

Business Technology

Ms. Hardin

Business & Marketing Essentials

****Dual Credit course****

Suggested Grade Level: 9-10

Prerequisite: None

Credit: 1.0

Course Description: This course establishes basic foundations for further study in business and marketing courses and provides essential information for making financial and economic decisions. Students learn about the fundamentals of the American free enterprise system and world economics, applications of sound money management for personal and family finances, credit management, consumer rights and responsibilities, forms of business ownership, risk and insurance, and the importance of international trade.

Personal Finance

****Dual Credit course****

Suggested Grade Level: 9-10

Prerequisite: Business Principles & Applications

Credit: 1.0

Course Description: This course is designed to provide students with the knowledge and skills to manage one's financial resources effectively for lifetime financial security. Topics include economics, money in the economy, budgeting, credit, consumer rights, investments and retirement planning.

Microsoft Office

****Dual Credit course****

Suggested Grade Level: 10-12

Prerequisite: None

Credit: 1.0

Course Description: As an extension of Computer and Technology Applications or Advanced Computer and Technology Applications, students will have the opportunity to increase their computer skills. Advanced functions and integration of Microsoft Word, Excel, Access, and PowerPoint will be taught. Students will work toward MOS/MCAS Certification in one or more of these Microsoft areas. In addition, students will utilize Internet access to complete various projects. Leadership development will be provided through FBLA.

Business Law

****Dual Credit course****

Suggested Grade Level: 11-12

Prerequisite: Business Principles & Applications

Credit: 1.0

Course Description: This course develops an understanding of legal rights and responsibilities in personal law and business law with applications applied to everyday roles as consumers, citizens, and workers. The student will have an understanding of the American legal system, courts/court procedures, criminal justice system, torts, the civil justice system, oral and written contracts, sales contracts and warranties, and consumer protection. Legal terminology is emphasized. Leadership development will be provided through FBLA.

Business Management

****Dual Credit course****

Suggested Grade Level: 11-12

Prerequisite: Digital Literacy and Financial Literacy or Accounting Finance and Foundations

Credit: 1.0

Course Description: This course emphasizes the skills needed for managing a business that involves the selection and supervision of employees including efficient use of time, personnel, facilities, and financial resources. Students will explore forms of business ownership; typical business organizational structure; product or service promotion in business; effective communications; human relations skills required in dealing with employees; and effective management strategies used in personnel, finance, production, marketing, and information processing. Leadership development will be provided through FBLA/DECA.

Entrepreneurship

****Dual Credit course****

Suggested Grade Level: 11-12

Prerequisite: Business Principles & Applications, Business Law, & Business Management

Credit: 1.0

Course Description: This course is designed to provide students the skills needed to effectively organize, develop, create and manage their own business. This course is based on the business and marketing core that includes communication skills, economics, financial analysis, operations, promotion and selling. The culminating project of the course is the development of a comprehensive business plan. Cooperative education or shadowing experiences may be used to enhance course instruction. Leadership development will be provided through FBLA.

Business Education Internship

Suggested Grade Level: 12

Prerequisite: Business Principles & Applications, Business Law & Another business course

Credit: 1.0

Course Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less). All information referenced to the Work Based Learning Guide.

Information Technology

Ms. Chamblee

Computer Literacy

****Dual Credit course****

Suggested Grade Level: 9-10

Prerequisite: None

Credit: 1.0

Course Description: Introduces students to the main components of computer literacy including Computer Fundamentals, Key Applications and Living Online. Provides an introduction to the computer and the convergence of technology as used in today's global environment. Introduces topics including computer hardware and software, file management, the Internet, e-mail, the social web, green computing, security and computer ethics. Presents basic use of application, programming, systems and utility software. Basic keyboarding skills are strongly recommended.

Computer Hardware & Software Maintenance

****Dual Credit course****

Suggested Grade Level: 10-12

Prerequisite: Digital Literacy

Credit: 1.0

Course Description: Focuses on the design of computing systems, including instruction in the principles of computer hardware and software components, algorithms data basis, telecommunications, etc. Includes the knowledge to identify and explain PC components, setup a basic PC workstation, conduct basic software installation, identify compatibility issues and recognize/prevent basic security risks and also gives knowledge in the areas of Green IT and preventative maintenance of computers.

