

LHS Curriculum Guide 2023-24

COURSE DESCRIPTIONS

ART DEPARTMENT

The Ludington Area School District charges a \$10.00 fee for art classes which covers the cost of all required projects. Students will need to cover additional costs for extra individual, non-required projects.

ART SURVEY 2D: FUNDAMENTALS OF TWO-DIMENSIONAL ART

Grade Level: 9, 10, 11, and 12

Prerequisites: None/ Credit: 0.5

Art Survey 2D presents basic art instruction dealing with the principles and elements of 2-D design. Students are encouraged to develop their creative abilities and to explore art with a variety of materials and techniques through drawing, painting, and other two-dimensional mediums.

ART SURVEY 3D: FUNDAMENTALS OF THREE-DIMENSIONAL ART

Grade Level: 9, 10, 11, and 12

Prerequisites: None/ Credit: 0.5

Art Survey 3D presents basic art principles as they apply to 3D artworks. Students develop creative abilities and explore art with a variety of materials and techniques through sculpture and other 3D mediums including ceramics, wire, and plaster.

CERAMICS

Grade Level: 9, 10, 11, and 12

Co/Prerequisites: Art Survey 3D/ Credit: 0.5

Ceramics provides basic instruction in the hand building techniques of ceramic construction. Students will work with pinch, coil, and slab processes as they become sensitive to the aesthetic as well as the functional purpose of ceramic ware.

JEWELRY

Grade Level: 9, 10, 11, and 12

Co/Prerequisites: Art Survey 3D/ Credit: 0.5

Students will learn basic jewelry making techniques with an emphasis placed upon sheet metal designs and construction. Students will be encouraged to become sensitive to both aesthetic and functional qualities as they create their own original jewelry pieces. Good design skills, originality, and craftsmanship will be stressed in this course.

SCULPTURE

Grade Level: 9, 10, 11, and 12

Co/Prerequisites: Art Survey 3D/ Credit: 0.5

This course provides the art student with in-depth exposure to a variety of three dimensional design processes in the area of sculpture. Casting, modeling, and carving methods are used, as well as other media are utilized. Realistic as well as abstract approaches to sculpture will be taught.

PAINTING & PRINTS

Grade Level: 9, 10, 11, and 12

Co/Prerequisites: Art Survey 2D/ Credit: 0.5

Acrylic painting techniques will be taught in this class as well as exploring different artistic styles. A variety of printmaking processes will also be explored, including screen-printing and relief printing. This course is designed for the serious art student.

ADVANCED DRAWING

Grade Level: 9, 10, 11, and 12

Co/Prerequisites: Art Survey 2D/ Credit: 0.5

Advanced drawing is a comprehensive approach to drawing that will explore realistic, formal, and expressive aspects of drawing as well as art history and art criticism. Still life, figure drawing, landscape, self-portraits, as well as looking at influential artists are all a part of the

course. This course is designed for the serious art student. Seats in this class are limited and students are to select an alternate course in the case that it cannot be scheduled.

PHOTOGRAPHY

Grade Level: 10, 11, and 12

Co/Prerequisites: Art Survey 2D/ Credit: 0.5

The old blends with the new as students learn how to create fine art photographs using traditional black and white film and 35 mm cameras as well as digital cameras and using computer photo editing software such as Adobe Photoshop. Students should provide their own 35 mm camera. Some digital cameras will be available for student use. Students will also explore the historical aspects through techniques and photographers. This is designed for serious art students who have a history of strong work ethic, responsibility, and advanced levels of creativity.

PORTFOLIO – ART

Grade Level: 11 and 12

Art Survey 2D/ Credit: 0.5

Prerequisites: Students with an intention to pursue a postgraduate career in art must apply in advance of placement. Applications are available in the counseling office and from the high school art instructors. Applications are subject to counselor and art instructor approval. "A" average in previous art courses is mandatory.

Once selected, the student and the instructor will plan a program of study that will provide the student with a well-prepared portfolio of artwork. Students will work on areas of interest (drawing, painting, sculpture, ceramics, jewelry, etc.), which will strengthen their art abilities. Students will be required to plan a program of study, to develop a collection of their artwork, to produce work at an advanced level, to meet deadlines, and to develop career goals.

BUSINESS & TECHNOLOGY DEPARTMENT

AP COMPUTER SCIENCE PRINCIPLES A, B, and C

Grade Level: 9, 10, 11, and 12

Prerequisites: None/ Credit: 1.5

The AP Computer Science Principles course is designed to be equivalent to a first semester introductory college computing course. In this course, students will develop computational thinking skills vital for success across all disciplines, such as analyzing data and working with large data sets to visualize, and draw conclusions from trends. The course engages students in the creative aspects of the field by allowing them to develop computational artifacts based on their interests. Students will also develop effective communication and collaboration skills by working individually and collaboratively to solve probes' and will discuss and write about the impacts these solutions could have on their community, society and the world.

Introduction to Business

Grade Level: 9, 10, 11, and 12

Prerequisites: None/ Credit: 0.5

Our primary purpose is to support Ludington Area School students across the curricula and provide lifelong skills using business, computers, and technology for students pursuing a professional career or self employment opportunities. Students will learn more about production and efficiency management, business economics, human resource management, finance, technology, brand marketing, communication (individual and cloud collaboratives) including leadership skills. Students will examine the role of government in business, employer/employee taxation tables, business in a global economy and the importance of money and financial institutions. Students considering an internship or job shadowing opportunities should consider taking this course.

FAMILY & CONSUMER SCIENCE DEPARTMENT

FOOD SCIENCE

Grade Level: 9, 10, 11, and 12

Prerequisites: None/ Credit: 0.5

This is for students interested in developing and enhancing their skills in the kitchen, while keeping in mind nutrition and its relationship to health and well-being. Much time will be spent exploring basic cooking principles. Included units are nutrition, basic food preparation techniques, kitchen language, safety, and equipment.

CHILD DEVELOPMENT

Grade Level: 9, 10, 11, and 12

Prerequisites: None/ Credit: 0.5

All areas of child development are studied from conception to adolescence with emphasis on the essentials of a healthy environment. Prenatal development and theories are covered in depth.

PARENTING

Grade Level: 9, 10, 11, and 12

Prerequisites: None/ Credit: 0.5

This course examines readiness to become a parent, issues of raising healthy children and building parent-child relationships. Parenting skills can be learned through positive relationships with everyone around you, so students will be investigating what makes all relationships healthy. Students will work to recognize cognitive, emotional, social, and physical needs of young children.

ADVANCED FOOD SCIENCE

Grade Level: 9, 10, 11, and 12

Prerequisites: A passing grade in Food Science/ Credit: 0.5

This is a course centered around project-based learning using the skills learned in Food Science. Students collaborate to prepare a holiday feast, research recipes, cater for parent-teacher conferences, research a foreign country and prepare dishes from that cuisine, as well as many more projects. The final project will be a "Top Chef" challenge where each group's food will be judged and rated.

INDEPENDENT LIVING

Grade level: 11 and 12

Prerequisites: None/ Credit: 0.5

This class is designed to help transition from an individual living at home to living independently. Areas covered include: careers and taxes, managing money, saving and investing, spending and borrowing and insurance. We use a curriculum from renowned finance expert Dave Ramsey and students will learn in a blended video format and will complete many hands-on activities to ensure concepts are understood. This course may count as a math-related course for seniors only.

HOME AND FINANCE

Grade Level: 11 and 12

No Prerequisites/ Credit: 0.5

Six weeks of Home Technology where students will learn about electrical (wiring a switch, wiring an outlet, wiring a lamp), plumbing (cooper and PVC installation), drywall (installing and repairs), tiling (installing and grouting), and home math (board foot pricing, estimating costs for replacement).

Six weeks of Personal Finance where students will learn about banking (accounts and loans), savings, interest, budgeting, moving out, transportation and life on their own and consumer awareness (marketing techniques and reading the fine print). This course may count as a math-related course for seniors only.

ENGLISH DEPARTMENT

ENGLISH 9 A

Grade Level: 9/ Credit: 0.5

English 9 A is required of all ninth grade students. This course, in all respects, looks to integrate reading, writing, and critical thinking skills to promote lifelong literacy. Students examine short stories, drama and novels and explore literary terms and techniques to help understand, analyze and evaluate literature. Communication skills, both written and oral are developed and practiced throughout the course with emphasis on recognizing and communicating connections between texts, composition, discussion, and student experience.

ENGLISH 9 B

Grade Level: 9/ Credit: 0.5

English 9 B is required of all ninth grade students designed to be taken after successfully completing English 9A. Like the English 9A counterpart, this course uses a thematic approach to study various literary genres including poetry, the epic poem, and Shakespearean drama. Each unit emphasizes the use of interpretive and critical thinking skills that are necessary for understanding all types of literature. This course promotes lifelong literacy, beyond recall and basic comprehension, to make connections between works, genres, and life outside the classroom.

A.C.E. (Academic Center for Excellence)

Grade Level: 9/ Credit: 0.5 per trimester (1.5 possible if taken all year)

A 9th grade academic support class. ACE targets a wide range of skills and knowledge needed to make a successful transition to high school. Students will be selected based on Middle school staff recommendation and need.

