

Marcellus High School Course Description Guide



Marcellus
COMMUNITY SCHOOLS

Revised 2024-25

English

English 9 A/B (1 year, each semester .5 credit)

The first semester consists of the study of English grammar and usage with an emphasis on “writing to be understood.” The second semester consists of the study of literature (short stories, poetry, Shakespeare and *Romeo and Juliet*, various non-fiction articles). In addition, students may be required to make an oral book report on independent student reading.

English 10 A/B (1 year, each semester .5 credit, Prerequisite English 9 A/B)

10th grade English is a year-long literature survey class. The class covers literary terminology, vocabulary building, test taking strategies, and several literary genres.

English 11 A/B (1 year, each semester .5 credit, Prerequisite English 10 A/B)

Concentration on reading, thinking, writing, and speaking. The (English) through the Medieval Period (Middle English) to the English Renaissance (Modern English). While studying English literature, the student will read selections from classics of each time period *Beowulf*, the Venerable Bede, Sir Thomas Malory, Chaucer’s *Canterbury Tales*, Shakespeare, Christopher Marlowe. In addition, the student will make speeches on a variety of subjects and will be required to create a portfolio of academic skills, personal management skills, and teamwork skills. Students will also learn to create business letters, resumes, and other school to work related documents and learn about the job interview process.

English 12 A/B (1 year, each semester .5 credit, Prerequisite English 11 A/B)

English 12 is a yearlong required course that will enable students to become skilled readers of a wide range of literature, including prose, poetry, and short stories. Students are expected to read and respond to a variety of literature, independently, in group discussion and in writing. All facets of language arts - listening, speaking, reading, writing will be covered. The study of language in use – grammar, mechanics, sentence structure, and usage will be incorporated in this yearlong course as well.

Mathematics

Algebra (1 year, each semester .5 credit)

The course emphasizes algebraic language, structure, concepts and skills. Major topics include algebraic properties and the real number system with an emphasis on the application of basic operations, functions and their graphs, linear equations and inequalities, quadratic equations, linear regression and modeling, systems of linear equations and inequalities, polynomial and factoring, algebraic fractions and real world applications.

Geometry (1 year, each semester .5 credit, Prerequisite Algebra)

Geometry builds on a number of key geometric topics developed in the middle grades, namely relationships between angles, triangles, quadrilaterals, circles, and simple three-dimensional shapes. Students will study deductive reasoning, plane figures, trigonometry, and geometric relationships that have the goal of improving a student's mathematical thinking and problem solving skills.

Algebra II (1 year, each semester .5 credit, Prerequisite Algebra and Geometry)

Topics learned in this course include linear functions and systems, quadratic functions and their equations, polynomial functions, rational functions, rational exponents and radical functions, exponential and logarithmic functions, trigonometric functions, statistics and probability.

Pre-Calculus (1 year, each semester .5 credit, Prerequisite Algebra, Geometry and Algebra II)

Topics learned in this course include real numbers, exponents, radicals, rational expressions, modeling and inequalities, functions, polynomial and rational functions, conic sections, advanced trigonometry, sequences and series, probability, matrices and linear systems.

AP Calculus (1 year, each semester .5 credit, Prerequisite Algebra, Geometry, Algebra II & Pre-Calculus)

Topics learned in this course include limits and continuity, differentiation: definition and basic derivative rules, differentiation: composite, implicit and inverse functions, contextual applications of derivation, analytical applications of differentiation, integration and accumulation of change, differential equations, and applications of integration.

Math Applications (1 year, each semester .5 credit)

Math Applications is a course designed to strengthen students' math skills. This course will focus on areas and concepts in math that the group of students is having difficulty with. Concentrating on these concepts and areas of difficulty will improve students' math content knowledge, test scores, and application.

Financial Literacy (1 year, each semester .5 credit, Prerequisite Algebra, Geometry and Algebra II)

During semester 1 students will learn the foundations of personal finance, personal savings budgeting, debt, consumer awareness, bargain shopping and prepare for life after high school. The second semester includes gaining understanding about Investing and retirement, insurance, money and relationships, careers and taxes, and giving.

Science

Biology A/B (1 year, each semester .5 credit)

This is a two semester course where students will explore basic biological concepts including the characteristics of living things, cell structure and function, genetics, evolution, and biodiversity.

Biology II A/B (1 year, each semester .5 credit)

An advanced level biology course with a strong laboratory emphasis. The course builds on the concepts introduced in Biology I, such as microbiology, heredity, and genetics. Although not a required prerequisite, information covered in Chemistry is helpful.

Chemistry A/B (1 year, each semester .5 credit)

Students will develop the model of the atom and will use the model to explain properties of matter, energy transformation, and changes that occur within matter. Writing formulas, naming of materials, and explaining chemical equations will also be discussed. Students will use their knowledge of atomic structure and matter to discuss chemical reactions, rates of change, and changes in chemical energy that occur during these reactions. Chemical quantities and their relationships will also be explored.

Physical Science A/B (1 year, each semester .5 credit)

Applied physical science is a course taken by all ninth grade students. Content for the course includes subjects in physics and chemistry. Students will receive a working knowledge of basic chemistry and physics to prepare them for these two courses in high school. Students will learn about and keep an interactive journal of content they learn in class. Learning activities will include reading science articles and texts, note taking, station labs, internet research and activities, an independent science project and whole group and small group discussions.