Intro to Networking

Suggested Grade Level: 11-12

Prerequisite: Computer Literacy, Computer Hardware & Software Maintenance

Credit: 1.0

Course Description: Introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. Introduces the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations. Helps students to be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes.

Help Desk Operations

Suggested Grade Level: 11-12

Prerequisite: Computer Literacy, Computer Hardware & Software Maintenance

Credit: 1.0

Course Description: Introduces a variety of tools and techniques to provide user support in help desk operations. Explores help desk concepts, customer service skills, troubleshooting problems, writing for end users, help desk operations and software, needs analysis, facilities management, and other topics related to end user support.

Information Technology Internship

Suggested Grade Level: 12

Prerequisite: Computer Literacy, Computer Hardware & Software Maintenance & another IT course

Credit: 1.0

Course Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less). All information referenced to the Work Based Learning Guide.

Health Sciences

Mrs. Beaverson, Mrs. Willard, & Mrs. Clark

Principles of Health Science

Suggested Grade Level: 10-11

Prerequisite: Application

Credit: 1.0

Course Description: Principles of Health Science is an orientation and foundation for occupations and functions in any health care profession. The course includes broad health care core standards that specify the knowledge and skills needed by the vast majority of health care workers. The course focuses on exploring health career options, history of health care, ethical and legal responsibilities, leadership development, safety concepts, health care systems and processes and basic health care industry skills. This introductory course may be a prerequisite for additional courses in the Health Science program.

Medical Terminology I

****Dual Credit course****

Suggested Grade Level: 11

Prerequisite: Principles of Health Science

Credit: 1.0

Course Description: Medical Terminology is designed to develop a working knowledge of language in all health science major areas. Students acquire word-building skills by learning prefixes, suffixes, roots and abbreviations. Students will learn correct pronunciation, spelling and application rules. By relating terms to body systems, students identify proper use of words in a medical environment. Knowledge of medical terminology enhances the student's ability to successfully secure employment or pursue advanced education in health care.

Emergency Procedures

Suggested Grade Level: 11

Prerequisite: Principles of Health Science

Credit: 1.0

Course Description: This course will focus on potential emergency situations. It is designed to promote an understanding of standard precautions necessary for personal and professional health maintenance and infection control. Upon successful completion of the course, the student will demonstrate the necessary skills in First Aid and Cardiopulmonary Resuscitation (CPR) and will be given the opportunity to take the completion examination as outlined by the sponsoring agency.

SENIOR YEAR COURSES BELOW

Pre-Nursing - Medicaid Nurse Aid

****Dual Credit course****

Suggested Grade Level: 12

Prerequisite: Principles of Health Science, Medical Terminology, Emergency Procedures

Credit: 3.0

An instructional program that prepares individuals to perform routine nursing-related services to patients in hospitals or long-term care facilities under the training and supervision of an approved registered nurse. State Registry is available upon successful completion of state written and performance examination. Prior to offering this course, the instructor and health science program must be approved for meeting state requirements set by the Cabinet for Health and Family Services.

Dental Careers – Dental Assisting

Suggested Grade Level: 12

Prerequisite: Principles of Health Science, Medical Terminology, Emergency Procedures

Credit: 3.0

This pathway prepares individuals to provide patient care, take dental radiographs (x-ray photographs), prepare patients and equipment for dental procedures, and discharge office administrative functions under the supervision of dentists and dental hygienists. It includes instruction in medical recordkeeping, general office duties, reception and patient intake, scheduling, equipment maintenance and sterilization, basic radiography, pre- and post-operative patient care and instruction, chairside assisting, taking tooth and mouth impressions, and supervised practice.

Allied Health Internship - EKG Tech

Suggested Grade Level: 12

Prerequisite: Principles of Health Science, Medical Terminology, Emergency Procedures

Credit: 1.0

A program that prepares individuals, under the supervision of physicians and nurses, to administer EKG and ECG diagnostic examinations and report results to the treatment team. Includes instruction in basic anatomy and physiology, the cardiovascular system, medical terminology, cardiovascular medications and effects, patient care, EKG and ECG administration, equipment operation and maintenance, interpretation of cardiac rhythm, patient record management, and professional standards and ethics.

