

# Course Descriptions 2024-25

All course offerings are available as determined by the administration, in cooperation with the requests for those classes. Not all courses are necessarily offered every year.

## ENGLISH LANGUAGE ARTS

**English Language Arts I** - Grade Level: 9 (full year course - a year course - one-half credit per semester)

This course reviews literary elements taught in middle school, while asking students to further analyze the decisions writers make when creating a story. We begin the year with short story collections and move into a novel study where we again review the literary elements and how they impact literature. Second semester is focused primarily on specialized types of literature including a play, poetry and an independent novel unit. Writing and informational text selections are interspersed throughout the course.

**English Language Arts II** - Grade Level: 10 (full year course - a year course - one-half credit per semester)

This course focuses attention on British Literature and how the foundational works from Britain help us to further explore and understand our own country's development. Students are exposed to a wide range of texts from outside our own cultural experiences. An emphasis is placed on informational text within each unit. First semester delves into history while the second semester focuses more on contemporary literature. The writing emphasis is argumentative and is interspersed throughout the year.

**English Language Arts III** - Grade Level: 11 (full year course - a year course - one-half credit per semester)

This course focuses attention on American Literature and how literature can be an excellent source of historical information. Students are exposed to a wide range of texts which help them explore the foundations of our own country's history as well as who we are today. First semester focuses on early America and foundational informational text documents. Second semester explores more contemporary informational text pieces while asking students to consider the topic of the American Dream and how it applies to their own lives. The writing emphasis is a mixture of analyzing arguments and writing informational and expository texts.

**English Language Arts IV** - Grade Level: 12 (full year course - a year course - one-half credit per semester)

This course focuses attention on a wide range of informational texts and literature in which students explore the topic of the American Dream, while determining how their own futures may look. The literature spans history, revolving around a similar theme in which students explore not only the topics but how authors present information on the topic. Much of the time is spent analyzing, questioning and determining how this fits students' own lives and goals. Second semester focuses primarily on informational texts and sharing the revelations they have made, personally and individually. Presentations are a large component of this class and the writing focus shifts to producing clear and coherent writing in which the development, organization, style are appropriate to task, purpose, and audience.

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**Resource Room English I, II, III, IV** - Grade Level 9, 10, 11, 12 - (full year course - one half credit per semester)

These courses are adapted versions of the English I, II, III, IV courses appropriate for students with Individualized Education Plans. These courses may utilize different texts that are at the reading and comprehension levels of the students taking the course, but still maintain the integrity of the Michigan Merit Curriculum requirements for high school graduation. If the amount of adaptation and modifications made do not meet the requirements for Michigan Merit Curriculum, then they are more appropriate for students earning a Certificate of Completion.

## MATHEMATICS

**Algebra I:** Grade Level: Grade 9 (a year course - one-half credit per semester for students in Grade 9)

The Algebra 1 course will include recognizing and developing patterns using tables, graphs and equations. In addition, students will explore operations on Algebraic expressions and apply mathematical properties to algebraic equations. Students will solve problems using equations, graphs and tables to investigate linear relationships.

**Geometry:** Grade Level: 11 (a year course - one-half credit per semester)

The Geometry course includes an in-depth analysis of plane, solid, and coordinate geometry as they relate to both abstract mathematical concepts as well as real-world problem situations. Topics include logic, parallel lines and polygons, perimeter and area analysis, volume and surface area analysis, similarity and congruence, trigonometry, and analytic geometry. Emphasis will be placed on developing critical thinking skills as they relate to logical reasoning and argument.

**Algebra II:** Grade Level: 10 (a year course - one-half credit per semester)

The Algebra II course will include fundamental skills of mathematics that will be applied to such topics as functions, equations and inequalities, probability and statistics, Logarithmic and exponential relationships, quadratic and polynomial equations, and matrices. Emphasis will be placed on developing critical thinking skills as they relate to logical reasoning and argument.

**Accelerated Algebra** - Grade Level: Grade 9 (a year long course - one half credit on a 5.0 honors scale for students in Grade 9) - offered starting 2022-23 school year for students who meet the NWEA requirements and teacher recommendation.

The Accelerated Algebra Course will include all of the Algebra I content and the first half of the Algebra II Course in one school year.

**Accelerated Algebra/Geometry** - Grade Level: Grade 10 (a year long course - one half credit on a 5.0 honors scale for students in Grade 10) - offered starting 2023-24 school year for students who meet the NWEA requirements and teacher recommendation.

The Accelerated Algebra Geometry course will include the second half of Algebra II Course and all of the Geometry course in one school year.

