

# Aberdeen Central High School

## A-TEC Course Offerings

### Architecture & Construction

---

#### ***Course Title: Introduction to Building Trades***

**Credit:** 1.0      **Prerequisites:** none      **Level:** GGrade: 10, 11, 12      **CTE #17002**

**Course Description:** Architecture & Construction Career Cluster. Students will gain insight and practical skills in the area of building trades, construction and home improvement. Students will study safety procedures, construction math skills, hand, power and pneumatic tools, plumbing applications, electrical wiring applications and concrete construction applications. Students will complete classroom and hands on project based applications in the areas listed above.

#### ***Course Title: Residential Construction***

**Credit:** 2.0      **Prerequisites:** none      **Level:** GGrade: 11, 12      **CTE #17003**

**Course Description:** Architecture & Construction Career Cluster. Upon successful completion of this course, students should have enough skills to get an entry-level job in carpentry. Students will spend time in the classroom for related information, and participate in actual on-the-job construction of a house from start to finish. Instruction and a limited amount of practice will be given in the following trades: electrical, plumbing, pricing, estimating, drywall, carpentry, and painting to assist students in making career choices.

### Arts, Audio/Video Technology & Communications

---

#### ***Course Title: Advanced Photography***

**Credit:** .5      **Level:** G      **Grade:** 11, 12

**Prerequisites:** Introduction to Art 1 & 2 and Basic B & W Photography

**Course Description:** This advanced photography course is for students who want to fine-tune their photography skills. We will focus on digital photography, advanced critique concepts, advanced presentation techniques, creative composition and portfolios. Students will study famous photographers and photography careers. Some Photoshop manipulation of photos will be taught. There will be critiques at the end of each project with quizzes as needed. Personal digital cameras are helpful, but a school digital camera can be provided. Some supplies may have to be purchased

#### ***Course Title: Housing/Interior Design***

**Credit:** .5      **Level:** G      **Grade:** 9, 10, 11, 12

**Prerequisites:** None

**Course Description:** This course will provide students with the opportunity to explore the history and styles of housing design, draw floor plans, read blueprints, apply the elements and principles of design in room arrangements, and compare renting and buying a home.

#### ***Course Title: Computer Graphics***

**Credit:** .5      **Level:** G      **Grade:** 10, 11, 12

**Prerequisites:** Introduction to Art 1 & 2 w/C or above

**Course Description:** This 9 week course is truly the canvas for the new millennium! The class will introduce the world of art in advertising and graphic design. Adobe Photoshop is explored in depth. Basic computer skills are required. Students can imagine themselves as current advertisers composing images for a local business. Projects will have strict deadlines and students are expected to work outside of class to meet deadlines. The issues of copyright and careers will also be discussed. Students will create digital portfolios that will be burned to a CD. Photography skills are helpful, but not required.

**Course Title: Fashion**

**Credit:** .5

**Level:** G

**Grade:** 9 , 10, 11, 12

**Prerequisites:** None

**Course Description:** Topics of discussion may include clothing and human behavior, skin and hair care, fabric characteristics and care, principles of design, color, body form analysis, wardrobe needs, fads, labeling, current trends, ready to wear, and personal clothing budget. This course will give the students an opportunity to realize the factors that influence one's decisions in clothing selection, and careers in clothing and fashion.

**Course Title: Introduction to Arts, A/V Technology & Communications**

**(formerly Radio/TV Production)**

**Credit:** 1.0

**Prerequisites:** none

**Level:** G **Grade:** 10, 11, 12

**CTE #11000**

**Course Description:** Arts, A/V Technology & Communications Career Cluster. Students will research, videotape, edit, write, produce, narrate and host video and audio projects, operate television studio equipment and learn to manage media for DVDs, CDs, web, and videotape. Students will acquire skills necessary to produce media programs that inform, entertain and persuade. This introductory media course enables students to understand and critically evaluate the role of media in society. Course content includes investigation of visual images, and video and audio segments as tools of information, entertainment, and propaganda; improvement of presentation and evaluative skills in relation to mass media; recognition of various techniques for delivery of a particular message; and creation of a media product.

