility Lineworker Technology OR Consent of instructor

**VAT 1111 Veterinary Math Calculations**
Veterinary Math Calculations provides a consistent approach to computations involved in drug and solution problems. (1 sch: 1 hr. lecture)

**VAT 1213 Animal Restraint and Medication**
Animal Restraint and Medication is the study and practice of restraining small animals, utilizing both chemical and physical means of safe and humane restraint. Included in the course are basic terminology, usage, administration, and general knowledge of common drugs and vaccines. (3 sch: 2 hr. lecture, 3 hr. clinical)

**VAT 1313 Animal Anatomy and Physiology**
Animal Anatomy and Physiology introduces the student to basic anatomy and physiology as related to the needs of a Veterinary Technician. Special emphasis is given to the structure of a selected cadaver, location of specific structures, and functions of these structures. (3 sch: 2 hr. lecture, 2 hr. lab)

**VAT 1414 Surgical and Hospital Techniques I**
Surgical and Hospital Techniques I is the study and practical application of sterile techniques, preparation of the surgical site, operating room conduct, assisting the surgeon, preanesthetics, anesthesiology, and anesthetic emergencies. (4 sch: 3 hr. lecture, 3 hr. clinical)
VAT 1424 Surgical and Hospital Techniques II
Surgical and Hospital Techniques II is the study and practical application of basic clinical and hospital techniques required of the veterinary technician. Subjects include pharmacology, animal nutrition, radiology, patient management and client instructions, and office procedures. (4 sch: 3 hr. lecture, 3 hr. clinical)

VAT 1512 Animal Parasites and Diseases
Animal Parasites and Diseases includes the study of etiology, symptoms, pathology, transmission, duration, prognosis, prevention, and general knowledge of common parasites and diseases of farm animals and pets. (2 sch: 2 hr. lecture)

VAT 1613 Clinical Pathology
Clinical Pathology is the study and practical application of veterinary diagnostic aids. The course includes hematology, blood chemistries, serology, urinalysis, fecal analysis, and organ function test. (3 sch: 2 hr. lecture, 3 hr. clinical)

VAT 2151 Clinical Elective
The student will participate in an additional rotation of the student’s choice.

VAT 2161 Business Procedures
The educational goals of this course relate primarily to understanding and practicing proper hospital procedures and improving communication skills in actual hospital situations. Emphasis will be placed on developing professionalism and efficiency.

VAT 2171 Laboratory Animal Care
The Veterinary Technician student will be instructed in the care and handling of laboratory animals. Maintenance of health laboratory animals to include proper nutrition, husbandry, and handling will be emphasized.

VAT 2173 LARAC
The Veterinary Technician student will rotate through the Laboratory Animal Unit of the College of Veterinary Medicine. Maintenance of health laboratory animals to include proper nutrition, husbandry, and handling will be emphasized.

VAT 2181 Necropsy
The student will rotate through the Necropsy Service of the Diagnostic Laboratory under the direct supervision of a faculty pathologist.

VAT 2184 Preceptorship
The Animal Health Technician student is required to complete a four week preceptorship with an approved Mississippi veterinarian practice or laboratory animal facility. This internship provides hands-on experience in a small animal, mixed animal, large animal, or laboratory animal facility. (4 sch: 12 hr. clinical)

VAT 2191 Pharmacy
The student will be instructed in basic knowledge of various aspects of pharmacy. This will include the area pharmacokinetics, proper handling of Controlled Substances, and dosage calculation.
**VAT 2213 Community Practice**
This rotation will require active participation in the management of small animal cases, aspects of the practice environment, and the delivery of health maintenance programs associated with a small animal clinical service.

**VAT 2223 Internal Medicine ICU**
The student will rotate through the Small Animal Unit of the Animal Health Center under the direct supervision of internal medicine faculty. The student will participate in the receiving, analysis, and management of patients referred for medical or surgical care. The student will also be instructed in the area of Intensive Care Unit.

**VAT 2233 Equine Services**
The student will rotate through Equine Units of the Large Animal Clinic under the direct supervision of large animal clinical faculty. The student will participate in the receiving, analysis, and management of equine patients referred for medical or surgical care.

**VAT 2243 Food Animal**
The student will rotate through the Field Services Unit of the Animal Health Center under the direct supervision of large animal clinical faculty. The student will participate in problem analysis, case management, and development of health maintenance programs for populations of animals.

**VAT 2253 Small Animal Surgery**
The student will rotate through the Small Animal Surgery Unit of the Animal Health Center under the direct supervision of surgical faculty and will participate in all aspects of patient preparation, patient management, operating room setup, and surgical equipment and supply preparation.

**VAT 2263 Anesthesia**
The student will rotate through the Anesthesia Services of the Animal Health Center under the direct supervision of faculty in anesthesia. Responsibilities include preoperative evaluation of patients, selection of appropriate anesthetic protocols, induction of anesthesia, maintenance of anesthesia, monitoring of anesthesia, anesthetic recovery of patients, and post-operative management.