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**Financial Literacy:** Grade Level: 11 or 12 (a year course - one-half credit per semester)

Senior Math is a course designed to help students understand the impact of individual choices on occupational goals and future earnings potential. Topics covered will include income, money management, spending and credit, as well as savings and investing. Students will design personal and household budgets, simulate use of checking and savings accounts, demonstrate knowledge of finance, debt, and credit management, and evaluate and understand insurance and taxes. This course will provide a foundational understanding for making informed personal financial decisions. This course also examines different forms of economies. This course focuses on the American economy. In this course, the stock market, import/export goods, and the involvement of the government in the economy is examined. Also, the effect of financial choices individuals make on the national economy is discussed.

**Introduction to Statistics** - Grade level 12 (one semester course - one half credit)

Students encounter variability in their lives, in their science and social studies coursework, and in the news media. Study of the topics in statistics and probability gives students methods for summarizing data, introduces students to mathematical models for random phenomena, and provides the tools for decision making under uncertainty. The concepts and techniques of statistics and probability should be introduced and used in the context of specific studies. Sometimes these are called “real-world” applications, although it is often useful to clean up data before presenting it to students so the essential concepts are not obscured by the complexities of the data. Wherever possible, technology (calculators or statistical software) should be used for computations and graphing. Simulation can give students a deeper understanding of many probability and inferential concepts and should be used often.

**Resource Room Math** - Grade Level 9, 10, 11, 12 - (full year course - one half credit per semester)

These courses are adapted versions of Pre-Algebra and Algebra courses appropriate for students with Individualized Education Plans. These courses may utilize different materials that are at the academic level of mathematics of the students taking the courses. These courses may not meet the requirements of the Michigan Merit Curriculum for high school graduation and are more appropriate for students earning a Certificate of Completion.

## SCIENCE

**Biology** - Grade Level: 10 (a year course - one-half credit per semester) This course begins with a study of cells and how they function. Students will study viruses and bacteria then look at animals, beginning with the simplest protists and concluding with humans. Plants and fungi are also studied. Second semester will involve a study of the various human systems (digestive, respiratory, etc.). We will also study classification, genetics, and environmental science. This course is a mandated state requirement for graduation.

**Chemistry** - Grade Level: 11 (a year course - one-half credit per semester) Prerequisites: Biology and Algebra This course includes the study of the general principles of chemistry, the properties of the elements and some practical applications of chemistry. Lab work and reports are

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an integral part of the course and lab safety guidelines will be followed by all students. Algebra is used throughout the course. The MME, ACT and SAT all contain an area of chemistry, and this course is helpful in preparing for these tests.

**Science 9** – Integrated Physical Science A is a science course that will cover four modules: Human Systems Interactions, Electromagnetic Force, Gravity and Kinetic Energy and Waves.

The culmination of the course leads students to consider accessible energy sources and the reliance of modern lifestyles on access to this energy, as well as the consequences of such energy use. Students leave this course with an understanding of force and energy to begin forming a solid foundation for high school and college physics.

The course leads students to better understand the interaction of potential and kinetic energy in the world around them. It will help students understand about the reliance that modern lifestyles have on technology, as well as the advancements and limitations it has placed on society through interactive simulations and career explorations. Students leave this course with a greater understanding of the interaction of force, energy and technology to begin forming a solid foundation for high school and college physics.

**Project Lead the Way: General Overview** PLTW (Project Lead The Way) encourages students to explore Science, Technology, Engineering and Math (STEM) through various explorations of topics in an online curriculum that promotes collaborative problem-solving for the real world.

**Biomedical Science** - In Principles of Biomedical Science, individuals explore science in an exciting way to gain real-world exposure to problems facing biology and medicine today. They investigate a crime scene to solve a mysterious death and complete “autopsy” dissections for morgue reports, diagnose and propose treatment to patients in a medical practice, track down and contain a medical outbreak at a local hospital, learn how to stabilize/triage patients during an emergency/disaster situation as part of an emergency response team, and collaborate with others to design solutions effectively to respond global emergencies as a public health function. In addition, CAD, ArcGis and other computer technologies are explored in the course, to provide opportunities for teams to create medical prototypes and delivery systems for possible medical innovations across the globe as a part of the “next frontier” in science exploration.

#crime scene investigation of mysterious death #autopsy #outbreak #disaster response team

**PLTW- Design and Modeling/Ten80 Challenge:** Grade Level: 9th through 12th grade elective course (one-half elective credit per semester)

Design and Modeling (DM) provides students opportunities to apply the design process to creatively solve problems. Students are introduced to the unit problem in the first activity and are asked to make connections to the problem throughout the lessons in the unit. Students learn and utilize methods for communicating design ideas through sketches, solid models, and mathematical models. Students will understand how models can be simulated to represent an authentic situation and generate data for further analysis and observations. Students work in teams to identify design requirements, research the topic, and engage stakeholders. They also use

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industry standard 3D modeling software to create virtual images of designs and produce a portfolio to showcase their creative solutions. At the end of the course, teams design a toy or game for a child with cerebral palsy, fabricate and test it, and make necessary modifications to optimize the design solution.

