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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CTE 1153  Computational Methods for Career and Technical Education
CTE 1163  Introduction to Sustainable and Renewable Energy
CTE 200(1-3) CPAS Prep
RST 1312  Freshman Orientation

SECTION IV: STATE-APPROVED LOCAL PROGRAM COURSES

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BCT 1133  Graphic Design for Media (Meridian Community College)
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BCT 1223  Broadcast News Writing (Meridian Community College)
BCT 1423  Introduction to Mass Media (Meridian Community College)
BCT 1813  Broadcast Assistantship I (Meridian Community College)
BCT 1823  Broadcast Assistantship II (Meridian Community College)
BCT 2113  Broadcast Techniques II, 3 cr. (Meridian Community College)
BCT 2223  Writing for Radio and TV (Meridian Community College)
BCT 2233  Broadcast Studio Operation (Meridian Community College)
BCT 2243  Non-Linear Concepts (Meridian Community College)
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ECT 1213  Law Enforcement Operations (Meridian Community College)
ECT 1223  Principles of Public Safety Communications (Meridian Community College)
ECT 1613  Mass Casualty Incident Management (Meridian Community College)
ECT 1623  Transportation Emergency Incident Management (Meridian Community College)
ECT 1813  Dynamics of Homeland Security (Meridian Community College)
ECT 2313  Hazardous Materials (Meridian Community College)
ECT 2323  Incident Management Systems (Meridian Community College)
ECT 2333  Emergency Planning (Meridian Community College)
ECT 2413  Emergency Personnel Supervision (Meridian Community College)
ECT 2423  Disaster Response and Recovery (Meridian Community College)
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Uniform Course Numbering for Career and Technical Education

SECTION I: Introduction

The system of identifying courses in all CTE 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 1254 Communications and Digital Sales Methods
This course is designed to teach the student the proper etiquette when using the telephone and other digital selling opportunities and provide the needed skills for selling and working with customers over the telephone and other digital sales methods. (4 sch: 2-hr lecture, 4-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 1335 Inventory Control
This course includes actual performance of the requirements and responsibilities of controlling the parts movement under both lab and real life conditions. (5 sch: 2-hr lecture, 6-hr lab)

AAV 1344 Counter Sales
This course includes actual performance of the requirements and responsibilities of selling parts over the counter under both lab and real life conditions. (4 sch: 1 ½ -hr lecture, 7-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 1723—Introduction to Electricity**
This course covers basic electricity and the circuits, wiring diagrams, schematic diagrams, and electrical symbols that a service technician will encounter when servicing Refrigeration, Heating, Air Conditioning and Appliance equipment. (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 résumé, record keeping, and service contracts. (3 sch: 3 hr. lecture)

**ACT 2213—Washing Machine Technology**
This course applies the theory and operating principles involved with different brands of washing machines. Advanced troubleshooting techniques of the electrical and mechanical systems are studied and practiced. (3 sch: 2 hr lecture, 2 hr lab)

**ACT 2223—Dryer Systems Technology**
This course covers the theory and operating principles involved with different brands of dryers. The electrical and mechanical systems of both gas and electric dryers are studied. Advanced troubleshooting techniques of the electrical and mechanical systems are practiced. (3 sch: 2 hr lecture, 2 hr lab)

**ACT 2233—Cooking Systems Technology**
This course covers electric and gas ranges, cook tops, wall ovens, microwaves, and convection ovens. The theory and operating principles are studied. Advanced troubleshooting techniques of the electrical systems are studied and practiced. (3 sch: 2 hr lecture, 2 hr lab)

**ACT 2243—Dishwasher Systems Technology**
This course covers the theory and operating principles involved with different brands of dishwashers. The electrical and mechanical systems are studied. Advanced troubleshooting techniques of the electrical and mechanical systems are practiced. (3 sch: 2 hr lecture, 2 hr lab)

**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  Air 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)

AHT 1113 Medical Terminology  
This is a course for Allied Health majors who need to read and be able to use and understand health terms which are most common in health care. Students will learn phonetic pronunciation. (3 sch: 3 hrs. lecture).

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)

**ANT 1123 Aviation Systems**
This course is a study of the structure of the aviation system and its functions, including familiarity with the language of air traffic control, the operating principles of navigational equipment, and the federal rules affecting the movement of aircraft. (3 sch: 3 hr lecture)
(Prerequisite: AVM 1113).

**ANT 1313 Airport Management and Operations**
Examines the administration of public airports and their relationship with airlines, fixed-base operators, and the FAA. Federal airport standards for security, fuel handling and storage, noise abatement, bird control, clear zones, lighting, and federal and state financial aid programs to airports for improvements and upgrades. (3 sch: 3 hr lecture)

**ANT 1513 Aviation Security**
This course is a study of the security framework of commercial airports including familiarity with the process of balancing security needs with economic needs of an airport. Provides a broader view of aviation security beyond the airport. (3 sch: 3 hr lecture)

**ANT 2133 Tower Operations and Procedures**
Provides an understanding of the operation of an airport control tower. The student will achieve a workable knowledge of the various components of the tower and positions of operation, the phraseologies, the separation criteria, the flight data process, and the rules and procedures for each component. (3 sch: 3 hr lecture) (Prerequisite: AVM 1113 and ANT 1123)

**ANT 2143 Radar Operations and Procedures**
Provides an understanding of the operation of an approach control facility or en route control facility. The student will achieve a workable knowledge of the various components of the facilities, the phraseologies, the separation criteria, the flight data process, and the rules and procedures for each component. (3 sch: 3 hr lecture) (Corequisite: ANT 2133).

**ANT 2153 Tower Applications**
This course will allow the student to apply the various facets of air traffic control that were learned in the prerequisite courses to a simulated tower environment. (3 sch: 3 hr lecture) (Prerequisite: ANT 2133).
ANT 2163 Radar Applications
This course will allow the student to apply the various facets of air traffic control that were learned in the prerequisite courses to a simulated radar environment. (3 sch: 3 hr lecture) (Prerequisite: ANT 2143).

ANT 2323 Aviation Safety and Airport Inspection
Provides an overview of aviation safety programs and systems including trends in aviation safety practices with emphasis on future safety enhancements. Provides a workable knowledge of the safety inspection of airports as prescribed in Federal Aviation Regulation 139. (3 sch: 3 hr lecture)

ANT 2333 Air Transportation
Provides an overview of the aviation industry. Describes the economic aspects of passenger and cargo air transportation, including practices, problems, and regulations. (3 sch: 3 hr lecture)

ANT 2343 ACE Preparation
Provides assessment and skill enhancement for preparation for the Airport Certified Examination (ACE), the national certifying examination for Airport Operations Specialists. The ACE is administered by the American Association of Airport Executives (AAAE). (3 sch: 3 hr. lecture) (Prerequisites: MT 1313, AAT 1513, AAT 2323 and ANT 2333).

ANT 2523 Introduction to Homeland Security
Introduces students to the vocabulary and important components of Homeland Security. Explores the state, national, and international laws impacting Homeland Security. Includes an examination of the most critical threats confronting Homeland Security. (3 sch: 3 hr lecture)

ANT 2533 Intelligence Analysis and Security Management
Examines intelligence analysis and its indispensable relationship to the security management of terrorist attacks and other threats. Explores vulnerabilities of our national defense and private sectors, as well as the threats posed to these institutions by terrorists, man-made disasters, and natural disasters. Students will discuss substantive issues regarding intelligence support of Homeland Security. (3 sch: 3 hr lecture)

ANT 2543 Transportation and Border Security
Provides an in-depth view of modern border and transportation security. Specific topics include security for seaports, ships, aircraft, trains, trucks, pipelines, buses, etc. Focuses on the technology need to detect terrorists and their weapons as well as includes discussion on legal, economic, political, and cultural aspects of the problem. (3 sch: 3 hr lecture)

ANT 2613 Unmanned Aerial Systems (UAS) Basic Flight Skill Development
Orientation and familiarization with Remotely Piloted Vehicle (RPV) simulator software and hardware systems to include basic flight maneuvers and flight dynamics; practical application of pilot skills of UAS microlight aircraft including aircraft setup, tuning, troubleshooting, and testing. (3sch: 2 hr lecture, 2 hr lab)

ANT 2623 Unmanner Aerial Systems (UAS) Intermediate Flight Skill Development
Orientation and familiarization with full-scale aircraft simulation software and hardware systems; intermediate flight skills training to include aircraft preflight and systems check, recovery from unusual attitudes, and flight dynamics of heavily-loaded, high-performance
aircraft; practical application in external flight training of basic and advanced UAS aircraft. (3sch: 2 hr lecture, 2 hr lab)

ANT 2633 Unmanned Aerial Systems (UAS) Advanced Flight Skill Development
Advanced UAS systems overview including video and data link operation; introduction to First Person View (FPV) in basic and advanced UAS aircraft; launch/recovery techniques and UAS operations in the airport environment. (3sch: 2 hr lecture, 2 hr lab)

ANT 2643 Autonomous Systems
Introduction of autonomous systems theory including UAS autopilot operation, setup, tuning, and troubleshooting; practical application of UAS mission planning and aircraft flight testing including launch/recovery, flight following, situational awareness, Crew Resource Management, risk awareness and emergency procedures. ANT 2643 is the capstone course for the UAS pilot training curriculum and is designed to prepare the student for an entry level pilot position within the UAS industry. (3sch: 2 hr lecture, 2 hr lab)

ANT 2653 Autonomous Systems-Rotary Aircraft
Emphasis on rotary aircraft autonomous systems including rotary UAS autopilot operation, setup, tuning, and troubleshooting; practical application of rotary UAS mission planning and aircraft flight testing including launch/recovery, flight following, situational awareness, Crew Resource Management, risk awareness and emergency procedures. (2 hr lecture, 2hr lab)

ANT 2713 Fixed Wing UAS Airframe Setup and Maintenance
Airframe construction and repair techniques, aircraft tuning, and weight/balance considerations; installation of data link, sensors, and autopilot systems. (2 hr lecture, 2hr lab)

ANT 2723 Rotary UAS Airframe Setup and Maintenance
Emphasis on rotary airframe construction and repair techniques, aircraft tuning, and weight/balance considerations; installation of data link, sensors, and autopilot systems. (2 hr lecture, 2hr lab)

ANT 2813 UAS Commercial Applications I
Commercial applications of UAS technology within the agricultural and surveying industries. (2 hr lecture, 2hr lab)

ANT 2823 UAS Commercial Applications II
Commercial applications of UAS technology including aerial photography, structural inspections, law enforcement, search and rescue (SAR), sports video, and real estate marketing. (2 hr lecture, 2hr lab)

ANT 2913 Special Problems in Aviation Technology
A course to provide students with an opportunity to utilize skills and knowledge gained in other Aviation Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (3 sch: 2 hr. lecture, 2 hr. lab)

ANT 2923 Supervised Work Experience
Internship in area of specialization. Supervised work in government or industry to gain experience in the aviation fields. (3 sch: 9 hrs clinical) (Prerequisite: Department approval).

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 1224 High Performance Heads
This course covers the advanced techniques and practices of cylinder head porting. The goal of this course is to have the learners achieve a high level of understanding and skills in the flow of air through the cylinder head. (Sch. 3 1 hr. Lecture, 6 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: 3 hr. lecture, 15 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: 3 hr. lecture, 15 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: 6 hr. lecture, 6 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: 6 hr. lecture, 6 hr. lab)

**BAV 2217 Barbering Instructor Training I**
Successful completion of this course will enable the student to apply the training and instruction he or she received at the community/junior college program with the company of his or her choice. The student will perform/observe independently with minimal supervision from a company trainer. (7 sch: 2 hr lecture, 15 hr. clinical lab) **Prerequisites:** Completion of BAV 1118-1618, consent of instructor, and a current and valid barber license.

**BAV 2227 Barbering Instructor Training II**
Successful completion of this course will enable the student to apply the training and instruction he or she received at the community/junior college program with the company of his or her choice. The student will perform/observe independently with minimal supervision from a company trainer. (7 sch: 2 hr. lecture, 15 hr. clinical lab). **Prerequisites:** Completion of BAV 2217, consent of instructor, and a current and valid barber license.

**BAV 2237 Barber Instructor Training III**
Successful completion of this course will enable the student to apply the training and instruction he or she received at the community/junior college program with the company of his or her choice. The student will perform/observe independently with minimal supervision from a company trainer. (7 sch: 2 hr. lecture, 15 hr. clinical lab) **Prerequisites:** Completion of BAV 2217 and BAV 2227, consent of instructor, and a current and valid barber license.