SAT PREP

Grade Level: 11/ Credit: 0.5

A one trimester course runs only during the Trimester 2 to help students improve performance on the SAT exam. Cohorts of students will rotate through three sessions during the trimester each lasting four weeks. There are sessions focused on math and English with content area certified staff. Students will use individualized data from PSAT scores to focus on their own goals and areas for improvement. The third session follows an online SAT prep course that helps students gain extra practice and test taking skills.

ENGLISH 10 A: LITERATURE AND SPEECH

Grade Level: 10

Prerequisites: English 9 A and B / Credit: 0.5

10th Grade Literature and Speech A is a one-trimester course integrated with the U.S. History I, spanning approximately the 1890s to 1930s. This course is designed to give students opportunities to progress in their reading, writing, speaking, and listening skills through exposure to a variety of authors and genres. Students are encouraged to read and think critically via analysis of themes, literary voice, and literary techniques. Furthermore, students will broaden their understanding by connecting texts to history, personal experience, current events, and potential ethical issues. Students will apply these skills in various written exercises, individual oral presentations, and classroom activities.

ENGLISH 10 B: LITERATURE AND SPEECH

Grade Level: 10

Prerequisites: English 9 A and B, English 10 A/ Credit: 0.5

10th Grade Literature and Speech B is a one-trimester course integrated with the U.S. History II, spanning approximately the 1930's to present day. This course is designed to give students opportunities to progress in their reading, writing, speaking, and listening skills through exposure to a variety of authors and genres. Students are encouraged to read and think critically via analysis of themes, literary voice, and literary techniques. Furthermore, students will broaden their understanding by connecting texts to history, personal experience, current events, and potential ethical issues. Students will apply these skills in various written exercises, individual oral presentations, and classroom activities.

JOURNALISM A, B, and C

Grade Level: Any

Prerequisites: None/ Credit: 0.5 per trimester

Journalism courses (typically associated with the production of a school newspaper, yearbook, or literary magazine) emphasize writing style and technique as well as production values and organization. Journalism courses introduce students to the concepts of newsworthiness and press responsibility; develop students' skills in writing and editing stories, headlines, and captions; and teach students the principles of production design, layout, and printing. Photography and photojournalism skills may be included.

CREATIVE WRITING

Grade Level: 10, 11, and 12

Prerequisites: English 9 A and B/ Credit 0.5

Creative writing is an elective workshop where regular and brief lessons in common writing concerns, problems, and techniques are given. However, the vast majority of manuscripts are based on student choice of genre, audience, and topic/theme. The course is individualized to meet varying degrees of talent, commitment, and writing experience. Students will gain or further experience process oriented strategies of pre-writing, drafting, revising, editing, rewriting, and publishing. In addition to experiment, false starts, and assignments, each student will produce a portfolio of six polished pieces for publication in a classroom magazine. The class is recommended for those with a need or willingness to write regularly and to share that writing with peers. One guarantee is the writer's experience will be broadened; one hope is the student's creativity will increase.

ENGLISH 11 I

Grade Level: 11

Prerequisites: English 10 A and B/ Credit: 0.5

The English 11 courses focus on reading and writing skills necessary to be successful in real world settings and senior English classes. Appropriate state standards are covered and this course counts towards MMC graduation requirements.

English 11 II

Grade Level: 11

Prerequisites: English 10 A and B/ Credit: 0.5

The English 11 courses focus on reading and writing skills necessary to be successful in real world settings and senior English classes. Appropriate state standards are covered and this course counts towards MMC graduation requirements.

ENGLISH 12 I

Grade Level: 12

Prerequisites: English 11 I and II/ Credit: 0.5

The English 12 courses focus on reading and writing skills necessary to be successful beyond high school in the real world and post-secondary education. Appropriate state standards are covered and this course counts towards MMC graduation requirements.

ENGLISH 12 II

Grade Level: 12

Prerequisites: English 11 I and II/ Credit: 0.5

The English 12 courses focus on reading and writing skills necessary to be successful beyond high school in the real world and post-secondary education. Appropriate state standards are covered and this course counts towards MMC graduation requirements

MYTHOLOGY

Grade Level: 10,11,12/ Credit: 0.5

This elective course is designed for students who plan to continue their educational development at a community college, university, vocational or trade school or in the workplace. Students will exercise skills in grammar, research-based argument writing, analytical discussion, listening, and public speaking.

Literature studied in this course will feature classical myths from the ancient world of the Egyptians, Greeks and the Norse as well as other contemporary works that focus on the archetypes of the epic hero, the epic journey, the creation of all, death and the afterlife, and explaining natural phenomena. Students will be asked to analyze many works, including non-fiction informative pieces, poetry, and the recorded arts, to connect the cultures of the ancient civilizations to our modern world.

AP ENGLISH LITERATURE AND COMPOSITION A, B, and C

Grade Level: 11 and 12/ Credit:1.5

Prerequisites: Pre-enrollment and Selection Process Endorsement

This AP English Literature and Composition course is designed to introduce students to college level rhetorical theory and coursework through careful observation and interpretation of textual detail. The student will encounter a broad variety of writers with representative pieces from

British and American literary traditions, as well as some pieces translated from other literary traditions into English. In addition, the writers represent a variety of genres spanning many centuries of literary contributions. Students will daily address various vital aspects of literary criticism and analysis, with a focus on the artistry of writing. The student will further focus on employing the artistic proofs (ethos, pathos, and logos) when encountering a text and will consider structure, style, themes, social and historical influences, and the use of figurative language, imagery, symbolism, and tone to consider the artistry of the works as well as to yield multiple meanings from the texts.

In this course, students will have various writing assignments including informal and formal pieces, extended analysis of texts, and timed in-class responses. Effective critical writing requires an understanding of a literary piece and the means of explaining through scholarly evaluation. Therefore, in this course, the student will:

- address each aspect of effective critical writing
- write to understand through exploratory writing activities
- write to explain through analytical essays
- write to evaluate through argumentative essays
- draw upon the techniques of literary analysis addressed in class
- formulate positions concerning the artistry and quality of the literary works
- address grammar and sentence structure issues through instructor led mini-lessons
- be evaluated on an on-going basis through teacher/student conferencing

This course is designed to function as a workshop where students interact concerning texts with the instructor operating as a facilitator with specific emphasis on the use of Socratic questioning techniques. Students will engage in small group conferencing over text analysis and for revising and editing of some of the writing assignments. The instructor will also provide individualized feedback on student writing, both before and after students revise their written work, in order to help students develop their critical writing skills to effect a mature literary voice of their own. Specifically, the instructor's goal is to help students develop:

A wide-ranging vocabulary used appropriately and effectively

A variety of sentence structures, including appropriate use of subordination and coordination
Logical organization, enhanced by specific techniques to increase coherence, such as repetition, transitions, and emphasis

A balance of generalization and specific, illustrative detail

An effective use of rhetoric, including controlling tone, establishing and maintaining voice, and achieving appropriate emphasis through diction and sentence structure (AP College Board)

AP ENGLISH LANGUAGE AND COMPOSITION A, B, AND C

Grade Level: 11 and 12/ Credit: 1.5

Prerequisites: Pre-enrollment and Selection Process Endorsement

AP English Language and Composition is a three term course that engages students in becoming skilled readers of prose written in a variety of rhetorical contexts. In addition, AP Language prepares students to become skilled writers who compose for a variety of purposes.

The texts of AP Language will focus on raising student awareness of the interactions among a writer's purposes, audience expectations, and subjects, as well as the way genre conventions and the resources of language contribute to effectiveness in writing. Students will have the opportunity to write about a variety of subjects from a variety of disciplines. The compositions will emphasize the expository, analytical and argumentative writing that forms the basis of academic and professional communication, as well as the personal and reflective writing that fosters the development of writing facility in any context. Students will read primary and secondary sources carefully, to synthesize material from these texts in their own compositions, and will cite sources using conventions recommended by professional organizations such as the Modern Language Association (MLA), the University of Chicago Press (The Chicago Manual of Style), and the American Psychological Association (APA).

Adapted from: <http://apcentral.collegeboard.com/apc/public/repository/ap-english-course-description.pdf>

EXPERIENTIAL LEARNING (mentored within the BUSINESS DEPARTMENT)

WORK-BASED EXPERIENCE I, II, and III

Grade Level: 11 and 12/ Credit: 0.5 per trimester

Prerequisites: Must have excellent attendance as determined by the counselor, permission of the community professional or business, and a serious interest in the career field or industry. EDPs must also align with the career goal or exploration.

There are many area business and professional organizations that have provided internship opportunities to senior students intent to learn more about a desired career with-in a real-world experience. Examples of past internships include local veterinary clinics, optometrist offices, hair and nail salons, pharmacies, nursing homes, accounting firms, the hospital, and other local industries. As with every internship, the initiative and success of the program is on the student. The student makes first contact to the desired mentor with the goal of setting up an intern/mentor relationship. While the specific requirements of internships vary, there are core expectations of the experience that remain in common. The intern is expected to: complete an online career-related course, spend a minimum of 4 contact/instructional hours per week as an intern, increase in knowledge of professional vocabulary and protocol, learn procedures common to the profession/workplace, experience and/or observe common practice, and reflect and uphold the expected dress, behavior, and language of the profession. A final exam is expected, but the mentor has the discretion of the designing and implementing evaluations. A final grade is given which will affect GPA.