**VAT 2273 Radiology**
The student will rotate through the Radiology Services of the Animal Health Center under the direct supervision of faculty radiologists. Responsibilities include positioning animals for radiographs. The student is also responsible for participation in ultrasound diagnostic and radiotherapy procedures.

**VAT 2283 Clinical Pathology**
The student will rotate through the Diagnostic Laboratory of the Animal Health Center under the direct supervision of the Diagnostic Services faculty. Responsibilities include collection of laboratory samples, conducting laboratory analysis in clinical pathology, parasitology, and bacteriology.
Work-Based Learning I, II, III, IV, V, and VI
A structured worksite learning experience in which the student, program area teacher, Work-Based Learning Coordinator, and worksite supervisor/mentor develop and implement an educational training agreement. Designed to integrate the student’s academic and technical skills into a work environment. Includes regular meetings and seminars with school personnel for supplemental instruction and progress reviews. (1-3 sch: 3-9 hours externship).

Course Name: Work-Based Learning I, II, III, IV, V, and VI
Corequisite: Concurrent enrollment in vocational–technical program area courses

WCT 1113 Maintenance Mechanics
This course includes the functions and demonstrates the maintenance of levers, inclined planes, cams, mechanical linkages, pulleys, belts, sprockets, gears, and drives. (3 sch: 2-hr lecture, 2-hr lab)

WCT 1123 Rotary Drilling Safety
This course explores the safety requirements of rotary drilling including rig, shop, welding, and related equipment safety. (3 sch: 2-hr lecture, 2-hr lab)

WCT 1136 Rotary Rig and Related Equipment
This course is a study of all facets of rotary rigs and related equipment. (6 sch: 2-hr lecture, 6-hr lab)

WCT 1146 Operation of Rotary Rig and Related Equipment
This course includes the operation of the rotary rig and related equipment. (6 sch: 2-hr lecture, 6-hr lab)

WCT 1314 Drilling Fluids
This course includes the functions and properties of drilling fluids. Included are the different types of mud and methods of controlling densities and viscosities of muds. (4 sch: 2-hr lecture, 4-hr lab)

WCT 1513 Geological Formations
This is a basic course in investigating the occurrence of ground water. Included are basic geology and hydrology and formations related to ground water. (3 sch: 2-hr lecture, 2-hr lab)

WCT 1613 Metal Fabrication for Well Drilling
This course includes welding safety, gas and electric welding, and basic machine shop operation as related to well construction operations. (3 sch: 2-hr lecture, 2-hr lab)

WCT 2223 Pump Theory and Installation
This course includes the selection of pumps for specific applications, installation of pumps, servicing of pumps, and maintenance of pump components. (3 sch: 2-hr lecture, 2-hr lab)

WCT 2233 Well Testing and Completion
This course is a detailed study of different well completion methods and their applications. (3 sch: 1-hr lecture, 4-hr lab)
WCT 2333 Down-hole Problems
This is a course that addresses problems of maintaining a straight hole when drilling. Included are fishing for lost tools, lost circulation zones, and other down-hole problems. (3 sch: 2-hr lecture, 2-hr lab)

WCT 2423 Water Well Construction
This course is a detailed study of the drilling, development, and production of water supply wells. Included are the legal responsibilities of a drilling contractor and investigation of the sanitary aspects of a well. (3 sch: 2-hr lecture, 2-hr lab)

WCT 2433 Environment and Geotechnical Drilling
This is a detailed course covering all aspects of environmental drilling. Included are hazardous materials recognition, identification, and safe handling. A study of the various methods of soil sampling used in geological and environmental investigations. (3 sch: 2-hr lecture, 2-hr lab)

WCT 291(1-3) Special Problem in Well Construction Technology
A course to provide students with an opportunity to utilize skills and knowledge gained in other Well Construction Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-3 sch: 2-6 hr. lab)

WCT 292(1-6) Supervised Work Experience in Well Construction Technology
A course that is a 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 one semester hour per 45 industrial contact hours. (1-6 sch: 3-18 hr externship)

WDT 1123 Web Development Concepts
This course is an introduction to the Internet and its uses in the world of business. It includes basic and advanced features of creating Web pages. Upon completion of this course, students will be able to create a personalized home page (3 sch: 2 hr. lecture, 2 hr. lab).