Physics A/B (1 year, each semester .5 credit)

The course is designed for students to explore and apply the principles of technology in a classroom setting with hands-on laboratory activities. Within each chapter are several pages that cover topics such as motion, forces, electricity, magnetism, waves, and quantum physics

High School Integrated Physics and Chemistry (1 year, each semester .5 credit)

This high school integrated physics and chemistry course introduces students to fundamental principles governing the physical world. Through hands-on experiments, mathematical problem-solving, and critical thinking, students develop a deep understanding of motion, forces, energy, waves, and electricity, the basic principles that govern matter and chemical interactions. Through hands-on experiments and practical examples, they develop a solid understanding of the molecular world.

Advanced High School Chemistry Course (1 year, each semester .5 credit)

In this challenging chemistry course, students delve deeper into the molecular world, exploring complex concepts and applications. Through hands-on experiments and theoretical investigations, they develop a deeper understanding of chemical phenomena.

Advanced High School Physics (1 year, each semester .5 credit)

This rigorous high school physics course delves deeper into the fundamental principles that govern our universe. Students explore complex topics, engage in mathematical modeling, and develop critical analytical skills. It requires a solid understanding of algebra and geometry which should both be completed with a high grade before taking this course.

Social Studies**World History A/B** (1 year, each semester .5 credit)

This course in the first semester covers the significant events beginning with the early river civilizations to the 13th century, with emphasis on the political, social, industrial, cultural, geographical and ideological developments which shape our world. The second semester covers the significant events beginning with the 14th to the 20th centuries with emphasis on the political, social, industrial, cultural, geographical and ideological developments which shape our world today. The purpose of the course is to help the student become more aware of how the world has developed as it has, and its relationship to what is occurring throughout the world today.

U.S. History A/B (1 year, each semester .5 credit)

Students will gain an understanding of United States history from Industrialism to the present day. Students will learn how events and politics of this time changed the course of U.S. History to the current day. This course will help students understand some of the issues of our country and how to be productive and informed members of society.

Economics (½ semester, .5 credit)

The workings of the American market economy is the major focus. Studies in the course include basic economic principles, the factors of production, economic systems, demand, supply, equilibrium, elasticity, business structures, types of competition, government involvement in the economy, sources of government revenue, and a host of other economic topics.

Government (½ semester, .5 credit)

The study of the development of the United States Government: its historical foundations and English roots, the history of the American Colonies, the American Revolution, the weaknesses of the Articles of Confederation, the creation of the United States Constitution, and the function and

form of the United States Government today. The student will also learn about the form and function of the state governments and their relationship with the national government (federalism).

Electives

Communications

Students will learn skills to be academically successful through the use of learning how to give presentations, readings, paraphrasing and summarizing, speech writing, vocabulary, parts of speech, punctuation, creative writing and research skills.

Great Books/Writing Lab (1 year, each semester, .5 credit)

Students will analyze several classic novels covering various genres. Additionally, students will learn basic terminology in order to analyze and discuss the novels. Students will hone their reading skills by engaging in classical and current texts. They will also continue to improve their written skills by writing about concepts discussed in the course. Presentations and assignments associated with reading material will be required. Students may analyze the same work in both the written and audiovisual medium.

Mythology (½ semester, .5 credit)

Greek myth, stories, and legends. Critical thinking; text analysis; and effective verbal and written communication. Exploration that examines Greek mythology's influence on current societal, emotional, and cultural beliefs and understanding. Report opinions and research using a variety of multimedia formats.

Sociology A/B (1 year, each semester .5 credit)

This course is designed to give the student a greater awareness of his/her role within the various segments of society. The student will be made aware of the interrelationships of the various patterns and systems within society and how he/she relates to them.

Yearbook A/B (1 year, each semester .5 credit, must seek recommendation for course)

Students will complete a variety of tasks to create a quality yearbook that reflects on the activities for the present school year. Examples of what will be completed throughout the year: develop a theme, design cover, end sheets and title page that will reflect the theme, create a workable ladder, determine photo ideas, organize sales and distribution of the completed book, sell advertisements, edit pages, and meet publication deadlines. Students will be using an online program and software called E-design to complete these tasks along with a digital camera.

Current Events A/B (1 year, each semester .5 credit)

Students will gain a broad understanding of current events and increase media literacy. Students will study major and minor news stories and practice maps to learn where and how events occurred to the present day and how the future may be affected.

Sociology (1 year, each semester .5 credit)

Sociology is the study of human behavior in group situations. This course covers basic sociological theory, the effect of social structure, practices, and institutions upon the individual in everyday life. Topics will include but are not limited to culture, socialization, social institutions, social deviation, the family, social inequalities, poverty and crime.

Career Preparedness**Four Core Review** (1 year, each semester .5 credit)

Four Core Review is a course designed to prepare students to take their college entrance exam (ACT/SAT). The course reviews the subjects of reading, writing for the SAT essay, academic vocabulary, math and science. Students are provided with practice test questions and complete practice tests. Students will learn basic test taking skills and specific test taking requirements for the ACT and SAT. During practice test sessions students are exposed to the timing component of the tests and will develop the necessary skill to finish the college entrance exams in the allotted time. Upon completion of the SAT in the spring of each year, the course focus changes to introduce students to the admission process for college and university admission. The students research different colleges and universities and then research a career of their choice and create presentations to give to the class.

Computer Literacy (1 year, each semester .5 credit)

This elective course challenges students to learn about the basics of computers, such as general knowledge of the computer system, to more advanced concepts, such as hacking and coding. Students will learn in a hands-on environment through applicable assignments about the computer components being studied.