**BAV 2247 Barber Instructor Training IV**
Successful completion of this course will enable the student to apply the training and instruction he or she received at the community/junior college program with the company of his or her choice. The student will perform/observe independently with minimal supervision from a company trainer. (7 sch: 2 hr. lecture, 15 hr. clinical lab) **Prerequisites:** Completion of BAV 2217, BAV 2227, and BAV 2237, consent of instructor, and a current and valid barber license.
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: 1 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 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 2543 Medical Machine Transcription III**
This course is designed to continue the development of the student’s transcription skills including more difficult dictation, longer and more complex medical records, and more difficult physician dictation (foreign accents, dialects). All major medical specialties are included. (3 sch = 1 hr lecture, 4 hr lab)

**BOT 2613 Entrepreneurial Problem Solving**
Designed to develop business students into entrepreneurs capable of operating their own companies and to reduce the high failure rate of starting, conducting, and expanding a business. Students will gain experience in problem solving through analyses of case studies, and projects and surveys of current business practices. (3 sch=3 hr lecture)

**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 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 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)

**BPT 1124 Cookies, Mignardise and Frozen Desserts**
Instruction on how to make a variety of cookies, biscotti's, miniature desserts, ice creams, anglaise, petit fours and sorbets. Different methods and techniques will be covered such as creaming, tempering, foaming, product knowledge, and terminology. Provide skills in the production of churned and frozen desserts. (4 sch: 1 hr lecture, 6 hr lab)
**BPT 1234 Classic Pastry, Pies and Tarts**
Designed to provide students with the fundamental knowledge of producing various pies, puff pastry, pate a choux, custards, creams and tarts utilizing traditional methods. This course will include platter and plate design arrangements for different menu styles. (4 sch: 1 hr lecture, 6 hr lab)

**BPT 2214 Artisan Breads and ViennoiserieExp**
Provides students with the knowledge, skills and techniques of artisan breads and viennoiserie production. Laminated doughs, quick breads, yeast breads, rolls and savory quick breads products, techniques and skills are applied. The properties of scaling, mixing, production and baker's percentage are studied. Baking methodology, fermentation, proper mixing and production are emphasized. (4 sch: 1 hr lecture, 6 hr lab)

**BPT 2324 Advanced Cakes and Patisserie**
Apply fundamental skills of icing cakes in creating special occasion cakes. Emphasis is placed on developing skills in making various flowers out of modeling chocolate, marzipan and gum paste. Students are introduced to covering and glazing special occasion cakes with rolled fondant and build their piping skills through intricate patterns and techniques. (4 sch: 1 hr lecture, 6 hr lab).

**BPT 2334 Chocolates, Confections Sugar Artistry**
Production and history of chocolate and other confection techniques necessary to work with chocolate and sugar. Various candies are to be hand dipped or molded into form. Sugar artistry to include pastillage- blown, pulled or poured while in production. Edible centerpiece showcases design explored. (4 sch: 1 hr lecture, 6 hr lab)

**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)

**CNT 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)

**CNT 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) Pre/Corequisite CPT 1113 Operating Platforms

**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 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(3-6) 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’s interaction with platforms in order 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)

CRJ 1313 Introduction to Criminal Justice  
History, development, and philosophy of law enforcement in a democratic society, introduction to agencies involved in the administration of criminal justice; career orientation. (3 sch: 3 hr lecture)

CRJ 1323 Police Administration and Organization  
Principles of organization and administration in law enforcement agencies; introduction to concepts of organizational behavior. (3 sch: 3 hr lecture)

CRJ 1353 Internship in Criminal Justice  
Course includes field work offering research and practice in a criminal justice agency. Three lecture hours per week. (3 sch: 3 hrs lecture) Prerequisite: Instructor approved internship in an approved law enforcement, juvenile justice or correctional agency. Major in criminal justice with sophomore standing, under supervision of the agency concerned and school instructor.

CRJ 1363 Introduction to Corrections  
An introduction to the origins, historical and philosophical development of the American correctional system and its relationship with other criminal justice agencies. An overview of major contemporary correctional system and methods of treatment of offenders. (3 sch: 3 hrs lecture)

CRJ 1373 Introduction to Homeland Security  
The issues pertaining to the role and mission of the Department of Homeland Securities and related agencies, both domestic and international. (3 sch: 3 hrs lecture)

CRJ 1383 Criminology  
A study of causes, treatment, and prevention of crime with emphasis on the nature and significance of criminal behavior. Course content includes theories, statistics, trends, and programs concerning criminal behavior. (3 sch: 3 hrs lecture)

CRJ 2213 Traffic Law  
An examination of the history, development, and enforcement of statutes pertaining to motor vehicles with emphasis on prevailing MS traffic law and methods of enforcement. (3 sch: 3 hrs lecture)

CRJ 2223 Survey of Criminalistics  
The study of scientific crime detection methods; modus operandi, crime scene search, preservation of evidence, research projects and class participation required. (The course is currently an approved course in SBCJC’s Uniform Course Numbering Guide for Transfer Programs for the Associate of Arts degree in Criminal Justice.)

CRJ 2313 Police Operations  
A study of police procedures, and enforcement methods within law enforcement agencies. Particular emphasis is placed on the function of the patrol division. (3 sch: 3 hrs lecture)
CRJ 2323 Criminal Law—Evidence
A survey of applied substantive law with emphasis on the most common criminal offenses. Practical insight into the rules of evidence and consideration governing the admissibility of evidence in court. (3 sch: 3 hrs lecture)

CRJ 2333 Criminal Investigations I
An examination of the crime solving process with an emphasis on methodology, corpus delicti, and evidence. Fundamentals of evidence collection, preservation, and analysis; fingerprinting, photography, crime scene processing, and the use of scientific techniques in investigation. (3 sch: 3 hrs lecture)

CRJ 2363 Criminal Court Practice
An in depth study of the criminal case within several courts of the state and federal systems. (3 sch: 3 hrs lecture)

CRJ 2394 Survey of Criminalistics
The study of scientific crime detention methods; modus operandi, crime scene search, preservation of evidence, research projects and class participation required. (4 sch: 4 hr lecture).

CRJ 2413 Administration of Criminal Justice
A study of basic legal concepts; due-process and criminal procedure, to include laws of arrest, search and seizure, the warrant process and warrant exceptions, and evidence. (3 sch: 3 hrs lecture)

CRJ 2513 Law Enforcement and the Juvenile
A survey of the common law roots of juvenile law; the unfolding of case law in American history; the development of the juvenile courts and corrections, and the role of law enforcement in juvenile delinquency. Also, the theoretical perspectives on juvenile deviance. (3 sch: 3 hrs lecture)

CRJ 2713 Foundations of Terrorism
Survey of the role of the criminal justice professional in combating terrorism in the modern world. (3 sch: 3 hrs lecture)

CRJ 2723 Intelligence Analysis and Security Management
This course is designed to develop an understanding of how intelligence assists in maintaining national security, the laws, guidelines, executive directives and oversight relating to intelligence as well as the methodologies used in the intelligence community. (3 sch: 3 hr lecture)

CRJ 2733 Transportation and Border Security
This course provides a student with an analysis of issues that concern the protection of the borders of the United States and U. S. policies regarding the safety of the U. S. Transportation System. (3 sch: 3 hr lecture)

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 1113  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: 1-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 1153  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: 1-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 1213 Stenotype Machine Shorthand I
This course is a continuation of CRT 2213 Voice Writing III. Emphasis is placed on speaker identification, transcript formatting and production, and proofreading through computer-access transcription of actual judicial transcripts, public hearings, literary dictation, and congressional
record. In this course, students will learn about the many career choices available to realtime reporters and about the technologies and skills required for these aspects of reporting. Speakers who have worked in areas such as captioning, classroom reporting, computer-integrated courtrooms, and on-line technologies will discuss the evolving role of the reporter. (3 sch: 2 hr lecture 1 hr lab)

**CRT 1223 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: 2 hr lecture, 2 hr lab)  
Prerequisite: Stenotype Machine Shorthand I (CRT 1113)

**CRT 1233 Voice Writing I**
This course introduces the student to basic voice theory, speech recognition engines, dictation techniques, and voice writing equipment. This course is designed to provide students with the knowledge needed to maintain, update, diagnose, and operate a laptop and windows operating system for the purpose of Voice Reporting. Daily assignments are given. At the completion of this course, students should be writing approximately 100 wpm with 95% accuracy. (3 sch: 2 hr lecture 1 hr lab)

**CRT 1243 Voice Writing II**
This course focuses on the interaction of the multiple software applications used to produce accurate, sustained, realtime voice recognition. It will re-enforce the skills mastered in CRT 1233 Voice Writing I, including basic voice theory, speech recognition engines, dictation techniques, voice writing equipment, and vocabulary development. Daily assignments are given. At the completion of this course, students should be writing at 140 wpm with 95% accuracy. (3 sch: 2 hr lecture 1 hr lab)

**CRT 2113 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. (3 sch: 1-hr lecture, 4-hr lab)

**CRT 2123 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. (3 sch: 1-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)

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CRT 2163  Realtime 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. (3 sch: 1-hr lecture, 4-hr lab)

CRT 2173  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 2213 Voice Writing III  
This course is a continuation of CRT 1243 Voice Writing II with emphasis on medical anatomy, physiology, and medical and technical dictation. This course also focuses on the interaction of the multiple software applications used to produce accurate, sustained, realtime voice recognition and will re-enforce the skills mastered in Voice Writing II. At the completion of this course, students should be writing at 180 wpm with 95% accuracy. (3 sch: 2 hr lecture 1 hr lab)

CRT 2223 Voice Writing IV  
This course is a continuation of CRT 2213 Voice Writing III. Emphasis is placed on speaker identification, transcript formatting and production, and proofreading through computer-access transcription of actual judicial transcripts, public hearings, literary dictation, and congressional record. In this course, students will learn about the many career choices available to realtime reporters and about the technologies and skills required for these aspects of reporting. Speakers who have worked in areas such as captioning, classroom reporting, computer-integrated courtrooms, and on-line technologies will discuss the evolving role of the reporter. (3 sch: 2 hr lecture 1 hr lab)

CRT 2513 CART I  
This course provides instruction in writing the spoken word with punctuation using a realtime translation theory for communication access realtime translation (CART). (3 sch: 1-hr. lecture, 4-hr. lab)

CRT 2523 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). (3 sch: 1-hr lecture, 4-hr lab)

CRT 2563 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. (3 sch: 2-hr lecture, 2-hr lab)

CRT 2573 CART Dictionary Development  
In this course, the student will continue to build a dictionary for communication access realtime translation (CART). (3 sch: 2-hr lecture, 2-hr lab)
CRT 2713 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. (3 sch: 1-hr lecture, 4-hr lab)

CRT 2723 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. (3 sch: 1-hr lecture, 4-hr lab)

CRT 2763 Captioning Technology
This course is an overview in captioning technology, concepts, and vocabulary. Emphasis is on basic equipment setup for broadcast captioning. (3 sch: 2hr lecture, 2-hr lab)

CRT 2773 Captioning Dictionary Development
In this course, the student will continue to build a dictionary for captioning. (3 sch: 2-hr lecture, 2-hr lab)

CRT 2913 Internship for Judicial Reporters
This course provides supervised practical experience in courts and freelance court reporting firms. (3 sch: 140 clock hours)

CRT 2923 Internship for CART
This course provides supervised practical experience in communication access realtime translation (CART). (3 sch: 140 clock hours)

CRT 2933 Internship for Captioning
This course provides supervised practical experience in broadcast captioning. (3 sch: 140 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
CST 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 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 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 2313 Mobile Computing Software and Hardware for IT Specialist
Mobile Computing Software and Hardware for IT introduces students to the rapid evolution of mobile computing and explores the impact this technology has in advancing systems, communications, and societies worldwide. Students will learn the primary standards and techniques for mobile computing, from design and development, to testing and implementation. The curriculum instructs best practices and procedures for the utilization and deployment of mobile applications for leading mobile devices including the Apple iPhone and iPad, Droid, and Blackberry. (3 sch: 2-hr lecture, 2-hr lab) Prerequisites: Basic IT Hardware & Operating Systems for IT

CST 2323 IT Mobile Computing Diagnosing/Troubleshooting I for IT Specialist
IT Mobile Computing Troubleshooting introduces students to diagnostic techniques and troubleshooting methodologies of operating systems, common hardware problems, and system malfunctions including peripherals. The curriculum instructs best practices and procedures for the utilization and deployment of networking protocols to resolve security issues for mobile devices. (3 sch: 2-hr lecture, 2-hr lab)

CST-2333 IT Mobile Computing Servicing Lab I for IT Specialist
Mobile Computing Servicing Lab I for IT introduces students to the fundamentals for Mobile Computing servicing. This course includes hands-on training in mobile computing operating system configuration, test equipment usage, basic disassembly and assembly methods, preliminary tests and diagnostics, and schematic interpretation. (3 sch: 6-hr lab)
Prerequisites: Mobile Computing Software and Hardware for IT

CST-2343 Mobile Security and Privacy for IT Specialist
Mobile Security and Privacy for IT provides the fundamental understanding of wireless architecture, security principles, 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).
Prerequisites: Mobile Computing Software and Hardware for IT
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

CTV 1114 Garment Construction
An application of principles, techniques, and skills with emphasis on working with problem fabrics (plaids, 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)

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, in-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 place 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 2813 Inventor 3D Modeling and Animation**
This course provides instruction on the 3D applications of Inventor. Emphasizing the development of 3D parametric models and the ability to generate 2D drawings, details and renderings from the 3D model. This course will also provide utilization of assembly drawings and animation of working parts. (3 sch: 1hr lecture, 4 hr lab)

**DDT 2823 Revit Architecture 3D Modeling**
Course Description: This course provides instruction on the 3D applications of Revit Architecture. Emphasizing the development of 3D parametric building models and the ability to generate 2D drawings, details and renderings from the 3D model. This course will also provide animation walk thru of the 3D building. (3 sch: 1 hr lecture, 4 hr lab)

**DDT 2833 Portfolio**
This course provides instruction on the preparation of drawings for a portfolio presentation and a resume for portfolio presentation using both electronic and hard copies. The students will use different medias to showcase their work. Topics will include production of a resume and portfolio, setting up a website showing multiple projects and examples of their work. (3 sch: 1 hr lecture, 4 hr. lab)

**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 1614  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 1124 Fundamentals of Sonography**
This course is designed to prepare students for entry into the Diagnostic Sonography Technology program who do not have a credential in a nursing or health science profession. Students will be introduced to basic ultrasound physics, instrumentation, terminology, patient care, and will participate in clinical observation related to sonography. (4 sch: 1 hr lecture, 9 hours clinical)

**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.
Prerequisite: 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: 3-hr lecture, 2-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.) (3 sch: 1 hr lecture, 4 hr lab; 6 sch: 2 hr lecture, 8 hr lab)