WJV 1114 Fundamentals of Watch and Jewelry Repair
This course includes a basic background and history of jewelry, as well as the modern watch. The course also includes tool making, use of various measuring instruments and gauges, use of torch for soldering as well as for heat treatment, filing brass projects to measurement, safety practices, and sharpening of turning gravers. Also included are polishing and cleaning jewelry, watch bands, take-in repairs, adjusting watch bands, engraving, and some battery installations. (4 sch: 2 hr. lecture, 4 hr. lab)

WJV 1124 Mechanical Watch I
This course includes identifying watch tools and the proper use and care of those tools. The course includes limited lathe work as it relates to sharpening of turning gravers. Students will learn to handle tools and watch parts with care using safety precautions. This course also includes disassembling, identifying watch parts along with the functions of those parts, and reassembling watches. Developing hand skills, proper use of eyewear, and adjusting the workstation is necessary in the course. (4 sch: 2 hr. lecture, 4 hr. lab)
**WJV 1134 Mechanical Watch II**
This course concentrates on the disassembly and reassembly process with emphasis on regular, calendar, automatics, and small ladies’ watches as relate to servicing. The student is introduced to removing and replacing a balance staff, and basic moving removing and replacing parts. Also included is how to professionally clean and service all types of watches. (4 sch: 2 hr. lecture, 4 hr. lab)

**WJV 1144 Basic Quartz Analog**
This course introduces the student to the quartz watch and how the technology differs from the regular mechanical and other electric timepieces. The student will learn to test circuits and coils, along with other electrical components with safety in mind; to remove and replace parts; to properly clean and service a quartz watch; and to create retro-fitting for quartz watches. (4 sch: 2 hr. lecture, 4 hr. lab)

**WJV 1154 Watch Repair**
This course includes removing and replacing balance staffs of pocket watches, regular wrist watches, small lady’s watches, and truing and poising those balance/crowns, fitting crystals, tightening cannon pinions of various types, straightening hairsprings, setting up the escapement, troubleshooting, and problem solving techniques. Professional dress, professional skills, professional communications, and professional attitude are encouraged, with emphasis of future employment. (4 sch: 2 hr. lecture, 4 hr. lab)

**WJV 1164 Advanced Watch Repair I**
This course includes cleaning and service of all types of watches as well as troubleshooting and problem solving techniques. It requires the students to be confident and increase speed and accuracy. Also included is major balance assembly repair such as staffing, truing, and poising with emphasis on special tools and their uses. This course should prepare the student to exhibit good habits, professional practices, and conduct conducive to watch and jewelry industry. (4 sch: 2 hr. lecture, 4 hr. lab)

**WJV 1174 Advanced Watch Repair II**
This course includes cleaning and servicing watches of various types and special features, such as chronometers, chronographs, etc. It requires less assistance from the instructor with speed and accuracy. It requires moderate intensity and concentration. The student is challenged to all types of repair such as crystal fitting, roller jewel setting, balance staffing, truing, poising and escapement setting, and any other type repair one might encounter with minimum advice from the instructor. (4 sch: 2 hr. lecture, 4 hr. lab)

**WJV 1184 Advanced Watch Repair III**
This course requires the student to be more accurate in troubleshooting and problem solving. It includes waterproofing, using innovative techniques as well as those found in the market place. Personal appearance becomes more important as it relates to the interview process. The student must have good customer relations, good professional practices, and degree of initiative, as well as extrapolative ability in relationship to any watch. The student must be able to clean and service three or more watches in one cleaning basket to insure production methods. (4 sch: 2 hr. lecture, 4 hr. lab)
**WJV 1224 Basic Jewelry Repair**
This course includes silver soldering rings using the torch to any size larger or smaller without the solder joint showing any imperfections. It also includes putting bright, ripple, hammered, Florentine, and satin finishes on rings. The student must successfully demonstrate knowledge of jewelry process, terms, nomenclature, and basic precautions to stones. (4 sch: 2 hr. lecture, 4 hr. lab)

**WJV 1234 Jewelry Casting and Design**
This course includes instruction in hand carving wax patterns, spruing, casting, burnout cycle, bombing, electro stripping, rubber molds, and wax injection. This course includes training in manufacturing of all types of jewelry. (4 sch: 2 hr. lecture, 4 hr. lab)

**WJV 1244 Jewelry Repair I**
Upon completion of this course, the student will be able to use the torch for soldering heads on rings, chains, and wire fabrication. The student will be able to use the flex shaft to set various stones. (4 sch: 2 hr. lecture, 4 hr. lab)

**WJV 1254 Jewelry Repair II**
Upon completion of the course, the student will be able to solder chains, jump rings, and all chain repairs. The student will be able to re-tip old prongs and replace broken prongs, make rock salt nuggets, charcoal nuggets, solder bails on large items, engrave, test carat of gold, and make all general and minor repairs that come in over the counter from live work. (4 sch: 2 hr. lecture, 4 hr. lab)

**WJV 1264 Jewelry Repair III**
Upon completion of this course, the student will be able to successfully demonstrate the ability to completely build from round wires, square wore, and flat stock finished articles to size rings and proper drilling of small holes for delicate soldering. The student will also be able to take in live work from over the counter and properly repair all the various types of everyday repairs. (4 sch: 2 hr. lecture, 4 hr. lab)

**WJV 1274 Stone Setting**
Upon completion of this course, the student will be able to successfully set stones level in cluster and multi-head rings using bearing burrs and hart burrs, setting burrs, and gravers. The student will repair all live work and understand take-in procedures. Upon job completion, all stones must be bright, level, and secure. (4 sch: 2 hr. lecture, 4 hr. lab)