Allied Health Internship - Phlebotomy

Suggested Grade Level: 12

Prerequisite: Principles of Health Science, Medical Terminology, Emergency Procedures

Credit: 1.0

A program that prepares individuals, under the supervision of physicians and other health care professionals, to draw blood samples from patients using a variety of intrusive procedures. Includes instruction in basic vascular anatomy and physiology, blood physiology, skin puncture techniques, venipuncture, venous specimen collection and handling, safety and sanitation procedures, and applicable standards and regulations.

Allied Health Internship - Pharmacy Tech**Suggested Grade Level: 12****Prerequisite:****Credit: 1.0**

A program that prepares individuals, under the supervision of pharmacists, to prepare medications, provide medications and related assistance to patients, and manage pharmacy clinical and business operations. Includes instruction in medical and pharmaceutical terminology, principles of pharmacology and pharmaceuticals, drug identification, pharmacy laboratory procedures, prescription interpretation, patient communication and education, safety procedures, record-keeping, measurement and testing techniques, pharmacy business operations, prescription preparation, logistics and dispensing operations, and applicable standards and regulations.

Allied Health Internship – Medical Administrative Assistant**Suggested Grade Level: 12****Prerequisite: Principles of Health Science, Medical Terminology, Emergency Procedures****Credit: 1.0**

A program that prepares individuals, under the supervision of office managers and other professionals, to perform routine administrative duties in a medical, clinical, or health care facility/system office environment. Includes instruction in general office skills, data processing, office equipment operation, principles of medical record-keeping and business regulations, medical/clinical office procedures, and communications skills.

Allied Health Internship – EMT – Emergency Medical Technician**Suggested Grade Level: 12****Prerequisite: Principles of Health Science, Medical Terminology, Emergency Procedures****Credit: 1.0**

A program that prepares individuals, under the remote supervision of physicians, to recognize, assess, and manage medical emergencies in prehospital settings and to supervise Ambulance personnel. Includes instruction in basic, intermediate, and advanced EMT procedures; emergency surgical procedures; medical triage; rescue operations; crisis scene management and personnel supervision; equipment operation and maintenance; patient stabilization, monitoring, and care; drug administration; identification and preliminary diagnosis of diseases and injuries; communication and computer operations; basic anatomy, physiology, pathology, and toxicology; and professional standards and regulations.

Computerized Manufacturing and Machining (Machine Tool)

Mr. Chaney

Fundamentals of Machine Tools – A

****Dual Credit course****

Suggested Grade Level: 10-11

Prerequisite: Application

Credit: 1.0

Course Description: This course provides the basic principles needed for a solid foundation in machine tool technology. Areas and machines covered include shop safety, bench work, drill press, power saw, measurement, mills, and lathes.

**Fundamentals of Machine Tools A & B taken together, A in the Fall and B in the Spring. **

Fundamentals of Machine Tools B

****Dual Credit course****

Suggested Grade Level: 10-11

Prerequisite: Application

Credit: 1.0

Course Description: This course provides intermediate skill development in machine tool technology. The course builds on basic skills developed in MTT 110, especially in the calculation of safe cutting speed and feed rates for the drill press, power saw, mills, and lathes. Shop safety, bench work, and precision measurement are also emphasized.

**Fundamentals of Machine Tools A & B taken together, A in the Fall and B in the Spring. **

Applied Machining I

****Dual Credit course****

Suggested Grade Level: 11-12

Prerequisite: Fundamentals of Tools A & B

Credit: 1.0

Course Description: Consists of intermediate level skills using machining machines and surface grinders. It will include the selection of grinding wheels. Applications in milling, lathe, bench work, and utilizing gauge blocks and the sine bar are covered in this course. Surface grinding and abrasives are introduced and properties of metals are discussed.

**Applied Machining I & II are taken together, I in the fall and II in the spring. **

Applied Machining II

****Dual Credit course****

Suggested Grade Level: 11-12

Prerequisite: Fundamentals of Tools A & B

Credit: 1.0

Course Description: Carries the student to higher levels in the operation of machine tools. Applications in milling, lathe, bench work, and utilizing gauge blocks and the sine bar are covered in this course. Surface grinding and abrasives are introduced, and properties of metals are discussed.