INDUSTRIAL ART DEPARTMENT

HOME TECHNOLOGY

Grade Level: 9, 10, 11, and 12

Prerequisites: None/ Credit: 0.5

Home Technology is designed to familiarize students with home maintenance problems. We will strive to develop good work habits within the students, and at the same time arrange for each student a maximum number of problem solving situations on home care. Since home maintenance is an important part of every household, caring for and repairing such items as water faucets, electric switches and sockets; windows and screens as well as damaged walls will be an integral part of the class.

WOODWORKING I

Grade Level: 9, 10, 11, and 12

Prerequisites: None/ Credit: 0.5

The goal of Woodworking I is to familiarize students with the wood shop and its equipment. Students learn the use of basic power hand tools, wood identification and wood finishing. Because power tool usage will be introduced, two projects using power tools must be completed.

WOODWORKING II

Grade level: 9, 10, 11, and 12/Credit: 0.5

Prerequisites: "C" in Woods I or better or instructor permission/ Credit: 0.5

This is an intermediate course in woodworking. The safe and most efficient operation of all power equipment is covered. Considerable emphasis is placed on identification of shop lumber, planning, design and orderly procedures for making projects and manufacturing of furniture.

WOODWORKING III

Grade Level: 10, 11 and 12

Prerequisites: "C" or better in Woodworking II or instructor's approval/ Credit: 0.5

This is an advanced course employing the practical experiences of previous woodworking courses. All power machines are used. A student completes one cabinet project requiring

advanced joinery. The project must contain a drawer, door, frame, panel, and four specific wood joints. The student must apply a complete finish, and select another woodworking project, as time permits.

WOODWORKING IV

Grade level: 10, 11 and 12

Prerequisites: Woodworking III with "C" or better or instructor permission/ Credit: 0.5

The instructor may grant permission to do special projects for a fourth year of woodworking. Mass production may be employed, or the student may work independently.

METALS I

Grade Level: 9, 10, 11, and 12

Prerequisites: None/ Credit: 0.5

This is a beginning level course designed to acquaint the students with the proper use and care of hand tools, metal layout and fabrication, gas and electrical welding, and forging applications. This is an exploratory class with emphasis placed on career awareness.

METALS II

Grade Level: 9, 10, 11, and 12

Prerequisites: Metals I/ Credit: 0.5

Course Description: Advanced level of Metals I

MANUFACTURING AND DESIGN

Grade Level: 9, 10, 11, and 12

Prerequisites: None/ Credit: 0.5

Units of study include: Industrial processes, salesmanship, customer service, communication skills and responsibility. During the trimester, students will develop/design a project and successfully mass-produce it with the skills learned in this course.

SMALL GAS ENGINES

Grade Level: 9, 10, 11, and 12

Prerequisites: None/ Credit: 0.5

The student will study engine construction and principles of operation for two and four stroke cycle engines. Activities include maintenance, tune-up, disassembly, inspection, and reassembly of a small engine. Emphasis will be on the lawn-mower type engine.

HOME AND FINANCE

Grade Level: 11 and 12/Credit: 0.5 (counts as a senior math credit)

Six weeks of Home Technology where students will learn about electrical (wiring a switch, wiring an outlet, wiring a lamp), plumbing (cooper and PVC installation), drywall (installing and repairs), tiling (installing and grouting), and home math (board foot pricing, estimating costs for replacement).

Six weeks of Personal Finance where students will learn about banking (accounts and loans), savings, interest, budgeting, moving out, transportation and life on your own and consumer awareness (marketing techniques and reading the fine print).

MATHEMATICS DEPARTMENT

PRE-ALGEBRA A and B OR ALGEBRA RECOVERY

Grade Level: 9

Credit: 1.0

A two triester 9th grade general education math course focused on foundational skills and knowledge needed to be successful in Algebra 1. Students will be selected based on need for extra support in mathematics.

ALGEBRA A, B, C

Grade Level 9, 10/ Credit: 1.5

Prerequisite: None

This course is designed to meet the state expectations in Algebra. Topics include simplifying expressions, evaluating and solving equations and inequalities. Functions studied will include linear, quadratic, exponential, polynomial and others found in the MME/ CCSS Algebra standards. Real world applications are presented within the course content and a

functions-based approach is emphasized. To satisfy MMC requirements, students must earn a minimum of credit for Algebra C and either the A or B sections of the course.

GEOMETRY A and B

Grade Level: 9, 10, 11, and 12

Prerequisites: Recommendation Algebra I/ Credit: 1.0

Geometry involves the study of plane and solid figures and their relationship to one another. This course integrates standard approaches, coordinates, and transformations, and makes use of algebra throughout. It presents the history of major ideas and examples of recent developments in geometry and its application, with the use of handheld construction tools, as well as, calculators, computers and other modern tools. Logical reasoning and the development of a language system unique to geometry are an integral part of the course. The student should develop a practical understanding of the principles of geometry that are needed in everyday situations, vocations, and advanced courses in mathematics and science. To fulfill the MMC requirement, students must earn credit for both Geometry A and B.

ALGEBRA II A and B

Grade Level: 9, 10, 11, and 12

Prerequisites: Algebra I and Geometry/ Credit: 1.0

Pre-approved application from previous math teacher required to be taken concurrently with Geometry. Applications are available in the counseling office.

This course extends the major concepts covered in Algebra I. Students study each mathematical idea in depth through applications and practical problems to develop skills and to understand the importance of mathematics in everyday life. To fulfill the MMC requirement, students must minimally earn credit for Algebra II A or its equivalent.

FUNCTIONS, STATISTICS, and TRIGONOMETRY A and B (FST)

Grade Level: 10, 11, and 12/ Credit: 1.0

Prerequisites: Algebra I, Geometry, and Algebra II

Pre-approved application from previous math teacher required to be taken concurrently with Algebra II. Applications are available in the counseling office.

This course integrates the ideas of functions, and trigonometry usually studied at this level, with the statistics and data analysis necessary to function successfully in the worlds of today and

tomorrow. Statistics and algebra concepts are integrated as students display, describe, transform, interpret, and model numerical data. This course also covers deriving and graphically representing trigonometric relationships and functions in a variety of situations. The availability of graphing calculators makes it possible for students to work with a broader range of both pure and applied problems.

PRE-CALCULUS

Grade Level: 10,11, and 12

Prerequisites: Algebra I, Geometry, Algebra II, and FST/ Credit 0.5

May be taken concurrently with FST B

Pre-calculus is a one trimester course intended for those students who plan on continuing their math education and would like to further study the areas of mathematics necessary for Calculus. The main mathematical concepts that will be studied are graphical analysis, sequences and limits, manipulation of algebraic equations, and trigonometry functions and identities. It is recommended that this class be scheduled the same year as FST A and B.

AP CALCULUS A, B, and C (AB)

Grade Level: 10,11, and 12/ Credit: 1.5

Prerequisites: Recommendation FSTThis is a study of calculus with an emphasis on limits, derivatives, and integrals. This course is designed around preparation for the Advanced Placement exam in Calculus AB and is graded on a five-point grading scale.

DATA ANALYSIS

Grade Level: 11 and 12/ Credit: 0.5

Prerequisites: Completion of Geometry

The purpose of this course is to introduce students to the concepts and skills needed for collecting, organizing, analyzing, and drawing conclusions from data. Themes will include sampling, exploring data numerically and graphically, finding patterns using probability, and using statistics features of the Texas Instruments graphing calculator. This course may taken in place of Algebra II A to fulfill the MMC requirements, but it should be noted that more selective colleges or universities may require completion of Algebra II A and B for admission consideration.

MUSIC DEPARTMENT

Bel Canto I and II

Grade Level: 9,10,11, and 12/ Credit: 0.5 per trimester

Choir rehearses every day and will study music from the Classical Period to the 21st Century (including pop music.) Students will work on theory concepts, ear training, sight-reading, breath management, and choral technique. The LHS Concert Choir performs at all home concerts as well as MSVMA District and State Festivals.

Arts Chorale I, II, and III

Grades 9,10,11, and 12/ Credit: 0.5 per trimester

Prerequisites: Recommendation Concert Choir/ Credit: 0.5 per trimester

Chorale is an auditioned group of female singers that rehearses every day during the 3rd hour and will study music from the Baroque Period to the 21st Century (including pop music.) We will work on theory concepts, ear training, sight-reading, breath management, and choral technique. Chorale also performs at all home concerts as well as MSVMA District and State Festivals.

JAZZ BAND A, B, and C

0 Hour Class (6:30-7:30 a.m.)

Grade Level: 9, 10, 11, and 12/ Credit: 1.5

Prerequisites: Director selection and concurrent membership in Ludington Wind Symphony

The Jazz Band is open to students who play saxophone, trumpet, trombone, piano, guitar and drums. Course content includes: 1) Performance and analysis of jazz and popular music from the 1890's to the present. 2) The history of jazz and its application to modern jazz theory.

