

INTRODUCTION

The overall goal of the program is to prepare students for post-secondary education and/or to go directly into the workforce. The following credits may be offered through your home school.

HIGH SCHOOL GRADUATION CREDITS

CREDITS	TYPE	WHO CAN EARN IT
1-2 Credits	Elective	All students in any 1 or 2 hour ISD program
1 Credit	Visual Performing Applied Arts	Students enrolled in any ISD class
1 Credit	4 th year of Math	Seniors enrolled in any ISD class
1 Credit	3 rd year of Science	Students enrolled in any ISD class
1 Credit	2 nd year of Foreign Language	Students enrolled in any ISD class
1 Credit	Algebra II	Students who have a Personal Curriculum who enrolled in ISD Programs with Technical Math

Students could earn 5-6 graduation credits for their class!

COLLEGE CREDITS

College credits may be awarded if student meets the individual criteria for program area. For more information please call (906) 786-9300.

CERTIFICATIONS

Certifications may be earned after passing the course and certification tests.

CONSTRUCTION

INTRO TO CONSTRUCTION TRADES (Grade 10) (2 Credits)

Intro To Construction Trades students will learn to read and understand blueprints and how to properly bid a job from the prints. They will learn the proper and safe use of power tools and pneumatic nail guns while building projects for class or personal projects for themselves (i.e. hunting blinds/ice shanties, speaker boxes and more). Students will have the skills needed for a career and knowledge for everyday projects.

CONSTRUCTION TRADES I (2 Credits)

Construction Trades I is designed for students interested in learning basic skills related to construction and maintenance of small and large structures. Hands-on experience will be gained through the various building/repair projects. Learning experiences will be gained through introduction to hand and



power tools use, building materials, blueprint reading, computer-aided design, concrete work, brick and block masonry, carpentry skills, roofing insulation, windows and doors, interior trim, vinyl siding, plumbing, electrical, cabinetmaking, drywall hanging and finishing, painting, finishing woodwork, landscaping and employability skills. **Prerequisite:** None

CONSTRUCTION TRADES II (2 Credits)

Construction Trades II students will further develop their construction and leadership skills. They will be assigned as crew leaders and will focus on their own career interest. Advanced second year students can also be placed on a work experience site with a contractor in the community to further define their career goal. **Prerequisite:** Construction Trades I

EDUCATION & TRAINING

(POSSIBLE COLLEGE CREDITS AWARDED - 3)

INTRO TO CAREERS IN EDUCATION (Grade 10) (1 Credit)

Exploring Careers In Education is a one hour year long course that introduces sophomore students to a variety of careers related to the field of education and what it takes to become a professional educator.

CAREERS IN EDUCATION I (2 Credits)

The Careers in Education I course introduces students to careers in teaching and education. It provides students with an orientation to the teaching profession and related fields by providing students with an in-depth look into the profession of teaching.

Students study the growth and development of the learner, as well as the social, political, philosophical, cultural, legal and economic forces that shape the public education system. In addition, students participate in classroom observations and an extended on-site lab experience assisting a classroom teacher with one-on-one student assistance, group monitoring, and whole class instruction. Students study child development principles and principles of effective teaching practices. All Careers in Education I students will be provided an on-site work experience in the Small Wonders Preschool Lab and will participate in the Future Educators Association (FEA) international leadership organization. A strong interest in exploring a career in education and a desire to work with young children is recommended. **Recommended:** Cumulative Grade Point Average minimum of 2.0.

CAREERS IN EDUCATION II (2 Credits)

The Careers in Education II course is open to high school senior students who have successfully completed Careers in Education I and wish to broaden their knowledge and skills through more extensive training and work experience. This course reinforces the content learned in the year prior through participation in an internship outside the ISD classroom three days per week. The internship may involve the pre-school level through middle school and is selected to match the student's career focus. All students will participate in the Future Educators Association (FEA) international leadership organization. A sincere interest in pursuing a college degree in an education related field is recommended when enrolling in this course. **Prerequisite:** Successful Completion of Careers in Education I



HEALTH SCIENCE

(POSSIBLE COLLEGE CREDITS AWARDED - 1 TO 11)

INTRO TO HEALTH OCCUPATIONS (Grade 10) (1 Credit)

Exploring Careers in Medicine assists student in determining the medical career most suited to their individual goals by learning medical terms, career descriptions, introductory professional skills, and structure and function of body systems.