In the Ten80 Challenge portion of the course Engineering course, students are certified in three key aspects of race engineering: Problem Solving, Driving through Data and Mechanical Systems. Students will be specialized into projects and roles that interest them personally and that contribute to the team's performance. The original "Racing Challenge" vehicle comes ready-to-run so the first weeks of engagement are spent learning how systems operate and how to organize data rather than following 'build' directions. After being 'certified' in mechanical systems, data and problem solving students rebuild the car with improved parts. Once students master the fundamentals of problem solving, data and mechanical systems, they specialize into areas of personal interest.

## SOCIAL STUDIES

**US History:** (Grade Level 9 - a year long course; one-half credit per semester)

History of the United States from Reconstruction to present day. This course includes the Spanish-American War, women's fight for suffrage, World War I, World War II, the Civil Rights Movement, and events of the early 21st century.

**World History:** (Grade Level 10 - a year long course; one-half credit per semester)

History of the world from the Dawn of Civilization to Modernity. This course includes the Agricultural Revolution, the Roman Empire, the Silk Road, the Middle Ages, the Age of Imperialism, and the development of the 5 major religions.

**Government:** (Grade Level 11 - a one semester course; one-half credit)

This course examines different forms of government. This course focuses on the American government. In this course, the functions of government and how government works is discussed and examined.

**Economics:** (Grade Level 11 - a one semester course; one-half credit)

This course examines different forms of economies. This course focuses on the American economy. In this course, the stock market, import/export goods, and the involvement of the government in the economy is examined. Also, the effect of financial choices individuals make on the national economy is discussed.

## PHYSICAL EDUCATION/HEALTH

**Physical Education (*Bigger Faster Stronger*):** (Grades 9-12; one-half credit per semester)

Litchfield Community Schools has adopted the Bigger Faster Stronger program for training their athletes in grades 9-12. BFS consists of weight, sprint, and jump training that is done during both

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the in-season and off-season. All athletes start in the readiness program which builds a solid strength base at a lower weight, with a concentration on good form and technique. Once they have graduated from the readiness program, they enter the set rep log book system. This system is differentiated for in-season and off-season athletes. In-season athletes weight train two days a week while off season athletes weight train three days. The in-season program has 24 hour and 48 hour recovery lifts that are timed during the week to make sure that athletes are recovered before their competition. Sprint and jump training are two days a week for all athletes.

Bigger Faster Stronger has six core lifts. They are bench press, towel bench, parallel squat, box squat, deadlift, and power clean. Athletes are also tested on 20 yard, 40 yard dash, standing long jump, vertical jump, plyometric dot drill speed and hamstring flexibility. The BFS Balance Protocol Test is also done to ensure that athletes are well balanced and have ankle, knee and hip stability that is essential for reducing injury. BFS also has a stretch program that is done after every workout session to ensure that athletes are not losing speed and flexibility. Athletes are tested quarterly on the six core lifts that produce speed, power, and balance to monitor progress.

Along with the BFS Program, athletes will also be working on speed and agility workouts that consist of speed ladders, dot drills, triangle drills, hand eye coordination, balance, and sport specific drills that will prepare and develop each athlete for their sports. Athletes that are Bigger, Faster and Stronger will be less likely to sustain injury during their time as an athlete at LCS.

This unified program will be the standard for all sports at LCS so that all coaches and physical education teachers are unified in their approach for training LCS athletes. This positive training environment will build unity and character in our athletes that will connect to their academics and help ensure that we have well rounded student athletes with strong character and self-esteem that show great sportsmanship at every practice and athletic competition. Athletics plus academics equal success.

**Health:** (one-half credit per semester) (this course will be offered online and in conjunction with JCISD)

This course allows students to explore and learn information regarding: Nutrition and Physical Activity; Alcohol, Tobacco and Other Drugs; Safety; Social and Emotional Health; Personal Health & Wellness; and HIV Prevention. Within these categories, students will learn basic wellness/managing stress, understanding nutrition, identifying dietary needs, dangers of steroids, tobacco, and alcohol. Textbook information will be enhanced with videos, guest speakers, and a wide variety of class activities.