Performance opportunities include concerts, festivals, athletic events, band trips, and jazz combo performances. The members of the Jazz Band will participate in some performances outside of regular school hours. These activities are part of the requirements of the class and are required for all members of the band. Because Jazz Band membership must be concurrent with Concert Band, it functions as an "honors" type course. This class offers advanced music students an opportunity to reach their highest levels of musical and artistic performance.

WIND SYMPHONY A, B, and C

Grade Level: 9, 10, 11, and 12/ Credit: 1.5

Any current Ludington band student may enter this course without an audition. Students who wish to join this group that have not been involved in the Ludington band program will be required to audition. Students will be responsible for attending all activities required of the participating student through the LHS Band Handbook.

PHYSICAL EDUCATION DEPARTMENT

HEALTH

Grade levels: target grades 9 and 10/ Credit: 0.5

This is a required course to be taken during either 9th or 10th grade, but may be taken by any grade student who needs to fulfill this MMC requirement.. Students will build a strong foundation of Health and Wellness through developing 7 essential skills that they will use for a lifetime. (Accessing information, Analyzing Influences, Goal Setting, Decision Making, Interpersonal Communication, Self Management, and Advocacy.) These skills will be developed through the exploration of the following units—Nutrition and Wellness, Safety, Social and Emotional Health, and Healthy Relationships.

PERSONAL FITNESS

Grade levels: 9/ Credit: 0.5

Required Attire: *Tennis shoes, socks, and proper fitness clothing*

Students in this course will be given the opportunity to develop physical fitness and skills in the following sports: tennis, badminton, volleyball, basketball, soccer, speedball, football, Lacrosse, *Bowling, strength training and fitness conditioning are among a variety of units. Discussion topics include: exercise safety, sportsmanship, performance eating, cardio-training, strength charting and fitness program concepts. Students will be able to design a proper fitness program for themselves using their present fitness levels as a starting point. The objective goal is to become their own “personal trainer” and utilize the concepts learned in class to continue a lifetime of healthy fitness activities. (*Bowling fee required).

The audience for Personal Fitness is only 9th grade students, so if a student wants to take their required PE credit as a peer experience, they must select Personal Fitness for their 9th grade year. It may be taken by 10th grade students with instructor permission. This fitness class cannot be repeated.

FITNESS WALKING

Grade level: 9-12/ Credit: 0.5

Prerequisites: None

Requirements: Tennis shoes, proper fitness clothing for indoor and outdoor activities including a one-piece swimming suit for females and swimming trunks (no Speedos) for males during water activities. Walking outdoors will be a major emphasis in this course. Developing cardio and muscle endurance using various forms of fitness walking styles such as: power pace/speed, Nordic pole, water, and trail hiking will be used for training. Heart rate monitoring, pedometer-step and distance calculating to record progress will be emphasized throughout the 12 weeks. Treasure hunts, orienteering-compass reading, learning how to read maps for walking courses and various topics related to fitness walking will be covered including: conditioning, safety, body energy burn, stride development along with trail walking/hiking and survival strategies. Designing your own mini survival shelter will be one of the final exam projects. The class walking goal will be to cover 100 miles. Students will have the opportunity to include additional mileage outside of class time to their total. This course may be repeated with instructor approval.

TEAM SPORTS

Grade Level: 9, 10, 11, and 12

Prerequisites: None/ Credit: 0.5

Required Attire: Tennis shoes, socks , and proper fitness clothing

This course will concentrate on improving sport skills and maintaining an appropriate level of fitness through the enjoyment received in participating on a variety of team sports. Football, Basketball, Soccer, Speedball, Handball and Lacrosse are a few of the sports explored including various net sports like Volleyball, Tennis, and Badminton. The course will include aspects of physical fitness conditioning/training and team issues like: sportsmanship, ethics and behaviors. Several styles of tournament brackets will be used in each sport. Students will have a 4 day Drill Project and design their own personal fitness workout program. *Bowling fee will be required. This course may be repeated with instructor approval.

WATER SPORTS

Grade Level: 9, 10,11, 12

Prerequisites: None/ Credit: 0.5

Required Equipment: Appropriate swimwear—(one piece for females and trunks for males. Goggles and PFD) Students in this course will be able to enjoy several sports and develop

fitness conditioning while in the water. Volleyball, basketball, water polo, football, water aerobics and several water games will be modified to play in the water. Water safety, lifesaving skills and personal conditioning will be covered. Advanced swimming and diving skills are not required though they are recommended. Students should feel comfortable in deep water activities. Please note that this is not a lifeguarding course and will not meet Red Cross certification requirements. Students may bring in their own PFD (personal floatation device) and goggles for wearing. Individual projects include designing and constructing a shallow water skim board* and a personal fitness aquatic workout program. Group project includes designing/constructing a cardboard/duct tape boat and testing it in the pool. (*Fee for wood and paint).

STRENGTH & CONDITIONING

Grade Level: 9, 10, 11, and 12/ Credit: 0.5

Prerequisites: None

Required Attire: Tennis shoes, socks, and proper fitness clothing

Each student will learn how to design an individual training regimen that would best benefit his/her needs in fitness with an emphasis on muscle strength and endurance. This class is designed for the individual who wishes to become stronger, faster, and more explosive as well as simply more physically fit. A stronger athlete is a better athlete. Athletes who strength train are less susceptible to injury and are faster and more powerful. Through the use of various types of resistance training methods, equipment, and machines, students learn how to lift safely, effectively, and efficiently. Other topics include discussions on myths associated with lifting weights, why it is healthy to strength train, the difference between strength training and other forms of resistance training, and sports nutrition. Students record and analyze progress throughout the trimester to develop an understanding of why they progressed as they did. Some aerobic equipment is available for students as well to improve cardiovascular fitness (bikes, treadmills, stair climbers). This course may be repeated with instructor approval.

ADVANCED SPORTS SKILLS (FALL, WINTER, and SPRING)

Grade Level: 9,10, 11, and 12/ Credit: 0.5

Prerequisites: Must be involved on an LHS school sport team and taken the trimester IMMEDIATELY PRIOR to the student's athletic season.

This class does not meet the requirements for fulfilling the PE/Health graduation requirements and is taken only for specific athletic skill advancement, and general lifestyle fitness is not explicitly emphasized or taught. The advanced sport skills class was designed for the highly competitive, motivated and responsible student athlete. Students who desire to take this class need to request the class the trimester before the school sport takes place. For example, a student who plays basketball would request to have Advanced Sport Skills in the Fall trimester. The course will enable the student athlete to develop his/her team and individual sport skills. Under instructor guidance, each student is responsible to develop and implement an individualized training regimen. These regimens will utilize concepts previously taught in other

physical education classes as well as practice drills devised by the head coach of their respective sport. Students must obtain a parent, coach and instructor signature to enroll. This course may be repeated with the instructor and coach approval. This class is offered during a zero hour period that runs before the normal school day starts at 6:30 am. No public transportation provided.

SCIENCE DEPARTMENT

NOTE: In order to meet MME Science requirements:

Students planning on using conceptual chemistry and physical science must have completed a minimum of (conc. chemistry and 1 physical science course)

Students must have 1.0 credits of physics/chemistry combination

EARTH SCIENCE A and B

Grade Level: 9, 10, 11, and 12/ Credit: 1.0

Prerequisites: None

Earth science will have a focus on the physical earth including physical and climate changes. An examination from the core to the outer reaches of the atmosphere including interactions and relationships between layers. Units in this course will include: History of Earth, Space systems, Earth systems (geosphere, hydrosphere, biosphere, atmosphere), Weather and climate, and Human sustainability. This course is two trimesters.

BIOLOGY A and B

Grade Level: 9,10,11, and 12/ Credit: 1.0

Prerequisites: None

Biology is designed to provide information regarding the fundamental concepts of life and life processes. These topics include: homeostasis, complex organisms, photosynthesis and respiration, carbon, macromolecules, cycling of matter, ecology, genetics and traits, natural selection and evolution.

AP ENVIRONMENTAL SCIENCE A, B, and C

Grade level: 10,11, and 12/ Credit: 1.5

Prerequisites: Successful completion of Biology and/or science teacher recommendation.

AP Environmental Science courses are designed by the College Board to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, identify and analyze environmental problems (both natural and human made), evaluate the relative risks associated with the problems, and examine alternative solutions for resolving and/or preventing them. Topics covered include science as a process, ecological processes and energy conversions, earth as an interconnected system, the impact of humans on natural systems, cultural and societal contexts of environmental problems, and the development of practices that will ensure sustainable systems.

CONCEPTUAL CHEMISTRY

Grade Level: 10,11,12/ Credit: 0.5

Prerequisites: Earth Science-2 trimesters and Biology-2 trimesters, it is possible to take concurrently with earth or biology sophomore year with instructor approval. Chemistry places emphasis upon application of principles, not a memorization of facts and symbols. The course is designed to enable students to understand the chemistry of everyday life, as well as serve as a foundation for further study in Chemistry. Subject matter is supported by experimentation. Topics covered in this course include: chemical reactions, interactions of elements and compounds, conservation of mass, atoms, ions and the periodic table, and energy movement associated with chemical changes. This is a one trimester course.