**WJV 1284 Advanced Stone Setting**
Upon completion of the course, the student will be able to successfully set stones level and secure in bar setting, bezel setting, channel setting, tube setting, gypsy setting, and multi-head setting (free form). The student will be able to take in jewelry repairs using proper take-in procedures, repair carat gold jewelry as assigned, and wait on customers using professional practices. (4 sch: 2 hr. lecture, 4 hr. lab)

**WLV 1116 Shielded Metal Arc Welding I**
This course is designed to teach students welding techniques using E-6010 electrodes. (6 sch: 1-hr lecture 10-hr lab)
WLV 1124 Gas Metal Arc Welding (GMAW)
This course is designed to give the student experience in various welding applications with the GMAW welder including short circuiting and/or pulsed transfer. (4 sch: 1-hr lecture, 6-hr lab)

WLV 1136 Gas Tungsten Arc Welding (GTAW)
This course is designed to give the student experience in various welding applications using the GTAW process. (6 sch: 1-hr lecture, 10-hr lab)

WLV 1143 Flux Cored Arc Welding (FCAW)
This course is designed to give the student experience using FCAW process. (3 sch: 1-hr lecture, 4-hr lab)

WLV 1155 Pipe Welding
This course is designed to give the student experience in pipe welding procedures. (5 sch: 1-hr lecture, 8-hr lab)

WLV 1162 Gas Metal Arc Aluminum Welding
This course is designed to give the student experience in Gas Metal Aluminum Welding. (2 sch: 1-hr lecture, 2-hr lab)

WLV 1171 Welding Safety, Inspection, and Testing Principles
This course is designed to give the student experience in safety procedures, inspection and testing of welds. (1 sch: 2-hr lab)

WLV 1226 Shielded Metal Arc Welding II
This course is designed to teach students welding techniques using E-7018 electrodes. (6 sch: 1-hr lecture, 10-hr lab)

WLV 1232 Drawing and Welding Symbol Interpretation
This course is designed to give the student experience in reading welding symbols and drawings. (2 sch: 1-hr lecture, 2-hr lab)

WLV 1252 Advanced Pipe Welding
This course is designed to give the student advanced pipe welding techniques using shielded metal arc and gas tungsten arc welding processes. (2 sch: 1-hr lecture, 2-hr lab)

WLV 1314 Cutting Processes
This course is designed to give the student experience in oxyfuel cutting principles and practices, air carbon cutting and gouging, and plasma arc cutting. (4 sch: 2-hr lecture, 4-hr lab)

WLV 191(1-3) Special Problem in Welding and Cutting Technology
A course to provide students with an opportunity to utilize skills and knowledge gained in other Welding and Cutting Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-3 sch: 2-6-hr lab)

WLV 192(1-6) Supervised Work Experience in Welding and Cutting Technology
A course which is a 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 one semester hour per 45 industrial contact hours. (1-6 sch: 3-18 hr externship)
**WLV 2812  Welding Metallurgy**  
This course is designed to give the student experience in the concept of metallurgy and how metals react to internal and external strains and temperature changes. (2 sch: 2-hr lec, 1 lab)  

**WLV 2913  Welding Code**  
This course is designed to give the student experience in the various welding codes and the experience in interpretation of these codes. (3 sch: lecture)
SECTION III: STATE-APPROVED INTERDISCIPLINARY COURSES

ATE 1213  Spanish Conversation for Technology
Special emphasis is placed upon pronunciation and conversation. Some grammar is used. (3 sch: lecture)

CTE 1113  Occupational Math
This course is designed for students who want to improve their basic math skills in order to enhance the probability of admission into nursing, health education, industrial technology or other occupational programs and/or to increase the probability of success after entering an occupational program. (3 sch: lecture)

RST 1312  Freshman Orientation
This course is designed to help students adjust to college life. Course content includes personal, academic, and financial information to assist the student in succeeding in college. The course is designed to teach effective study habits, reading methods, use of the library, not taking, report writing, financial responsibility education and gives the student guidance in collegiate life. (2 sch: lecture)
SECTION IV: STATE-APPROVED LOCAL PROGRAM COURSES

BCT 1113 Broadcast Techniques I (Meridian Community College)
This course covers the elementary principles and practices of television and radio in varied program formats. This includes the basic mechanics of operating video and audio equipment and basic linear editing. 3 hours lecture. (3 sch: lecture)

BCT 1133 Graphic Design for Media (Meridian Community College)
This course introduces the student to the visual graphics standards used in modern television production as well as the principles of computer design for the broadcast media. Students gain experience with Adobe Photoshop and other forms of graphic production effects. (3 sch: lecture)

BCT 1213 Radio and Television Announcing (Meridian Community College)
Diction, pronunciation, articulation and inflection are studied and practiced in this course as applied to announcing on radio and television. Students apply the skills they have learned in the radio and television studios on campus. (3 sch: lecture)

BCT 1223 Broadcast News Writing (Meridian Community College)
This course covers the process of gathering, writing and delivering news for the electronic media. In addition, the role of the reporter, styles of presentation of news and the types of news content involved with the electronic media are also studied and practiced. (3 sch: lecture)