**Course Title: Broadcast Technology (formerly Broadcast Journalism)**

**Credit:** 1.0 **Prerequisites:** Introduction to Arts, A/V Technology & Communications **Level:** G **Grade:** 10, 11, 12 **CTE #11103**

**Course Description:** Arts, A/V Technology & Communications Career Cluster. Broadcast Technology is designed to prepare high school students for employment and/or further education in the career fields of television news, radio, entertainment television and commercial video performance. Job titles include broadcast talent, including news, sports or entertainment television and radio, actor, news and sports radio and TV reporter and webcast talent. Students will also learn behind scene production elements, including pre-production, production and post-production, as well as producing a weekly news program which will air on A-TEC TV 7.

**Course Title: Digital Filmmaking – Audio/Visual Production**

**Credit:** 1.0

**Level:** G

**Grade:** 10, 11, 12

**CTE #11151**

**Course Description:** Arts, A/V Technology & Communications Career Cluster. Audio/Visual Production in digital media offers instructional lessons for planning, filming, editing and viewing of quality digital video. Designed to instruct students and provide them with the technical skills and knowledge for the creation of digital film productions. Students whose career interests are in digital video technologies will benefit from this overall production techniques course. This course will include the use of the ISMFiles website to help students produce short films, documentaries, promotional, and instructional films.

**Course Title: Fall/Winter Sports Broadcasting – 1<sup>st</sup> Semester**

**Credit:** 1.0

**Level:** G

**Grade:** 10, 11, 12

**CTE #11103**

**Course Description:** Arts, A/V Technology & Communications Career Cluster. Students will learn to produce sports programs from live sporting events to sport highlight programs airing once a month. Play-by-Play and Color Commentary skills will be developed. Editing of sports packages and highlights tapes will be part of the curriculum. Productions will air on Cable 7 and live on the Web. This class will concentrate on Fall sports such as Football, Soccer, Volleyball, Tennis, Cross Country, and Dance and Cheer which will air on A-TEC TV 7. This class will also work closely with Sports Marketing to produce campaigns promoting sports programs. Students will also have the opportunity to work with SDPB televising state events in Aberdeen.

## **Course Title: Winter/Spring Sports Broadcasting – 2<sup>nd</sup> Semester**

**Credit: 1.0**

**Level: G**

**Grade: 10, 11, 12**

**CTE #11103**

**Course Description:** Arts, A/V Technology & Communications Career Cluster. Students will learn to produce sports programs from live sporting events to sport highlight programs airing once a month. Play-by-Play and Color Commentary skills will be developed. Editing of sports packages and highlights tapes will be part of the curriculum. Productions will air on Cable 7 and live on the Web. This class will concentrate on Basketball, Wrestling, Gymnastics, Track & Field, Tennis, and Golf which will air on A-TEC TV 7. This class will also work closely with Sports Marketing to produce campaigns promoting sports programs. Students will also have the opportunity to work with SDPB televising state events in Aberdeen.

---

# **Business Administration & Management**

---

## **Course Title: Computer Applications**

**Credit: 1.0**

**Level: G**

**Grade: 9, 10, 11, 12**

**Prerequisites: None**

**Course Description:** Computer Applications is designed to further improve students' computer skills through the use of various software and integrated application packages. Specific areas to be addressed include word processing, spreadsheet, database, graphics, finance, and web page design. The internet is used when appropriate to enhance the learning process.

## **Course Title: Computer Applications 2**

**Credit: .5**

**Level: G**

**Grade: 10, 11, 12**

**Prerequisites: Successful completion of Computer Applications**

**Course Description:** Continue to investigate multiple facets of software that may include but is not limited to: Publisher, Excel (pivot tables, macros, and drop-down menus), Access, Word, PowerPoint, Dreamweaver, and various online software applications such as Google docs. You will learn the 8 basic computer components. You will also learn their functions, how to install them and how to selectively purchase them.