Introduction to Research (1 year, each semester .5 credit)

Introduction to Research is a college preparatory class. Students will learn about all aspects of plagiarism and how to avoid it. The class focuses on writing college level research papers in the proper format with scholarly resources. Students will learn how to do research on the internet, how to choose reliable/peer reviewed sources and how to give credit to their sources. Citation styles explored will be APA and MLA, and a brief introduction to Chicago Manuscript Style. Students will learn how to properly create in-text citations and works cited citations in both

formats. Students will work on creating brief summaries of information, reflective papers, short essays, science lab reports and a complete argumentative essay.

Computer Science Principles (1 year, each semester .5 credits)

This elective course introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. More than a traditional introduction to programming, this class is a rigorous, engaging, and approachable course that explores many of the foundational ideas of computing so all students understand how these concepts are transforming the world we live in.

Transitions a.k.a. Next Up (1 year, each semester .5 credits)

This elective course assists students in establishing strategies and creating tools to manage time efficiently in the job search process. The lessons will reinforce understanding of researching and preparing prior to applying for and interviewing for a job. Students will participate in workplace readiness training and work-based learning experiences.

Health and Physical Education

Advanced Physical Education A/B (1 year, each semester .5 credit)

This course will emphasize four fundamental areas: strength development, stretching for flexibility, speed and agility enhancement, and the fundamentals of a proper nutritional program. Students will be required to keep accurate records of their progress in the weight training phase as well as speed workouts. Proper technique and spotting procedures will be demonstrated, explained, and practiced for each of the core weight training stations. Students will be instructed as to proper running form for speed workouts.

Health 9 (½ semester, .5 credit)

This is a required course that deals with the emotional, physical, social, and psychological aspects of the human body. It is intended to prepare students to enter society with the knowledge to make responsible decisions regarding their health. The units covered are mental health, tobacco, alcohol, drugs, reproduction, pregnancy, contraception, and STD/AIDS.

Lifetime Fitness A/B (1 year, each semester .5 credit)

The purpose of this course is to help students improve personal fitness and health through active participation in a variety of safe and effective health related fitness components. The class includes a variety of aerobic activities, weight lifting, core strength and flexibility exercises. Students will gain a basic understanding of the physiological foundations of weight training and fitness running as well as proper nutritional concepts.

Physical Education 9 (½ semester, .5 credit)

The purpose of this course is to help students improve personal fitness and health through active participation in a variety of safe and effective health related fitness components. The class includes a variety of aerobic activities, weight lifting, core strength and flexibility exercises. Students will gain a basic understanding of the physiological foundations of weight training and fitness running as well as proper nutritional concepts.

Nutrition and Wellness (1 year, each semester .5 credit)

This elective course provides students with the understanding of general health and wellness. Students will learn about specific topics related to the subject and learn from presentations. Students in the course will also participate in hands-on activities and concepts they discuss and learn about, such as soccer and volleyball. This course will promote activities and concepts that will help students continue nutrition and wellness even after the course is completed.

Introduction to Refereeing (1 year, each semester .5 credit)

This elective course is an engaging, informative and inclusive sports officiating education curriculum. It incorporates innovative point of view technology to put the learner in position to make the call on the court, field, mat, pitch, or track. It is designed to provide the depth and breadth of content that helps students develop leadership, time management and conflict resolution skills, and become immediately employable.

Performing/Visuals Arts Applied**Band A/B** (1 year, each semester .5 credit)

Band is a one year elective course open to students grade 9-12. Prerequisites may include participation in beginning and Middle School Band. The class may be repeated. Enrolling in band entails complete participation in both concert and marching band. Complete participation includes band camp as well as all rehearsals and performances indicated by the instructor. In band, students will be studying all facets of instrumental music, including rhythmic and tonal studies, genre, style, interpretation, intonation and tone quality.

Jazz Band A/B (1 year, each semester .5 credit)

Jazz Band is an elective class open to students 9-12, who are already enrolled in Band. The class may be repeated. The Jazz Band consists of trumpets, trombones, alto, tenor and baritone saxophones, percussion, piano, guitar and bass. In Jazz Band, students will be studying the many facets of Jazz including improvisation and chord study. Different styles including Blues, Latin, Rock, and Swing will all be studied and performed. Attendance at all performances is required.

Introduction to Music Theory (½ semester, .5 credit)

Designed for students who seek to enrich their knowledge of the fundamentals of music. Students will gain an understanding of how elements of music interact to create musical style and effect, students will better appreciate how music is brought to life and its ability to communicate to others.

Introduction to Guitar (½ semester, .5 credit)

This course is designed to provide a musical introduction to playing the acoustic guitar. Through in-class instruction, individual practice, and playing assignments, the student will advance in their understanding of music and guitar pedagogy. The daily objective of the course is to foster and promote musical growth through the playing of an instrument by the student.

Art A/B (1 year, each semester .5 credit)

This course is designed to introduce students to the Elements of Art and Principles of Design, as well as Color Theory through work with a variety of media and techniques. Students will create both 2D and 3D artwork. Major Art Movements and the artists within those movements will also be studied with this course. Writing is also incorporated into this course through journal writing and artists statements. This course is intended for those wishing to pursue art as a serious study or for those who are inexperienced and wish to investigate artistic expression.

World Language**Spanish 1A/1B** (1 year, each semester .5 credit)

This course is an introduction to the language and culture of the Spanish speaking world. Through storytelling, basic vocabulary and grammatical structures will be taught as well as the fundamental speaking, listening, reading and writing skills. Paired and group activities will be used to develop speaking skills. An appreciation for cultural diversity will be presented through such activities as learning about Hispanic holidays, Spanish music, geography and history of Spanish speaking countries.