BCT 1423 Introduction to Mass Media (Meridian Community College)
This course covers the origin and development of books, magazines, newspapers, film, radio and television in America as a means to mass communications. The advanced technology of today’s diverse electronic media is also covered. (3 sch: lecture)

BCT 1813 Broadcast Assistantship I (Meridian Community College)
This course is designed to give the student supervised work experience in radio and television production both in the studio and in the field. The purpose of this course is to give the student hands-on experience in the field of professional broadcasting. (3 sch: 100 hours minimum lab to be arranged)

BCT 1823 Broadcast Assistantship II (Meridian Community College)
This course is a continuation of BCT 1813. (3 sch: 100 hours minimum lab to be arranged)

BCT 2113 Broadcast Techniques II, 3 cr. (Meridian Community College)
Advanced principles and techniques of producing and directing radio and television broadcasts are stressed in this course. This includes fully integrated news package development. (3 sch: lecture)

BCT 2223 Writing for Radio and TV (Meridian Community College)
This course helps students learn to be creative writers within the confines imposed by the television and radio media and the industry that supports those media. Preparation and research is stressed, along with the importance of communicating effectively through writing. Persuasion is also taught. (3 sch: lecture)
BCT 2233 Broadcast Studio Operation (Meridian Community College)
This course covers the theory and practice of producing television programming that is broadcast ready with a focus on studio production and broadcast news. (3 sch: lecture)

BCT 2243 Non-Linear Concepts (Meridian Community College)
This course introduces students to nonlinear editing, computer animation and video production effects. Digital editing and broadcast production using Media 100 and Adobe After Effects is also covered. (3 sch: lecture)

BCT 2813 Broadcast Assistantship III (Meridian Community College)
This course is designed to give the student supervised work experience in radio and television production. Students are expected to take greater responsibility with the focus being placed on directing, producing and leadership. (3 sch: 100 hours minimum lab to be arranged)

BCT 2823 Broadcast Assistantship IV (Meridian Community College)
See BCT 2813 for description. This course is a continuation of BCT 2813. (3 sch: 100 hours minimum lab to be arranged)

DTV 1137 Commercial Truck Driving Internship
Under the supervision of a company trainer, this course will enable the student to apply the training he/she received at Meridian Community College with the trucking company of his/her choice. The student will earn a salary during this internship (OJT). The successful completion of this course will enable the student to drive solo with the company of his/her choice. Prerequisites: DTV 1116, 1126. (7 sch; 200 lab)

ECT 1113 Principles of Emergency Management (Meridian Community College)
This course is to provide an overview of the characteristics, functions, and resources of an integrated system and how various emergency management services work together in a system of resources and capabilities. Emphasis will be placed on how this system is applied to all hazards for all government levels, across the four phases and functions of emergency management. (3 sch: lecture)

ECT 1123 Fire Service Operations (Meridian Community College)
An orientation to the fire service, this course explores department structure and organization, operations and responsibility, and the history of the fire service. Also included are changes that impact how traditional fire department services are currently delivered. (3 sch: lecture)

ECT 1213 Law Enforcement Operations (Meridian Community College)
Line activities of law enforcement organizations are discussed with emphasis on organization and management. This course provides a guide to the responsibilities assigned to patrol, traffic, investigations, and other specialized police units. (3 sch: lecture)

ECT 1223 Principles of Public Safety Communications (Meridian Community College)
This course is a study of the systems used to facilitate emergency communications between the public, fire unit, and dispatch centers. Information is centered on the methods used by telecommunicators to rapidly process and respond to critical information. (3 sch: lecture)

ECT 1613 Mass Casualty Incident Management (Meridian Community College)
During a disaster, few things are more taxing on a community’s response resources than multiple casualty incidents. This course uses components of the Incident Command System to coordinate
the efforts of triage, treatment and transport of the sick and injured. Additional focus is placed on identifying key incident factors that impact the decision-making process. (3 sch: lecture)

ECT 1623 Transportation Emergency Incident Management (Meridian Community College)
Railroad operations and the potential for disaster are discussed in this course. Case studies from both passenger and freight rail incidents are reviewed with attention given to resource management and incident command. (3sch: lecture)

ECT 1813 Dynamics of Homeland Security (Meridian Community College)
The primary intent of this course involves information gathering, including the analysis and assessment of local threats and response capabilities. Students will develop procedures for preparing and responding to terrorist attacks. In addition, the practices for restoring and maintaining critical government operations are discussed in this course. (3 sch: lecture)

ECT 2313 Hazardous Materials (Meridian Community College)
Identification and recognition of hazardous materials are stressed in this class. Various types and classes of hazardous materials are discussed as well as various methods of transportation and storage. (3 sch: 3 hr lecture)

ECT 2323 Incident Management Systems (Meridian Community College)
This course is a study of incident management systems used for handling situations from the smallest incidents to the largest. A variety of methods are discussed with emphasis placed on the National interagency Incident Management System. (3 sch: lecture)

