

DHS-W.I.S.D. CAREER/ TECHNICAL EDUCATION COURSES

Health Sciences Technology: All-year/3 hours

Prerequisite: *STUDENTS MUST HAVE INSTRUCTOR'S APPROVAL.* Health Sciences Technology has been designed for eleventh and twelfth grade students interested in all levels of health careers at the professional and paraprofessional levels. Areas of study include anatomy and physiology, disease process, medical ethics, communications, medical terminology, career exploration and trends in healthcare. Students will develop skills in CPR, vital signs, safety and patient care skills that apply to multiple health fields, such as nursing, medicine, physical therapy, x-ray tech and more. Students will gain practical experiences in hospitals, long-term health facilities and professional working environments of the health career being considered. College bound students considering a career in the health field would benefit greatly from this course by determining their interest and abilities and experiencing the job first hand. Students who complete all the requirements are eligible to take the State of Michigan tests to become Certified Nursing Assistant (CNA). The CNA certificate is required for the WCC Nursing Program. Articulation is available with Washtenaw Community College and Ferris State University.

Careers In Education: All-year/3 hours

Prerequisite: *Open to Grades 11-12*

This course is for students who are interested in exploring the teaching profession. It provides students an opportunity to get hands-on experience in the classroom before entering a teaching program in college. This experience enables students to gain knowledge and an understanding of the teaching profession. This placement will aid in the career decision making process. Placements for cadet teaching field experience are made with a professional teacher in the student's home district. Students will receive a grade based on supervising teacher evaluations, on-site observation, related assignments and a classroom teaching portfolio. Articulation is available with Mott Community College.

Hospitality/Culinary Arts: All-year/3 hours

Prerequisite: *Grades 11-12*

This course is designed to introduce students to the hospitality industry, which includes Culinary Arts, Food Service, Hotel/Motel & Travel/Tourism, with a major focus on Culinary Arts. Students will learn and apply principles of safety, sanitation and food preparation. They will operate "The Hive", our student operated restaurant, as well as do catering and special projects. In addition, they will learn and practice employability skills, goal setting, and problem solving. They will apply math and communication skills to work situations. Students will rotate through various kitchen stations including: broil cook, fry cook, pantry cook and prep cook. Students may take this class as a junior or senior or both. Culinary students have the opportunity to compete in various competitions including: Individual Hot Foods, Baking, Waiter/Waitress, Prostart Team cooking, Team Banquet, Food Sculpture and Best Teen Chef. Competitions start at a regional level and students can advance to state and national competition. Competitions are hosted by the following professional organizations: SkillsUSA and the Michigan Restaurant Association. Students have the opportunity to learn a nationally recognized certificate through the National Restaurant Association with ServeSafe and ProStart programs. Articulation (up to 9 credits) is available at Ferris State University, Grand Rapids Community College, Henry Ford community College, Lake Michigan College, Michigan State University, Washtenaw Community College, West Shore Community College, The Art Institutes, Cornell University, the Culinary Institutes of America, Kendall College, New England Culinary Institutes, Johnson and Wales University, and other colleges and universities across the US.

Marketing I: All-year/3 hours

Prerequisite: *Grades 11-12*

This class is open to students interested in marketing, management or entrepreneurship. In this class, students will learn vital skills necessary to be successful in any career they choose. The class focuses on marketing concepts, salesmanship, interviewing, merchandising, management, retailing, promotion and much, much more. Students in this class will completely manage the school store, called "The Edge", which includes ordering, pricing, displaying and promoting products, as well as conducting market surveys. Each student will be given the opportunity to manage the store as a cashier or salesperson. The students will also be a part of the international association of marketing students, called DECA. Participants may compete in areas related to marketing, management and entrepreneurship at the district, state and/or international levels. Students may also participate in the development of social intelligence, leadership and community service. Articulation is available with Washtenaw Community College.

Marketing II All-year/3 hours--Consists of a 'trimester' each of Entrepreneurship, Retailing, Sports & Entertainment

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Entrepreneurship: 1 Trimester

Prerequisite: *Grade 12; Marketing I*

This class provides a more detailed approach to applying the marketing concepts introduced in Marketing I and provides further focus on the written competitive events offered through DECA. The course will also cover retailing, with an emphasis on Entrepreneurship. Students will choose their own sole proprietor business idea and will leave the class with their own unique business plan. Participants will compete in DECA for a second year at the district, state and/or international levels. Articulation is available with Washtenaw Community College.

Retailing: 1 Trimester

Prerequisite: *Marketing I; Grade 12*

This class provides a more detailed approach to applying the marketing concepts introduced in Marketing I and provides further focus on managing the school store. The 1st trimester (Retailing) will offer emphasis on aspects of retailing; creating promotions, ordering, merchandising, pricing and purchasing of products for the store. Students will also participate for a second year in all DECA activities and promotions. Articulation is available with Washtenaw Community College.