## Visual & Performing Arts

**Art:** Grade Level: 9, 10, 11, or 12 (a year course – one-half credit per semester)

Students will explore and become familiar with various mediums, which may include but are not limited to: pencil, colored pencil, chalk pastel, oil pastel, sharpie pen and ink, watercolor and crayon. Students will study the book "Drawing on the Right Side of the Brain" by Betty Edwards, shading, perspective, blending of color and abstract forms. Students will create works of art by utilizing the internet, magazines, found art, still lifes and creating unique work of their

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own. The course will follow standards and benchmarks set forth by the Michigan Department of Education.

**Design (Art Class):** Grade Level: 9, 10, 11, or 12 (a year course – one-half credit per semester)  
Students will explore and become familiar with various design elements and machines.

Students will use the following machines:

- Cricut
- Heat Press
  - with sublimation
  - With vinyl
- Poster Maker
- Letter Maker

Students will design and create projects including but not limited to t-shirts, mugs, hats, bulletin boards and posters for the use of the school. Students will sell the items that they create to help with the sustainability of the class. The course will follow standards and benchmarks set forth by the Michigan Department of Education.

## World Language

**Spanish I** - Grade level:8/ 9 (a year course - one -half credit per semester) (This course will be offered online) This course gives students a basic knowledge of the language and culture. Students will study Spanish speaking countries, greetings, descriptions, school subjects, shopping, traveling, family, and more in the target language. Students will be encouraged to use Spanish in conversations. Students will learn to read, write, speak, and listen for important details in Spanish. They will also celebrate and learn about typical Spanish holidays celebrated all over the Spanish speaking world. According to research, learning another language helps students improve their test scores and the skills needed for English and math courses. This course is a mandated state requirement for graduation.

## Electives

*\*Electives may not be offered each year depending on staffing and need - Some electives may be offered through our online options utilizing Edmentum.*

**SAT Prep:** Grade Level: 10/11 (one semester, .5 credit) (May be offered online)

This course begins with taking an SAT pretest so students will have a measurable growth by the end of the semester. This course is designed to help students prepare for the upcoming SAT test. Students will take practice tests in all areas tested on the SAT, and receive lessons and practice in regards to the tested subjects. Students will learn and discover techniques to use for studying and to help prepare for the SAT. Students will use different methods in preparing for the SAT: online practice using approved websites, paper/pencil practice, independent practice, group practice, etc.

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**Publications:** Grade Level: 9-12(full year - a year course - one-half credit per semester)

This course is designed to create and publish different pieces over the course of the semester. Students will write scripts for the morning announcements, write and publish news articles for the school-wide newsletter, create advertisements and flyers for events at our school, and create the school yearbook. Students will also learn to use video equipment and software for morning announcements. Students will use different methods and programs for this course including, but not limited to, online yearbook software, Google Sheets/Docs/Slides, Adobe InDesign, and Adobe Premiere Pro.

**Study Skills:** Grade Level: 6-12 (full year or half year for a half credit per semester) This course is designed for students with active IEPs to support them in achieving their goals each year. This will be assigned by the principal in cooperation with the special education teacher and the IEP team members. This is a part of the tiered level of interventions in working with students.

**Work-based learning/Vocational Skills :** Grade Level: 10, 11,12 (full year) (students can earn .5 credits per hour of School to Work but no more than 3.0 total credits for the school year). School to Work is a Work-Based Learning program for students typically of junior or senior status, but may be offered as a part of a students' Individualized Educational Plan at an earlier grade status of sophomore. School-to-Work is a program designed and based on the Michigan Department of Education's Work-Based Learning program. Through the School-to-Work program students will gain hands-on job training and employment experiences related to a specific career field of interest, as listed in the student's Education Development Plan (EDP).

There are six recognized types for work-based learning experiences that students can participate in.

1. Student/Visitor
2. Volunteer
3. Work-based learning non-CTE programs (paid OR unpaid student learning)
4. Work-based learning state-approved CTE programs (paid OR unpaid student learner)
5. In-district/in-school placement (unpaid student learner)
6. minor employee with a work permit

The School-to-Work program earns students high school credit; therefore, students are receiving elective credits for their time spent learning on-the-job skills through a host-site. The amount of credits received are determined by the number of hours a student is at the host-site. A student may not spend more than half of his/her day at a placement, unless outlined in their IEP.