Spanish 2A/2B (1 year, each semester .5 credit, prerequisite Spanish 1A/1B)

This course focuses on strengthening the skills learned in Spanish One by additional practice in speaking, listening, reading and writing. Students will increase their Spanish vocabulary and more emphasis will be placed on the grammatical structures of the language.

Business**Accounting 1A/1B** (1 year, each semester .5 credit)

The first year course is designed for the business pathway student. The accounting cycle for

sole proprietorships and small corporations will be studied. Opportunities to use the computer software to solve accounting activities take place throughout the course

Accounting 2A/2B (1 year, each semester .5 credit)

The second year course is designed for the business or finance pathway students. Students will study advanced/post-secondary topics in accounting and obtain hands-on experience by recording the financial information for the school store.

Advanced Business Technology and Management 1A/1B (1 year, each semester .5 credit, Prerequisite Business Technology and Management A/B)

BTM II builds upon the foundational skills in technology and management that were learned in BTM 1A/1B. Students enrolled are considered CTE-Q level, in that they are learning post-secondary skills. Students will use entrepreneurial and management knowledge to operate the school store. Additionally, students will prepare and seek clarification in Microsoft Office Expert-Word, PowerPoint, and Excel Students enrolled in this course are required to work in the school store.

Business Technology and Management 1A/1B (1 year, each semester .5 credit)

BTM is the foundation class that gives the student a foundation of skills that will be expanded on in other classes. This course provides instruction in business management and career education. Instruction will include software concepts using a Windows based software suite, which includes word processing, spreadsheet, and presentation applications. Instruction in basic computer hardware, software and operating systems that support software application.

Digital & Multimedia Design 1A/1B (1 year, each semester .5 credit, Recommended Prerequisite Business Technology and Management 1A/1B)

This is a business course designed to allow students to develop proficiency in using industry standard software to create a variety of multimedia projects for both computer/web viewing and print. Students will incorporate the principles of design throughout the course in both print and Web publications including integration of text and graphics and use sophisticated hardware and software to develop and create quality materials. Students will incorporate the process of analyzing information and audience while choosing the appropriate visual aids to communicate the desired message effectively. Basic web page design and instruction is incorporated within this course as well as the use of photo and video editing software. Students will also have opportunities to explore basic IT through projects, which will encourage computational thinking, curiosity, creativity, and empathy.

Digital & Multimedia Design 2A/2B (1 year, each semester .5 credit, Prerequisite Digital & Multimedia Design 1A/1B)

Students will continue studying the concepts of Digital & Multimedia Design 1A/1B, but will work on advanced skills in an area of focus learned DMD 1A/1B.

Workplace Communications (1 year, each semester .5 credit) In this elective course, students will gain knowledge about responsibilities and duties in a typical work environment. Students can take this knowledge that they have gained into their future workplace.

Vocational and Career and Technical Education

Auto Mechanics IA/IB (grades 9-12)

Auto Mechanics I is a one semester course meeting two block periods per day. Students will be expected to show proficiencies in many phases of automotive brake systems, theory, and service. The second portion of the course will involve engine operation and rebuilding. Two-thirds of the course time will be devoted to theory. The remainder will be spent in the lab. Emphasis will be placed upon classroom and practical experience in all aspects of brake systems diagnosis and repair leading to certification in that field.

Auto Mechanics II/III A/B (grades 11-12)

Auto Mechanics II/III A/B is a one semester class meeting two block periods per day. The course is designed to provide students with entry level skills in the field of automotive suspension systems, including alignments. Throughout the semester, instructional material will include various components and labs related to suspension systems. Successful alignment of at least two vehicles will culminate front/rear suspension course study. The remainder of the time will be spent with basic automotive electricity, circuits, and component testing. Students will be encouraged to participate in many avenues of automotive service.

Cadet Teacher Academy

Students receive face-to-face and online classroom instruction two days per week to learn beginning teaching skills/methodology. Three days per week, students work with a mentor teacher, gaining classroom experience, first by observing, then advancing to actual lesson development and delivery. College credit is available through local community colleges. Students also have the opportunity to participate in the "Family, Career and Community Leaders of America" (FCCLA) student organization. An enrollment packet which includes field placement information is required for the Cadet Teacher Academy. Students may also qualify to receive their "Proficiency Certificate for Teacher Assistants" and/ or Career Readiness Certificate by receiving a Silver, Gold, or Platinum rating on Work Keys and Business Writing. This would allow students to be qualified as a Classroom Paraprofessional upon graduation from High School. Participation in an orientation before the start of the school year is also required.

Commercial Art

Recent software developments allow individuals to create "Interactive Messages", which include spoken words, motion from video sources and animation, as well as traditional art and type-based documents . Students will learn skills required for computer usage, as well as traditional skills such as drawing and painting. Making messages is an art. Images may be created, scanned, organized, stored, and "published" using a computer. Self-motivation and discipline are important skills to have. Most career choices in this field require additional post-secondary education.

Fire Science

This program introduces students to the basic skills required by firefighters including fire control, detection, and prevention. Certifications in this program include CPR, First Aid, and Hazardous Materials, Awareness, and Operations. Students who are at least 16 and pass the class with 70 percent or higher will be eligible to take the Michigan Firefighter I and II exams for state certification.