ECT 2333 Emergency Planning (Meridian Community College)
Development of emergency operation plans and the process used to update existing plans that conform to current FEMA guidelines is covered in this course. Additional focus is placed on the interaction between public safety personnel that occurs during the planning process. (3 sch: lecture)

ECT 2413 Emergency Personnel Supervision (Meridian Community College)
Focusing on supervising and managing personnel involved with emergency management, this course provides students with information on developing effective supervisory techniques. Attention is given to exploring the role of the supervisor, dealing with problem situations, and issues related to leadership. (3 sch: lecture)

ECT 2423 Disaster Response and Recovery (Meridian Community College)
This course discusses the role emergency managers have in responding to situations and the operations necessary to begin recovery efforts. Emphasis is placed on responsibilities assumed by local, state, and federal government agencies as well as the associated coordination requirements. (3 sch: lecture)

ECT 2433 Public Information and Awareness (Meridian Community College)
This course provides an overview of the basic skills needed to perform as a public information officer (PIO) as they relate to emergency management. The course focuses on the various methods used to disseminate public information during the time surrounding an emergency. (3 sch: lecture)
ECT 2513 Financial Management (Meridian Community College)
Budgeting and financial management are the primary concerns of this course. Various methods of budgeting are discussed as well as budgetary tracking methods and evaluation procedures. The application of these methods is demonstrated at different levels of personnel responsibility. (3 sch: lecture)

ECT 2613 Wildland Fire Incident Management (Meridian Community College)
Wildland fires can create a unique set of problems for emergency managers that range from selecting proper strategies, managing resources, coordinating evacuations, and initiating recovery efforts. Understanding how wildland fires behave and the methods used to combat them is critical to the decision-making process. This course focuses on wildland fires from an incident management standpoint with emphasis on risk management and safety.

ECT 2623 Hazardous Weather Operation (Meridian Community College)
The course provides detailed information on weather-related hazards and the necessary coordination and communication of warning information. Additional focus is given towards flooding situations and the appropriate warnings for such events. (3 sch: lecture)

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ECT 2633 Special Problems in Emergency Management (Meridian Community College)
Prerequisite: Consent of program coordinator and prior or concurrent enrollment in ECT courses. This course provides selected problems aimed towards local emergency management needs. Students utilize critical thinking skills and perform the necessary research to develop effective solutions. (3 sch: lecture)

ECT 2713 Emergency Management Technical Practicum (Meridian Community College)
This course allows emergency management personnel to implement knowledge and experience by functioning in the career field. The experience is designed to integrate the student’s academic and technical skills into a work environment. (3 sch: lecture)

ECT 2813 Response to Incidents of Terrorism (Meridian Community College)
This course addresses the special concerns and hazards encountered at incidents resulting from acts of terrorism or other criminal intent. Specific issues include responder safety, incident management, and weapon of mass destruction. Additional emphasis is placed on developing working relationships between response agencies involved with terrorism incidents. (3 sch: lecture)

ECT 2833 Principles of Transportation Security (Meridian Community College)
History demonstrates that transportation play an important role in the outcome of a terrorist attack. Likewise, the various modes of commercial transportation provide multiple methods for the concealment and delivery of weapons of mass destruction. This course focuses on the methods and procedures used to safeguard our transportation system and the steps local governments can take to improve the security of transportation facilities. (3 sch: lecture)
EMT 2933 Cardiac Resuscitation Across the Life Span
This course is a comprehensive review of cardiac resuscitation for healthcare professionals. The course provides a review of Basic Life Support for all age groups, advanced cardiac life support, and pediatric advanced life support. At the end of the course, licensed healthcare providers are eligible to receive Certification in BLS-Healthcare Provider, ACLS, and PALS from the American Heart Association. (3 sch: 3 hr. lecture)

FFT 1113 Introduction to Fire Science (Meridian Community College)
An orientation to the fire service, this course explores department structure and organization, operations and responsibilities and the history of the fire services and changes that are currently remolding traditional fire services. (3 sch: lecture)

FFT 1123 Introduction to Fire Prevention (Meridian Community College)
This course introduces students to modern approaches of fire prevention. An overview of current fire prevention methods is provided, including Codes and Standards, Company-Based Inspections, Public Fire Education, Interdiction Programs and legislation affecting fire prevention activities. (3 sch: lecture)

FFT 1213 Firefighting Principles and Practices (Meridian Community College)
A basic firefighting tactical course, this class provides information on the major principles and practices conducted at fire and emergency scenes. Concentrating on activities of rescue, ventilation, salvage, overhaul, offensive and defensive attack methods and firefighter safety, students explore various operations that must be conducted in a coordinated manner. (3 sch: lecture)

FFT 1223 Fire Apparatus & Equipment (Meridian Community College)
Engines, pumps, operation procedures, maintenance techniques and equipment specifications are discussed while providing a working knowledge and understanding of various types of apparatus and equipment used by the fire service. (3 sch: lecture)