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## Hillsdale Area Career Center Courses\*\*

### **CONSTRUCTION TRADES 46.0000**

Construction Trades is a two-year program providing basic and advanced instruction in all areas of residential construction. The majority of training is hands-on at the HACC Construction Site. The instructional objective is to provide the students with core competencies in residential construction, preparing them for entry into post-secondary construction management, Carpentry Apprenticeship Programs, and entry-level work in construction trades. Students in this program build a single-family home from start to finish. The program of study in Construction Trades is part of the National Career Cluster called Architecture and Construction. Students will gain proficiency in correct, safe usage of hand, stationary and portable power tools commonly associated with residential construction. Students will also learn correct construction terms; basic construction concepts; materials usage, estimating and measurement. They will be instructed in the fundamentals of residential construction systems such as foundations, framing, window/door installation, roofing, siding, masonry, plumbing, and electrical wiring. There is a strong emphasis on math skills as it relates to the construction process. Students will apply math concepts through each phase of the home construction process. The understanding of these math concepts directly correlates to the quality of the build.

Students will work in a construction environment in which they will learn the importance of effective teamwork to meet construction schedules, to stay within project budget and to deliver a product, which meets specific quality objectives. Personal management skills necessary for success in the construction trades will be stressed. To develop leadership skills, students will have the opportunity to be crew leaders throughout the building process. Additional topics taught in the Construction Trades class include Site Preparation, Employability Skills, Green Technology Construction Techniques, exposure to Heavy Equipment/Civil Construction Techniques, and Construction Business Management.

Year 2 Students meeting the attendance and academic requirements may be provided the opportunity to improve their construction skills and employability through “on-the-job” work based learning experience in the field of construction. During the second year, students will be eligible to earn OSHA certification(s), Basic Construction Credentials as outlined by MDE and Basic First Aid/CPR certification. Successful completion of the two year program will allow students to earn Articulated College Credits through colleges and universities across Michigan through statewide articulation agreements.

### **CRIMINAL JUSTICE AND PUBLIC SAFETY 43.0100**

This program was developed through a cooperative partnership between HCISD, the Sheriff’s Department, Jackson College and Kellogg Community College. Students will be introduced to the American Criminal Justice System through a variety of hands-on activities and simulations, classroom instruction, projects and demonstrations. Students gain insight into the organizational structure of our

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criminal justice system including policies and procedures, the development of legal and public policy and the interrelationship between the police, attorneys, courts and the correction system.

Individuals will be introduced to the skills required to perform the duties expected of Protective Service personnel including personal protection, CPR/First Responder, evidence collection, crowd management, traffic control, investigation and crime prevention. Second year students, meeting the academic and attendance criteria, (must be 18) may participate in a Criminal Justice Internship program. Students may earn articulated college credit (a minimum of 9 credits after completing the two year program).

## **CYBERSECURITY & DIGITAL FORENSICS 11.1003**

Cybersecurity is part of the Information Technology Career Cluster and would be of interest to individuals who want to use their skills and abilities to engage with hardware, software, network systems, or multimedia to create, design, and produce interactive products; design, develop, implement, and repair computer systems and software; and work with coding languages. This program provides exciting opportunities for student professionals in the high-demand and challenging world of Cybersecurity and Digital Forensics. It introduces the technologies used in the field such as computer maintenance, basic networking, and cybersecurity awareness. Students will learn how to troubleshoot and repair various hardware, software, and configuration problems. Students will also practice installing basic computer parts, networking components, and apply security concepts. Cybersecurity courses provide students with the knowledge and skills to assess cyber risks to computers, networks, and software programs. Students will learn how to create solutions to mitigate cybersecurity risks. Students learn how to plan, monitor, implement, and upgrade security measures for the protection of computer networks and information; as well as design and regulate firewalls, security controls, digital files, and vital electronic infrastructure. These courses will also cover the legal, environment and ethical computing behavior related to cybersecurity.

Second year students will have an opportunity to pursue different cybersecurity pathways: Advanced Certifications in Ethical Hacking, Cyber Defense; Server and Part 107 Commercial Drone Pilot License and Dual Enrollment

Students should expect to earn a variety of industry recognized certifications that will lead to immediate career advancement and opportunities and/or translate into articulated college credits through colleges and universities across Michigan. Successful completion of this 2 year program will result in the student earning 32 articulated college credits through Jackson College. Credentials can be earned in many areas such as IFT, A+, Sec+, Net+, Linux+, Ethical Hacking, CCNA. Students meeting the academic and attendance requirements will be eligible to participate in Work Based Learning opportunities.