Fundamentals of Patient Care

The Fundamentals of Patient Care Program focuses on nursing and preparing students to pursue a Michigan Certified Nursing Assistant (CNA) license. Classroom instruction is divided between hands-on lab and theory time. Integrated English, science and math are a part of the weekly curriculum. Students can become certified in CPR and First Aid. Second-year students can apply for a co-op position that offers paid work experience.

Law Enforcement

In this course you will learn about basic policies and procedures of the legal system, study juvenile delinquency problems and theories, and become more familiar with the work of youth agencies, legislative involvement, and new approaches to juvenile crime prevention. Classroom participation, job shadows, and field trips are included. Qualifying first year students can earn six credits from Lake Michigan College (LMC) . Second year students are placed in an intern program and application process, including background check, is required for this program.

Advanced Manufacturing

Previously known as Machine Tool, this program combines high-tech machines with hands-on projects. Students are engaged with brainstorming, engineering, machining and robotics. Work on Vertical Milling Machines and Engine Lathes, along with 3-axis Computer Numeric Controlled Milling and Lathe Machines is included. Build a foundation of manufacturing skills that will help you gain an engineering background.

Construction Trades

Students will learn and apply the concepts of plumb, level, and square through practical on-site applications. Emphasis is placed on "hands-on" learning and correcting mistakes. Construction areas covered in this program include: safety, hand and power tool operations, masonry skills, framing, roofing, siding, drywall hanging and finishing, door/ trim applications, and estimating. Also, students gain knowledge in electrical, cabinet making and more. In both the on-site and off-site programs, students will construct a residential home.

Culinary Arts & Catering Management

The Culinary Arts and Catering Management program, includes segments from a variety of related industries. Students develop skills through field trips, banquets, on-and off-site food service events, textbook/workbook activities, hands-on cooking, and culinary/ cooking/ restaurant development competitions. Qualifying students can earn college credit and industry certifications. ServSafe, an internationally recognized sanitation certification, is a hospitality services industry requirement. Students who successfully complete ProStart Levels I and II are issued a certificate from the National Restaurant Association.

Marketing & Entrepreneurship

Learn and apply marketing skills that allow you to be successful in today's highly competitive business world. Units include management and communication skills, product demonstrations, visual merchandising, job interviewing, product planning and packaging, marketing research, and advertising. This course will also teach you how to research a business idea, write a business plan, and start your own business. Participation and competition in the national Business Professionals of America (BPA) student organization is encouraged for all students.

Pharmacy Technician

Pharmacy Technicians help pharmacists provide medication and other health care products to patients. This college-level program prepares students to work in a pharmacy /hospital setting through classroom study and hands-on learning . Students will learn about pharmacy law and ethics, medical terminology, anatomy and physiology, pharmaceutical terminology and abbreviations, infection control procedures, pharmaceutical prescription preparation and dispensing procedures, pharmacy computer applications, insurance procedures, drug research, and patient/ customer relations.

Print Media Technologies

In this class, students will learn the entire printing process, from concept to finished product. The program includes an introduction to digital photography and video editing. Students will make their own T-shirts, stationary, and business cards, as well as take their own senior picture and produce a video. In addition to their own projects, students will help with the production of printed products for the Van Buren Intermediate School District. This program can be a starting

point to a college career in Graphic Arts. Western Michigan University, Ferris State University, and Kalamazoo Valley Community College all have highly regarded programs in the Graphic Arts field. Successful students should have good basic math and computer skills.

Allied Health Technologies

Get on track to an interesting career in one of the therapy areas taught in this program. Learn skills and terminology applicable to virtually all healthcare fields. Students can become certified in CPR and First Aid.

Cyber Security & Computer Network Technology

In this program, students will gain job skills and a foundation for college in PC hardware and software, network cable line, switches, routers, wireless access points, servers and network security. Learn how to build, repair, configure, manage, and secure computers and networks. This program prepares students for CompTIA A+, Security+, CISCO Certified Network Associate, and Microsoft Certified Solutions Associate (MSCA) certifications. Direct college credit is available in this program and up to 24 articulated credits are also available through various colleges and universities.

Engineering & Architectural Design

In this program, students will learn the foundational principles behind the fields of engineering and architecture. Working as a team, you will invent solutions to challenges, be exposed to new technologies and ideas, and learn how to benefit the world through problem solving designs. Students will sketch designs, learn Computer Aided Design (CAD) software and 3D printing technologies, as well as programming and electronics that will help make design ideas and inventions come to life. Students will also partner with colleges and real engineers and architects to learn pathways for students to make solutions to real-world problems and ideas for new creations.

Software Engineering

Computer software is enabling unprecedented technological innovation. Software engineering is defining the future. In this class, we cover basic computer science, software development and related career topics, and using languages such as Java, C# and C++. Students learn how to specify requirements, design, code, test and maintain computer software. After learning the fundamentals, students work in teams to create high-technology applications in areas such as robotics, simulation, computer vision, control systems and machine learning.

Welding

Learn how to safely use the various welding equipment and do strong, professional looking welds. Apply your knowledge of various types of welds in a high-tech welding lab. Work

independently while learning precise measurements and angles and a variety of welding processes including Gas Metal Arc Welding, Gas Tungsten Arc Welding, Shielded Metal Arc Welding, Flux Core Arc Welding, Resistance Welding, and more!

Polymer Technologies

Learn how to operate a variety of plastics machines including injection molding, mix resins to make the plastic parts, set-up inks for stamping, and/ or engraving images on plastics.