ELT 1113 Residential/Light Commercial Wiring
Advanced skills related to the wiring of multifamily 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). Prerequisite: Fundamentals of Electricity (ELT 1192-3) or by permission of instructor

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) Prerequisite: Fundamentals of Electricity (ELT 1192-3), Residential/Light Commercial Wiring (ELT 1113), or by permission of instructor

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 applying 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) Prerequisite: Fundamentals of Electricity (ELT 1192-3) or by permission of instructor

ELT 1153 Computational Methods for Electrical Technology
Study of computational skills required for the development of accurate design and drafting methods used in the electrical technology profession. (3 sch: 2-hr lecture, 2-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) Prerequisite: Fundamentals of Electricity ELT 1192 or by permission of instructor

ELT 1173 Fundamentals for Construction for Electrical Tech
This course includes basic safety, an introduction to construction math, an introduction to hand and power tools, an introduction to construction drawings, employability skills and communications. (Approximately 72.5 clock hours should be allotted in this course to satisfy requirements to test for NCCER Core certification. Instructors for this course must be certified as an NCCER Instructor.) (3 sch: 2 hr. lecture, 2 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, 2-4 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) Prerequisite: Fundamentals of Electricity (ELT 1192-3) or by permission of instructor

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) Prerequisite: Fundamentals of Electricity (ELT 1192-3) or by permission of instructor

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, 2-hr lab) Prerequisite: Residential/Light Commercial Wiring (ELT 1113) or by permission of instructor

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) Prerequisite: Fundamentals of Electricity (ELT 1192-3) or by permission of instructor

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 residential/commercial automation systems (3 sch: 2-hr lecture, 2-hr lab) Prerequisite: Fundamentals of Electricity (ELT 1192-3) or by permission of instructor

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) Prerequisite: Fundamentals of Electricity (ELT 1192-3), Residential/Commercial Wiring (ELT 1113), or by permission of instructor

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) Prerequisite: Motor Controls ELT1413, PLC’s ELT 2613, Solid State Motor Controls ELT 2424, or by permission of instructor

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,
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) Prerequisite: Motor Controller (ELT 1413), Advanced PLCs (ELT 2623), Solid State Motor Controls (ELT 2424), or by permission of instructor

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) Prerequisite: Fundamentals of Electricity (ELT 1192-3), AC and DC Circuits (ELT 1144), or by permission of instructor

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) Prerequisite: Fundamentals of Electricity (ELT 1192-3), Motor Controls (ELT 1413), PLCs (ELT 2613), Solid State Motor Control (ELT 2424), and Automated Manufacturing Controls for Electrical Technology (ELT 1313).

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) Prerequisite: Fundamentals of Electricity (ELT 1192-3), Motor Controls (ELT 1413), PLCs (ELT 2613), or by permission of instructor

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) Prerequisite: Fundamentals of Electricity (ELT 1192-3), Motor Controls (ELT 1413), PLCs (ELT 2613), or by permission of instructor

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) Prerequisite: Fundamentals of Robotics (ELT 1353).
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) Prerequisite: Fundamentals of Electricity (ELT 1192-3) or by permission of instructor

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) Prerequisite: Fundamentals of Electricity (ELT 1192-3) and AC/DC Circuits (ELT 1144) or by permission of instructor

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) Prerequisite: By permission of instructor

ELT 1523 Fundamentals of Fiber Optics for Electrical Technology
Fiber-optic cable in modern industry applications (3 sch: 2-hr lecture, 2-hr lab) Prerequisite: Fundamentals of Electricity (ELT 1192-3) and AC/DC Circuits (ELT 1144) or by permission of instructor

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) Prerequisite: Fundamentals of Electricity (ELT 1192-3) and AC/DC Circuit (ELT 1144) or by permission of instructor

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) Prerequisite: Fundamentals of Electricity (ELT 1192-3) and AC/DC Circuits (ELT 1144) or by permission of instructor

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)

ELT 1613/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 (3-4 sch: 1 hr lecture, 4-6 hr lab) [May be taught as a 90-contact-hour lab in open-entry/open-exit career programs]
ELT 2113-4/ IMM 2113-4  Equipment Maintenance, Troubleshooting, and Repair
Maintenance and troubleshooting techniques, use of technical manuals and test equipment, and inspection/evaluation/repair of equipment (3-4 sch: 1 hr lecture, 4-6 hr lab)

ELT 2213 Introduction to Sustainable and Renewable Energy
An introduction to alternative energy sources, such as wind, solar, bloom, wave, and hydroelectric applications. Installation techniques and power-transfer methods are also taught. (3 sch: 2-hr lecture, 2-hr lab) Prerequisite: Fundamentals of Electricity (ELT 1192-3), AC/DC Circuits (ELT 1144), and Residential/Light Commercial Wiring (ELT 1113) or by permission of instructor

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). Prerequisite: Motor Control Systems (ELT 1413) and Programmable Logic Controllers (ELT 2613) or by permission of instructor

ELT 2613 Programmable Logic Controllers
Use of programmable logic controllers (PLCs) in modern industrial settings. Also, the operating principles of PLCs and practice in the programming, installation, and maintenance of PLCs (3 sch: 2-hr lecture, 2-hr lab). Prerequisite: Motor Control Systems (ELT 1413) or by permission of instructor

ELT 2623 Advanced Programmable Logic Controllers
Advanced PLC course that provides instruction in the various operations, installations, and maintenance of electric motor controls. Also, information in such areas as sequencer, program control, introduction to function blocks, sequential function chart, introduction to HMI, and logical and conversion instructions (3 sch: 2-hr lecture, 2-hr lab) Prerequisite: Programmable Logic Controllers (ELT 2613) and Motor Control Systems (ELT 1413) or by permission of instructor

ELT 291(1-3), ELT 293(1-3) Special Project I, II
Practical application of skills and knowledge gained in other electrical or electrical-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: 2–6-hr lab) Prerequisite: Consent of instructor

ELT 292(1-6), ELT 294(1-6) Supervised Work Experience I, II
A cooperative program between industry and education that is designed to integrate the student’s technical studies with industrial experience. Variable credit is awarded on the basis of 1 semester credit hour (sch) 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 electrical/electronics related programs

EMS 1122 Introduction to EMS Systems
This course introduces the student to the Emergency Medical Services (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 Fundamentals of Pre-hospital Care (EMT 1122). (2 sch: 1-hr lecture, 2-hr lab)
EMS 1314 Airway: Management, Respiration, and Oxygenation
This course will provide the student with the essential knowledge to attain an airway and manage
the respiratory system using advanced techniques. This course was previously taught as Airway
Management and Ventilation (EMT 1315) (4 sch: 1-hr lecture, 6-hr lab) Corequisite:
Introduction to EMS Systems (EMS 1122) and Anatomy and Physiology II (BIO 2524)

EMS 1414 Patient Assessment
This course will teach comprehensive history taking and physical exam techniques. (4 sch: 1-hr
lecture, 6-hr lab) Corequisite: Introduction to EMS Systems (EMS 1122) and Anatomy and
Physiology II (BIO 2524)

EMS 1513 EMS Practicum 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)
Corequisites: Introduction to EMS Systems (EMS 1122), Airway: Management, Respiration,
and Oxygenation (EMS 1314), and Patient Assessment (EMS 1415)

EMS 1614 Pharmacology
This course will teach comprehensive pharmodynamics and pharmacokinetics. This course was
formerly taught as Pre-hospital Pharmacology (EMT 1613). (4 sch: 2-hr lecture, 4-hr lab)
Corequisite: Introduction to EMS Systems (EMS 1122) and Anatomy and Physiology II (BIO
2524)

EMS 1825 Cardiology
This class will teach a comprehensive approach to the care of patients with acute and complex
cardiovascular compromise. This course was previously named Pre-hospital Cardiology (EMT
1825). (5 sch: 2-hr lecture, 6-hr lab) Prerequisites: All first semester courses

EMS 2714 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 was previously called Pre-hospital Trauma (EMT 2714). (4
sch: 2-hr lecture, 4-hr lab) Prerequisites: All first semester courses

EMS 1525 EMS Practicum II
This course will provide clinical and field 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 previously taught as EMS Clinical Internship II and now
incorporates EMS Field Internship I (EMT 2552). (5 sch: 9-hr clinical, 6-hr field clinical)
Prerequisite: EMS Practicum I (EMS 1513)

EMS 2855 Medical
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 was
previously called Pre-hospital Medical Care (EMT 2855). (5 sch: 2-hr lecture, 6-hr lab)
Prerequisites: All first semester courses
EMS 2414 Maternal/Child Emergencies
This course will provide a detailed understanding of the anatomic structures, physiology, and pathophysiology encountered when providing care in gynecological and obstetrical emergencies as well as pediatric emergencies. The course was previously divided into Pre-hospital OB/GYN (EMT 2412) and Pre-hospital Pediatrics (EMT 2423). (4 sch: 3-hr lecture, 2-hr lab) Prerequisites: All first semester courses

EMS 2912 EMS Operations
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. (2 sch: 1-hr lecture, 2-hr lab) Prerequisites: All first semester courses

EMS 1422 EMS Special patient Populations
This course will provide a comprehensive overview of providing care for the patient with special needs. This course was previously taught as Special Considerations (EMT 1423). (2 sch: 1-hr lecture, 2-hr lab) Prerequisite: All first semester courses

EMS 2565 EMS Practicum III
This course will provide advanced clinical and field experiences in the skills and knowledge obtained in the classroom with an emphasis on leadership skills. These will be supervised activities carried out in the clinical and out-of-hospital field setting at approved sites with an approved preceptor. This course was previously called EMS Field Internship II (EMT 2564). (5 sch) Prerequisite: EMS Practicum II (EMS 1553)

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 (Expires 1/1/2013)
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 (Expires 1/1/2013)
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 (Expires 1/1/2013)
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 (Expires 1/1/2013)
This course will teach comprehensive history taking and physical exam techniques. (5 sch: 2 hr.
lecture, 6 hr. lab)

EMT 1423  EMS Special Considerations (Expires 1/1/2013)
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 (Expires 1/1/2013)
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 (Expires 1/1/2013)
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 (Expires 1/1/2013)
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 (Expires 1/1/2013)
This course will provide 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 (Expires 1/1/2013)
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 (Expires 1/1/2013)
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 (Expires 1/1/2013)
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 (Expires 1/1/2013)
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 (Expires 1/1/2013)
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 (Expires 1/1/2013)
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 (Expired 1/1/2013)
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)

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)

END 1113 Introduction to Electrodiagnostics
This is a lecture-demonstration course with laboratory exercises designed to focus on recording information utilizing electrodiagnostic technologies. It introduces students to the various procedures they will be required to perform in a clinical setting. (3 sch: 2 hrs. lecture, 2 hrs. lab)

END 1123 Instrumentation and Electronics
This course provides a detailed study of EEG and EP equipment along with electrical concepts. Electrical safety, filters, polarity convention and digital concepts are covered. (3 sch: 3 hrs. lecture)

END 2113 Evoked Potentials
Evoked Potential instrumentation includes signal averaging, statistics, amplifiers, filters and stimulators. Includes instruction in sonata sensory and brain stem auditory responses. Lab included in practical application. (3 sch: 2 hrs. lecture, 2 hrs. lab)

END 2123 Homeostatic Physiology
This is a course which places emphasis on the systems and their importance in maintaining homeostasis in the human body. (3 sch: 3 hrs. lecture)
**END 2216 END Clinic I**
This is the first in a series of clinical rotations that will give the student exposure and practice in a variety of basic electroneurodiagnostic tests. Students will learn to take patient information and maintain laboratory records. 6 semester hrs. (6 sch: 24 hrs clinical per week for 8 weeks.)

**END 2226 END Clinic II**
This is a continuation of skill building in Clinic I. Students will develop proficiency in clinical recording techniques involving a variety of procedures with a broad patient population. 24 hours clinical per week for 8 weeks.

**END 2232 END Clinic**
(12 sem. hrs.) Advanced clinical skill development in EEG, evoked potentials, epilepsy monitoring, and operating room. Physician record review and correlative seminars are a part of this rotation. 12 semester hours. 30 hours of clinic for 15 weeks.

**ENT 1013 Introduction to Entertainment Media Industry (changes to ETT Fall 2013)**
This course introduces the entertainment media industry, careers in the field, and basic terms and vocabulary used in the industry. Students also gain introductory hands-on experience with editing systems, audio systems, animation, and programming. (3 hr. lecture)

**ENT 1113 Audio Design & Production (changes to ETT Fall 2013)**
Students develop the skills necessary in the field of audio engineering and production for use in entertainment media. (3 sch: 2 hr lecture, 2 hr lab)

**ENT 1113 Graphic Communication (Co-Prerequisite: ENT 1313)**
Fundamentals and principles of drafting to provide the basic background needed for all other drafting courses. (3 sch: 2 hr. lecture, 2 hr. lab).

**ENT 1123 Computational Methods for Drafting**
This course is designed for the study of computational skills which are required for the development of accurate design and drafting methods. (3 sch: 3 hr. lecture).

**ENT 1133 Technology Graphics (Prerequisite: GRA 1143 or ENT 1113)**
Machine drafting methods and practice in pictorial and orthographic projections. Techniques and procedures in presenting screws, bolts, rivets, thread types, gears, cams and design and working drawings, concepts of descriptive geometry and computer aided drawing. (3 sch: 2 hr. lecture, 2 hr. lab).

**ENT 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, run out, and location of features on an object. (3 sch: 2 hr. lecture, 2 hr. lab).