**Applied Machining I & II are taken together, I in the Fall and II in the Spring. **

Machine Tool Internship

Suggested Grade Level: 12

Prerequisite: Fundamentals of Tools A & B & Applied Machining I & II

Credit: 1.0

Course Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less). All information referenced to the Work Based Learning Guide.

Industrial Maintenance Technology

Mr. McCollum

Industrial Maintenance Electrical Principles & Lab

****Dual Credit course****

Suggested Grade Level: 10-11

Prerequisite: Application

Credit: 1.0

Course Description: This course introduces the theory of electricity and magnetism and the relationship of voltage, current, resistance, and power in electrical circuits. The course is designed to develop an understanding of alternating and direct current fundamentals. Students will apply formulas to analyze the operation of AC and DC circuits.

****Electrical Motor Controls & Electrical Principles are taken together, Principles in the fall and Motor Controls in the spring. ****

Electrical Motor Controls & Lab

****Dual Credit course****

Suggested Grade Level: 10-11

Prerequisite: Application

Credit: 1.0

Course Description: This course addresses the diversity of electric motor control devices and applications used in industry today with safety and electrical lockouts included.

****Electrical Motor Controls & Electrical Principles are taken together, Principles in the fall and Motor Controls in the spring. ****

Fluid Power

****Dual Credit course****

Suggested Grade Level: 11-12

Prerequisite: Electrical Principles & Electrical Motor Controls

Credit: 1.0

Course Description: This course is a study of fluid power theory, component identification and application, schematic reading, and basic calculations related to pneumatic and hydraulic systems and their operations. ****Fluid Power & Industrial Maintenance of PLC's are taken together, FP in the fall and PLC's in the spring. ****

Industrial Maintenance of PLC's

****Dual Credit course****

Suggested Grade Level: 11-12

Prerequisite: Electrical Principles & Electrical Motor Controls

Credit: 1.0

Course Description: This course includes the theory of Programmable Logic Controllers to include installation, programming, interfacing, and troubleshooting PLC's. ****Fluid Power & Industrial Maintenance of PLC's are taken together, FP in the fall and PLC's in the spring. ****

Industrial Maintenance Internship**Suggested Grade Level: 12****Prerequisite: Electrical Principles, Electrical Motor Controls, Fluid Power, PLC's****Credit: 1.0**

Course Description: Internship for CTE courses provide supervised work-site experience for high school students who are enrolled in a capstone course associated with their identified career pathway. Internship experiences consist of a combination of classroom instruction and field experiences. A student receiving pay for an intern experience is one who is participating in an experience that lasts a semester or longer and has an established employee-employer relationship. A non-paid internship affects those students who participate on a short-term basis (semester or less). All information referenced to the Work Based Learning Guide.

Automotive Technology

Mr. Martin

Automotive Maintenance and Light Repair Sections A, B, C, D & Labs

Suggested Grade Level: 10-12

Prerequisite: Application

Credit: 1.0 per section.

Course Description: These courses introduce the student to the principles, theories, and concepts of Automotive Technology, and include instruction in the maintenance and light repair of Engines, Brake Systems, Electrical/Electronic Systems, Suspension and Steering Systems, Automatic and Manual Transmission/Transaxles, and Engine Performance Systems. In all areas, appropriate theory, safety, and support instruction will be taught and required for performing each task, including proper care and cleaning of customers vehicles. The instruction will also include identification and use of appropriate tools and testing/measurement equipment required to accomplish certain tasks. The student will also receive the necessary training to locate and use current reference and training materials from accepted industry publications and resources, and demonstrate the ability to write work orders.

Automobile Service Technology Sections A, B, C, D & Labs

Suggested Grade Level: 12

Prerequisite: Automotive Maintenance & Light Repair A, B, C & D.

Credit: 1.0

Course Description: These courses present the theory, component identification, operation, diagnosis, and the service and repair of Engines, Brake Systems, Electrical/Electronic Systems, Suspension and Steering Systems, Automatic and Manual Transmission/Transaxles, and Engine Performance Systems. In all areas, appropriate theory, safety, and support instruction will be taught and required for performing each task. The instruction will also include identification and use of appropriate tools and testing/measurement equipment required to accomplish certain tasks. The student will also locate and use current reference and training materials from accepted industry publications and resources, and write industry standard work orders.