PHYSICAL SCIENCE I: MOTION AND FORCES

Grade Level: 10,11,12/ Credit: 0.5

Prerequisites: Conceptual Chemistry-1 trimester, Earth Science-2 trimesters and

Biology-2 trimesters (it is possible to take concurrently with earth or biology sophomore year with instructor approval).

Motion and forces place an emphasis on the forces between particles, molecules, and macroscopic objects. Additional focus areas include: motion of objects between each other and interactions to their environment, magnetic fields and electric currents. A strong connection will be made on how these forces apply to everyday life. This is a one trimester course.

PHYSICAL SCIENCE II: ENERGY AND WAVES

Grade Level: 10,11,12/ Credit: 0.5

Prerequisites: Conceptual Chemistry-1 trimester, Earth Science-2 trimesters and

Biology-2 trimesters (it is possible to take concurrently with earth or biology sophomore year with instructor approval).

Energy and waves places emphasis on the movement, change, interaction, and effect of energy on matter. Additional focus areas include: different forms of energy and their interactions, electromagnetic radiation, waves interactions and behavior. A strong connection will be made on how these forces apply to everyday life. This is a one trimester course.

CHEMISTRY A AND B

Grade Level: 10,11,12/ Credit: 1.0

Prerequisites: Earth Science-2 trimesters and Biology-2 trimesters (it is possible to take concurrently with earth or biology sophomore year with instructor approval). Algebra I-three trimesters.

During chemistry students will learn about elements, ions and periodic table. Additional focus areas include: physical and chemical properties of elements, periodic trends, chemical reactions and the conservation of mass, bonds and bonding, energy associated with bonds and reactions, Le Chatelier's principle, collisions of molecules and strength of intermolecular particles, intermolecular forces, nuclear reactions. Students will also learn how to apply stoichiometry and mole relationships to solve problems.

PHYSICS A AND B

Grade Level: 10,11,12/ Credit: 1.0

Prerequisites: Earth Science-2 trimesters and Biology-2 trimesters (it is possible to take concurrently with earth or biology sophomore year with instructor approval). Algebra (3 trimesters), Geometry (2 trimesters can be concurrent).

Physics places emphasis on the forces between particles, molecules, and macroscopic objects. Additional focus areas include: motion of objects between each other and interactions to their environment is stressed, magnetic fields and electric currents. A strong connection will be made on how these forces apply to everyday life. Students will also learn about the movement, change, interaction, and effect of energy on matter. While studying matter emphasis will be

placed on: different forms of energy and their interactions, electromagnetic radiation, wave interactions and behavior including quantitative analysis of data and mathematical calculations of speed, velocity, and energy.

ANATOMY AND PHYSIOLOGY A and B

Grade Level: 11 and 12 (10 with instructor permission)/ Credit: 1.0

Prerequisite: Biology and Chemistry/Conceptual Chemistry (may be concurrently enrolled in Chemistry)

This class is geared for the student with an interest in the medical field. Students will explore the structure and function of human organ systems. The course highlights the following: Integumentary, Skeletal, Muscular, Nervous, Endocrine, Digestive, Respiratory, and Cardiovascular systems.

FORENSIC SCIENCE

Grade Level: 11 and 12/ Credit: 0.5

Prerequisite: Successful completion, Earth Science, Biology, and Chemistry/Conceptual Chemistry (may be concurrently enrolled in Chemistry)

This experience will incorporate skills related to Biology, Chemistry, and Physics to answer questions, work through problems, and solve fictitious crimes based on physical and chemical evidence. Students will receive continued training of scientific methods, measuring, rechecking, data analysis and the engineering method. Students will spend a great deal of time working on lab and hands-on activities, both individually and in small groups of their peers.

MICHIGAN FISHERIES AND DESIGN

Grade Level: 9,10,11, and 12/ Credit: 0.5

Prerequisites: None

Study local waterways, ecosystems, and fisheries. Students will also design and carve a working fish decoy. Other concepts will include fish anatomy, ecology, Michigan habitats, density, buoyancy, etc..

HISTORY and SOCIAL STUDIES DEPARTMENT

WORLD HISTORY A

Grade Level: 9, 10,11 and 12/ Credit: 0.5

Prerequisites: None

World History/Geography I is designed to give students an introduction to the study of geography as well as the history of several world regions. The Middle East, Asia and Africa are the focus areas of the course. A small unit on key World Organizations is also included. Many different methods will be used in studying these topics such as reading, writing, simulation experiences, mapping and use of other social studies skills.

WORLD HISTORY B

Grade Level: 9, 10, 11, and 12/ Credit: 0.5

Prerequisites: None

World History and Geography II examines the history of the world using a regional approach. The primary focus of the course is Europe and Oceania as well as an examination of World Religions. Many different methods will be used in studying these topics such as reading, writing, simulation experiences, mapping and use of other social studies skills.

U.S. HISTORY I

Grade Level: 10,11,and 12/ Credit: 0.5

Prerequisites: None

Students will study Industrialization to the beginnings of Progressive Reforms, the rise of Imperialism up to the causes of World War I, and the ramifications of the war on the United States. The end of the course will emphasize the political, social, and economic changes of the interwar years with focus on the events that led to the Great Depression.

U.S. HISTORY II

Grade Level: 10

Prerequisites: None/ Credit: 0.5

This course continues with World War II and its impact on the United States both home and abroad. Special emphasis will be placed on the political, social, and economic changes in a post WWII world including the Cold War, Vietnam, Civil Rights Movement, as well as recent events in American Society.

CIVICS

Grade Level: 11 and 12/ Credit: 0.5

Prerequisites: None

This course explores the rights and responsibilities of citizens, with an emphasis on the Constitution and the democratic process. Role-plays, simulations, debates and other active teaching methods are employed. Students will learn how to reason effectively and create strong oral and written arguments. This is a required class under the MCC requirement and may be taken by mature and academically qualified students in grade 10.

ECONOMICS

Grade Level: 11 and 12/ Credit: 0.5

Prerequisites: None

This course is an integrated study of the American economic system. Topics will include: the effects of various economic systems on achieving broad economic societal goals, the problem of scarcity and how producers confront it when supplying the marketplace, how the government predicts economic trends and directs the economy through monetary and fiscal policy, and the impact of trade and global economic development of nations. Multiple instructional strategies will be used including reading, note-taking, simulations, and group activities. This is a required class under the MMC requirements.

GLOBAL AWARENESS

Grade Level: 11, 12 (10th with recommendation of the instructor)

Prerequisites: None/ Credit: 0.5

This course is designed to immerse students in a variety of current political issues in order to help students understand their complexity. Central goals are for students to recognize the multiple, valid perspectives that people can have on such issues, and to arrive at an informed opinion on such after thorough study. Use of a weekly news magazine, roundtable discussion and debate, and research-based writing will be constants of the course. Note: students will be expected to speak frequently and in depth, as well as write extensively on issues, and both will form the better part of the final course grade.

PSYCHOLOGY I

Grade Level: 11 and 12

Prerequisites: None/ Credit: 0.5

This course is designed to provide the college-bound student with an introduction to psychology, with an emphasis on major theoretical perspectives. Topics include functions of the brain, sensation, perception, learning, memory, and consciousness. Reading, discussion, writing, and experimentation will be emphasized. NOTE: students should have strong reading and writing skills in order to excel in this course.

PSYCHOLOGY II

Grade Level: 11 and 12

Prerequisites: None/ Credit: 0.5

This course is designed to provide the student with an introduction to psychology, with an emphasis on major theoretical perspectives. Topics include infant/child development, adolescent/adult development, personality, psychological disorders, and therapy. Reading, discussion, writing, and application of learning to one's own life will be emphasized. NOTE: students should have strong reading and writing skills in order to excel in this course.

SOCIOLOGY I

Grade Level: 11 and 12

Prerequisites: None/ Credit: 0.5

This course is designed to provide the student with an introduction to sociology, with an emphasis on major theoretical perspectives. Topics include social interaction, group dynamics and socialization. Reading, discussion, writing and research will be emphasized. NOTE: Students should have strong reading and writing skills in order to excel in this course.

SOCIOLOGY II

Grade Level: 11 and 12

Prerequisites: None/ Credit: 0.5

This course is designed to provide the student with an introduction to sociology, with an emphasis on major theoretical perspectives. Topics include social class, culture, and collective movements/social change. Reading, discussion, writing, and research are emphasized. NOTE: Students should have strong reading and writing skills in order to excel in this course.

AP EUROPEAN HISTORY A, B, and C

Grade Level: 11 and 12/ Credit: 1.5

Prerequisites: Recommendation of a social studies teacher

AP European History is a college-level course that examines European history and its subsequent effect on the rest of the world. AP European History examines European history from a political, social, intellectual, economic and diplomatic perspective. The course covers European history beginning with the Renaissance and ends with the dissolution of Communism in Eastern Europe. Students should expect to evaluate the history of Europe through the changes in thought and philosophy that occurred as Europe transformed over time. Examining primary sources from the era will play a significant role in the study of European history. Seminar-style discussions about the ideas and philosophies of the different eras of European history will also be a major part of the class. It is the intent for students to conclude their AP European History experience by taking the AP Exam for college credit in May. This class is graded on a 5 point weighted grading scale.