## **Course Title: Web Page Design**

**Credit: .5**

**Level: G**

**Grade: 10, 11, 12**

**Prerequisites: Successful completion of Computer Applications**

**Course Description:** Students will learn how to create professional websites using Dreamweaver 8 which is known as the industry standard for website development. This web design class is designed to introduce the new user to the interface, concepts, and techniques of visual web design using Dreamweaver 8. Students go from start to finish, creating and maintaining basic websites to advanced applications and the latest technologies. Students will learn the proper procedures for creating websites for professional and personal use, along with creating image maps, navigation bars, Flash animation, and managing web code.

## **Course Title: Entrepreneurship**

**Credit: 1.0**

**Level: G**

**Grade: 11, 12**

**Prerequisites: None**

**Course Description:** The main purpose of this class is to learn how to successfully begin and run a business by learning the appropriate concepts and procedures. The concepts include feasibility studies/business plan/marketing analysis, insurance and legal responsibilities, financing the business, site selection, personnel management, inventory selection and management, financial management/pricing strategies, promotional strategies, record keeping, organizing a budget, ethical issues in business, and experience in hands-on business operations. We will explore the role of business in the future and tactics of managing personnel, consumer markets, promotional selling, and advertising. This class will start up and operate a school store. Entrepreneurship meets Capstone requirements.

## **Course Title: Personal & Business Law**

**Credit: .5**

**Level: G**

**Grade: 10, 11, 12**

**Prerequisites: None**

**Course Description:** Personal and Business Law is a practical course designed for everyone. It deals with day-to-day situations in the juvenile and adult worlds. Areas stressed include: your rights, the Courts, criminal and civil law, prisons, contract law, insurance, bankruptcy, real property, marriage and divorce, and wills. Past have included: observing a court proceeding, touring the Brown County Jail and Juvenile Detention Center. Past speakers have included: police officers, detectives, probation officers, judges, Department of Corrections' officers, attorneys, and game wardens. Field trips and speakers are based on scheduling and availability.

**Course Title:** *Accounting 1*

**Credit:** 1.0

**Level:** G

**Grade:** 10, 11, 12

**Prerequisites:** None

**Course Description:** Accounting moves from the start of financial record keeping through the accounting cycle. Students will work with journals, payrolls, tax tables, work sheets, financial statements, ledgers, checkbooks and financial information analysis. Accounting 1 should be used as a stepping-stone for further accounting classes at both the high school and post-high school levels. Accounting 1 is strongly recommended for anyone interested in pursuing any kind of career in business.

**Course Title:** *Honors Accounting 2*

**Credit:** 1.0

**Level:** H

**Grade:** 10, 11, 12

**Prerequisites:** Accounting 1

**Course Description:** To be able to do well in this course, the student must have a very good understanding of the basic concepts taught in Accounting 1. Partnership, corporate, and cost accounting are taught in H Accounting 2. H Accounting 2 will help to form a better, stronger foundation of accounting principles for students who plan to continue studying accounting in post secondary schools.

**Course Title:** *Personal Finance*

**Credit:** .5

**Level:** G

**Grade:** 10, 11, 12

**Prerequisites:** None

**Course Description:** Personal Finance stresses ways to arrive at solutions to your financial concerns or problems. It should help students take advantage of their learning years to become financially independent. The course includes coordinated plans for the achievement of overall personal financial objectives. Topics may include: savings and investing, taxes, credit, housing alternatives, car ownership, food, clothing, recreation, insurance, budgeting, and rights and responsibilities of consumers. Personal Finance fulfills the Economics requirement for graduation

---

## Finance

---

**Course Title:** *Computer Applications*

**Credit:** 1.0

**Level:** G

**Grade:** 9, 10, 11, 12

**Prerequisites:** None

**Course Description:** Computer Applications is designed to further improve students' computer skills through the use of various software and integrated application packages. Specific areas to be addressed include word processing, spreadsheet, database, graphics, finance, and web page design. The internet is used when appropriate to enhance the learning process.