**ENT 1153 Basic Applications of Industrial Safety**
This course introduces the concepts of health and safety in both off-the-job training and in an industrial environment. It aims to make the students safety-conscious in relation to personal safety, accident prevention, and methods of compliance. (3 sch: 3 hr. lecture).
ENT 1213 Digital Imaging and Editing (changes to ETT Fall 2013)  
This course provides knowledge of the tools required to create graphic images and understand the most commonly used image editing concepts and terminology. Hands-on activities, collaborative learning, and lecture are combined to provide participants a well-rounded project-based program. (2 hr. lecture, 2 hr. lab)

ENT 1213 Construction Materials  
A course designed to familiarize the student with the physical properties of the materials generally used in the erection of structure, with a brief description of their manufacture. (3 sch: 3 hr. lecture).

ENT 1223 Illustration and Artistic Rendering (changes to ETT Fall 2013)  
In this course students will understand and apply the elements of visual design and demonstrate the use of illustration software. (2 hr. lecture, 2 hr. lab)

ENT 1223 Wood Technology  
Study of wood production manufacturing sales, construction industries, and experimentation of current woodworking skills. (3 sch: 1 hr lecture 4 hr lab).

ENT 1233 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, commercial, and heavy construction industry. (3 sch: 3 hr. lecture).

ENT 1243 Building Codes & Construction Documents  
Introduction to building code compliance, the role of inspection in building construction, and overview of construction contracts and specifications. (3 sch: 3 hr. lecture).

ENT 1313 Photography for Entertainment Media (changes to ETT Fall 2013)  
This course will introduce the student to photographic terms and techniques for use in entertainment media. (2 hr. lecture, 2 hr. lab) (changes to ETT Fall 2013)

ENT 1313 Principles of CAD  
This course will use CAD machine to design and draw various problems in the architectural, mechanical, and civil drafting areas. Emphasis will be placed on the operations of the CAD system to solve these problems. (3 sch: 2 hr. lecture, 2 hr. lab).

ENT 1323 Intermediate CAD (Prerequisite: ENT 1313 & ENT 1113)  
This course is designed as a continuation of Principles of CAD. Subject area will include dimensioning, sectional views, and symbols. (3 sch: 2 hr. lecture, 2 hr. lab).

ENT 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: 2 hr. lecture, 4 hr. lab).

ENT 1513 Principles of Design  
This course is designed as an introduction to the field of interior design with emphasis on processes and resources of the designer. (3 sch: 3 hr. lecture).
ENT 1523 Landscape Design
An introduction to the concepts, principles, and elements of landscape design, this course includes introduction and practice in the use of drawing instruments and supplies and in conducting a site analysis. (3 sch: 2 hr. lecture, 2 hr. lab).

ENT 159(1-3) Internship/Special Project in Design
This course is designed for the student to use the skills and knowledge gained in other design courses. It is a cooperative program between industry and education designed to integrate the student’s technical studies with industry experience. (1 sch: 3 hr internship; 2 sch: 6 hr internship; 3 sch: 9 hr. internship). (Prerequisite: successful completion of the core technical courses.)

ENT 1613 Architectural Design I (Prerequisite: ENT 1313)
This course is a study and development of architectural design principles for a residential structure. (3 sch: 2 hr. lecture, 2 hr. lab).

ENT 1813 Basic Electricity & Electronics
Study of fundamental industrial electrical and electronic principles with experimentation and project construction. (3 sch: 1 hr. lecture, 4 hr. lab).

ENT 1823 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).

ENT 2112 Audio Design and Production I (changes to ETT Fall 2013)
This course is an introductory course on the art and science of audio recording, including studio and field recording, digital editing, equipment operation, mixing, and the theories and techniques that support quality sound production. Trends in analog and digital production, studio recording, and electronic music are also covered. (1 hr. lecture, 2 hr. lab)

ENT 2124 Audio Design and Production II (changes to ETT Fall 2013)
This course continues the study of the art and science of audio recording, including studio and field recording, digital editing, equipment operation, mixing, and the theories and techniques that support quality sound production. This course will focus on post-production sound. (2 hr. lecture, 4 hr. lab)

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

ENT 2233 Structural Drafting (Prerequisite: ENT 1113 or GRA 1143)
Structural section, terms, and conventional abbreviations and symbols used by structural fabrications and erectors are studied. Knowledge is gained in the use A.I.S.C. Handbook. Problems are studied that involve structural designing and drawing of beams, columns, connections, trusses, and bracing. (3 sch: 2 hr. lecture, 2 hr. lab).

ENT 2243 Cost Estimating (Prerequisite: ENT 1113)
Preparation of material and labor quantity surveys from actual working drawings and specifications. (3 sch: 3 hr. lecture).
ENT 2254 Statics & Strengths of Material/Physical Science
Study of forces acting on bodies, movement of forces, stress of materials, basic machine design; beams, columns, and connections. (4 sch: 2 hr. lecture, 4 hr. lab). (Pre- requisite: MAT 1313 or Consent of Instructor)

ENT 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: 3 hr. lecture).

ENT 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).

ENT 2323 Forging and Welding
Practice in hand forging; annealing, hardening, and tempering of tool steel; gas and electric welding. (3 sch: 6 hr. lab).

ENT 2343 Advanced CAD (Prerequisite: ENT 1313)
A continuation of Intermediate CAD. Emphasis is placed on the user coordinate system and 3D modeling. (3 sch: 2 hr. lecture, 2 hr. lab).

ENT 2363 Computer Numerical Control (Prerequisite: ENT 1313)
A course designed to introduce the students to the basics of computer numerical control machines. (3 sch: 2 hr. lecture, 2 hr. lab).

ENT 2413 History and Appreciation of Artercrafts
Growth and development of the artcrafts through the ages, instructional applications; practical designs; demonstrations and projects in leather, ceramics, wood working and other handicraft areas. (3 sch: 2 hr. lecture, 2 hr. lab).

ENT 2423 Mapping & Topography (Prerequisite: ENT 1413)
Selected drafting techniques are applied to the problem of making maps, traverses, plot plans, plan and profile drawing using maps, field survey data, aerial photographs and related references, materials including symbols, notations, and other applicable standardized materials. (3 sch: 2 hr. lecture, 2 hr. lab).

ENT 2443 Principles of Manufacturing Management
This course will include a study of manufacturing processes and materials. A problem solving approach will be used, emphasizing the context of the manufacturing business and the complexities to be addressed. (3 sch: 3 hr. lecture).

ENT 2512 Media Portfolio (changes to ETT Fall 2013)
In this course students will apply practical knowledge, skills, and techniques gained from the program of study to develop and demonstrate a final project. (4 hr. lab)

ENT 2513 Visual Communications in Design (Corequisite: ENT 1113)
This course is designed as an introduction to visual communications in interior design with emphasis on orthographic and free-hand drawing and visual design terminology. (3 sch: 2 hr. lecture, 2 hr. lab).
ENT 2514 Media Portfolio (changes to ETT Fall 2013)
In this course students will apply practical knowledge, skills, and techniques gained from the program of study to develop and demonstrate a final project. (8 hr. lab)

ENT 2523 Intermediate Design (Prerequisite ENT 1513)
This course is a studio course for the exploration and application of design methodology to interior environments. (3 sch: 2 hr. lecture, 2 hr. lab).

ENT 2533 Design Materials and Installation Methods
This course is a study of architectural materials for interiors with an emphasis on selection, cost, installation, construction supervision and code/standards requirements. (3 sch: 3 hr. lecture).

ENT 2543 Visual Literacy in Design
This course is an exploration of various communication methods in interior design through a variety of projects. (3 sch: 2 hr. lecture, 2 hr. lab).

ENT 2563 Advanced Visual Literacy in Design (Prerequisite ENT 2543)
This course is an exploration of advanced graphic communication and modeling methods in interior design through a variety of projects. (3 sch: 2 hr. lecture, 2 hr. lab).

ENT 2572 Portfolio Development
This course is an introduction to various portfolio techniques, documentation methods and career planning for the interior design profession. (2 sch: 2 hr. lecture).

ENT 2613 Supervised Work Experience (changes to ETT Fall 2013)
This course is available on campus in workforce training or a cooperative program between industry and education designed to integrate the student's technical studies with industrial experience. (3 hr. externship).

ENT 2623 Architectural Design II (Prerequisite: ENT 1613)
This course emphasizes standard procedures and working drawings. Details involving architectural, mechanical, electrical, and structural drawings are covered, along with presentation of drawings and computer aided design assignments. (3 sch: 2 hr. lecture, 2 hr. lab).

ENT 2643 Architectural Rendering (Prerequisite: ENT 1613)
Visual expression of architectural principles and structures. Perspective, shade, shadow, and color (using pencil, pen & ink, paint and new media). (3 sch: 2 hr. lecture, 2 hr. lab).

ENT 2713 Architectural History
Analysis of achievements in the design and construction of major architectural developments from early times to present. (3 sch: 3 hr. lecture).

ENT 291(1-3) Special Project (Prerequisite: Consent of Instructor)
Skills and knowledge gained in other drafting courses. The instructors work closely with the student to insure that the selection of a project will enhance the student’s learning experience. (1 sch: 1/2 hr lecture, 1 hr lab; 2 sch: 1 hr lecture, 2 hr lab; 3 sch: 1 hr lecture, 4 hr lab)

ENT 2923 Fundamentals of Multimedia (Prerequisite: ENT 1613)
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: 2 hr. lecture, 2 hr. lab).
**EPT 1113 Introduction to Entrepreneurship**
Evaluation of business skills and commitment necessary to successfully operate an entrepreneurial venture and review the challenges and rewards of entrepreneurship. Also, a review of entrepreneurial businesses in the United States and the impact they have had on our national and global economy. (3 sch: 3-hr. lecture)

**EPT 2113 Entrepreneurship Feasibility Study**
Assessment of the viability of a new venture business idea will be conducted in order to determine if the concept is feasible for business start up and long term growth based on strengths and skills, personal, professional and financial goals. Identification and analysis will be conducted through basic research to determine the present climate for their business idea by completing an industry, target market and competitive analysis. A final assessment will be conducted to determine the financial needs for startup as well as their own skills, strengths and talents to launch a successful business idea. (3 sch: 2 hr. lecture, 2 hr. lab)

**EPT 2313 Marketing for the Entrepreneur**
Insights essential for marketing entrepreneurial ventures utilizing innovative and financially responsible marketing strategies will be reviewed. Traditional and non-traditional entrepreneurial marketing strategies will be covered with students preparing marketing strategies with associated tactics to launch and sustain an entrepreneurial venture. (3 sch: 3 hr. lecture)

**EPT 1313 Entrepreneurship Legal Issues**
Legal issues related to business entities including sole proprietorship, general partnerships, limited partnerships, and corporations will be covered. A review will be conducted of contract law, articles of incorporations and the filing process, employment law (including FEPA, ADA, FMLA), personnel policies and procedures, the hiring process, job descriptions, disciplinary actions, and business insurance. (3 sch: 3 lecture hr.)

**EPT 1213 Entrepreneurship Financial Topics**
This is a comprehensive course covering financial situations for business. Financial topics will include employee benefits, retirement planning, budgeting, creation of financial statements, and learning how to work with an accounting professional. Other topics will include income tax, sales and use tax, payroll tax, and unemployment tax. (3 sch, 1 hr. lecture, 2 hrs. lab)

**EPT 2213 Entrepreneurship Business Plan**
An evaluation of a business concept and write a sound business plan will be conducted. Students will assess the strengths and weaknesses of a business concept; collect, analyze and organize market research data into a marketing plan; and prepare the financial projections for their business concept. Students will be able to identify and evaluate various resources available for funding small businesses. (3 sch: 1 hr. lecture, 4 hrs. lab) Prerequisite: Intro to Entrepreneurship and Entrepreneurship Feasibility Analysis

**ETT 1013 Introduction to Entertainment Media Industry (This course was ENT changed to ETT Fall 2013)**
This course introduces the entertainment media industry, careers in the field, and basic terms and vocabulary used in the industry. Students also gain introductory hands-on experience with editing systems, audio systems, animation, and programming. (3 hr. lecture)

**ETT 1113 Audio Design & Production (This course was ENT but changed to ETT changed to ETT Fall 2013)**
Students develop the skills necessary in the field of audio engineering and production for use in entertainment media. (3 sch: 2 hr lecture, 2 hr lab)
ETT 1213 Digital Imaging and Editing (This course was ENT but changed to ETT changed to ETT Fall 2013)
This course provides knowledge of the tools required to create graphic images and understand
the most commonly used image editing concepts and terminology. Hands-on activities,
collaborative learning, and lecture are combined to provide participants a well-rounded project-
base program. (2 hr. lecture, 2 hr. lab)

ETT 1223 Illustration and Artistic Rendering (This course was ENT but changed to ETT Fall 2013)
In this course students will understand and apply the elements of visual design and demonstrate
the use of illustration software. (2 hr. lecture, 2 hr. lab)

ETT 1313 Photography for Entertainment Media (This course was ENT but changed to ETT Fall 2013)
This course will introduce the student to photographic terms and techniques for use in
entertainment media. (2 hr. lecture, 2 hr. lab)

ETT 2112 Audio Design and Production I (This course was ENT but changed to ETT Fall 2013)
This course is an introductory course on the art and science of audio recording, including studio
and field recording, digital editing, equipment operation, mixing, and the theories and techniques
that support quality sound production. Trends in analog and digital production, studio recording,
and electronic music are also covered. (1 hr. lecture, 2 hr. lab)

ETT 2124 Audio Design and Production II (This course was ENT but changed to ETT Fall 2013)
This course continues the study of the art and science of audio recording, including studio and
field recording, digital editing, equipment operation, mixing, and the theories and techniques
that support quality sound production. This course will focus on post-production sound. (2 hr. lecture,
4 hr. lab)