HEALTH OCCUPATIONS I (2 credits)

Health Occupations students prepare themselves for placement in a wide range of occupational specialties in the health care industry. As a Health Occupations student, you will be observing many health care professionals at work during your hospital, nursing home or other clinical rotations. These include, but are not restricted to: lab techs, x-ray techs, physical and occupational therapists, veterinary techs, etc. The first-year curriculum focuses on medical terminology, basic human anatomy and physiology related to diseases, and specialized skills such as Vital Signs, First Aid, and CPR. Employability skills will be stressed throughout the program as well as growth in leadership opportunities through the student organization HOSA (Health Occupations Students of America). During the second semester, students receive in-depth instruction in their chosen profession and clinical non-paid work based learning and job shadowing such as Mental Health, Dental Office, Rehabilitation Therapies, Animal Care, Pharmacy, Radiology, Mortuary Science, or Certified Nursing Assistant*. Students will be eligible for three to seven (3-7) college credits. **Prerequisite:** None



Certified Nursing Assistant Training*

- Students will have the opportunity to complete the Nursing Assistant Certification with the State of Michigan as stated under the Omnibus Reconciliation Act of 1991 (OBRA). This training is an integral part of the Health Occupations Program and relates to the nursing home clinical.
- During this phase of the course, students function as an assistant and provide direct, supervised care of elderly patients in a nursing care facility. Those offended or bothered by normal bodily functions, odors or hygiene issues must accept their responsibilities with professionalism and compassion or seek training in some other career field.
- Students must successfully complete the first semester of Health Occupations I to be eligible for the training program.
- The basic training consists of combined classroom and supervised clinical training that includes personal care skills, care of the patient environment, vital signs, nutritional needs and restorative care of the resident.
- Successful completion of the Nursing Assistant Training Program qualifies the student to take the examination required for the State of Michigan Nursing Assistant Certificate. You must begin working within one year or the certification expires.

HEALTH OCCUPATIONS II (2 credits)

The second year of Health Occupations expands the student's skills

and knowledge in health care procedures and applications. This is accomplished through **Independent Study**, classroom instruction, computer modules, clinical internships, and study in their specific area of interest within the community health care setting. Students will be eligible for an additional five (5) credits from Bay College. Continued development of employability skills will be stressed as well as growth in leadership opportunities through the student organization HOSA (Health Occupation Students of America).

Students will receive a general clinical rotation at OSF St. Francis Hospital as well as in-depth clinical non-paid work-based learning and job shadowing such as Mental Health, Dental Office, Rehabilitation Therapies, Animal Care, Pharmacy, Radiology, Mortuary Science, or Certified Nursing Assistant*. **Prerequisite:** Health Occupations I

INFORMATION TECHNOLOGY

(POSSIBLE COLLEGE CREDITS AWARDED - 11)

INTRO TO PC TECHNOLOGY (Grade 10) (1 Credit)

This class is an introductory class designed to give students basic computer knowledge. The course will cover hardware, software, installing operating systems, file management and other basic computer functions and features. It will also cover troubleshooting issues, updating Windows and other software and installing hardware devices. Students completing this course are well prepared for PC Technology I class.

PC TECHNOLOGY I (2 Credits)

This program is designed to provide students with entry level skills related to the repair, installation and maintenance of desktop computer hardware including PCs, monitors, mice, keyboards, printers and basic networking devices. Students will gain hands-on experience in building new PCs, re-building older systems, installing new devices and troubleshooting computer systems in general. **Prerequisite:** Keyboarding, Computer Classes



PC TECHNOLOGY II (2 Credits)

This program is a continuation of the PC Technician I course with an emphasis on computer software. Students will install operating systems (predominantly Windows), application software, as well as, software used for networking and the internet. Students will also learn Microsoft Office applications and learn how to install, update and repair all types of software.

Prerequisite: PC Technology I

MANUFACTURING

(POSSIBLE COLLEGE CREDITS AWARDED - 2 TO 11)

INTRO TO MACHINING (Grade 10) (1 Credit)

The Intro to Machining program will be an introduction to basic machine shop operation, & hand tool use. Students will be introduced to many aspects of machining including precision measuring, to wet their appetite for the machine shop trade. Students will get hands on experience on manual machines throughout the year.

MACHINING I (2 Credits)

This course is designed to provide students with a broad understanding of opportunities in the field of machining. Components of the course will include blueprint reading, basic and finite measurement, basic machining operations, machine and workplace maintenance, workplace safety, and career and employability skills. In addition, students will be introduced to the design process, computer aided design, computerized numerical control (CNC) machining. Students will also be introduced to basic robotics and automation technology. Overall, students will have a wide range of hands on experience to assist them in making career choices in the ever-expanding machining industries (basic machining, blueprint reading, CAD, CAM).

Prerequisite: None



MACHINING II (2 Credits)

The second year will focus on the computerized aspect of machining and allow students to gain more knowledge of the topics covered in Machining I. Students will get more involved in designing for manufacturing, just-in-time inventory, and other current manufacturing concepts. They will also be responsible for complete preparation of projects from the design phase to production and through final inspection. Students will receive career and employability training to better market their talents after high school and will also be involved in mentoring first year students and getting experience leading and training other students. Students will spend more time learning and utilizing CNC equipment.