**Course Title:** *Accounting 1*

**Credit:** 1.0

**Level:** G

**Grade:** 10, 11, 12

**Prerequisites:** None

**Course Description:** Accounting moves from the start of financial record keeping through the accounting cycle. Students will work with journals, payrolls, tax tables, work sheets, financial statements, ledgers, checkbooks and financial information analysis. Accounting 1 should be used as a stepping-stone for further accounting classes at both the high school and post-high school levels. Accounting 1 is strongly recommended for anyone interested in pursuing any kind of career in business.

**Course Title:** *Honors Accounting 2*

**Credit:** 1.0

**Level:** H

**Grade:** 10, 11, 12

**Prerequisites:** Accounting 1

**Course Description:** To be able to do well in this course, the student must have a very good understanding of the basic concepts taught in Accounting 1. Partnership, corporate, and cost accounting are taught in H Accounting 2. H Accounting 2 will help to form a better, stronger foundation of accounting principles for students who plan to continue studying accounting in post secondary schools.

**Course Title: Entrepreneurship****Credit: 1.0****Level: G****Grade: 11, 12****Prerequisites: None**

**Course Description:** The main purpose of this class is to learn how to successfully begin and run a business by learning the appropriate concepts and procedures. The concepts include feasibility studies/business plan/marketing analysis, insurance and legal responsibilities, financing the business, site selection, personnel management, inventory selection and management, financial management/pricing strategies, promotional strategies, record keeping, organizing a budget, ethical issues in business, and experience in hands-on business operations. We will explore the role of business in the future and tactics of managing personnel, consumer markets, promotional selling, and advertising. This class will start up and operate a school store. Entrepreneurship meets Capstone requirements.

**Course Title: Personal & Business Law****Credit: .5****Level: G****Grade: 10, 11, 12****Prerequisites: None**

**Course Description:** Personal and Business Law is a practical course designed for everyone. It deals with day-to-day situations in the juvenile and adult worlds. Areas stressed include: your rights, the Courts, criminal and civil law, prisons, contract law, insurance, bankruptcy, real property, marriage and divorce, and wills. Past tours have included: observing a court proceeding, touring the Brown County Jail and Juvenile Detention Center. Past speakers have included: police officers, detectives, probation officers, judges, Department of Corrections' officers, attorneys, and game wardens. Field trips and speakers are based on scheduling and availability.

**Course Title: Personal Finance****Credit: .5****Level: G****Grade: 10, 11, 12****Prerequisites: None**

**Course Description:** Personal Finance stresses ways to arrive at solutions to your financial concerns or problems. It should help students take advantage of their learning years to become financially independent. The course includes coordinated plans for the achievement of overall personal financial objectives. Topics may include: savings and investing, taxes, credit, housing alternatives, car ownership, food, clothing, recreation, insurance, budgeting, and rights and responsibilities of consumers. Personal Finance fulfills the Economics requirement for graduation.

## Health Science

---

**Course Title: Health Science Careers I****Credit: 1.0****Prerequisites: none****Level: G Grade: 11, 12****CTE #14001**

**Course Description:** Health Science Career Cluster. This course gives students an overview of the healthcare industry and its occupations. The course will use an integrated approach that will allow students to learn medical terminology while gaining a baseline knowledge and understanding of the anatomy and physiology of the human body as well as associated disease processes. This course will also include medical legal/ethical issues and professionalism in healthcare including critical thinking, teamwork, and how to meet patient needs. Students will gain knowledge in infection prevention and infection control in the healthcare field and in the community. Students will begin to develop a vocational portfolio which will enhance future scholastic and professional endeavors. Students will have the opportunity to tour healthcare facilities in the community and will be able to interview healthcare professionals. Students will also participate in community service projects. In addition, students will be certified in Heartsaver AED and Heartsaver First Aid.