ETT 2512 Media Portfolio (This course was ENT but changed to ETT Fall 2013)
In this course students will apply practical knowledge, skills, and techniques gained from the
program of study to develop and demonstrate a final project. (4 hr. lab)

ETT 2514 Media Portfolio (This course was ENT but changed to ETT Fall 2013)
In this course students will apply practical knowledge, skills, and techniques gained from the
program of study to develop and demonstrate a final project. (8 hr. lab)

ETT 2613 Supervised Work Experience (This course was ENT but changed to ETT Fall 2013)
This course is available on campus in workforce training or a cooperative program between
industry and education designed to integrate the student's technical studies with industrial
experience. (3 hr. externship)

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)

**FFT 1113 Introduction to Fire Science**
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: 3-hr lecture)

**FFT 1123 Introduction to Fire Prevention**
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: 3-hr lecture)

**FFT 1213 Firefighting Principles and Practices**
A basic fire fighting tactical course, this class provides information about 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: 3-hr lecture)

**FFT 1223 Fire Apparatus and Hydraulics**
Engines, pumps, operating 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: 3-hr lecture)

**FFT 1513 Building & Fire Codes**
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**
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 fireground, students learn the fundamentals of fire department operations and management. (3 sch: 3-hr lecture)
FFT 1913 Planning for Fire and Emergency Services
With emphasis on the identification and evaluation of problems common to the management of public-safety resources, this course explores the planning, training, and logistical concerns needed to maintain organizational readiness and community preparedness. (3 sch: 3-hr lecture)

FFT 2313 Disaster Management
A study in the fundamental principles of preparing for and responding to local disasters. This course focuses on analyzing resources, developing and implementing response plans, and starting the recovery process. (3 sch: 3-hr lecture)

FFT 2323 Building Construction
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: 3-hr lecture)

FFT 2333 Fire Fighter Safety
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: 3-hr lecture)

FFT 2413 Strategy and Tactics
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 conflagrations, this course makes use of simulations and case histories in exploring necessary strategy and tactical endeavors. (3 sch: 3-hr lecture)

FFT 2423 Incident Management Systems
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 Incident Management Systems (3 sch: 3-hr lecture)

FFT 2433 Special Problems in Fire Protection
This course provides selected problems aimed at local fire-service needs. Students utilize critical thinking and perform the necessary research to develop effective solutions. (3 sch: 3-hr lecture)

FFT 2513 Fire Protection Systems
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
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
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**
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**
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**
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**
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**
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**
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**
This course introduces students to management. Particular attention is paid to the management process as it relates to both nonemergency and emergency aspects of the fire officer’s role. (3 sch: 3-hr lecture)

**FFT 2823 Fire Service Supervision**
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: 3-hr lecture)

**FFT 2833 Financial Management**
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: 3-hr lecture)

**FFT 2913 Delivery of Fire and Emergency Services**
The proper deployment of adequate resources is often the most critical aspect of an effective response. This course emphasizes methods for interpreting data and making sound tactical decisions to manage local emergency situations and other large-scale incidents. (3 sch: 3-hr lecture)

**FFT 2923 Community Risk Management I**
This course facilitates the analysis of local-area hazard data and threat control principles relating to personal and environmental risks. Investigation techniques, inspection methodologies, and prevention programs essential to public safety are emphasized. (3 sch: 3-hr lecture)

**FFT 2933 Community Risk Management II**
A continuation of the principles addressed in Community Risk Management I, this course requires the analysis of a specific hazard and the application of specialized mitigation and control measures. The use of various codes, standards, and regulations related to such activities serves as the focal point of this course. (3 sch: 3-hr lecture)

**FMT 1113 Fashion Design Fundamentals**
Examines factors influencing fashion color, line, and design. Includes applications of principles of design 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 Fundamentals**
Study of the functions of a buyer within the retail operation and the fundamentals of purchasing merchandise for resale when going to market. (3 sch: 2-hr lecture, 2-hr lab)

**FMT 1313 Fundamentals of Textiles**
Introduce and explore both natural and manufactured fibers. Examine the production, development, and care of natural and common manufactured fibers as they relate to the apparel industry. (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, make up techniques, wardrobe coordination, and the use of posture and poise to improve image. Seasonal color coding is dated. Determining
whether warm, neutral, or cool colors should be used or worn is the current trend. (3 sch: 1-hr lecture, 4-hr lab)

**FMT 2613 Fashion Show Production**
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 2623 Fashion Forecasting**
Principles and application of predicting fashion trends based on past and present style-related information, the interpretation and analysis of the motivation behind a trend, writing trend reports, and creating mood boards to artistically illustrate fashion direction. (3 sch: 1-hr lecture, 4-hr lab)

**FMT 291(1-6) 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.) (1-6 sch: 3- to 18-hr externship)

**FMT 292(1-6) Fashion Cooperative Education**
Direct application of concepts and theory of marketing management. Students will work in a marketing-related environment. (1-6 sch: 3- 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 GPSGIS 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).

FVT 1114 Editing I
This course covers editing in the digital environment using non-linear editing software. Topics include terminology, technologies, project workflow, and advanced sound and picture editing skills. Upon completion, students should be able to demonstrate proficiency in using editing equipment, local area network storage, and project collaboration. (2 hr. lecture, 4 hr. lab)
FVT 1213 Grip and Electrical
This course covers various grip/support packages used in different environments for studio and location. Topics include lighting units, hardware, stands, color media, and electrical theory with emphasis on safety. Upon completion, students should be able to execute basic grip and electrical directions given by the key grip and/or gaffer. (2 hr. lecture, 2 hr. lab)

FVT 1314 Camera and Lighting I
This course covers the basic principles of video camera and recorder operations in professional formats, crew protocol and safety, and basic lighting theory and application. Emphasis is placed on terminology, the characteristics of light, basic lighting procedures, and proper procedures of field recording with video equipment. Upon completion, students should be able to demonstrate an understanding of the basic technical terms of camera operation, video recording, and lighting equipment. (2 hr. lecture, 4 hr. lab)

FVT 1413 Screenwriting Fundamentals
This course is an introduction to the building blocks upon which all film and television writing is based: visualization, dialogue, scenes, sequences, and basic dramatic structure. Students begin with writing exercises and proceed to the development of several short scripts. (2 hr. lecture, 2 hr. lab)

FVT 1513 Directing I
Student will demonstrate the principles of organizing and directing a film or video production. Theory and practice of aesthetic and practical skills will be developed as student analyze and plan a video program for in-class presentation (3 sch: 2 hr. Lecture, 2 hr. lab)

FVT 1613 Production Skills
This course introduces the terminology, equipment, forms, and safety measures needed to fill the role of a production assistant including craft services. Extras casting, location scouting, and video assisting are also covered. (2 hr. lecture, 2 hr. lab)

FVT 2114 Editing II
This course provides further instruction in the use of non-linear editing systems. Advanced editing techniques are introduced. (2 hr. lecture, 4 hr. lab)

FVT 2124 Editing III: Independent Commercial Video Production
This course continues advanced instruction in editing techniques with emphasis on settings for commercial distribution. Students will collaborate on a practical project. (2 hr. lecture, 4 hr. lab)

FVT 2134 Video Compositing and Special Effects
This course presents particle systems, plug-ins, and special applications to achieve "Hollywood"-style effects in animation and film. (2 hr. lecture, 4 hr. lab)

FVT 2613 Assistant Directing
In this course students will demonstrate the principles of organizing and directing a film or video production. Theory and practice of aesthetic and practical skills will be developed as students analyze and plan a video program for inclass presentation. (2 hr. lecture, 2 hr. lab)

FVT 2314 Camera and Lighting II
(Prerequisite: FVT 1314) This course offers advanced principles of video camera and recorder operations and introduces students to film formats and equipment as well as advanced lighting theory applications. Emphasis is placed on terminology, lighting for effect, and color correction.
Upon completion, students should be able to demonstrate an understanding of camera terms and equipment, lighting theory, and applications and assist on studio and location shoots. (2 hr. lecture, 4 hr. lab)

**FVT 2414 Production and Set Management**
This course provides an analysis of procedures and problems in preparing a script for film or television production. Emphasis is on the role of the production manager in breaking down scripts, setting up shooting schedules, preparing budgets, and planning post—production. (2 hr. lecture, 4 hr. lab)

**FVT 2513 Motion Graphics and Visual Effects**
Using effects software, the students will combine elements from image editing software into an animated or still composition that may be rendered to video files. (2 hr. lecture, 2 hr. lab)

**FVT 2711 Script Supervising**
This course examines the role of the script supervisor in film production. Content emphasizes the importance of continuity for single camera production, script timing, reporting, lining the script, and other tools of the trade. (1 hr. lecture)

**FVT 2713 Set Construction**
This course provides the fundamentals needed for the construction of sets for Film & TV. The use of unique materials, construction, and finishing skills will be explored. Hands-on experience in the creation of set design, which follows film industry standards and work rules, will be provided. (2 hr. lecture, 2 hr. lab)

**FVT 2814 Business Aspects of Cinema Production**
This course provides a survey of business practices including financing, production, and distribution. (2 hr. lecture, 4 hr. lab)

**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)

**GER 2843 END OF LIFE ISSUES.**
This course provides the student with an understanding of the end of life process. The course
explores the physical, emotional, spiritual, legal, and financial aspects of dying, as well as grief
and bereavement. Three lecture hours. (3sch: 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)

**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. (3 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 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)

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 2921 Certification Fundamentals for Health Information Technology
This course is an in-depth study and review of material covered in the HIT curriculum and is designed to prepare students for the national registry exam. (1 sch: 1-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, 2-hr 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, 2-hr 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, 4-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)

HPR 2213 CPR 1st Aid
A score of 16 on the reading portion of the Enhanced ACT or REA 0123 with a grade of "C" or better. Instruction and practice in methods prescribed in the American Red Cross or American Heart Association standard and advanced course. (3 sch: 3 hrs. lecture.)

HPR 1213 PERSONAL AND COMMUNITY HEALTH
An application of principles and practices of healthful living to the individual and community, major health problems and the mutual responsibilities of home, school and health agencies. Three lecture hours. (3 sch: 3-hr lecture)

HPR 2213 CPR 1st Aid
A score of 16 on the reading portion of the Enhanced ACT or REA 0123 with a grade of "C" or better. Instruction and practice in methods prescribed in the American Red Cross or American Heart Association standard and advanced course. (3 sch: 3 hrs. lecture.)
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 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)

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 1253  Nutrition
This course covers the nutrients for normal growth and prevention of major chronic diseases, and applied to the selection of food for ingestion, the metabolic process of digestion, Assimilation, and absorption, and the applications for healthcare providers. (3 sch: 3 hr lecture)

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)

**HUS 1113 Introduction to Human Services.**
This course is designed to enable students to gain knowledge of the history of Human Services; understand the present Human Services concepts; identify varying roles of the HUS worker and understand contemporary strategies in the helping professions; develop skills in problem assessment and in determining appropriate responses to client needs; understand ethics and the law as they relate to the helping professions. (3 sch: 3 hr lecture)

**HUS 1123 Interpersonal Communication.**
The course covers self-concept, listening skills, verbal and nonverbal communication, skills to help resolve interpersonal conflict, and skills in self-understanding and acceptance. (3 sch: 3 hr lecture)

**HUS 1133 Social Problems.**
A study of the nature, scope, and effects of the social problems of today and the suggested remedies for dealing with them. Course includes such problems as unemployment, urbanization, crime, juvenile delinquency, alcoholism, drug addiction, and disaster; family problems include the aged, mentally ill, and retarded. Field trips to more fully acquaint students with social problems. (3 sch: 3 hr lecture)

**HUS 1143 Envisioning a Better Society.**
This course is designed to assist the student in recognizing the reality of interconnection and the need for a holistic approach in meeting personal and societal needs. Students are required to complete 60 hours of field work in an appropriate agency. (3 sch: 1 hr lecture, 4 hr lab)

**HUS 2113 Developing Interviewing Skills.**
This class is designed to enable the student to effectively use interviewing skills, (i.e., open-ended questions, clarification, reflection, silence, interpretation, summarization, body language, etc.) with normal and disturbed persons; demonstrate appropriate interpersonal skills for one-to-one helping relationships (genuineness, accurate empathy, non-possessive warmth, establishing rapport, constructive confrontation); and demonstrate skill in keeping clinical records and in keeping simple statistics. (3 sch: 3 hr lecture)

**HUS 2123 Affecting Social Change.**
This seminar is designed to assist students to become more effective as members of groups which interact with community change processes; analyze the ways groups operate; learn to organize successful meetings; learn to use tension creatively; learn how to utilize action planning and evaluation; develop group leadership skills; develop skill in making referrals to and counseling with other community agencies; and stay abreast of current social issues which affect the community. Students are required to complete 60 hours of field work in an appropriate agency. (3 sch: 1 hr lecture, 4 hr lab)
**HUS 2133 Exploring Social Issues.**
This class is designed to expose students to conflicting views on major controversial social issues; to assist them in analyzing and understanding both sides of an issue; and to enable them to reach their own conclusions in an atmosphere free of stereotypes and reactionary responses. (3 sch: 3 hr lecture)

**IET 1114 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. (4 sch: 2-hr lecture, 4-hr lab) Pre/Corequisite: Industrial Controls I (IET 1314) or by instructor consent

**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

**IDT 1113 Introduction to Interpreting**
Defines interpreting terms; lists and discusses code of ethics; placement of interpreters in various settings; discusses environmental factors; and describes the assessment and certification process. (3sch: 3hrs lecture)

**IDT 1123 Foundation of Deafness**
This course will provide students with knowledge in types of communication problems resulting from deafness, ease in mixing with deaf persons, occupational trends for the deaf, causes and physiological aspects of deafness, and social barriers faced by deaf individuals. Deaf individuals and leaders in the community will be invited into the classroom to discuss these topics along with professionals working with the deaf in various situations. The course is also designed for students majoring in interpreting for the deaf, teachers, teachers’ aides, school counselors, and so forth. This course provides a review of a normal mechanism of speech and hearing and how they are affected by hearing loss, as well as an emphasis on the history of deafness, trends in deaf education, and the deaf community and its culture. (3 sch: 3 hrs lecture)

**IDT 1211 Expressive and Receptive Fingerspelling**
This course will develop beginning expressive and receptive fingerspelling skills based on word and phrase recognition principles. Fingerspelling is an important part of communicating. (1sch: 1hr lecture).