AP UNITED STATES HISTORY A, B, and C

Grade Level: 10, 11, and 12/ Credit: 1.5

Prerequisites: Recommendation of a social studies teacher

AP U.S. History is a college level history class culminating with the National AP Exam held each spring. Satisfactory scores on the National Examination (as determined by the student's chosen college/university for post-HS studies) will result in the award of college credit hours (likewise determined individually by institutions of higher learning and as such will vary between students / scores achieved). Evidence supported in writing and investigative skills are constant. Satisfies the US History I and II requirement with successful completion of all three trimesters. This class is graded on a 5 point weighted grading scale.

AP WORLD HISTORY A, B, and C

Grade Level: 9(pilot year) 11 and 12/ Credit: 1.5

Prerequisites: Recommendation of a social studies teacher

AP World History is a course that approaches World History by examining the major developments and interactions that have occurred throughout history from its beginnings to the present day. Understanding of World History is becoming increasingly important as the world's

social and economic climate becomes more global. AP World History is a course intended to be comparable to the rigors of a college history course. Students should expect to make comparisons throughout history in terms of political, religious, social, cultural and other societal characteristics. Students should also expect to analyze how factors such as the environment, trade, technology and conflict have shaped different civilizations throughout history. Examining different interpretations of major events and other primary sources is an integral portion of the course as well. It is the intent for students to conclude their AP World History experience by taking the AP Exam for college credit in May. This class is graded on a 5 point weighted grading scale.

WORLD LANGUAGE DEPARTMENT

Many colleges and universities recommend or require the equivalent of two years of study in the same world language in order to attain a certain level of language proficiency.

Students who have previous experience with French or Spanish should take competency tests to earn credit. Heritage and native speaking students can earn credit for their language proficiency without testing, if the student comes from a multilingual household. Placement tests should be taken by students who do not seek credit for their knowledge of French or Spanish, but rather wish to ensure they are enrolled at the appropriate level of study in the language. A placement test may be recommended for many exchange students who enroll in August.

FRENCH I A

Grade Level: 9, 10, 11, and 12

Prerequisites: None/ Credit: 0.5

Students in French I A are introduced to basic greetings, numbers, colors, telling time, and personal attitudes. Specifically, French I A students learn how to talk about hobbies, sports, friends, shopping and school. Grammar topics include conjugations of *re* verbs as well as *faire*, and *avoir*, demonstrative articles, adjective agreements, negations, direct, and indirect articles and pronoun usage. Cultural lessons include the Euro, schooling in France, food, family, Québec and the geography of France, Europe, and the Francophone world.

FRENCH I B

Grade Level: 9, 10, 11, and 12

Prerequisites: French I A/ Credit: 0.5

Students in French I B build on their knowledge of the first trimester. The second trimester includes grammar lessons on the verbs être, prendre, aller, and vouloir possessive adjectives, question formation, the imperative, re verbs, the near future, partitives, and en. Students learn to talk about their family, chores around the home, social plans, dining out, and giving orders or suggestions. Culturally students study Paris in depth as well as the geography of French speaking Africa and French cuisine.

FRENCH II A and B

Grade Level: 10, 11, and 12/ Credit: 1.0

Prerequisites: Successful completion of French I, or approval of instructor.

This course begins with an in-depth review of French I in order to build upon the first year of study. Students in French II A study more complicated grammatical structures including an introduction to the past tense, regular and irregular IR verbs, geographical prepositions, and the pronoun y. Readings become more lengthy and students are expected to write beyond simple sentences about themselves, their weekend activities, their clothing styles, vacations, and food. Cultural studies include units on Western Africa, the South of France, and Martinique. Students complete their second year (French II B) of study with an autobiographical project. Students at each level of French are exposed to dozens of French songs, video clips, and a couple of feature films in the target language. Daily routines are conducted in the target language and all students are expected to use French as often as possible. Graded speaking activities are done in small groups, with a partner, via the Internet, and one and one with the teacher.

SPANISH I A and B

Grade level: 9, 10, 11, and 12

Prerequisites: None/ Credit: 1.0

Spanish I serves as an introduction to the Spanish language. Spanish I students learn the basic vocabulary and grammar they need to greet other people and to speak, read, and write about topics that relate to their daily lives. They are also introduced to Spanish and Latin American history and culture, with particular emphasis on the Hispanic culture in the United States.

SPANISH II A and B

Grade Level: 9, 10, 11, and 12/ Credit: 1.0

Prerequisite: Successful completion of Spanish I or written approval from the instructor.

Vocabulary focus: naming places, events and transportation around town, common main dish items on a menu, describing a house and talking about household chores, discussing sports and maintaining a healthy body. Grammar focus: present tense stem-changing verbs, present tense verbs with irregular yo forms, ordinal numbers, and affirmative tú commands. Cultural focus: covers but is not limited to aspects of Spain, Ecuador, and the Dominican Republic—and representative artists, architecture, traditions, music, indigenous cultures, and modern-day heroes of these countries.

SPANISH III A and B

Grade Level: 10, 11, and 12/ Credit: 1.0

Prerequisite: Successful completion of Spanish II or written approval from the instructor.

Spanish III focuses on building students' ability to use the language in unfamiliar situations. Emphasis is placed on increasing students' listening proficiency so they can understand language spoken at a normal rate. Students are expected to read increasingly complex texts in Spanish throughout the course.

SPANISH IV A and B

Grade Level: 11 and 12/ Credit: 1.0

Prerequisites: Successful completion of Spanish III or written approval of the instructor.

This course will complete the student's four-year program of high school Spanish. It includes a review of all major grammar points covered in levels I, II, and III. Students will continue to improve their language proficiency through the study of advanced level grammar topics and more sophisticated vocabulary. They will enjoy reading authentic literature from exemplary authors of the Spanish-speaking world.

SPECIAL EDUCATION DEPARTMENT

Special education is instruction that is specially designed to meet the unique needs of children who have disabilities. This definition of special education comes from IDEA, the Individuals with Disabilities Education Act. This law gives eligible children with disabilities the right to receive special services and assistance in school.

At Ludington High School, students with Individualized Education Plans (IEPs) are assigned case managers who teach within the special education department to manage and oversee the special education process. LHS offers a comprehensive special education program that includes specialized sections of Michigan Merit Curriculum (MMC) Requirements to meet the needs of students with IEP accommodations seeking a traditional LHS graduation diploma.

The following courses are designed to meet MMC Requirements and seek to meet the general education curriculum within an accommodated setting in support of Individualized Education Plans. Like all special education courses, students are assigned as needed and in compliance with plans. These courses are not selectable and placement is determined by appropriate staff at LHS. Prerequisites for courses are determined by case managers

RELATED SKILLS/ ENGLISH

ENGLISH 9 A

Grade Level: 9

Prerequisites: None/ Credit: 0.5

This English 9 A meets half of the required English credits for 9th grade. This course integrates reading, writing, and critical thinking skills to promote literacy. Students learn text purposes, examine short stories, dramas, and novels as well as explore literary terms and techniques to aid them in understanding, analyzing, and evaluating literature. Communication skills are developed through writing and speaking and practiced throughout the course. English 9A also focuses on recognizing and communication connections between text, composition, discussion, and student experience.

ENGLISH 9 B

Grade Level: 9

Prerequisites: None/ Credit: 0.5

This English 9 B completes the last half of required English credits for 9th grade. This course is designed to be taken after the successful completion of English 9. This course uses a thematic approach to study various literary genres including poetry, the epic poem, and Shakespearean drama. Each unit emphasizes the use of interpretive and critical thinking skills that are needed

to understand all types of literature. English 9 B promotes lifelong literacy beyond recall and comprehension to make connections between works, genres, and life outside of the classroom.

ENGLISH 10 A

Grade Level: 10

Prerequisites: English 9 A and B or placement by case manager/ Credit: 0.5

English 10A is a one-trimester course designed to increase language-arts skills in the areas of communication, reading decoding and comprehension, written expression, and critical thinking. Students are encouraged to speak, read, write, and think critically by analyzing themes, literary voice, and literary analysis. Students will apply these skills in written and spoken exercises, as well through various classroom activities.

ENGLISH 10 B

Grade Level: 10/ Credit: 0.5

Prerequisites: English 9 A, B and English 10 A or placement by case manager

English 10 B is a one-trimester course designed to increase language arts skills in the areas of speaking, reading, decoding and comprehension, written expression, and critical thinking. Students are given the opportunity to increase these skills through lessons in poetry, journaling, development of a research paper, argument analysis, and independent reading. Students are encouraged to read and think critically through lessons designed to prompt analysis of themes, literary techniques, and inferential thinking. Students will apply these skills in various written and spoken exercises, as well as various classroom activities.