**Course Title: Health Science Careers II****Credit: 1.0****Prerequisites: Health Science Careers I Level: G****Grade: 11, 12****CTE #14002**

**Course Description:** Health Science Career Cluster. This course will build upon knowledge and skills from Health Science Careers I. Other topics that will be addressed include cultural diversity, medical math, and human growth and development. Additional projects will enable students to make valuable additions to the vocational portfolio. Students will have the opportunity to tour additional healthcare facilities and participate in career shadowing experiences. Students will have the opportunity to interact with various populations such as those with developmental and physical disabilities and residents of long-term care facilities by developing and participating in several community service projects. Students will complete the skills portion of the SD Certified Nurse Assistant (CNA) Program. After completing this portion of the CNA program, students will receive a certificate of completion and would need only to complete the classroom portion, clinical hours and pass the state examinations in order to become a Certified Nurse Assistant.

# Human Services

---

## ***Course Title: Child Development / Parenting***

**Credit:** .5

**Level:** G

**Grade:** 9, 10, 11, 12

**Prerequisites:** None

**Course Description:** This class will discuss rewards and responsibilities of parenthood, guidance and discipline, and teen pregnancy. It will focus on the social, physical, emotional and intellectual development of a child from prenatal through age 3.

## ***Course Title: Child Development / Preschool***

**Credit:** .5

**Level:** G

**Grade:** 11, 12

**Prerequisites:** None

**Course Description:** This course studies growth and development of children ages 3-6 years. Students will develop an understanding of preschool children through observation, visiting childcare and preschool programs in the community, and teaching in a preschool setting.

## ***Course Title: Family Living***

**Credit:** .5

**Level:** G

**Grade:** 11, 12

**Prerequisites:** None

**Course Description:** This class will discuss relationships, human sexuality, marriage adjustments, family and society, family and work, crises in the family, abusive relationships, divorce and the family life cycle. The Real Care Baby Simulation is a requirement in the course.

## ***Course Title: Independent Living***

**Credit:** .5

**Level:** G

**Grade:** 11, 12

**Prerequisites:** None

**Course Description:** This course is designed for students who wish to broaden their knowledge of the consumer and management skills necessary for independent living. These include personal decision making, resource management, transportation, insurance, credit, clothing maintenance, finding a place to live and job seeking strategies.

# Information Technology

---

## ***Course Title: Computer Applications***

**Credit:** 1.0

**Level:** G

**Grade:** 9, 10, 11, 12

**Prerequisites:** None

**Course Description:** Computer Applications is designed to further improve students' computer skills through the use of various software and integrated application packages. Specific areas to be addressed include word processing, spreadsheet, database, graphics, finance, and web page design. The internet is used when appropriate to enhance the learning process.

## ***Course Title: Computer Programming 1***

**Credit:** .5

**Level:** G

**Grade:** 10, 11, 12

**Prerequisites:** None (Keyboarding skills are very helpful)

**Course Description:** The student will learn the high-level programming language of Visual Basic and C++ with their wide variety of applications. Each student will be given as much hands-on experience as possible, and will explore forms, properties, and code and develop an understanding of the logical processes of problem solving.

## ***Course Title: Web Page Design***

**Credit:** .5

**Level:** G

**Grade:** 10, 11, 12

**Prerequisites:** Successful completion of Computer Applications

**Course Description:** Students will learn how to create professional websites using Dreamweaver 8 which is known as the industry standard for website development. This web design class is designed to introduce the new user to the interface, concepts, and techniques of visual web design using Dreamweaver 8. Students go from start to finish, creating and maintaining basic websites to advanced applications and the latest technologies. Students will learn the proper procedures for creating websites for professional and personal use, along with creating image maps, navigation bars, Flash animation, and managing web code.

## ***Course Title: Network/Computer Cabling***

**Credit:** 1.0      **Prerequisites:** none      **Level:** GGrade: 10, 11, 12      **CTE #10112**

**Course Description:** Information Technology; Manufacturing Career Clusters. Do you want to setup your own computer network at home? Then this is the course for you! You will learn how to setup your own network, from building the cables to setting up a wireless system. Also, you will have the chance to get certified as a network cabling technician in copper cabling.