FFT 1513 Building & Fire Codes (Meridian Community College)
The importance of building and fire codes is stressed in this class by studying the "Southern Building Code Congress Building and Fire Codes," the most commonly used building code in the state. A review of hazards and how they relate to standard chapters is explored. Requirements for various types of construction are also discussed. (3 sch: lecture)

FFT 1613 Hazardous Materials (Meridian Community College)
Identification and recognition of hazardous materials are stressed in this class. Various types and classes of hazardous materials are discussed, as well as methods of transportation and storage. (3 sch: lecture)

FFT 1713 Fire Investigation (Meridian Community College)
This course focuses on building construction, chemistry, physics, electricity, motivation and human reaction as related to the arson fire. Basic investigation techniques, arson law and the psychology of the arsonist are covered. (3 sch: lecture)

FFT 1813 Fire Law (Meridian Community College)
An analysis of public law that affects the fire service is the basics of this class. From laws related to codes and standards, administrative and management practices, to those related to the fire
ground, students learn the fundamentals of fire department operations and management. (3 sch: lecture)

FFT 2313  Fire Service Hydraulics (Meridian Community College)
A study in the use of water to combat fires, this course provides information on theories associated with the use of water, actual fire ground application practices and the use of water additives. A study is made of various delivery and usage methods. (3 sch: lecture)

FFT 2323  Building Construction (Meridian Community College)
Why do buildings burn? What are the danger areas of various types of construction? This course investigates building construction from the standpoint of the fire service. A basic overview of building codes and construction methods is used to familiarize students with building components and construction types. (3 sch: lecture)

FFT 2333  Fire Fighter Safety (Meridian Community College)
This course provides an overview of safety practices for the emergency service worker. Covering the individual and team from "in the station" through the emergency scene and return back to service, this course is essential for those who participate in emergency service activities. (3 sch: lecture)

FFT 2413  Strategy & Tactics (Meridian Community College)
Strategy and tactics used in a variety of situations faced by the fire service are explored. Covering different situations from small everyday occurrences to massive conflagration, this course makes use of simulations and case histories in exploring necessary strategy and tactical endeavors. (3 sch: lecture)

FFT 2423  Incident Management Systems (Meridian Community College)
This course is a study of incident management systems used for handling situations from the smallest incidents to the largest. A variety of methods are discussed with emphasis placed on the National Consortium for Incident Systems’ Incident Command/Management System. (3 sch: lecture)

FFT 2513  Fire Protection Systems (Meridian Community College)
An exploration of various types of fixed and portable fire protection systems forms the basis for this class. Design, testing, maintenance and inspection of a variety of common fire protection systems are emphasized. (3 sch: lecture)

FFT 2523  Fire Inspection (Meridian Community College)
An effective inspection technique is the goal of this course by providing students with a review of pertinent codes and standards, methods of inspection, hazard studies and legal documentation requirements. (3 sch: lecture).

FFT 2533  Public Fire Education (Meridian Community College)
This course provides an overview of public education activities in regard to fire protection and prevention. Drawing from effective national model programs, this class focuses on identification of target audiences and hazards and methods for addressing individuals and groups. (3 sch: lecture)
FFT 2613  Chemistry of Hazardous Materials (Meridian Community College)
Chemical behavior of materials is explored and students learn how to improve decision making, safety, operations and handling of hazardous materials incidents. Students also learn to evaluate potential and real hazards and predict behavior of hazardous materials. (3 sch: lecture)

FFT 2623  Hazardous Materials Practices (Meridian Community College)
This course focuses on the strategies and safe procedures for alleviating the danger at a hazardous materials incident. Topics include integrating information about the chemical properties, storage, transportation, local conditions and resources in dealing with hazardous materials problems. (3 sch: lecture).

FFT 2633  Hazardous Materials Incident Management (Meridian Community College)
Basic and advanced response procedures, techniques and methods for dealing with a variety of hazardous materials situations are explained in this course. Focusing on the hazardous materials situation’s complexity, this course prepares students to manage emergency response operations. (3 sch: lecture)

FFT 2713  Law of Evidence (Meridian Community College)
Evidence procedures (primarily for arson-related crimes), types of evidence, criminal court procedures and collection methods are studied in this course. Other topics include search and seizure, arrest and discretion. (3 sch: lecture)

FFT 2723  Evidence Analysis (Meridian Community College)
The collection, analysis and use of physical evidence from the crime scene to evaluation and in the courtroom are covered. Crime laboratory methods, procedures and tests as they relate to arson cases are also explored in depth. (3 sch: lecture)

FFT 2733  Criminal Law (Meridian Community College)
Local, state and federal laws are covered with emphasis on development, application and enforcement. Specific attention is paid to the state and federal laws related to arson, mail fraud and insurance fraud. (3 sch: lecture)

FFT 2813  Fire Department Management (Meridian Community College)
This course introduces students to management. Particular attention is paid to the management process as it relates to non-emergency and emergency aspects of the fire officer's role. (3 sch: lecture)