Sports & Entertainment: 1 Trimester

Prerequisite: *Marketing I; Grade 12*

Students will continue to manage the school store, with an emphasis on Sports and Entertainment Marketing. The 3rd trimester class will provide students with an understanding of the Sports and Entertainment industry while applying skills learned in Marketing I. Students will join Marketing I in all of the marketing and DECA opportunities. Articulation is available with Washtenaw Community College.

Botany: Plant Systems-Turf Science: All-year/3 hours

Prerequisites: *completion of Biology*

This year-long course is for students considering a green industry career as a florist, greenhouse manager, alternative energy engineer, urban forester, sports field manager, golf course superintendent, nursery manager, landscape architect, designer, contractor, botanist, horticulturist, soil conservationist, farm manager or other careers working with and caring for crops or plants in the future. This course will provide students with a foundation in botanical studies in agricultural crops, horticultural plants and forestry. Topics include classification, selection, anatomy, physiology, genetics, breeding, nutrition, health, judging of plants and plant products, fundamentals of soil science, hydroponics, plant pests, meeting human needs with plants and their importance to the Michigan economy. In addition, an introduction to alternative energy systems in bio-fuels, methane/natural gas, solar, wind, wave, fuel cell technology, landscape design, construction, supplies, equipment, management and safety are covered. Students care for plants in the hydroponic lab, new school greenhouse for 2010 (planned), outdoors on the school landscape, crop and sports fields, forest, and wetlands areas. This course can be retaken as an advanced Ag Projects independent research class during the same time slot after the Zoology course segment is completed or taken concurrently. Membership and participation in activities of the National FFA Student Organization, leadership, communication, teamwork skills, and other personal development skills, are part of all natural resources & agriscience classes.

Zoology: Animal Systems-Pre-Veterinary Science: All-year/3 hours

Prerequisite: *completion of Biology*

This advanced year-long course is for students considering an animal industry career as a veterinarian, vet technician, horse trainer, animal groomer, pet store manager, game warden, rancher, farm manager or other careers working with and caring for farm or companion animals in the future. This course will provide students with a foundation in pre-veterinary zoology studies in the animal species of livestock (food animals) and companion animals (horses, dogs, cats). Topics include classification, selection, anatomy, physiology, genetics, breeding, behavior, nutrition, health, judging and showing of animals and animal products, grooming, aquaculture, habitat management, wildlife conservation and the importance of hunting, trapping and fishing to the Michigan economy. Students grow broiler chickens and fish in the lab, do outdoor studies of the habitat of animal species in the forest, field and wetland areas of the school campus. This course can be retaken as an advanced Ag Projects independent research class during the same time slot after the Botany Course segment has been completed or taken concurrently. Membership and participation in activities of the National FFA Student Organization, leadership, communication, teamwork skills, and other personal development skills, are part of all natural resources & agriscience classes.

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Cosmetology I (a 2-year program + 1 summer) All-year/3 hours

***You must provide your own transportation to the Huron Valley Beauty Academy on Wagner Rd.**

Prerequisite: *Grades 11-12*

This program is open only to 11th and 12th grade students who have made a serious commitment to become a professional Cosmetologist. Limited space will be available for seniors who are willing to commit to a year beyond graduation to complete the program. The Cosmetology program offered through the South and West Washtenaw Consortium prepares a student for employment in one of our nation's largest personal service industries. The Cosmetology program prepares a student with the entry-level skills needed for employment in the beauty trades. Upon completion of the 1500 hours combined theory and clinical instruction the student will be qualified to take the Michigan State Board of Cosmetology exam. Class work includes the following areas of study: sanitation, bacteriology, cosmetology laws and rules, personal hygiene, hairshaping, hair dressing, finger waving, hair coloring, chemical reconstruction, applied anatomy, physiology and histology of the human head, hands, nails and skin, applied chemistry as related to skin, hair and nails, manicuring, facials, salon management and employability skills. Students must purchase required uniforms and arrange their own transportation to the West Ann Arbor location. A counselor can provide further information and the required application forms.

Cosmetology II: All-year/4 hours

***You must provide your own transportation to the Huron Valley Beauty Academy on Wagner Rd.**

Prerequisite: *Cosmetology I; Grade 12*

This course is a continuation of COS I. Students should be able to complete the 1500 hours necessary to take the Michigan State Board of Cosmetology exam.