**IDT 1224 American Sign Language I**
A developmental course, meaning that the students (whatever their competency level at the beginning of the course) are expected to grow continuously throughout the semester. The students will develop a high degree of familiarity with and a respect for the usage of the basic principles of American Sign Language (ASL) through nonverbal communication techniques, eye training, and fingerspelling. Also, students will be introduced to the basic patterns of ASL through discipline and instruction. (4 sch: 3 hrs lecture, 2 hrs lab). Prerequisite: IDT 1224

**IDT 1234 American Sign Language II**
An introduction to sign language idioms and English idioms. This course will introduce ways to express English idioms in signs and also the vocabulary for the sign language idioms. Continuation of building student’s sign language vocabulary is a primary interest of this course. Deaf-resource people, videotapes, and other related materials will be included. (4 sch: 3 hrs lecture, 2 hrs lab). Prerequisite: IDT 1224

**IDT 1253 Transliterating I**
Studies skills required to transmit English into Conceptually Accurate Signed English (CASE). Three lecture hours. (3 sch: 3 hrs lecture)

**IDT 2243 American Sign Language III**
An advanced-level course in American Sign Language (ASL). Will expand sign vocabulary to include English and deaf idioms and proper use in both languages. Concentration will be on
proficiency in both ASL and methods of simultaneous translation of hearing-impaired people who communicate in various forms of manual English. Increased emphasis will be placed on the development of native-like fluency. Instruction is through conversational techniques incorporating additional principles and vocabulary items. (3 sch: 2 hrs lecture, 2 lab hours). Prerequisite: IDT 1224 and IDT 1234

**IDT 2263 Transliterating II**
Further study of the skills of transmitting English into Conceptually Accurate Signed English (CASE). (3 sch: 3 hrs lecture). Prerequisite: IDT 1253

**IDT 2313 Sign-to-Voice Interpreting I**
Classroom work giving verbatim translations and sign-to-voice materials. There is an emphasis on the use of tapes and simulated situations. Vocabulary development, word endings, and the use of temporary signs are discussed. Students will learn to translate simultaneously from manual English to spoken English and learn to interpret from American Sign Language (ASL) to spoken English while keeping appropriate English diction. (3 sch: 3 hrs lecture). Prerequisite: IDT 2243

**IDT 2323 Educational Interpreting**
Studies techniques and ethics involved in educational interpreting focusing on special settings, code of conduct, physical arrangements, and resources for educational interpreters. Further study of the skills of transmitting English into Conceptually Accurate Signed English (CASE). (3 sch: 3 hrs lecture).

**IDT 2333 Interpreting**
Accuracy and clarity in expressive interpreting at a conversational speed. Refine and build English-to-ASL skills. Role-play and videos of actual experiences will be used. (3 sch: 3 hrs lecture). Corequisite: IDT 2243

**IDT 2343 Sign-to-Voice Interpreting II**
Continue classroom work giving verbatim translations and sign-to-voice materials. There is an emphasis on the use of tapes and simulated situations. Vocabulary development, word endings, and the use of temporary signs are discussed. Students will learn to translate simultaneously from manual English to spoken English and to interpret from American Sign Language (ASL) to spoken English while keeping appropriate English diction. (3 sch: 3 hrs lecture). Prerequisite: Approval of instructor

**IDT 2353 Interpreting in Special Situations**
This course includes lectures and observation of interpreters in various settings, including educational, legal, medical, religious, platform, deaf-blind, mental health, and so forth. (3 sch: 3 hrs lecture). Prerequisite: Approval of instructor

**IDT 2363 Artistic Interpreting**
Study of the principles and techniques of artistic interpreting including literary and musical works. (3 sch: 3 hrs lecture). Prerequisite: Approval of instructor

**IDT 2373 Legal Interpreting**
This is a preparation course for legal interpreting. The student will learn to anticipate settings, assess linguistic systems, determine and study specialized vocabulary, identify problems and apply ethical solutions, and practice interpreting legal texts. (3 sch: 3 hrs lecture). Prerequisite: Approval of instructor
IDT 2413 Interpreting Practicum
Application of interpreting/translating skills in a supervised, approved site(s). All contact hours will be verifiable, and direct observation will be administered by practicum supervising interpreter. (3 sch: 150 clock hours)
Prerequisite: Approval of instructor

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: 1 hr. lecture, 6 hr. lab) [May be taught as a 120 contact hour lab in open entry-open exit vocational programs.]

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 career program.]
**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 ensure 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 193 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)

**IMT 1213 Game Theory and Mechanics**
Students will learn the theory related to game design and development, the applications associated with game design and the elements and trends in game design. Students will apply design principles and techniques in the creation of 2D and 3D characters, and understand the “rules of play.” (3 sch: 2 hr lecture, 2 hr lab).

**IMT 1313 Networking for Game Design**
This course will introduce students to developing interactive media for use on networks. Topics include sockets, packets, virtual connections, flow control and debugging ((3 sch: 2 hr lecture, 2 hr lab).

**IMT 2114 Introduction to Animation**
A program focused on the creation and design of time-based media, 2D and 3D animation, digital video, and broadcast design. Study the choreography and design of complex animated sequences (2 sch: 2 hr lecture, 4 hr lab)

**IMT 2124 Advanced Animation**
Students will design, develop, and create complex character animations using design visualization software on an advanced level. (4 sch: 2 hr lecture, 4 hr lab)

**IMT 2213 Marketing for Game Design**
The importance of target markets and audience knowledge will be explained, as well as distribution of video games. Students will conduct research related to consumer behavior and
publisher relations with the functions of marketing, such as advertising, promotions, and sales, (3 sch: 3 hr lecture).

**IMT 2511 C++ Programming for Game Design Lab**
This lab will apply programming skills gained in C++ Programming to interactive media. (1 sch: 2 hr lab) Co-requisite: IST 2374

**IMT 2521 Advanced C++ Programming for Game Design Lab**
This lab will apply programming skills gained in Advanced C++ Programming to interactive media. (1 sch: 2 hr lab) Co-requisite: IST 2384.

**IMT 2713 Simulation and Artificial Intelligence**
Provides a broad background in simulation and artificial intelligence with practical applications in creative arts, visual arts, audio/video technology, creative writing, modeling, design, programming and management. Students will receive hands-on training in design, 3D modeling, and programming for the purpose of creating simulations and artificial intelligence (3 sch: 2 hr lecture, 2 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 291(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 information technology (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 Internet protocol (IP) telephony, local area networks, wide area networks, data transmission, and topology methods (4 sch: 2-hr lecture, 4-hr lab).

**IST 1143 Principles of Information Security**
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. (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 1173 Principles of Database Management**
This course is designed to give students a firm foundation in basic database tasks, enabling them to design, create, and maintain a small-scale 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. (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). Prerequisite: Fundamentals of Data Communications (IST 1134)

**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). Prerequisite: Web and Programming Concepts (IST 1154) OR Web Development Concepts (WDT 1123) and Programming Development Concepts (CPT 1143) OR permission of instructor

**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). Prerequisite: Web and Programming Concepts (IST 1154) OR Web Development Concepts (WDT 1123) and Programming Development Concepts (CPT 1143) OR permission of instructor

**IST 1414  Client-side Programming**
This course offers a comprehensive understanding of programming using JavaScript (4 sch: 2-hr lecture, 4-hr lab). Prerequisite: Web and Programming Concepts (IST 1154) OR Web Development Concepts (WDT 1123) and Programming Development Concepts (CPT 1143) OR permission of instructor

**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). Prerequisite: Web and Programming Concepts (IST 1154) OR Web Development Concepts (WDT 1123) and Programming Development Concepts (CPT 1143) OR permission of instructor

**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) Prerequisite: IST 1124

**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 the first of a two-part series designed to give students a firm foundation in basic database tasks enabling them to install, 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). Prerequisite: SQL Programming (IST 1513) Corequisite: Advanced SQL Programming (IST 1523)

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). Prerequisites: Fundamentals of Data Communication (IST 1134); Security Principles and Policies (IST 1143)

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). Prerequisite: Fundamentals of Data Communication (IST 1134); Security Principles and Policies (IST 1143)

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). Prerequisites: Network Security Fundamentals (IST 1623); Fundamentals of Data Communication (IST 1134)

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 1811 IST Seminar I
The Information Systems Technology Seminars are designed to prepare students to enter the workplace. Students learn the value of teamwork, cooperation, community involvement, professionalism, and the latest developments in the computer field (1 sch; 1-hr lecture).

IST 1821 IST Seminar II
The Information Systems Technology Seminars are designed to prepare students to enter the workplace. Students learn the value of teamwork, cooperation, community involvement, professionalism, and the latest developments in the computer field (1 sch; 1-hr lecture).

IST 2111 IST Seminar III
The Information Systems Technology Seminars are designed to prepare students to enter the workplace. Students learn the value of teamwork, cooperation, community involvement, professionalism, and the latest developments in the computer field (1 sch; 1-hr lecture).

IST 2121 IST Seminar IV
The Information Systems Technology Seminars are designed to prepare students to enter the workplace. Students learn the value of teamwork, cooperation, community involvement, professionalism, and the latest developments in the computer field (1 sch; 1-hr lecture).

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). Prerequisites: Principles of Information Security (IST 1143) and Network Components (IST 1223)

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). Prerequisites: Network Operating Systems Elective; Network Components (IST 1223)

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). Prerequisite: Network Planning and Design (IST 2224)

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). Prerequisite: Network Administration Using Novell (IST 1234)

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). Prerequisites: Network Administration Using Microsoft Windows Server (IST 1244)
**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). Prerequisites: Network Administration Using Linux (IST 1254)

**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). Prerequisite: At least one introductory programming language course.

**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). Prerequisite: Web and Programming Concepts (IST 1154) OR Web Development Concepts (WDT 1123) and Programming Development Concepts (CPT 1143) OR permission of instructor.

**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). Prerequisite: Visual BASIC Programming Language (IST 1314)

**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). Prerequisites: Visual BASIC Programming Language (IST 1314) and Concepts of Database Design (IST 1163)

**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). Prerequisite: RPG Programming Language (IST 1324)

**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). Prerequisite: COBOL Programming Language (IST 1334)

**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). Prerequisite: Successful completion of any IST programming language course or permission of instructor.

**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). Prerequisite: C Programming Language (IST 2374)

**IST 2424 XML Programming**
This course provides a comprehensive understanding of the Extensible Markup Language (XML) (4 sch: 2-hr lecture, 4-hr lab). Prerequisite: Web and Programming Concepts (IST 1154)
OR Web Development Concepts (WDT 1123) and Programming Development Concepts (CPT 1143) OR permission of instructor

**IST 2434 Server-side Programming**
An introduction to creating dynamic Web applications using Server-side technologies (4 sch: 2-hr lecture, 4-hr lab) Prerequisite: Client-Side Programming (IST 1414)

**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) Prerequisite: Server-side Programming I (IST 2434)

**IST 2454 Mobile Application Development**
The emergence of a new generation of highly-capable mobile devices and platforms has opened up opportunities for application developers. However, mobile development differs from conventional desktop development in that mobile devices operate in a constrained world with smaller screens, slower network connections, as well as limited memory and processing power. (3 sch: 2 hr lecture, 2 hr lab) Prerequisite: Visual BASIC Programming (IST 1314)

**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). Prerequisites: Server-side Programming I (IST 2434)

**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). Prerequisite: IT Foundations (IST 1124) or Operating Platforms (CPT 1333) and Systems Maintenance (CNT 2423/CPT 2383); Fundamentals of Data Communication (IST 1134)

**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). Prerequisite: Database Architecture and Administration (IST 1534)

**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). Prerequisite: IT Foundations (IST 1124) or Operating Platforms (CPT 1333) and Systems Maintenance (CNT 2423/CPT 2383)

**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). Prerequisite: IT Foundations (IST 1124) or Operating Platforms (CPT 1333) and Systems Maintenance (CNT 2423/CPT 2383)

**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). Prerequisites: Network Security Fundamentals (IST 1624); Network Administration Using Microsoft Windows Server (IST 1244)

**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). Prerequisite: Network Security Fundamentals (IST 1624); Advanced Network Administration Using Linux (IST 2264)

**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). Prerequisite: Network Defense and Countermeasures (IST 1643); Computer Forensics (IST 1613); any programming course

**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). Prerequisites: Consent of instructor and completion of at least one semester of advanced coursework in Information Systems Technology

**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). Prerequisites: Consent of instructor
**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 contract 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)

LGT 1113 — Fundamentals to Logistics
This course is designed to give the student a firm foundation in the systems approach to managing activities associated with forecasting, procurement, inventory management, life cycle costing, and product support. (3 sch: 3 hr lecture)
LGT 1213 — Transportation and Distribution.
This course is designed to give an overview of transportation and distribution issues. Emphasis is placed on domestic and international transportation, third party selection, regulations, route and schedule development and planning for shipments. (3 sch: 3 hr lecture)