ENGLISH 11 A and B

Grade Level: 11/ Credit: 1.0

Prerequisites: English 9 A, B and English 10 A, B or placement by case manager

English 11 A and B courses continue to develop students' writing skills, emphasizing clear, logical writing patterns, word choice, and usage, as students write essays and begin to learn the techniques of writing research papers. Students work to increase language-arts skills in the areas of reading decoding and comprehension, written expression, and critical thinking. Finally, students continue to read works of literature, which often form the backbone of the writing assignments

ENGLISH 12 A

Grade Level: 12/ Credit: 0.5

Prerequisites: English 9 A, B and English 10 A, B, English 11 A, B or placement by case manager

English 12 A blends composition and career readiness skills together. Students write informative essays to create a Senior Memory Book demonstrating their language arts skills. They will also go through the job hunting process where they will research job openings, create a cover letter, resume' and complete a variety of job applications. It will culminate with a mock interview as part of the career readiness unit.

ENGLISH 12 B

Grade Level: 12/ Credit: 0.5

Prerequisites: English 9 A, B and English 10 A, B, English 11 A, B or placement by case manager English 12 B is a one trimester course designed to increase language-arts skills in the areas of communication, reading decoding and comprehension, written expression, and critical thinking. Students will create critical and comparative analyses of selected literature focusing on the topic of maturity. Typically, students primarily write multi-paragraph essays, but they may also write one major research paper.

RELATED SKILLS/ MATHEMATICS

PRE ALGEBRA A

Grade Level: 9

Prerequisites: None/ Credit: 0.5

This course is designed to increase students' foundational math skills and prepare them for Algebra 1 by covering a variety of topics such as solving simple and multi-step equations, solving equations with variables on both sides, rewriting equations and formulas, graphing linear equations, finding and graphing slopes, and solving systems of linear equations.

PRE ALGEBRA B

Grade Level: 9

Prerequisites: Pre Algebra A or placement by case manager/ Credit: 0.5

This course is designed to follow the successful completion of Pre Algebra A and continues to prepare students for Algebra by focusing on topics such as graphing proportional relationships, graphing linear equations in slope-intercept form and graphing linear equations in standard form.

ALGEBRA A

Grade Level: 9,10, and 11

Prerequisites: Pre Algebra A, B or placement by case manager/ Credit: 0.5

This course is designed to meet the state expectations in Algebra including MME/CCSS. Topics include solving simple, multi-step equations, solving equations with variables on both sides, rewriting equations and formulas, graphing linear equations in slope-intercept and standard forms, writing equations in slope-intercept and point-slope form along with solving real life problems.

ALGEBRA B

Grade Level: 9,10,and 11/ Credit: 0.5

Prerequisites: Pre Algebra A, B and Algebra A or placement by case manager

A continuation of Alg which includes writing and graphing inequalities, solving inequalities using addition, subtraction, multiplication, and division, solving multi-step linear inequalities in 1 and 2 variables.

ALGEBRA C

Grade Level: 9, 10, and 11/ Credit: 0.5

Prerequisites: Pre Algebra A, B and Algebra A, B or placement by case manager

A continuation of Alg which includes solving systems of linear equations by graphing, substitution, elimination, special systems of linear equations, and systems of linear inequalities, finding the domain and range of functions, discrete and continuous domains, linear function patterns, function notation, comparing linear and nonlinear functions, and arithmetic sequences, properties of square roots, exponents, radicals, and rational exponents, exponential functions, growth, decay, and geometric sequences.

GEOMETRY A

Grade Level: 10,11,and 12/ Credit: 0.5

Prerequisites: Pre Algebra A, B and Algebra A,B,C or placement by case manager

Geometry A requires students to be able to name points, lines, and planes, measure and construct segments, using midpoint and distance formulas, finding perimeter and areas, measure and constructing angles, describing angle pairs, describing and applying postulates and theorems to pairs of lines and angles, parallel lines and transversals, and equations of parallel and perpendicular lines.

GEOMETRY B

Grade Level: 10,11,and 12/ Credit: 0.5

Prerequisites: Pre Algebra A, B ,Algebra A,B,C and Geometry A or placement by case manager
Geometry "B" is a continuation of building on concepts from Geometry "A". Students will translate, reflect, and rotate figures along with being able to describe triangle congruence theorems, dilations, similarity, and transformations. Students will explore special segments in triangles including perpendicular and angle bisectors, medians, altitudes, and midsegments. Inequalities within triangles are also explored.

DATA ANALYSIS

Grade Level: 10,11, and 12/ Credit: 0.5

Prerequisites: Pre Algebra A, B and Algebra A,B,C and Geometry A,B or placement by case manager

The purpose of this course is to introduce students to the concepts and skills needed for collecting, organizing, analyzing, and drawing conclusions from data. Themes will include sampling, exploring data numerically and graphically, finding patterns using probability, and using statistics features of the Texas Instruments graphing calculator.

RELATED SKILLS/ SCIENCE

EARTH SCIENCE A and B

Grade Level: 9, 10

Prerequisites: None/ Credit: 1.0

Earth Science has smaller class sizes, and a more individualized focus as well as a class learning pace that meets the needs of exceptional learners. The class will have a focus on the physical earth including physical and climate changes. An examination from the core to the outer reaches of the atmosphere including interactions and relationships between layers. Units in this course will include: History of Earth, Space systems, Earth systems (geosphere, hydrosphere, biosphere, atmosphere), Weather and climate, and Human sustainability. This course is two trimesters.

BIOLOGY A and B

Grade Level: 10

Prerequisites: None/ Credit: 1.0

Biology is designed to provide information regarding the fundamental concepts of life and life processes. These topics include: homeostasis, complex organisms, photosynthesis and respiration, carbon, macromolecules, cycling of matter, ecology, genetics and traits, natural selection and evolution.

PHYSICS A and B

Grade Level: 10,11,12/ Credit: 1.0

Prerequisites: Earth Science-2 trimesters and Biology-2 trimesters, it is possible to take concurrently with earth or biology sophomore year with instructor approval.

Physics places emphasis upon application of principles, not a memorization of facts and symbols. The course is designed to enable students to understand the physics of everyday life, as well as serve as a foundation of basic physics principles. Subject matter is supported by math applications to hands-on activities. Topics covered in this course include: centripetal force, structural design, speed, acceleration, velocity, momentum, air resistance, and gravity. This is a two trimester course.

RELATED SKILLS/ HISTORY and SOCIAL SCIENCE

WORLD HISTORY A

Grade Level: 9

Prerequisites: None/ Credit: 0.5

World History A is designed to give students an introduction to the study of geography as well as the history of several world regions. The Middle East, Asia and Africa are the focus areas of the course. A small unit on key World Organizations is also included. Many different methods will be used in studying these topics such as reading, writing, simulation experiences, mapping and use of other social studies skills.

WORLD HISTORY B

Grade Level: 9

Prerequisites: None/ Credit: 0.5

World History B examines the history of the world using a regional approach. The primary focus of the course is Europe and Oceania as well as an examination of World Religions. Many different methods will be used in studying these topics such as reading, writing, simulation experiences, mapping and use of other social studies skills.

US HISTORY I

Grade Level: 10,11

Prerequisites: None/ Credit: 0.5

Students will study Industrialization to the beginnings of Progressive Reforms, the rise of Imperialism up to the causes of World War I, and the ramifications of the war on the United States. The end of the course will emphasize the political, social, and economic changes of the interwar years with focus on the events that led to the Great Depression.

US HISTORY II

Grade Level: 10,11

Prerequisites: None/ Credit: 0.5

This course continues with World War II and its impact on the United States both home and abroad. Special emphasis will be placed on the political, social, and economic changes in a post WWII world including the Cold War, Vietnam, Civil Rights Movement, as well as recent events in American Society.

CIVICS

Grade Level: 11 and 12

Prerequisites: None/ Credit: 0.5

This course explores the rights and responsibilities of citizens, with an emphasis on the Constitution and the democratic process. The pace of this course is designed for the exceptional learner.. This course has smaller class sizes, and a greater focus on individual learning styles and pace of the class. Role-plays, simulations, debates and other active teaching methods are employed. Students will learn how to reason effectively and create strong oral and written arguments. This is a required class under the new MME requirements.

ECONOMICS

Grade Level: 11 and 12

Prerequisites: None/ Credit: 0.5

This course is an integrated study of the American economic system. The pace of this course is designed for the exceptional learner with smaller class sizes and a greater emphasis on individual learning styles. Topics will include: the effects of various economic systems on achieving broad economic societal goals, the problem of scarcity and how producers confront it when supplying the marketplace, how the government predicts economic trends and directs the economy through monetary and fiscal policy. Multiple instructional strategies will be used including reading, note-taking, simulations, and group activities. This is a required class under the new MME requirements.

SPECIAL EDUCATION SUPPORT

RELATED SKILLS A

Grade Level: 9,10,11 and 12

Prerequisites: None/ Credit: 0.5

Related Skills A is aimed at helping students develop the necessary habits to become a productive individual. This class focuses on improving study skills. A mini-lesson is taught daily covering habits of successful learners, effective studying, test taking and note taking, and reading strategies. Assignments may include journal responses, group activities, instructional videos, reading passages, worksheets, and tests and quizzes. The remainder of the class period is used by students to complete assignments for other classes, to study, or for independent reading. Students are graded on a combination of assignments and work ethic.