****Program Completion = Articulated Credit****

Welding Technology

Mr. Sprow

Blueprint Reading for Welding

****Dual Credit course****

Suggested Grade Level: 10-12

Prerequisite: Application

Credit: 1.0

Course Description: This course provides a study of occupationally specific prints for welders. Advanced study of multi-view drawings, assembly drawings, datum dimensions, numerical control drawings, sheet metal prints, castings and forgings, instrumentation and control charts and diagrams, working drawings, geometric dimensioning and tolerance and use of reference materials and books are included. Occupational specifics including welding drawings, symbols, joint types, grooves, pipe welding symbols, testing symbols, and specification interpretations are stressed.

Cutting Processes

****Dual Credit course****

Suggested Grade Level: 10

Prerequisite: Application

Credit: 1.0

Course Description: Students will obtain a working knowledge of various cutting processes used by the welding industry. Skills will include, but are not limited to, safety, theory of operation, setup and operating techniques, troubleshooting, and making minor equipment repairs, terms and definitions, identification, evaluation, repair and prevention of discontinuities of cut surfaces. Also included are oxy-fuel cutting, plasma arc cutting, exothermic cutting, air carbon arc cutting, shielded metal arc cutting, and mechanical cutting processes.

Shielded Metal Arc Welding (SMAW)

****Dual Credit course****

Suggested Grade Level: 10-12

Prerequisite: Blueprint Reading for Welding & Cutting Processes

Credit: 1.0

Course Description: Students learn the identification, inspection, and maintenance of SMAW electrodes; principles of SMAW; the effects of variables on the SMAW process to weld plate and pipe; and metallurgy.

SMAW Open Groove Lab

****Dual Credit course****

Suggested Grade Level: 10-12

Prerequisite: Blueprint Reading for Welding, Cutting Processes, & SMAW

Credit: 1.0

Course Description: Students will acquire the manipulative skills to do groove welds in all positions with backing.

Gas Metal Arc Welding (GMAW)

****Dual Credit course****

Suggested Grade Level: 11-12

Prerequisite: Blueprint Reading for Welding, Cutting Processes, & SMAW

Credit: 1.0

Course Description: This course covers identification, inspection, and maintenance of GMAW machines; identification, selection and storage of GMAW electrodes; principles of GMAW; and

the effects of variables on the GMAW process. Theory and applications of related processes such as FCAW and SAW and metallurgy are also included. Students learn the practical application and manipulative skills of Gas Metal Arc Welding and the proper safety situations needed in this process. Both ferrous and non-ferrous metals will be covered, as well as various joint designs on plate in all positions.

GMAW Groove Lab

****Dual Credit course****

Suggested Grade Level: 11-12

Prerequisite Blueprint Reading for Welding, Cutting Processes, SMAW, & GMAW

Credit: 1.0

Course Description: Students learn the method of operation and application of the Gas Metal Arc Welding process for welding groove welds in both ferrous and non-ferrous plate in all positions using both short circuiting and spray transfer where appropriate.

Welding Internship – Available Senior Year only.

Diesel Technology

Mr. Hardesty

Inspection, Maintenance & Minor Repair Sections A, B, C, D & Labs

Suggested Grade Level: 10-12

Prerequisite: Application

Credit: 1.0 per section.

Course Description: These courses introduce the student to the tasks/standards included in the Inspection, Maintenance, and Minor Repair. The tasks included in the Inspection, Maintenance and Minor Repair option are entry-level technician inspection tasks designed to introduce the student to correct procedures and practices of vehicle inspection in a teaching/learning environment. These courses will instruct the student in the principles, theories, and concepts of Medium/Heavy Duty Diesel Truck Technology, and include instruction on Diesel Engines, Brake Systems, Electrical/Electronic Systems, Suspension and Steering Systems, Drivetrains, Preventive Maintenance and Engine Performance Systems. In all areas, appropriate theory, safety, and support instruction will be taught and required for performing each task. The instruction will also include identification and use of appropriate tools and testing/measurement equipment required to accomplish certain tasks. The student will also receive the necessary training to locate and use current reference and training materials from accepted industry publications and resources and demonstrate the ability to write work orders.

****Program Completion = Articulated Credit****

Special Problems – Diesel – Available Senior Year only.