Intro to Agriculture

This course gives students a background in natural resources and related career opportunities. It addresses the biological and environmental issues within our state, the history of natural resources, soils, water conservation as well as forestry. In the wildlife section, student experiences will involve ecological principles, habitat management, domestic animal life histories, animal anatomy, animal production, fish and wildlife values, and their effects on the environment. Students will gain reinforcement learning on science standards.

Agriculture and Natural Resources

Learn and develop the leadership and teamwork skills necessary in the industry today. Students can test their skills in the FFA youth organization, plus help plan and implement community-based projects. First year students will learn about different aspects of plant science, animal science, and natural resource concepts. Second year curriculum includes learning concepts related to floral design, veterinary science, production agriculture, landscape management, wildlife management, and more!

Food Science (1 year, each semester .5 credit)

This elective course provides students with an overview of the food industry and the role it plays in the securing of a safe, nutritious, and adequate food supply. Students will take a project-based approach in this course, along with labs, team building, and problem solving activities to enhance their learning. Students will apply their learning from horticulture science to deepen their understanding of the chemistry and biology of food, including the roles of nutrients, enzymes, and microorganisms. Students will also learn about food safety regulations, quality control, and the impact of food processing techniques on nutrition and sensory attributes. Students will complete a supervised agricultural experience, participate in leadership development activities and become familiar with the National FFA Organization.

Animal Science (1 year, each semester .5 credit)

In this course, students will learn about the different uses for agricultural animals, the principles of genetics, and the biological technologies that are commonly used in the livestock industries. This is an excellent course for those interested in animals, genetics, scientific advances, or those

wishing to earn a science credit. Units include animal by-products, livestock industries, cell formation, cell reproduction, genetics, and biotechnology.

Animal Science II (1 year, each semester .5 credit)

This elective course will expand student knowledge of animal anatomy and physiology and utilize genetics to improve animal performance. Students will formulate nutrition plans to produce food animals and work in our animal production facilities to apply their skills. Students will complete a supervised agricultural experience, participate in leadership development activities and become familiar with the National FFA Organization.

Horticulture(1 year, each semester .5 credit)

This course gives students a background in horticulture and related career opportunities. It addresses the following topics: plant science, plant propagation, greenhouse management and crops, hydroponics and aquaponics. In this class, student experiences will involve working in the greenhouse, contributing to a community garden, and participating in skills contest through FFA.

Horticulture II (1 year, each semester .5 credit)

This elective course will expand student knowledge on the floriculture industry. Students will cultivate and propagate flowers and ornamental plants for gardens, greenhouses, nurseries, and landscapes. Horticulture classes will cover a variety of topics, including: design, plant identification, production, business, and art. Students will complete a supervised agricultural experience, participate in leadership development activities and become familiar with the National FFA Organization.

[Edmentum Courses](#)

SMC DUAL ENROLLMENT

Students have the opportunity to take college classes and earn college credit through Marcellus Middle High School on the campus of Southwestern Michigan College.

Eligible Students:

To qualify for dual enrollment students must:

- 1) Meet the assessment criteria on the PSAT, SAT, and /or SMC Placement Test
- 2) Meet with the high school counselor for course scheduling
- 3) Have a signed dual enrollment contract on file
- 4) Must maintain a D- or above to continue in the Dual Enrollment Program. **Failure of the class ,“F”, will result in full tuition reimbursement of the course at the expense of the student.**

EARLY COLLEGE

The Early College (EC) is an effective and efficient way for students to earn up to 62 tuition free

college credits while still in high school. Students will be able to save both time and money as they pursue a college degree, and they will have an additional year of high school (13th grade) to complete their college program at Southwestern Michigan College.

This program is designed to provide all students with the opportunity to earn a high school diploma, an occupational or specific certificate/certificate of achievement or an occupational associate degree which provides up to two years of transferable college credit towards a bachelor degree.

The EC is structured so that students gradually increase their exposure to college courses over a five-year span. Initially, (9th grade and 10th grade) all of the students' schedules will be comprised of traditional high school classes. As student's progress through their educational plan, they will be exposed to more college courses. By the time they reach the 13th grade, all of their coursework will be on-site at the college campus.

Students in the EC program will receive support services to assist them in their transition from high school to college. All EC students will take a College Success Strategies seminar in 10th grade to develop their academic preparation skills, study skills development, and social maturity skills. They will also be working with an EC Mentor who will serve as a "coach" as they progress through the program.

Students who consider EC must be willing, motivated, and up for the challenge to perform successfully at the college level. In addition to the college coursework, students must successfully complete all of the requirements of the Michigan Merit Curriculum.

What are Career Academies?

Heritage Southwest ISD Career Academies are a partnership between Lewis Cass ISD, Southwestern Michigan College and the four local districts (Cassopolis, Dowagiac, Edwardsburg, and Marcellus) in Cass County.

The academies provide 11th and 12th grade students an opportunity to earn college credit in a planned program of study while still in high school. Tuition, books and fees for academy classes are paid by the local high school.

Students in the academies attend classes at their local high school for half the school day and regular college classes taught by college instructors on either the Dowagiac or the Niles Campus of Southwestern Michigan College for the other half of the school day.

All academy students attend at least two college classes per semester in a planned academy program that directly relates to the students' chosen career pathway.

CAREER ACADEMIES

ACADEMY PHILOSOPHY

The academy philosophy emphasizes the importance of a planned program of study in a chosen career pathway for participating students.

Students attend more than one college class per semester. Students follow a sequence of classes to help prepare them for a specific pathway as they continue to post-secondary training or employment in their chosen field.