## **Education Academy 13.0000**

The Education program is an innovative hands-on course designed for high school students who want to enter the field of education and to gain experience working with pre-school, elementary and middle school students. An instructional component will be integral to the “in-classroom” experience with a strong emphasis on writing. You will work with students in as many capacities as possible: tutoring,

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working on special projects, supervising small groups, and eventually teaching a lesson to the entire class. You may also help with various classroom preparation duties. You will strengthen your understanding of the teaching process by documenting your observations and achievements in a Careers in Education Portfolio. Classroom content will focus on child development, learning styles, teaching strategies, classroom management, components of a quality lesson plan and group dynamics as it pertains to the learning environment. The curriculum outlined by the Childhood Development Association (CDA) and the Michigan School Age Your Development (MiYDA) is aligned to this program. Students in this program will participate in classroom instruction as well as be assigned to participate in a school age classroom as a cadet teacher where they will apply the skills they have learned. Students in this program will be eligible to earn their CDA and MiYDA credential at the completion of the 2 year program. These credentials will allow you to gain employment immediately after graduation and/or can translate to college credit for those that choose to further their education. This is a highly sought after credential with employment and post-secondary benefits. Some work with children outside of this program may be required depending on required contact hours. At the completion of this course, students will also be eligible to receive articulated college credits. Students that participated in the FPME (Future Proud Michigan Educators) program prior to enrollment will be able to use their hours working with students toward their certifications. FPME students will also have priority registration into the Education Academy Program and may be placed immediately into a classroom to begin working with children.

Students may be required to have clearance from DHHS, pass a background check and/or other safety and security measures required by partner organizations. Some program placements may require vaccinations, TB tests and/or fingerprinting.

## **HEALTH SCIENCES I/HEALTH SCIENCES II 51.0000**

The Health Sciences I program will assist students in developing the foundational knowledge and skills common to all health care occupations. They will develop core health care skills and competencies in medical terminology and medical math; anatomy and physiology; ethical and legal behavior; first aid and CPR; communication skills; confidentiality, and human growth and development. Ethics in the health profession is woven into the curriculum through readings, discussions and real world applications. The Health Science program is beneficial for students interested in all types of careers related to healthcare. Whether you are interested in being a nurse, physician, dentist, veterinarian, CNA, physical therapist, etc. this is the class for you. You will discover that the fundamentals for all healthcare professions begin here.

Health Sciences II (year 2) Semester 1 or 2 will focus on skills practice as it relates to Certified Nurses Assistant licensing. This course prepares students for the CNA state exam. Students take a deep dive into the health profession and the attributes of a health care worker. Students learn entry level nursing skills that are vital to patient care. Students are exposed to a variety of patient scenarios in varying health care settings. Exceptional work habits and skills are stressed as well as professionalism in the healthcare field. Second year students must qualify to participate in clinicals during their second semester. Students qualify by exhibiting proficiency in performing (checking off) on required Certified Nursing Assistant Skills as outlined by the MI Certified Nurse Aide program and demonstrating reliability through regular attendance. Students that do not qualify for clinicals will be required to complete additional curriculum as prescribed by the instructor during clinical rotations.

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Semester 1 or 2 will focus on skills practice as it relates to Certified Phlebotomy Technician certification. This course prepares students for the CPT exam. Students focus on the proper processes and procedures utilized in the lab setting. Students are required to meet the instructional hour requirements as well as meeting the successful venipuncture and capillary draw requirements. Students who qualify will have an opportunity to take the CPT certification exam.

Students completing both years can earn a CNA Certification and Basic Life/CPR Certification. Students with excellent attendance and academic achievement can participate in Work Based Learning placement through HACC. Students in the Health Science program can earn articulated college credit throughout Michigan.

## **Mechatronics 14.4201**

Successful completers of this STEM (Science, Technology, Engineering and Math) based, 2-year program will gain foundational knowledge and skills in the high-demand, multidisciplinary area of mechatronics. "Mechatronics" comes from combining the words mechanical and electronics, though it actually also includes computer controls.

Mechatronics integrates principles from four engineering disciplines: electrical, mechanical, computer, and industrial. Thus, students will learn about robots, machines, electronics, hydraulics & pneumatics, electrical motor controls, sensors, computer-aided design (CAD), Solidworks, programming, programmable logic controls (PLC), diagnostics, computer numeric control (CNC), and other topics that together form the basis of "smart" devices used in robotics and advanced automated systems. This important knowledge is needed not only by highly skilled technicians who help install, program, trouble-shoot and fix problems, but also by engineers who plan, design, develop, or otherwise work with complex mechatronic systems.

Utilizing the Design process will allow students to develop ideas from start to finish through a process widely used throughout Manufacturing and Engineering. Designs will be analyzed for strength and viability using advanced software and industry standards. All students will be exposed to and expect to be proficient in Basic Shop Math, Geometry for Manufacturing, Trigonometry for Manufacturing, Geometric Dimensioning and Tolerance, Blueprint Reading, Shop Safety, Machining Theory, Basic Machining Techniques and the Machinery's Handbook.