LGT 1233 — Materials Management.
This course provides managerial information concerning inventory information systems, managerial tools and techniques, the warehouse environment and distribution planning and control. (3 sch: 3 hr lecture)

LGT 1243 — Purchasing.
This course provides information about the purchasing function. Emphasis will be placed on vendor analysis, negotiations, systems contracts, public purchasing, competitive bidding and personnel. (3 sch: 3 hr lecture)

LGT 1313 Supply Chain Management.
This course provides information concerning the flow of products and information among producers, suppliers, and customers. Emphasis is placed on acquiring, purchasing and distribution of goods and services throughout the supply chain. (3 sch: 3 hr lecture)

LGT 1413 — Logistic Support Analysis.
This course is a study of the support function and the development of analytical tools to support managerial decisions. Topics covered are maintenance planning, provisioning and support, system safety, and life cycle cost. (3 sch: 3 hr lecture)

LGT 1513 — Production Planning & Control.
This course provides managerial information regarding material requirements, capacity planning and control techniques, master production scheduling, and techniques in cost analysis. (3 sch: 3 hr lecture)

LGT 2113 — Logistics Management.
This course is designed to help the student solve actual challenges they will encounter in the marketplace. Basic decision making tools and concepts will be used for finding cost reduction and strategic opportunities. (3 sch: 3 hr lecture)

LGT 2324 — Automatic Identification/Data Capture in Logistics.
This course is a study of the methods of recognizing objects, getting information about them and automatically entering that data or feeding it directly into computer systems without any human involvement. Automatic identification and data capture technologies include bar codes, Radio Frequency ID (RFID), Optical character recognition (OCR), magnetic stripes, smart cards and other data media. Laboratory experiences will emphasize bar coding and RFID technologies. Various automatic identification data capture applications will be used. (4 sch: 3 hr lecture, 2 hr lab)

LGT 2513 — Maintenance Management.
This course enables the student to understand the relationship between reliability and maintainability (R&M) and acquisition logistics and to evaluate the impact of R&M decisions. (3 sch: 3 hr lecture)
LGT 2533 — Configuration Management.
This course is designed to give the student a foundation of the interrelationship of configuration management to life cycle activities and logistics support. Emphasis will be placed on configuration identification, audits, controls, as well as data management. (3 sch: 3 hr lecture)

LGT 2814 — Business Logistics Capstone Project.
This course is designed to write a research paper specific to an approved logistics/supply chain management topic either selected by the student or assigned by the instructor. (4 sch:43 hr lecture)

LGT 292(1-3) — Special Project.
A course to provide students with an opportunity to utilize skills and knowledge gained in other Logistics Technology courses. The instructor and student work closely together to select a topic and establish criteria for completion of the project. (1-3 sch: 1-3 hr lecture)

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- 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)

MEC 1113 Mechanical Maintenance I
This course provides an orientation to the Millwright trade, introduces hand tools, fastener and anchors to include basic layout, gaskets and o'rings and orientation to Oxy Fuel cutting. (3 sch=1 hr lec., 4 hr lab)

MEC 1116 Mechanical Maintenance II
This course provides instruction on Trade Math, Field sketching, Blue Print Reading Millwright specialty and power tools, rigging, setting baseplates, lubrication and Intro to bearings. (6 sch= 2 hr. lec, 8 hr lab)
MEC 1123 Mechanical Maintenance III
This course provides instruction on Advanced Trade Math, Precision measuring tools and Installing pack, seals and mechanical seals. (3 sch=1 hr lec., 4 hr lab)

MEC 1133 Mechanical Maintenance IV
This course provides instruction on bearing, couplings, shims, jigs, equipment alignment, belt drives, chain drives, fans and blowers. (3 sch= 1 hr lec., 4 hr lab)

MEC 1115 Mechanical Maintenance V
This course provides instruction on troubleshooting and repair of conveyors, pumps, compressors, hydraulics, pneumatic and gearboxes. (5 sch= 1 hr lec., 8 hr lab)

MEC 1227 Mechanical Maintenance VI
This course provides instruction on maintaining, repairing application of reverse alignment, laser alignment, advanced blueprint reading, optical alignment, turbines, electric motors, vibration analysis. (7 sch=2 hr lec, 10 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: 3 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: 2-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 set up 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)

MIT 1301  INTRODUCTION TO MILITARY SCIENCE
This course provides training in general knowledge of military organization and culture, understanding of group combat skills, achievement of minimal physical conditioning standards and application of basic safety and group living skills. Course includes lecture, demonstrations and performance exercises. (3 sch: 3 hr lecture).
MIT 1313 RECORDS AND INFORMATION MANAGEMENT
This course provides training in proper collection, storage, processing and reporting of data in a military or civilian environment. This includes oral and written reports and the production and administration of staff journals, files, records and reports. (3 sch: 3 hr lecture)

MIT 1323 PERSONNEL SUPERVISION
This course provides training in planning, directing and controlling personnel functions in military or civilian environments. Introduces students to personnel challenges and competencies that are critical for effective leadership and learn how personal development of life skills such as time management, physical fitness and stress management relate to leadership. (3 sch: 3 hr lecture)

MIT 1333 LEADERSHIP AND TEAM MANAGEMENT
This course includes application of management and supervision principles. Lessons include problem solving, critical thinking, leadership theory, group interaction, goal setting and effective communication within a military environment. (3 sch: 3 hr lecture)

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, immunohematology, 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 Applications  
A project based course is a continuation of MMT 1113. (3 sch: 3-hr lecture)

MMT 1313  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: 3-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: 3-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: 3-hr lecture)

MMT 171(1-3), MMT 172(1-3), MMT 173(1-3), MMT 174(1-3), MMT 175(1-3)  Marketing Seminar I, II, III, IV, V  
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. (1-3 sch: 2-6-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 Marketing Management
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)

MMT 292(1-6)  Marketing Cooperative Education
Direct application of concepts and theory of marketing management. Students will work in a marketing-related environment. (1-6 sch: 3- to18-hr externship). Prerequisite: Permission of the instructor.

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 1251-2 Surface Grinding Operations
This course provides instruction in general shop safety as well as emphasis on advanced applications of precision grinders. (1–2 sch: 1-hr lecture; 1-hr lecture, 2-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 2553 Advanced Machining Tech
This course provides instruction on safety and operation and applications of new machining technologies that apply to precision manufacturing in global markets. Laser technology, EDM wire and Die sink, and plasma and water jets are now commonly used in machining and forming shapes in utilizing exotic space age materials. (1–2 sch: 1-hr lecture; 1-hr lecture, 2-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 occupation 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 1
This manipulative course provides fundamental knowledge of practice skills used with patients/clients across the life span and with various diagnoses. Observation and documentation techniques will be introduced. (3 sch: 2 hr. lecture, 2 hr. lab)
OTA 1433 Occupational Therapy Skills II
This manipulative 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 manipulative 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)

PCT 1113 Fundamentals of Plumbing
This course includes basic safety, an introduction to construction math, and introduction to hand and power tools, an introduction to construction drawings, and rigging. (3 sch: 2 hr lecture, 2 hr lab)

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)

PCT 1411 Low Pressure Boilers
Introduction to safe operation of pressure boilers for heating, steam production, and water heating (1 sch: 2 hr lab)

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 pipe. Safety procedures will be covered and emphasized. (3 sch: 1 hr lecture, 4 hr lab)

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)

PCT 1812 Rigging and Signaling
Basic use of hand signals, rigging, and equipment. (2 sch: 1 hr lecture, 2 hr lab)

PCT 1443 Piping Level/Transit
Applications of the leveling instruments, shooting elevations, and grading pipes. (3 sch: 1 hr lecture, 4 hr lab)

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)

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)
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)

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)

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)

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)

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)

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 ensure that the selection of a project will enhance the student’s learning experience. (1–3 sch: 2–6 hr lab)

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: 3–18 hr externship)

PCT 291(1-3) Special Project in Plumbing Technology
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)

PCT 292(1-6) Supervised Work Experience in Plumbing Technology
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)

PHM 1111 Pharmacy Technician Fundamentals
Introduces the student to the pharmacy technician career field and provides an overview of pharmacy practice and the opportunities open to certified pharmacy technicians. (1 sch: 1-hr lecture)

PHM 1123 Pharmacy Law
Federal and state laws pertaining to the practice of pharmacy. (3 sch: 3-hr lecture)

PHM 1212 Computer Applications in Pharmacy
A comprehensive understanding of pharmacy computer systems in addition to hands-on operation. (2 sch: 4-hr lab)
**PHM 1313 Pharmacy Math and Dosage Calculations**
Proper use of the metric, apothecary, and avoirdupois systems. Conversion between the systems. Application of formulas, calculations of fractional dosages, and methods of calculating dosages from all drug forms. Review of calculations dealing with ratio and proportion, percentages, ratio strength, reducing and enlarging formulas, and dilution and concentration problems. (3 sch: 3-hr lecture) Prerequisite: Intermediate Algebra (MAT 1233) or higher

**PHM 1413 Pharmacy Anatomy and Physiology**
Study of body structure essential to safe and effective pharmaceutical care. (3 sch: 3-hr lecture)

**PHM 1424 Pharmacology I**
A study of human disease processes and rational pharmacotherapeutics relating to fluids and nutrients in the following body systems: nervous, endocrine, skeletal, muscular, gastrointestinal, reproductive, and immune. Indications, contraindications, mechanism of action, side effects, dosages, and methods of administration including how these principles can be utilized in pharmacy practice. (4 sch: 4-hr lecture) Prerequisite: First-semester pharmacy technology courses

**PHM 1512 Pharmaceutical Compounding**
Concepts of design, preparation, use, and evaluation of solid and semisolid dosage forms. Specific topics include powders, tablets, capsules, coated dosage forms, suspensions, emulsions, magmas, gels, lotions, ointments, creams, pastes, suppositories, transdermal systems, sustained release products, and novel drug delivery systems. Exercises in computer application, prescription, and physician order interpretation, and the introduction of extemporaneous compounding are performed in the laboratory. (2 sch: 1-hr lecture, 2-hr lab) Prerequisite: Pharmacy Math and Dosage Calculations (PHM 1314)

**PHM 1525 Pharmacy Practice**
Medication distribution systems utilized in retail and hospital pharmacy, including processing of individual prescriptions, floor stock distribution, unit dose systems, and IV admixture. Topics discussed include hazardous waste handling, infection control, principles of quality assurance, and equipment use and maintenance. Exercises in packaging, unit dose functions, aseptic compounding, parental admixture, and use of computer database systems will be performed in the laboratory. (5 sch: 3-hr lecture, 4-hr lab) Prerequisite: First-semester pharmacy technology courses

**PHM 2434 Pharmacology II**
A study of human disease processes and rational pharmacotherapeutics relating to the cardiovascular, respiratory, renal, hematologic, and dermatologic systems as well as eyes, ears, nose, and throat. Indications, contraindications, mechanism of action, side effects, dosages, and methods of administration including how these principles can be utilized in pharmacy practice. (4 sch: 4-hr lecture) Prerequisite: First three semesters of pharmacy technology courses

**PHM 2534 Nonprescription Medications and Devices**
Reviews the categories of the over-the-counter medications, explains the types and procedures of home monitoring equipment, and provides guidelines for patient counseling. Explains durable and surgical or nondurable medical products. Highlights concepts of vitamins, herbs, and
nutritional supplements and the nontraditional treatment options. (4 sch: 4-hr lecture) Prerequisite: First three semesters of pharmacy technology courses

**PHM 2543 Drug Information Research**
The concepts of obtaining pertinent patient information and data collection, including patient medical records, patient interviews, drug-use reviews, literature resources, and problem solving. (3 sch: 2-hr lecture, 2-hr lab) Prerequisite: First three semesters of pharmacy technology courses

**PHM 2614 Practicum I**
Application of pharmacist technician concepts in community and hospital pharmacy, home health, and extended care settings. The student will be placed in a community or institutional setting as the setting is available. Emphasis is placed on functions associated with medication distribution systems. (4 sch: 12-hr of clinical) Prerequisite: Second semester pharmacy technology courses

**PHM 2624 Practicum II**
Progression of internship rotations in community hospitals, medical centers, or pharmaceutical manufacturers. The student will be placed in the setting not used in Practicum I. Emphasis is placed on intravenous admixture preparations, total parenteral nutrition, chemotherapy preparations, and the use of controlled and investigational drugs in an institution. (4 sch: 12-hr clinical) Prerequisite: First three semesters of pharmacy technology courses

**PHM 2634 Practicum III**
Advanced progression of internship rotations in community hospitals, medical centers, or pharmaceutical manufacturers. Emphasis is placed on intravenous admixture preparations, total parenteral nutrition, chemotherapy preparations, and the use of controlled and investigational drugs in an institution. (4 sch: 12-hr clinical) Prerequisite: First three semesters of pharmacy technology courses.