Students are provided a liaison between themselves, parents, school district, and college. Weekly attendance is reported to the local high school as well as academic warnings and midterm grades.

Automotive Technologies

This program prepares students for employment as an automotive service technician in various settings such as automobile dealerships, independent service facilities, franchised repair facilities and specialty shops.

Business

Business, management and administrative workers give the support needed to make a business run. You might check employee time records or train new employees. Or, you might work as a top executive and provide the overall direction for a company or department.

Construction Trades/Green Technologies

This program will prepare students with both the theoretical and applied knowledge necessary to gain successful employment in the construction industry. Students will also develop a solid foundation in “green” building.

Criminal Justice

Criminal justice and corrections programs prepare students to study the theories and principles of correctional science, organization management, and criminal justice.

Education/Early Childhood

An Early Childhood Educator is a person who works with young children and their families—birth through third grade—in child care centers, school based programs, home settings or other educational settings.

Graphic Design Technology

Graphic Artists create artwork to illustrate or promote products, services and ideas, as well as to improve appearance or attract attention. They plan, design and draw illustrations for displays, billboards, brochures, catalogs, books, magazines, newspapers, TV, the internet, and packaging.

Health

Health science workers promote health and wellness. They diagnose and treat injuries and disease. As a physician, dentist, or nurse, you could work directly with patients. You could also work in a laboratory to get information used in research or provide administrative support by keeping medical records.

Mechatronics Technologies

The emerging discipline of Mechatronics integrates electrical, mechanical, and computer systems, robotics, and programmable logic controllers and provides the graduate with the knowledge and skills required in today's manufacturing environment.

Sports Management

Sports Management is a business degree specialized for managing sports and recreation related operations. It encompasses a variety of applications within the growing field of sports and recreation.

Welding Technology

Welding is the process of combining materials, usually metal, using high heat. It may also involve patching metal, plastic, glass, or other materials. Welding is used in nearly every manufacturing industry from shipbuilding and construction to pipelines, oil rigs, and automotive (including NASCAR). Building and construction to pipelines, oil rigs, and automotive (including NASCAR).

ELIGIBILITY AND ENROLLMENT PROCESS

If interested in any career academy, students should contact their high school guidance department. Students must meet eligibility requirements of both the local high school and Southwestern Michigan College.

Virtual Partnership Courses

Keyboarding Enrichment: Keyboarding offers both beginner and intermediate levels of typing. Each student will be assigned a level according to age. In order to receive credit for this class, the lessons of the regular program must be completed by the end of the semester, then the practice and activities continue into one of the eight follow up programs within our keyboarding platform, in addition to the 900+ activities and lessons for students to explore and improve.

K-12 / Elective / Platform: Typing Club

World Language: This class has a focus in studying one of several foreign language options available through the virtual tools applied in the class of either Rosetta Stone, Rosetta Stone Jr., or Duolingo. With the variety of platforms available for the study of world language, a platform could be easily fitted to the needs of the students. Rosetta Stone works through a strategy of immersion in teaching the foreign language, while Duolingo approaches the teaching strategy on more of a traditional circular strategy for teaching the language.

Both platforms are available for either age group, with Rosetta Stone having a junior platform for the younger participants. Consistent participation and progress is expected for all participants even though a varied pace for each student may exist.

K-12/ Elective/ Platform: Mondly, Rosetta Stone, Rosetta Stone Jr.

Health and Fitness: Through the application of various virtual resources, such as Ed Puzzle and/or BrainPOP, students get to not only learn about several issues surrounding health and fitness, but also engage in an online format with virtual class peers in discussion and blogging of weekly topics, guided by the instructors of the course. The course will also include the completion of an exercise log of outside fitness activity.

K-12 / Elective / Platforms: ED Puzzle

Current Events: This program features nonfiction articles with quizzes for grades 3rd - 12th. Reading levels can be adjusted within five different levels while keeping the same content. Progress is tracked and recorded. Three new news articles are added daily to their database of thousands. The study of these nonfiction, current event articles is implemented through the virtual tool of Newsela.

3-12 / Elective / Platform: Newsela

Computer Coding I (3rd Grade and up) – A computer programming course for beginners that teaches the coding in languages used within the professional arena, such as Python, JavaScript and Java, while in a kid-familiar Minecraft and/or Roblox environment that kids enjoy already. Various lessons, activities and program design all occur within age-appropriate environments with online teachers and mentors to coach along.

Computer Coding II (7th Grade and up) – An advanced version of coding for our Junior High and High School students. Students are challenged to learn and develop various computer modules through the application of different computer programming languages. The full curriculum is broken down into different courses, intended to be completed from year to year in

sequence. Course choices through our virtual course provider, Simply Coding, include Java Script Game Design 1 and 2, Python Multiplayer Adventure, Intro to Java, Android Apps in Java

3-12 / Elective / Platform: CodaKid(Coding I), Simply Coding(Coding II)

Communication Skills Enrichment I: This course tackles the many facets of communication and takes kids through an adventure, exploring the different areas of life skills, the arts and basic communication necessities in an interactive, graphical approach. This section of the course is based in the virtual environment of ABC Mouse as well as offline opportunities for kids to extend their learning opportunities.

K only / Elective / Platform: ABC Mouse

Communication Skills Enrichment II: A second course, that can be taken simultaneously with the one above, that extends the kids opportunities into exploring life skills and communications on the more content-robust platform of MIAcademy. Both online and offline opportunities available for kids to extend their learning to another level, beyond the classroom.