In addition, opportunities may exist to explore the exciting field of manufacturing through internships with various local industries. Internship eligibility is based on needs of the local manufacturing community and for students in good academic standing (precision machining). Prerequisite: Machining I

INTRO TO WELDING TECHNOLOGY (Grade 10) (1 Credit)

This class is a condensed version of the two hour courses offered. In this class, students will be introduced to welding in the flat and horizontal positions using OFW, OFB, GMAW, SMAW, as well as using oxygen acetylene cutting, plasma cutting and CNC plasma cutting. This class will focus on the basics of print reading, measuring and fabrication as well as basic math skills.

WELDING TECHNOLOGY I (2 Credits)

This Welding course is designed to develop entry level job skills for students that may be interested in a career in the welding field. The student will study basic shielded metal arc welding, gas metal arc welding (Mig), gas tungsten arc welding (Tig), oxygen acetylene welding, and flux cored arc welding, and demonstrate the processes according to the American Welding Society Standards. This course is based on the fundamental welding concepts as they apply to welding carbon steel. Prerequisite: None



WELDING TECHNOLOGY II (2 Credits)

Welding Technology II broadens the students' knowledge and skills through experience and independent study of welding procedures. In depth blueprint reading and welding symbol understanding through the completion projects will also be covered. CNC Thermal Cutting will also be introduced. This course is based on the fundamental welding concepts as they apply to welding carbon steel, as well as aluminum and stainless steel. It emphasizes the interrelationships of the welding processes, material selection, product design, production techniques, quality control and provides the knowledge necessary to solve day-to-day welding and fabrication problems.

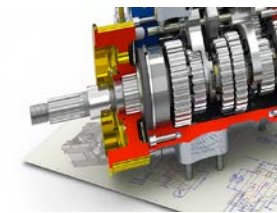
Prerequisite: Welding Technology I

SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (POSSIBLE COLLEGE CREDITS AWARDED)

(POSSIBLE COLLEGE CREDITS AWARDED)

PRODUCT DESIGN & DEVELOPMENT I (2 credits)

Students will learn the fundamentals of engineering design and technical drawing (drafting) through sketching and CAD software. Students learn the language of engineering as they design and fabricate machine and wood products through project based instruction. Instruction includes single and multi-view drawings, 3-D representation, section views and dimension of objects. SolidWorks software will be used for computer drawing. This class is designed for students interested in engineering, construction, manufacturing or trades requiring blueprint reading. Students will have the opportunity to receive a certificate in SolidWorks CAD Software.



Prerequisite: None

PRODUCT DESIGN & DEVELOPMENT II (2 credits)

Students will learn about engineering and entry level architecture through project-based instruction and drafting/design computer programs. Projects that enhance team-building skills involve students, parents, and staff. Topics of study include: Advanced CAD solid modeling, design and manufacturing, program management process, GD&T and residential house design. Students identify a creative way of solving a problem or inventing a better product, and then design a possible solution through the use of CAD. When prototypes can be created, they are fabricated and tested for possible use in the manufacturing world. Original thinking and visualization are used throughout the process. This class prepares students for college studies in any area of engineering, and entry level jobs in engineering, construction and manufacturing.

Prerequisite: Product Design & Development I

TRANSPORTATION

(POSSIBLE COLLEGE CREDITS AWARDED - 12 TO 21)

INTRO TO AUTOMOTIVE TECHNOLOGY (Grade 10) (1 Credit)

This program is designed to provide the student with those skills necessary to explore various automotive careers and the day-to-day automotive maintenance. The course deals with a variety of skills;

shop/tool safety, proper tool usage, vehicle maintenance and employability skills training.

AUTOMOTIVE TECHNOLOGY I (2 Credits)

The Automotive Technology I program is designed to provide the student with those skills necessary to attain state certification in auto mechanics for engines and auto electrical. The course deals with a variety of skills; shop/tool safety, precision measurement, electrical diagnostics, logical problem solving, diagnosis and repair of components. The students will also have the opportunity to rebuild their own automobile engine. Additionally, students will receive employability skills training while enrolled in this program. Students who successfully complete the Automotive Technology I program will have the skills necessary for entry-level positions in the automotive repair industry and the Automotive Technology II program.

Prerequisite: None



AUTOMOTIVE TECHNOLOGY II (2 Credits)

The Automotive Technology II program is designed to provide the student more in-depth instruction in brake system repair, tire balancing, power-train repair, steering/suspension service, wheel alignment, emission controls and engine tune-up. Students will receive in-depth instruction in the skills necessary to attain state certification in the following automotive areas: Brakes, Electrical Systems, Engine Repair, and Steering/Suspension. Each unit deals with a variety of skills: shop and tool safety, precision measurement, logical problem solving, diagnosis and repair of components, and employability skills. Successful completion of this program will provide the student with skills necessary for entry-level positions in the automotive industry, and assist in their future education. The automotive technology instructor is ASE certified and the program is NATEF (National Automotive Teacher Education Foundation) certified. Additionally, the students may receive NATEF & ASE certification as well as college credit by successfully passing the ASE & NATEF certification tests. Prerequisite: Automotive Technology I

Delta-Schoolcraft Intermediate School District Career & Technical Education

COURSE DESCRIPTIONS



2019/2020

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