In the second year, students will incorporate and build upon their knowledge of mechatronics learned in the first year through more complex, project-based applications. This course provides the opportunity for senior-level students, meeting the academic and attendance requirements to gain an "on-the-job" work based learning experience in the career area of their choice. By successfully completing this 2 year program, students will be able to earn a variety of industry recognized credentials: OSHA 10, FANUC I, FANUC II, FANUC iRVision, Pneumatic Technology, Automation, AMT and others. Along with credentials students will earn articulated college credit through a variety of colleges and universities across Michigan. Student Leadership opportunities, such as Skills USA will be provided.

WELDING, BRAZING AND SOLDERING 48.0508

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Students will learn the five most common welding processes, Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Gas Tungsten Arc Welding (GTAW), Oxy-Fuel Cutting (OFC), and Plasma Arc Cutting (PAC). Students will learn the safe operation of metal working tools and power hand tools. Students will weld basic joint designs for all processes in the flat, horizontal, vertical and overhead positions. Students will focus on the mechanics and art of welding as well as applying math concepts to the welding and manufacturing processes. Students will continually be applying these concepts to the process of welding in the lab setting. Students will learn the basics of blueprint reading and how it translates to welding and fabricating in the manufacturing setting. Safety is a priority in the Welding program and students will be required to adhere to all safety protocols outlined by the Instructor and OSHA. Students will be expected to earn their OSHA 10 certification during this program.

Second year students will weld advanced joint design in all the processes and all positions. Fabrication of metal (weldments) utilizing layout diagrams, sketches, prints and verbal instructions will be completed. Students will take the American Welding Society SENSE Certification I and II credential tests to gain industry recognized credentials. Second year students that meet the academic and attendance requirements will be eligible for Work Based Learning placements at local manufacturing sites which could lead to immediate employment after graduation. Second year students wanting to pursue advanced manufacturing pathways may be eligible for FANUC Robotics training and certification.

Students successfully completing this 2 year program will be eligible for articulated college credit and certifications that will advance their career as they enter the workforce or continue their education after graduation.

\*\*Courses not offered at the Hillsdale Area Career Center may be explored as an elective option through the Branch Area Career Center or Jackson Area Career Center with permission of the school administration. A cooperative agreement between the center and the district will be signed and transportation will be provided by the family or individual student, unless otherwise agreed upon with school administration.

**Early Middle College:** Hillsdale County Early Middle College is a combined high school and college program for capable and self-motivated students, located on the Jackson College LeTarte Center campus in Hillsdale. HCEMC exists in partnership with the nine school districts in Hillsdale County, the Hillsdale County Intermediate School District and Jackson College, and is funded by students' State of Michigan per-pupil foundation allowance. This alleviates cost to students or their families for attending.

Beginning in the 11th grade, students continue their high school coursework with the opportunity to simultaneously enroll in courses at Jackson College. The program affords students the ability to earn college credits while still in high school and enroll in advanced, college-level coursework. Students are able to take classes in the morning, afternoon or evening, depending on their choice and course offerings, in addition to their high school curriculum in their home districts.

HCEMC allows students to:

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- Graduate with a high school diploma and up to 60 college credits
- Attend classes on a college campus with support
- Learn in a college environment that fosters maturity and academic growth
- Gain vital knowledge and skills for career and college success

## Hillsdale County Early Middle College Program Graduation Requirements

### Beginning the 2022-2023 Academic Year

- As a constituent district of the Hillsdale County Early Middle College (HCEMC) Program, the district/local education agency shall enroll/designate pupils, before the fall count date of the pupil's junior year (11<sup>th</sup> grade) of high school, in the Educational Entity Master within the Michigan School Data System (MSDS) as an early middle college pupil
- A pupil enrolled in the HCEMC Program shall complete all Michigan Merit Curriculum requirements, with exception of one math or math-related course/credit requirement, at the Local Education Agency during their freshman, sophomore, junior, and senior years
- The one math or math-related course/credit requirement of the Michigan Merit Curriculum, not completed at the Local Education Agency, shall be completed by the pupil in the fifth year of the HCEMC Program at the postsecondary institution
- A pupil in the HCEMC Program shall be enrolled in at least one course that earns high school credit, during each count period, in the pupil's fifth year of the Hillsdale County Early Middle College Program
- Pupil must successfully complete and earn a minimum of 15 college credit hours
- Pupil shall complete either 100 hours of community service or 40 hours of career exploration, internship, job shadowing, or clinical experience . . . or a combination of the two categories that equals 70 plus hours
- Pupil must complete all graduation requirements of Litchfield High School traditional four (4) year path high school pupils, that may not be expressly addressed in the above requirements of a HCEMC Program pupil.