## ***Course Title: Computer Hardware and Operating Systems***

**Credit:** 1.0      **Prerequisites:** none      **Level:** GGrade: 10, 11, 12      **CTE #10254**

**Course Description:** Information Technology; Manufacturing Career Clusters. Course will prepare students to become more knowledgeable about the inner workings of their personal computer through hardware troubleshooting and hands-on computer repair skills. Topics covered in the class include individual hardware components, upgrading and troubleshooting a computer, formatting and partitioning hard drives, and network topologies. To fully understand the operation of a computer, the course also examines operating systems and their configurations.

## ***Course Title: Electronics – Part A – General Skills and Knowledge***

**Credit:** 1.0      **Prerequisites:** Algebra 1A & 1B      **Level:** G      **Grade:** 10, 11, 12      **CTE #17106**

**Course Description:** Information Technology; Manufacturing; STEM; Transportation Career Clusters. Part A covers basic theory for Direct and Alternating Current (DC & AC), terms and vocabulary, required formulas for circuit analysis, measurement devices, and basic components. Class is an introduction to Ohm's Law calculations determining operating parameters for voltage, current, and power. Material covered is the core information for all careers that encounter electricity or electronic circuits as part of their job descriptions.

## ***Course Title: Electronics – Part B – Semiconductor Devices & Circuits***

**Credit:** 0.5      **Prerequisites:** Electronics – Part A      **Level:** G      **Grade:** 10, 11, 12      **CTE #17106**

**Course Description:** Information Technology; Manufacturing; STEM; Transportation Career Clusters. Part B covers solid state/semiconductor theory and devices. Semiconductors range from individual components such as diodes and transistors to integrated circuits (IC) such as computer microprocessors. These devices are used in both analog and digital circuits; this element explores more of the analog side to give experience in prototyping and schematic reading.

## ***Course Title: Electronics – Part C – Digital Circuits***

**Credit:** 0.5      **Prerequisites:** Electronics – Part A & B      **Level:** G      **Grade:** 10, 11, 12      **CTE #17106**

**Course Description:** Information Technology; Manufacturing; STEM; Transportation Career Clusters. Part C concentrates on digital theory and operation, numbering systems, and logic circuits. These circuits are the foundation of all digital devices, such as computers, phones, and televisions. Students will also be introduced to basic device programming.

## ***Course Title: Electronics – Part D – Telecommunications Systems***

**Credit:** 0.5      **Prerequisites:** Electronics – Part A & B      **Level:** G      **Grade:** 10, 11, 12      **CTE #17106**

**Course Description:** Information Technology; Manufacturing; STEM; Transportation Career Clusters. Part D emphasizes currents and voltages that have continuously variable signals and, due to that emphasis, concentrates on signal modulation, transmission and reception, signal loss and distortion, and waveforms. This course also addresses conversion/demodulation/detection techniques. This course is designed to provide students with tools and strategies to introduce basic electronics, the science of radio, space technology and satellite communications, wireless computer networks, as well as weather science.

# Law, Public Safety & Security

---

## **Course Title: Personal & Business Law**

**Credit:** .5

**Level:** G

**Grade:** 10, 11, 12

**Prerequisites:** None

**Course Description:** Personal and Business Law is a practical course designed for everyone. It deals with day-to-day situations in the juvenile and adult worlds. Areas stressed include: your rights, the Courts, criminal and civil law, prisons, contract law, insurance, bankruptcy, real property, marriage and divorce, and wills. Past tours have included: observing a court proceeding, touring the Brown County Jail and Juvenile Detention Center. Past speakers have included: police officers, detectives, probation officers, judges, Department of Corrections' officers, attorneys, and game wardens. Field trips and speakers are based on scheduling and availability