Video News Production: All-year/3 hours

Prerequisite: *Grades 11-12*

The Video News Production class is an in-depth look at broadcast video and school news through digital media production. Students will learn the techniques needed to write, produce and output news stories and video media that impact your school and community. The broadcast aspect of news media is met by training students in the school broadcast studio and with online learning experiences in video production projects. Each student will be exposed to the latest broadcasting technology and techniques as they produce a weekly show called **SHS Today**. This show is aired every Friday throughout the school, local **SCTN Channel 18** and the web. Students will also be able to produce special interest shows working hand-in-hand with local community members. Articulation is available with Washtenaw Community College.

Visual Imaging Technology: All-year/3 hours

Prerequisite: *Grades 11-12*

VIT is about the design and production of media. VIT focuses on two major types of media: print media and electronic media. Print media includes such things as posters, CD covers, business cards, t-shirts, and many other products. Electronic media includes digital video and audio, digital photography, animation, and flash applications for the Web. What's common between print and electronic media can be summed up this way, it's all digital. Given the dynamic nature and fluidity of the visual imaging industry, one of the primary goals of the class is to give students a broad range of experience that encompasses both print and electronic media. VIT is a hands-on class in which students learn about each stage of the media production process and then use those tools to complete various media production projects and assignments. VIT prepares students for a career path within the visual imaging industry. Going into a college level program or directly into the workforce during/after high school are viable career path options for aspiring VIT students. Articulation is available with Washtenaw Community College. the visual imaging industry. Going into a college level program or going directly into a job during and after high school are viable career path options for aspiring VIT students.

Building Trades: All-year/3 hours

Prerequisite: *Grades 11-12*

The Building Trades program prepares a student for employment in the construction industry. There is much for the student to learn in the field, and the immense diversity of career opportunities makes this industry one of the most interesting and challenging. The Building Trades class prepares the student with entry-level skills needed for employment through the actual construction of a house. The specific areas of study include: site preparation, dry wall, masonry, finish carpentry, rough carpentry, painting and wall covering, heating, plumbing, construction technique, wiring, insulation, management skills, and employability skills. A solid foundation in math skills is needed, geometry is recommended. Articulation is available with Washtenaw Community College.

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Graph-X Academy: All-year/2 hours (2nd & 3rd hours) at DHS

Prerequisite: *Grades 11-12*

Graph-X Academy provides skills and experiences for the student interested in graphic arts/communications as a possible career or as background for advanced education after high school. Graph-X students experience on-site visits throughout the school year to local printing companies where they are exposed to all areas of the company. This gives students the opportunity to experience the latest technology and employability skills needed to be successful in a graphic arts/communications career. The school-to-work transition is a major focus of the Graph-X Academy. Articulation is available with Washtenaw Community College

Advanced Manufacturing (formerly Machine Tool Tech:) All-year/3 hours

Prerequisite: *Grades 11-12*

The Machine Tool Technology program will train students to go on to become technicians for employment in the modern computerized manufacturing industry. This class will be a good choice for the advanced drafting and pre-engineering student, as well as the machinist. The class includes training on CAD (Computer Aided Drafting) and CNC (Computer Numerical Controlled) lathes and mills, as well as basic machine tools such as lathes, mills, drills, and grinders. Articulation is available with Washtenaw Community College.

Welding Technology & Metal Processing: All-year/3 hours

Prerequisite: *Grades 11-12*

The Metal Processing and Welding Technology course prepares students for employment in the welding and fabrication industry. Skill development in the joining processes of MIG, TIG, STICK, and OXY-ACETYLENE welding and brazing will be developed. Fabrication processes including shearing, bending, burning, and plasma-arc cutting will be taught. Basic power tool operation including drill press, grinding and finishing will be taught through the development and construction of student projects. In addition, welding metallurgy and blueprint reading will be covered. Successful completion of this course will prepare the student for entry into industry or college for advanced study. Students that excel may receive articulated college credits from Washtenaw Community College for this class and be prepared for the AWS welding certification test.

Auto Technology I: All-year/3 hours

Prerequisite: *Grades 11-12*

Students will apply the principles and functions of components as they pertain to automotive systems. The course is divided into three major areas of study, including a light service unit, automotive electrical systems and braking systems. Included in the light service unit are topics ranging from reference materials and micrometers to basic vehicle systems like cooling, lubrication and wheels and tires. The automotive electrical systems unit includes all aspects of automotive electrical systems from the basic battery, alternator and starter to advanced electrical diagnostics, while the braking systems unit covers all aspects of automotive braking systems, including hydraulic principles, disc and drum braking systems, and anti-lock braking systems. The laboratory portion covers approximately 70 percent of this course. Students should be able to obtain state mechanic certification in at least two of the test categories. NATEF certification is available. Internships are available through the A-YES Program. Articulation is available with Washtenaw Community College.