K only / Elective / Platform: MIAcademy

Music Theory Enrichment: This course is a highly effective, yet fun environment for students to develop music theory and practice through engaging activities. The website, Ed Puzzle - Music, contains hundreds of learning games, activities and videos of varying levels, all carefully planned to gain mastery of the elements of music theory, ear training and rhythmic skills in an exciting, challenging environment. In addition to the many activities available through the virtual resources, an online practice record log keeps track of outside music activities that kids participate in.

K-12 / Elective / Platform: ED Puzzle, Classics for Kids

Essentials of Business: A course based on a variety of different virtual resources, including Schoology and/or Courseware, which teaches and encourages students to explore the world of business and publications, at an age appropriate level. A variety of projects, case studies, and activities bring students through different principles of general business and production.

K-12 / Elective / Platform: Schoology, Courseware(Edmentum), Khan Academy

Virtual Art I (K – 6th) – Taking advantage of the Ed Puzzle environment, this Virtual Art I course is set for the K through 6th grade level and takes the students through the creation of a variety of

crafts and projects that they create as they view different instructional videos and demonstrations.

Virtual Art II (7th – 12th) – This course, developed more for the older students, focuses on drawing and drawing techniques through the creation of a *Marvel character* drawing journal. This journal, then, is posted to each student’s electronic portfolio through scanning and digital imagery.

K-12 / Elective / Platform: ED Puzzle, Artsonia

Technology Lab I - This course provides students instruction designed to improve skills through a variety of virtual resources. The skills of the students are intended to be extended and enriched through a variety of different activities, games and projects geared toward the grade level. The course uses the game of chess, coupled with puzzles, lessons, videos and articles to teach students about strategy, tactics and perseverance.

Technology Lab IIa - Students taking this course will explore a number of topics ranging from organizational skills, cooperative activities, basic culinary arts, and food/diet culture.

Technology Lab IIb - Students will explore and experiment with several different methods of how things work and fit together. In the investigation side of things, past projects, inventions and other similar technology developments will be researched, inspiring new thinking for everyday objects.

Technology Lab IIc - Students taking this course will explore the world around us in the name of travel. A number of topics ranging from organizational skills, planning, culture, and highlights of traveling around the world, both geographic and artistic.

Technology Lab IIId – Students will explore things and processes from a non-linear perspective. With exercises and observations of such items and processes, students will explore and develop “out of the box” thinking in approaching problems and solutions.

Technology Lab IIe – A look at life and how it has changed over the last two centuries, from cabin building to technology, this course allows students to see how things were in the 1800’s and evaluate the change and development into our days now. What are the differences in ideology, construction and even concepts are all considered in the travel across time.

K-12 / Elective / Platform: Chess Kids, ED Puzzle

Technology Lab Enrichment IIIa: This class explores under the sea through video-based program lessons from the Ed Puzzle environment, that include multiple choice, true/false and open-ended questions built into the video for comprehension. We will explore many creatures like sharks, sea turtles, walruses, and whales plus ocean habitats like coral reefs. Activities

and/or worksheets linked for extra learning and assessment follow up for each topic of study. This course is intended for the K through 6th grade audience.

Technology Lab Enrichment IIIb: This class explores under the sea through video-based program lessons from the Ed Puzzle environment, that include multiple choice, true/false and open-ended questions built into the video for comprehension. This course extends the study and investigation of the many creatures like sharks, sea turtles, walruses, and whales plus ocean habitats like coral reefs. Activities and/or worksheets linked for extra learning and assessment follow up for each topic of study. This course is intended for the 7th and 8th grade audience.

Technology Lab Enrichment IIIc: This class explores the large world of land animals through video-based program lessons from the Ed Puzzle environment, that include multiple choice, true/false and open-ended questions built into the video for comprehension. We will explore the many different families of land animals that roam our earth, including the investigation of their natural habitats. Activities and/or worksheets linked for extra learning and assessment follow up for each topic of study. This course is intended for the K through 6th grade audience.

Technology Lab Enrichment IIId: This class takes the prior knowledge of animals, nature and outdoor life and explores lessons and activities through video-based program lessons from the Ed Puzzle environment, that include multiple choice, true/false and open-ended questions built into the video for comprehension. We will explore different outdoor living and survival skills with a nature-based approach on content. Activities and/or worksheets linked for extra learning and assessment follow up for each topic of study. This course is intended for the K through 6th grade audience.

K-8 / Elective / Platform: ED Puzzle

Khan Academy Personal Finance

This virtual course includes instruction on saving, budgeting, interest and debt, investments and retirement, income and benefits, housing, car expenses, paying for college, and keeping your information safe.

9-12/ Elective/ Platform: Khan Academy

Khan Academy Finance and Capital Markets

This virtual course covers topics such as interest and debt, inflation, taxes, accounting and financial statements, and current economics.

9-12/ Elective/ Platform: Khan Academy

Khan Academy SAT Review

A virtual resource course that provides an in depth review of test taking skills with styles and questions often seen on the SAT or ACT.

9-12 / Elective / Platform: Khan Academy

Khan Academy Computer Programming

This virtual course starts with the basics in programming and includes instruction in drawing, animation, games and webpage design.

7-12 / Elective / Platform: Khan Academy

Khan Academy Hour of Code

This virtual course includes instruction on program drawings, webpage design and data manipulation.

6-12 / Elective / Platform: Khan Academy

Khan Academy Health and Medicine

A virtual course that includes instruction on the systems in the body, including diseases, mental health and current events in health and medicine.

9-12 / Elective / Platform: Khan Academy

[Edmentum Electives](#)