# Manufacturing

---

## **Course Title: Machine Tool Technology I**

**Credit:** 2.0

**Prerequisites:** none

**Level:** G**Grade:** 10, 11, 12

**CTE #13203**

**Course Description:** Manufacturing Career Cluster. This course gives students a well-rounded introduction to the machine tooling industry. In the machine shop program, students will become familiar with the following areas: drill press operations, engine lathe and production (turret) lathe set up, horizontal and vertical milling machines, surface grinders, and how these machines relate to industry. Students will also be instructed in tool sharpening, project planning and design, blueprint reading, and heat treatment of metals. Tours of local industries are also an important part of the course. These tours allow students to relate the work they do in school to an actual industrial setting, as well as give students a first-hand look at industry at work. Maintenance machining is also taught—this area gives students an opportunity to repair and recondition automobile or machinery parts. After completion of the course, students should be capable of going into industry at an entry-level job or going on to college or technical school. (Credit from this course will apply to some vocational/technical schools.) Students are encouraged to design and build personal projects late in the year.

## **Course Title: Machine Tool Technology II\*\***

**Credit:** 2.0 **Prerequisites:** Machine Tool Technology I w/Instructor permission  
**CTE #13203**

**Level:** G **Grade:** 11, 12

**Course Description:** Manufacturing Career Cluster. This is an advanced Machine Tool course providing students with a faster pace and more difficult projects. The course starts with a review from the previous year and moves directly into a class project. Students will be introduced to advanced concepts using the tool and cutter grinder, the Horizontal mill, the Vertical mill, and the turning lathes. Advanced grinding, milling, and turning techniques will be explored. (Credit from this course may apply to area post-secondary technical schools.) Students are encouraged to design and build personal projects as part of this course. **\*\*Machine Tool Technology III available upon completion of Machine Tool Technology I and II.**

## **Course Title: Welding Technology I\*\***

**Credit:** .5

**Prerequisites:** none

**Level:** G**Grade:** 10, 11, 12

**CTE #13207**

**Course Description:** Manufacturing Career Cluster. Students will complete classroom and hands on project based applications in the area of welding. The course will include welding safety; welding applications using various metal types; preparing base metals; wire feed welding machine set up and adjustment; and career exploration.

**\*\*A "Girls Only" class will be added if enrollment numbers warrant offering it.**

## **Course Title: Welding Technology II**

**Credit:** .5  
**CTE #13208**

**Prerequisites:** Welding Technology I

**w/Instructor Permission**

**Level:** G **Grade:** 11, 12

**Course Description:** Manufacturing Career Cluster. This is an advanced course providing students with a faster pace and more difficult tasks. The course will start with a review and welding practice, and move on to advanced concepts and multiple weld positions. We will cover the needs of clamping and assembly processes of the parts for weld assembly. Students will also be encouraged to design and build personal projects as part of the course. Students may be expected to furnish some of their own materials.



# Marketing

---

**Course Title: Introduction to Business**

Credit: .5

Level: G

Grade: 9, 10, 11, 12

Prerequisites: None

**Course Description:** The purpose of Introduction to Business is to provide students with a brief overview of several business-related areas which may include the economy, financial management, credit, risk management, business management and consumerism.

**Course Title: Sport and Entertainment Marketing**

Credit: .5

Level: G

Grade: 10, 11, 12

Prerequisites: None

**Course Description:** Students will be introduced to Sports Marketing which is an industry where job growth is projected to increase faster than the average of all other occupations. Sport-related businesses will continue to experience dynamic growth and are a multi-billion dollar enterprise, which ranks it among the top fifteen industries in the nation. This marketing course is designed for students to develop skills in the areas of facility design, merchandising, advertising, public relations/publicity, event marketing, sponsoring, ticket distribution, and career opportunities as they relate to the sports and entertainment industry.

## Science, Technology, Engineering & Mathematics

---

**Course Title: PLTW Introduction to Engineering Design (IED)**

Credit: 1.0

Level: G

Grade: 10, 11, 12

Prerequisites: None

**Course Description:** Students use an engineering design process to improve existing products and invent new products that will eventually be manufactured or produced. They learn how to apply this process to solve problems in and out of the classroom. Using real world, sophisticated three-dimensional modeling software, students communicate the details of the products and will have the opportunity to create prototypes using a 3D printer.