Auto Technology II: All-year/3 hours **Early start so students must provide own transportation to Saline HS*

Prerequisite: *Auto Technology I*

This course covers an advanced study of topics covered in the prerequisite course, plus additional instruction in two major areas of study. The major areas of concentration are steering, suspension, wheel alignment, and an extensive unit on engine performance/drivability. The steering, suspension, and wheel alignment unit covers all aspects of current vehicle steering and suspension designs. The engine performance/drivability unit covers a vast number of topics including electronic fuel injection, computerized engine control, exhaust gas emission testing/analysis, ignition systems, and compression and leak down testing. "State of the Art" diagnostic equipment will be emphasized throughout this unit. This course is exclusively designed to provide the student with relevant and realistic "hands-on" training for preparation into the automotive servicing field as well as establishing a foundation for possible careers in Product Testing Technician, Dynamometer Technician, Service Manager, Parts Manager, Factory Service Representative, and Engineering Technician. Students should be able to obtain state mechanical certification in steering, suspension, and engine performance after successful completion of this course. NATEF certification is available. Internships are available through the A-YES Program. Articulation is available with Washtenaw Community College.

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Computer Aided Design (CAD) **offered in PM only-- provide your own transportation:* All-year/3 hours

Prerequisite: *Grades 11-12*

This is a class in Computer Aided Design (CAD) and Computer Aided Machining (CAM), automated manufacturing, rapid prototyping, tabletop manufacturing, CAD/CAM, and CNC programming are industry standards that students need to know to compete in tomorrow's job market and also prepare them for college. Students considering entering the field of engineering, design, machine tool, or any aspect of manufacturing will benefit from this class. Using state of the art software (MasterCam), students will gain job skills and college level experience in CAD/CAM programming. Maximum benefits to the students occur if Machine Tool Technology is taken with this course during their junior or senior year. This class will give students the power to design and visualize in 3D, generate tool paths and NC-code and produce the drawn part using a variety of industrial three-axis machine tools. Rapid prototyping and preproduction using CAD/CAM technology is in high demand and is considered to be essential skill in design and engineering professions, as well as many manufacturing technologies today. Articulation is available with Washtenaw Community College.

Drafting & Design Technology: All year/3 hours

Prerequisite: *Grades 11-12*

This course is designed to cover two types of drafting jobs, MECHANICAL DRAFTER and ARCHITECTURAL DRAFTER. Each discipline has its own set of tasks, which interactively use the CAD system to complete. It is planned that each job type will work from design to manufacturing of parts or building of a house.

Computer Servicing & Associated Electronics: All year/3 hours

Prerequisite: *Grades 11-12; Instructor Approval*

This class is designed to provide the student with a foundation in basic electronics with concentration in computer systems construction, repair, troubleshooting and upgrading. Basic electrical fundamentals will be covered including DC circuitry, reading schematic drawings, wiring and soldering. The focus of the class will be in preparing students to be Computer Repair Technicians. Computer technicians are in high demand and are responsible for troubleshooting and repairing computers. Upgrading and total construction of PC's will be experienced in this class, following the industry standard of A+ computer repair certification standards. Students that excel will be prepared for A+ computer certification testing. Articulation is available with Washtenaw Community College.

The Career & Technical Education Center (CTE Center)

Located at Saline High School - Room B223

The CTE Center is available to serve the needs of all students enrolled in the Career & Technical Education programs offered by the South and West Washtenaw Consortium. The Center provides students with a centrally located facility where they can receive assistance in developing specific academic skills related to their career oriented classes, in careful career planning, and in job placement. The Center also provides student assessment services and laboratory experiences related to individual career and technical needs. The goal of the CTE Center is to help all Career & Technical Education students attain their career objectives.

EXPERIENTIAL LEARNING

Co-Operative Education CTE: 1-3 Trimesters (for up to 2 hours of your DHS schedule each trimester)

Prerequisite: *Grade 12; currently enrolled in related CTE class. Previous enrollment as a junior in related class, core competencies in safety and curriculum documented. Application and interview process determines acceptance.*

This program provides on-the-job training in Career & Technical (CTE) programs such as Building Trades, Business Technology, Early Childhood Education, Cosmetology, Health Sciences Technology, Hospitality/Food Service, Marketing, and several trade and industrial occupations. Juniors who have completed, or are currently enrolled in a related CTE class are eligible to apply each spring for the following school year. Juniors, with approval, may apply for a third trimester placement during their junior year provided they have excellent references from their CTE teacher and counselor. Applications will be processed by a committee of counselors, teachers, and administrators. Criteria for acceptance include the student's occupational goals, attendance and disciplinary records, attitude, and instructor's recommendations. Students will be evaluated at least every nine weeks by the employer. They will also be required to attend weekly meetings, complete weekly assignments, and adhere to program standards and policies.