**PHM 2714 Pharmacy Management**
Discussion of pharmacy functions relating to policies and procedures, pharmaceutical purchasing, inventory control, drug recall and return, and maintaining transaction records. The class will explore several retail functions, such as payments, billing, oral and written communications, computer data collection, and pharmaceutical merchandising. (4 sch: 3-hr lecture, 2-hr lab) Prerequisite: First four semesters of pharmacy technology courses

**PHM 2813 Pharmacy Transition**
Further develops decision-making skills and promotes an interest in continued professional development. Employment opportunities and responsibilities, as well as preparation for the Pharmacy Technician Certification Exam, are emphasized. (3 sch: 3-hr lecture) Prerequisite: First four semesters of pharmacy technology courses

**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 1116 Practical Nursing Foundations**
This course is designed to explain the structure and function of the body systems and their interrelationship to one another in the provision of safe, effective nursing care. In addition, this course will provide the student with the theory and skills of practical nursing through campus lab demonstration, supervised practice, and clinical experiences needed to care for the individual in wellness and illness across the lifespan. (16 sch: 9 hr. lecture, 10 hr. lab, 6 hr. clinical) (Total instructional hours for the combined course: 135 hr. lecture, 150 hr. lab, 90 hr. clinical)

**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 1216 Intermediate Practical Nursing (FS)**
This course is designed to provide the student with the basic theory, campus lab demonstrations, supervised practice, and clinical experiences needed to provide safe, effective care to the adult client experiencing acute, chronic, or life-threatening physical health conditions in all body systems. The course will include the expanded role of IV therapy as outlined by the Mississippi Board of Nursing Practice Law, Rules, and Regulations, nutritional considerations, and the advanced theory of pharmacology. (16 sch: 11 hr. lecture, 2 hr. lab, 12 hr. clinical) (Total instructional hours for the combined course: 165 hr. lecture, 30 hr. lab, 180 hr. clinical)

**PNV 1312 Intermediate Practical Nursing (SS)**
This course will provide the student with the (1) Basic knowledge and skills to provide safe, effective care for clients and families during the antepartum, intrapartum, postpartum, and infancy through adolescent periods. (2) Basic knowledge and skills to provide safe, effective care for clients and families experiencing mental health alterations. (3) Expanded role of IV therapy as outlined by the Mississippi Board of Nursing Practice Law, Rules, and Regulations and the advanced theory of pharmacology. (12 sch: 10.33 hr. lecture, 2 hr. lab, 2 hr. clinical) (Total Instructional hours for the combined course: 155 hr. lecture, 30 hr. lab, 30 hr. clinical)
PNV 1412 Advanced Practical Nursing (FS)
This course will provide the student with the: (1) Basic knowledge and skills to provide safe, effective care for clients and families during the antepartum, intrapartum, postpartum, and infancy through adolescent periods. (2) Basic knowledge and skills to provide safe, effective care for clients and families experiencing mental health alterations. (3) Knowledge to prepare for the role transition from student to practical nurse. (12 sch: 10.33 hr. lecture, 5 hr. clinical) (Total instructional hours for the combined course: 155 hr. lecture, 75 clinical)

PNV 1426 Fundamentals of Nursing Theory
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 1437 Fundamentals of Nursing Lab/Clinical
This course provides demonstration and supervised practice of the fundamental skills related to practical nursing. (7 sch: 10 hr. lab, 6 hr. clinical) Corequisites: This course requires concurrent registration in PNV 1426. A passing grade in PNV 1426 and PNV 1437 is required in order to progress in the Practical Nursing program. If a passing grade is not maintained, both courses must be repeated concurrently upon readmission.

PNV 1443 Nursing Fundamentals and Clinical
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, as well as demonstration and supervised practice of the fundamental skills related to practical nursing. (13 sch: 6 hr. lecture, 10 hr. lab, 6 hr. clinical) (Total instructional hours for the course: 90 hr. lecture, 150 hr. lab, 90 hr. clinical).

PNV 1516 Advanced Practical Nursing (SS)
This course is designed to provide the student with the basic theory and clinical experiences needed to provide safe, effective care to the adult client experiencing acute, chronic, or life-threatening physical health conditions in all body systems and the knowledge to prepare for the role transition from student to practical nurse. (16 sch: 11 hr. lecture, 15 hr. clinical) (Total instructional hours for the course: 165 hr. lecture, 225 clinical)

PNV 1524 IV Therapy and Pharmacology
This course provides the student with principles of IV therapy and pharmacology. Principles covered in the course include the administration of medication, administration of IV fluids, and administration of IV medications included in the scope of practice for the practical nurse. The expanded role of IV therapy included in this course is in accordance with the Mississippi Nursing Practice Law and Administrative Code. (4 sch: 3 hr. lecture, 2 hr. lab) Prerequisites: All first-semester Practical Nursing courses

PNV 1614 Medical/Surgical Nursing Theory
This course provides the student with the basic nursing theory and skills to provide safe and effective care for the adult client experiencing acute, chronic, or life-threatening physical health conditions in selected body systems. Pharmacological and nutritional therapy considerations for various disorders are included. The systems not covered in this course are taught in Alterations in Adult Health Theory (PNV 1634). (4 sch: 4 hr. lecture) Prerequisites: All first-semester courses
Corequisite: Concurrent registration in PNV 1622 is required. A passing grade in PNV 1614 and PNV 1622 is required in order to progress in the practical nursing program. If a passing grade is not maintained, both courses must be repeated concurrently upon readmission.

PNV 1622 Medical/Surgical Nursing Clinical
This course includes clinical experiences for application of nursing theory and skills for safe, effective care of the adult client experiencing acute, chronic, or life-threatening physical health conditions in all body systems. (2 sch: 6 hr. clinical) Prerequisites: All first-semester courses Corequisite: Concurrent registration in PNV 1622 is required. A passing grade in PNV 1614 and PNV 1622 is required in order to progress in the practical nursing program. If a passing grade is not maintained, both courses must be repeated concurrently upon readmission.

PNV 1634 Alterations in Adult Health Theory
This course provides the student with the basic nursing theory and skills to provide safe and effective care for the adult client experiencing acute, chronic, or life-threatening physical health conditions in selected body systems. Pharmacological and nutritional therapy considerations for various disorders are included. The systems not covered in this course are taught in Medical/Surgical Nursing Theory (PNV 1614). (4 sch: 4 hr. lecture) Prerequisites: All first-semester courses Corequisite: Concurrent registration in PNV 1642 is required. A passing grade in PNV 1634 and PNV 1642 is required in order to progress in the practical nursing program. If a passing grade is not maintained, both courses must be repeated concurrently upon readmission.

PNV 1642 Alterations in Adult Health Clinical
This course provides the student with the basic nursing theory and skills to provide safe and effective care for the adult client experiencing acute, chronic, or life-threatening physical health conditions in selected body systems. Pharmacological and nutritional therapy considerations for various disorders are included. The systems not covered in this course are taught in Medical/Surgical Nursing Theory (PNV 1614). (4 sch: 4 hr. lecture) Prerequisites: All first-semester courses Corequisite: Concurrent registration in PNV 1642 is required. A passing grade in PNV 1634 and PNV 1642 is required in order to progress in the practical nursing program. If a passing grade is not maintained, both courses must be repeated concurrently upon readmission.

PNV 1666 Medical/Surgical Nursing Concepts and Clinical
This course provides the student with the basic nursing theory and skills to provide safe and effective care for the adult client experiencing acute, chronic, or life-threatening physical health conditions in selected body systems. Pharmacological and nutritional therapy considerations for various disorders are included. The systems not covered in this course are taught in Alterations in Adult Health Concepts and Clinical (PNV 1676). This course also includes clinical experiences for application of nursing theory and skills for safe, effective care of the adult client experiencing acute, chronic, or life-threatening physical health conditions in all body systems. (6 sch: 4 hr. lecture, 6 hr. clinical) (Total instructional hours for the course: 60 hr. lecture, 90 hr. clinical)

PNV 1676 Alterations in Adult Health Concepts and Clinical
This course provides the student with the basic nursing theory and skills to provide safe and effective care for the adult client experiencing acute, chronic, or life-threatening physical health conditions in selected body systems. Pharmacological and nutritional therapy considerations for various disorders are included. The systems not covered in this course are taught in Medical/Surgical Nursing Concepts and Clinical (PNV 1666). This course also includes clinical experiences for application of nursing theory and skills for safe, effective care of the adult client

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experiencing acute, chronic, or life-threatening physical health conditions in all body systems. (6 sch: 4 hr. lecture, 6 hr. clinical) (Total instructional hours for the course: 60 hr. lecture, 90 hr. clinical)

**PNV 1682 Adult Health nursing Concepts and Clinical**
This course is designed to provide the student with the basic theory and clinical experiences needed to provide safe, effective care to the adult client experiencing acute, chronic, or life-threatening physical health conditions in all body systems and the knowledge to prepare for the role transition from student to practical nurse. (12 sch: 8 hr. lecture, 4 hr. clinical) (Total instructional hours for the course: 120 hr. lecture, 180 hr. clinical).

**PNV 1714 Maternal-Child Nursing**
This course provides the student with basic knowledge and skills to promote and/or provide safe and effective care for clients and families during antepartum, intrapartum, and postpartum periods as well as infancy through adolescence. (4 sch: 3.7 hr. lecture, 1 hr. clinical)
Prerequisites: All first-semester PNV courses.

**PNV 1728 Specialty Areas in Nursing**
This course provides the student with basic knowledge and skills to promote and/or provide safe and effective care for clients and families during antepartum, intrapartum, and postpartum periods as well as infancy through adolescence. It also provides the basic knowledge and skills to assist in the promotion of the emotional, mental, and social well-being of the client and family experiencing a mental health alteration. (8 sch: 7.33 hr. lecture, 2 hr. clinical)(Total instructional hours for the course: 110 hr. lecture, 30 clinical)

**PNV 1814 Mental Health Nursing**
This course provides the student with basic knowledge and skills to assist in the promotion of the emotional, mental, and social well-being of the client and family experiencing a mental health alteration. (4 sch: 3.7 hr. lecture, 1 hr. clinical). Prerequisites: First-semester PNV courses

**PNV 1914 Nursing Transition**
This course prepares the student for role transition and the National Council Licensure Examination (NCLEX-PN). (4 sch: 3 hr. lecture, 3 hr. clinical) Prerequisites: All first- and second-semester PNV courses.

**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/PCT 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)
RET 2713 Principles of Real Estate
This course is designed to provide the student with an understanding of the basic principles and business fundamentals of real estate. The student will gain a working knowledge of real estate terminology and concepts in preparation for passing the licensing exam and/or for use in personal business. (3 sch: 3-hr lecture)

RET 2723 Real Estate Law
This course is designed to give students a general background in the laws of real property and real estate brokerage. (3 sch: 3-hr lecture)

RET 2783 Residential Mortgage Lending
This course provides an up-to-date survey of the rapidly changing field of residential mortgage lending. (3 sch: 3-hr lecture)

RET 2733 Real Estate Sales
A study of the methods and techniques employed by real estate salespersons and brokers in the sale and promotion of real estate. (3 sch: 3-hr lecture)

RET 2743 Real Estate Appraisal
A study of the methods, procedures, and evaluation techniques of appraising commercial and residential real property under various conditions. (3 sch: 3-hr lecture)

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 1134 Power Sports Mechanics I**
This course is designed to increase a student’s knowledge covered in prior courses with an emphasis on systems unique to the repair of powerports equipment repair. These areas of study will include, but not limited to lubrication, ignition, exhaust, emissions, and cooling systems. (3 Sch. 2 Lecture, 2 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 1323 Power Sports Transmission System**
This course takes the student into a level of understanding of how the engine power is transmitted to the driving wheel or wheels of motorcycles, and ATV’s. These systems are primary drives, clutches, manual, automatic transmissions, and final drive systems. (3Sch. 2 Lecture, 2 lab)

**SET 1333 Power Sports Engine and Fuel Systems**
This is an advanced course in the diagnosis and repair of engine and fuel systems unique to the power sports industry. (3 Sch. 2 Lecture, 2 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 1713 Power Sports Break and Suspension
This course will give the student the skills needed to properly diagnose and repair breaks and suspension systems used in the power sports industry. (3 Sch. 2 Lecture, 2 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 hydraulics as it relates 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 1111 CST Prep I
First semester review and preparation for the certified surgical technology (CST) exam. This
course also will provide instruction related to employment and employee responsibility to
promote an effective transition from the role of the student to the role of the employee. (1 sch: 1
hr. lecture)

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 1121 CST Prep II
Second semester review and preparation for the certified surgical technology (CST) exam. This
course also will provide instruction related to employment and employee responsibility to
promote an effective transition from the role of the student to the role of the employee. (1 sch: 1
hr. lecture)

SUT 1131 CST Prep III
Third semester review and preparation for the certified surgical technology (CST) exam. This
course also will provide instruction related to employment and employee responsibility to
promote an effective transition from the role of the student to the role of the employee. (1 sch: 1
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)

ULT 1213 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—240/480/277/480. (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—240/480/277/480. (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

ULT 1313 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

**ULT 2941-3 Supervised Work Experience I**
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: 3-9-hr externship). Prerequisites: Consent of instructor and completion of at least one semester of advanced coursework in Utility Lineworker Technology

**ULT 2951-3 Supervised Work Experience 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: 3-9-hr externship). Prerequisites: Consent of instructor and completion of at least one semester of advanced coursework in Utility Lineworker Technology

**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.
WBL 191(1-3); WBL 192(1-3); WBL 193(1-3); WBL 291(1-3); WBL 292(1-3); WBL 293(1-3) 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 trueing 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 wire, 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 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 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)

CTE 1143 Fundamentals of Construction and Manufacturing
This course includes basic safety, an introduction to construction math, an introduction to hand and power tools, an introduction to construction drawings, employability skills and communications. (Approximately 72.5 clock hours should be allotted in this course to satisfy requirements to test for NCCER Core certification. Instructors for this course must be certified as an NCCER Instructor.) (3 sch: 2 hr. lecture, 2 hr. lab)

CTE 1153 Computational Methods for Career and Technical Education
Study of computational skills required for the development of accurate design and drafting methods used in technology based professions. (3 sch: 2-hr lecture, 2-hr lab).

CTE 1163 Introduction to Sustainable and Renewable Energy
An introduction to alternative energy sources, such as wind, solar, bloom, wave, and hydroelectric applications. Installation techniques and power-transfer methods are also taught. (3 sch: 2-hr lecture, 2-hr lab)

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)

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 units, 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)

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)

**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: 3 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.