**Course Title: PLTW Principles of Engineering (POE)**

Credit: 1.0

Level: G

Grade: 10, 11, 12

Prerequisites: PLTW Introduction to Engineering Design

**Course Description:** Students will learn about major engineering concepts encountered in a college engineering curriculum. They will apply their knowledge of engineering concepts as they tackle real-world engineering design problems. Students will conduct destructive testing as they learn about material properties. They will design and build truss systems and determine the point of failure. Students will learn how to incorporate basic electronics and computer programming into the design of automated systems using VEX Robotics.

**Course Title: Alternate Energy Systems**

Credit: 0.5

Prerequisites: none

Level: G Grade: 10, 11, 12

CTE #21057

**Course Description:** Manufacturing; STEM Career Clusters. Alternate Energy systems play a critical role in everyday life, and as such are an important part of engineering. This course serves as an introductory course in alternative energy. This is a survey of wind, biomass, solar, geothermal, and other nontraditional energy sources, characteristics, and application by means of projects and hands-on activity and other experimental activities. This course also provides a close look at the "Green Automobiles" of the future.

# Transportation, Distribution, & Logistics

## ***Course Title: Automotive Technology***

**Credit:** 2.0

**Prerequisites:** none

**Level: GGrade:** 11, 12

**CTE #20104**

**Course Description:** Transportation, Distribution, & Logistics Career Cluster. The Automotive Technology Program is a detailed, comprehensive program for students interested in a career in the automotive industry. This program strives to provide students with a solid foundation based on automotive theory and commonly accepted industry practice. Instruction includes both classroom and structured lab work on automotive components and automobiles. The units of instruction are: Introduction to Auto Shop and Personal Safety, Tools and Equipment, Acquiring and Utilizing Technical Information, Preparing Vehicle for Service, Preparing Vehicle for Customer, Basic Vehicle Service, Engine Repair, Automatic Transmission, Manual Drive Train and Axles, Suspension and Steering, Brakes, Electrical/Electronic Systems, Heating and Air Conditioning.

## ***Course Title: Introduction to Vehicle Systems & Maintenance***

**Credit:** 1.0

**Prerequisites:** none

**Level: GGrade:** 10, 11, 12

**CTE #20106**

**Course Description:** Transportation, Distribution, & Logistics Career Cluster. The Introduction to Vehicle Systems and Maintenance Program will prepare students to meet the demand for a variety of types of vehicle maintenance, service and repair and to address a future in sales or support staff in the Transportation Industry. Students will have a greater understanding of how a vehicle operates and a good working knowledge of repair and repair practices. Topics covered are: Safety related to transportation systems and maintenance, Proper application and maintenance of tools and equipment, Principles of chemical, mechanical and physical functions of modern vehicle systems, Document maintenance procedures, Appropriate business practices, Vehicle service and repairs, Principles and operations of electrical systems, Principles of automotive brakes, steering, suspension, Automatic and manual transmission systems, and Career opportunities in Transportation, Distribution and Logistics.

## ***Course Title: Introduction to Auto Body (Nonstructural Analysis and Damage Repair)***

**Credit:** 0.5

**Prerequisites:** none

**Level: GGrade:** 11, 12

**CTE #20125**

**Course Description:** Transportation, Distribution, & Logistics Career Cluster. This program will concentrate on introductory auto body repair techniques at a basic level. Topics covered are: Automotive technology safety practices; nonstructural inspection and repair; body panel repair; metal finishing and body filling; repairing and replacing movable glass; metal welding and cutting; and plastic repairs and adhesives. Students will complete classroom and project based applications in the areas listed above.

## ***Course Title: Internship 1 / Internship 2***

**Credit:** .5

**Level: G**

**Grade: 12**

**Prerequisites:** None

**Course Description:** This course is designed for senior students who wish to job shadow an occupation for nine weeks (or two occupations for 18 weeks). Students will find their own supervisor and write up their own contract for the internship. Each student will also keep a daily journal for attendance purposes and document what they did each day. The goal is to explore possible career opportunities and to get a better understanding of that career. Students will be required to complete a portfolio. Internship meets Capstone requirements.