**21-F** Student access to any time and any place learning options has expanded under a new law in Michigan. Section 21f of Public Act 60 of 2013 allows students in grades 6 through 12 to take up to two courses online per academic term (with parental consent). Michigan is the seventh state in the U.S. to enable statewide choice at the course level through online learning options. Students may select online courses from the statewide catalog of online course titles available at <https://micourses.org/>. We are developing guidelines and procedures to accommodate

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student/parent requests to take online courses.

## **INDIVIDUALIZED LEARNING**

Students who enroll in Individualized Learning Courses must:

- Be self-directed and disciplined
- Assume responsibility to meet with teacher before/after school/on planning period
- Be a junior or a senior, unless recommended by a teacher
- Have at least 2.8 cumulative G.P.A

**Independent Study** - Grade level: 11, 12 (a semester or year long course – one-half credit per semester)

Independent study is an opportunity intended to provide an individual learning experience in a subject not traditionally taught at Litchfield High School. It is designed for those students who have exhausted the courses already offered. Students earn a letter grade for independent study. A plan must be created between the supervising teacher and the student that indicates learning objectives. The plan must be secured before the independent study is approved.

The plan must detail: 1) The intended student learning outcomes 2) The learning strategies which will be used to attain the stated outcomes 3) The proposed assessment tools which will be used to measure the learning outcomes Applications are available in the guidance office for any students interested in an independent study. The application must be completed by the student and the supervising teacher. It is then signed by the supervising teacher and parent/guardian, and submitted for approval by the principal.

The applicant will then be notified in a timely manner (less than two days) regarding the approval or denial of the independent study. It is recommended that a teacher does not take on more than one independent study per academic year. Students are only permitted one independent study per academic year.

**Experiential Learning Courses** - Offered beginning November 2022-23 School Year; an opportunity for a unique learning experience within the Litchfield Community Schools' District.

## **Classroom Teacher Assistant Course**

The course is included in the course catalog. The pupil attends and receives curriculum-based instruction from the certificated teacher that has been approved by the board of education of the school district or the board of directors of the public school academy. The curriculum and learning objectives are specifically related to skills necessary for a classroom teaching career and not only to general employability skills. The pupil receives a syllabus that identifies progressive instruction regarding the skills necessary for a classroom teaching career; direct experience that includes exposure to and guidance related to skills specific to a classroom teaching career (which may include, but are not limited to, tutoring other pupils)

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and the opportunity to practice those skills; tests and quizzes that assess progress in mastering skills and acquiring knowledge related to employment in general and specifically to a classroom teaching career. The pupil is eligible to receive credit toward a high school diploma through the issuance of a grade that is not pass/fail.

## **Physical Education Teacher Assistant Course**

The course is in the course catalog. The pupil attends and receives curriculum-based instruction from the certificated teacher that has been approved by the board of education of the school district or the board of directors of the public school academy. The curriculum and learning objectives are specifically related to skills necessary for a physical education teaching career and not only to general employability skills. The pupil receives a syllabus that identifies progressive instruction regarding the skills necessary for a physical education teaching career; direct experience that includes exposure to and guidance related to skills specific to a physical education teaching career and the opportunity to practice those skills; tests and quizzes that assess progress in mastering skills and acquiring knowledge related to employment in general and specifically to a physical education teaching career. The pupil enrolled is eligible to receive credit toward a high school diploma through the issuance of a grade that is not pass/fail.

## **MICHIGAN VIRTUAL COURSE OFFERINGS**

The MVHS provides interactive, online high school courses taught by highly-qualified Michigan certified teachers. High school courses are offered in several different styles: flex courses are self-paced with a flexible enrollment date, but a fixed end date, and are offered in both semester and trimester length. The semester paced courses follow a “traditional” semester schedule. Michigan Virtual courses range from credit recovery to advanced placement, while meeting the standards for the Michigan Merit Curriculum. For more details for Michigan Virtual course offerings, please see the High School Principal. <https://michiganvirtual.org/students/courses>.

## **EDMENTUM/PLATO COURSES**

High school students may earn, through Edmentum/Plato approved credit as determined by the principal/designee per master schedule and/or as circumstances may see fit (i.e.: summer school, correspondence, etc.). Edmentum courses range from credit recovery to advanced placement, while meeting the standards for the Michigan Merit Curriculum. Online courses will be graded on a weekly basis, using a formula. Teachers monitoring online students will enter weekly grades into the gradebook. Grades will be used for eligibility purposes. Please see separate documents for the courses offered through Edmentum. <https://www.edmentum.com/products/courseware> or <https://www.edmentum.com/products/edoptions-academy>.