FFT 2823  Fire Service Supervision (Meridian Community College)
Focusing specifically on supervising and managing personnel involved with fire protection, this course provides students with information on developing effective supervisory techniques, the role of the supervisor, dealing with problem situations and other areas relating to personnel in fire science and individual work groups. (3 sch: lecture)

FFT 2833  Financial Management (Meridian Community College)
Budgeting and financial management are the primary concerns of this course. Various methods of budgeting are discussed as well as budgetary tracking methods and evaluation procedures. An applied project requires the development of a model budget for the student’s fire service organization. (3 sch: lecture)
GCT 1113 Application and Mac Concepts (Meridian Community College)
In this course, students are introduced to the Macintosh computer. The names and uses of applications, such as QuarkXPress and Microsoft Word, are introduced for basic electronic page layout, word processing and desktop publishing. The course includes an exploration of digital imaging and editing using the application Adobe Photoshop CS. Emphasis is placed on using the computer as a tool to execute numerous design projects. (3 sch: 3 hr lecture)

GCT 1123 Graphic Art Design I (Meridian Community College)
This course introduces the elements of Graphic Design, such as layout, color and typography. Students learn to analyze design problems, conceptualizing appropriate solutions and developing visual and cognitive skills necessary to execute both editorial and advertising designs. (3 sch: 1 hr lecture, 4 hrs lab)

GCT 1133 Application and Desktop Layout (Meridian Community College)
The names and uses of application such as Adobe Illustrator CS and Adobe Photoshop CS are introduced for basic layout, illustration and design solutions. Emphasis is placed on using the computer as a tool to execute numerous design projects. (3 sch: 3 hr lecture)

GCT 1143 Advertising Print and Media Processes (Meridian Community College)
A comprehensive study using the Macintosh, this course focuses on the aspects of design from concept to finished output. (3 sch: 1 hr lecture)

GCT 1223 Graphic Art Design II (Meridian Community College)
This course examines the process of solving various design problems, including corporate identity, advertising and publications. Major emphasis is placed on using the computer as a tool to execute campaign projects. (3 sch: 1 hr lecture, 4 hr lab)

GCT 1233 Application and Desktop Layout II (Meridian Community College)
In this course, students use applications such as QuarkXPress, Adobe Illustrator CS, Adobe Photoshop CS, and Adobe InDesign CS to execute advanced layout, illustration and design solutions. (3 sch: 1 hr lecture, 4 hr lab)

GCT 2123 Advanced Graphic Art Design I, (Meridian Community College)
This course is an exploration of advanced graphic design problems including packaging and advertising. A complete advertising campaign is conceptualized and executed. All project components are treated as professional portfolio units. (3 sch: 2 hr lecture, 2 hr lab)

GCT 2132 Digitized Imaging and Advanced Layout (Meridian Community College)
A comprehensive course using the Macintosh, this course deals with the creation and manipulation of digital images and the application of those images to print, multimedia, video and the Internet. (Not a requirement for graduation.) (2 sch: 1 hr lecture, 2 hr lab)

GCT 2153 Real World Graphics (Meridian Community College)
This class mimics the ‘real world’ of work. Structured much like a small design or advertising agency, all work is done in creative teams. Projects are created, executed and presented to professionals for instant feedback. (3sch: 1 hr lecture, 4 hr lab)

GCT 2163 Graphic Design Portfolio (Meridian Community College)
This course focuses on the making and completing of a graphic design portfolio consisting of highly finished comps that simulate printed samples. (3 sch: 1 hr lecture, 4 hr lab)
GCT 2173 Graphic Communication Externship/Practicum (Meridian Community College)
This course provides the student on-the-job training in professional graphic design sites in the community. The student has the opportunity to integrate theory and practice gleaned from the classroom with the practical experience of the professional world. (3 sch: 5 hrs per week)

GCT 2223 Advanced Graphic Art Design II (Meridian Community College)
Students execute advanced graphic design projects during this course, including exploration into professions design practices. All project components are treated as professional portfolio units. (3 sch: 2 hr lecture, 2 hr lab)

IST 1483 Fundamentals of Virtualization
This course presents basic concepts of operating system virtualization, server virtualization, cloning, teams, and virtual networks (3 sch: 2 hr. lecture, 2 hr. lab)

MST 1113 Power Machinery IA (Meridian Community College)
A course that provides instruction in general shop safety as well as operation of power machinery. Instruction includes the safe operation of lathes, power saws, drill presses, and vertical mills. (3 sch: 1 hr. lecture, 4 hrs. lab)
Note: Successful completion of MST 1113 and MST 1114 equates to the completion of MST 1114-6 Power Machinery I in the statewide curriculum.

MST 1114 Power Machinery IB (Meridian Community College)
A continuation of Power Machinery IA in general shop safety and the operation of power machinery. Instruction includes the safe operation of lathes, power saws, drill presses, and vertical mills. (4 sch: 2 hrs. lecture, 4 hrs. lab)
Note: Successful completion of MST 1113 and MST 1114 equates to the completion of MST 1114-6 Power Machinery I in the statewide curriculum.