RELATED SKILLS B

Grade Level: 9,10,11 and 12

Prerequisites: None/ Credit: 0.5

Related Skills B is aimed at helping students develop the necessary habits to become a productive individual in the community. This class focuses on improving study skills. A mini-lesson is taught daily covering soft skills, hard skills, conflict resolution, career pathways, and employment process. Assignments may include journal responses, group activities, instructional videos, reading passages, worksheets, and tests and quizzes. The remainder of the class period is used by students to complete assignments for other classes, to study, or for independent reading. Students are graded on a combination of assignments, work ethic, and tests.

RELATED SKILLS C

Grade Level: 9,10,11 and 12

Prerequisites: None/ Credit: 0.5

Related Skills C is aimed at helping students develop necessary habits to become a financially productive individual in the community. This class is centered around Dave Ramsey's Foundations in Personal Finance book. This book focuses on saving, budgeting, credit, debt, financial planning, insurance, income, taxes, and giving. The remainder of the class period is used by students to complete assignments for other classes, to study, or for independent reading. Students are graded on a combination of assignments, work ethic, and tests.

EMPLOYABILITY SKILLS

Grade Level: 9,10,11 and 12

Prerequisites: None/ Credit: 0.83 per trimester

The Employability Skills Class focuses on skills that are not job specific, but on skills that are common across all industries and relevant to all employees, from entry level to CEO. What are these “employ + ability skills” or “soft skills”? To list a few: dependability, conscientiousness, responsibility, positive attitude, confidence, motivation, initiative, ability to use criticism, decision making, problem solving, honesty. Specifically, the class incorporates these themes: ‘Who am I’, “Basic Work Habits for the Beginner”, “Eight Ways to Find a Job”, “Above Average Applications”, “Budgeting”, “Selling Yourself In An Interview”, “Anger Management” and more. Over the course of the year long class, as many as 25 local businesses will be visited. While visiting each job-site the students tour the facility and have the opportunity to interview the management. We try to instill in each student an “above average” attitude. We help students to recognize their abilities, potentials and interests as well as help them identify their weaknesses and work on them.

WORKPLACE SKILLS

Grade Level: 9,10,11 and 12

Prerequisites: None/ Credit: 0.5 per trimester

The goal of a workplace skills class is to give special education students the opportunity to practice employability skills in a supported school environment. Daily or weekly tasks are assigned to the student to complete within the school day. Emphasis will be on completing jobs accurately and with increasing speed. As student’s gain skills they will become more prepared to hold employment in the community.

DAILY LIVING SKILLS

Grade Level: 9,10,11 and 12

Prerequisites: None/ Credit: 0.5 per trimester

Daily Living provides information about a wide range of subjects to assist students in becoming wise consumers and productive adults. These courses often emphasize such topics as goal-setting, decision-making, and setting priorities; money and time management; relationships; and the development of the self. Practical exercises regarding selecting and furnishing houses, meeting transportation needs, preparing food, selecting clothing, and building a wardrobe are often integral to these classes. In addition, specific topics such as insurance, taxation, and consumer protection may also be covered.

LIFE SKILLS

Grade Level: 9,10,11 and 12

Prerequisites: None/ Credit: 0.5 per trimester

Life Skills teaches the skills and strategies helpful in becoming more focused, productive individuals. These courses typically emphasize goal-setting; decision-making; managing time, energy, and stress; and identifying alternatives and coping strategies. They may also allow students to explore various career and lifestyle choices.

TRAILBLAZER'S WOODWORKING

Grade Level: 9,10,11 and 12/ Credit: 0.5

Prerequisites: None

This course is designed to offer cognitively impaired students from the Trailblazer's special education classroom the opportunity to experience basic woodworking skills and building. This course is a team taught course with the LHS industrial arts teacher, the Trailblazer classroom teacher and aides.

TRAILBLAZER'S ART

Grade Level: 9,10,11 and 12/ Credit: 0.5

Prerequisites: None

This course is designed to offer cognitively impaired students from the Trailblazer's special education classroom the opportunity to experience visual art project development. This course is a team taught course with the LHS art teacher, the Trailblazer classroom teacher and aides.

CAREER AND TECHNICAL EDUCATION

What is it?

Career and Technical Education (CTE) brings into focus the integral relationship between education and employment. Offered to all students in the Mason-Lake Intermediate School District, including students of LHS, CTE joined with West Shore Community College to offer junior and senior high students courses that explore and educate in specific career fields and pathways.

Are CTE classes the same as college classes?

The answer to this question is a qualified no, but many CTE programs articulate credit to WSCC, Ferris State University, or other university programs. Articulation means that if students do well enough on competency tests at the end of the program, he/she may be granted credit or have credit requirements waived at the college level. To articulate, students must talk to the CTE instructor and coordinate the intention to articulate credit at the start of the program. LHS counselors are not in charge of articulating credit to the college; CTE administration can best help with that effort.

Most students, however, take CTE for high school credit only. Unlike the college, there are no enrollment requirements and the program is open to any junior or senior high school student whose career goals align with the education that CTE affords. In addition, CTE students are also on the trimester schedule and each takes place during either the first and second hours (Morning CTE) OR fourth and fifth hour (Afternoon CTE) time slots all year.

What happens if too many students request to take the same program?

While all programs are available to junior and senior level students for request, availability cannot be guaranteed for all since class size is shared with the other schools in the district. In the case of too many requests, seniors are given first consideration for placement in hopes of juniors being able to take the program in the next year. After that, placement is determined by the student's career interest, attendance records or GPA and, in some cases, personal interview by the instructor. The most popular programs are Allied Health and Graphic Communications and those are the ones that a student may have to wait to take as seniors. When selecting any CTE program, especially the more popular ones, consider what six alternative courses may substitute for those CTE courses or select an alternate program, if another is of great interest and be sure to communicate that with the LHS counselor.

How do students get to West Shore and how much credit is it worth?

All classes are two-hour blocks and are full year programs for a total of six trimester courses, but offer 2.5 credits instead of a full 3. One half credit is subtracted because of the loss of instructional time while transporting to and from the center. Bus transportation is provided to the CTE Center for Morning and Afternoon CTE students.

CTE BUS SCHEDULE

Morning CTE

Departs LHS @ 8am

Arrives WSCC Rybicki Center @ 8:10am - Pick up @ 10:16am

Arrives WSCC Tech Center @ 8:20am - Pick up @ 10:10am

Arrives WSCC Rec Center @ 8:22am - Pick up @ 10:05am

Return to LHS @ 10:25am

Afternoon CTE

Departs LHS @ 12:22pm

Arrives WSCC Rybicki Center @ 12:32 pm - Pick up @ 2:21pm

Arrives WSCC Tech Center @ 12:39pm - Pick up @ 2:25pm

Arrives WSCC Rec Center @ 12:45pm - Pick up @ 2:32pm

Return to LHS @ 2:41pm

CAREER AND TECHNICAL EDUCATION

The West Shore ESD Career and Technical Education (CTE) program was established in 1989 by the Mason-Lake ISD, and has been providing industry relevant CTE courses ever since. The Tech Center has a long standing partnership with West Shore Community College which shares its facilities, equipment, and curriculum to offer an educational setting that is truly unique. Over 400 students from Mason, Lake, Oceana, and Manistee counties take part in our CTE programs each day.

CTE's mission has always been to provide students the skills to be a success in whatever their future may hold. The CTE teachers work closely with over 100 local business and industry professionals to ensure that our programs prepare students for both the local and national workforce. They also work closely with WSCC, Ferris State University, Baker College, and Davenport University to ensure that programs also focus on college preparation, and because of that CTE students have the opportunity to earn college credits while taking CTE programs.

ARTS AND COMMUNICATIONS CAREER PATHWAY

GRAPHIC COMMUNICATIONS / Credit: 2.5

Graphic Communications is an in-depth study of printing and allied trades. Students will receive training in safety practices, job planning and layout, strong emphasis on desktop publishing, offset printing and screen printing. The class structure is set up to resemble an industrial situation.

Related Careers: Graphic Arts Designer Graphic Illustrator

Art Director Commercial Artist Photographer Production Supervisor Industrial Designer Screen Printer Desktop Publisher Prepress Technician

What High School Classes Will Help?

Art, Math, Computers and English Composition

The Graphic Communications industry is huge. Think of all the companies that manufacture products for sale. They include automobiles, boats, outboard motors, sewing machines, lawn furniture, furnaces, windows, jewelry, clothing, computers. . . The list is practically endless. Every one of these manufacturers hires graphic communications firms to produce brochures to

inform prospective buyers of the merits of their products. There are thousands of catalogs and magazines that require graphic communications specialists to design their layouts to attract the attention of readers. Print work shows up on everything from soup can labels to footballs. There will never be a shortage of work in the Graphic Communications industry

Graphic Communications Students will receive experience in:
Creating and Printing Designs

Screen Printing T-shirts

Operate Offset Printing Presses

Graphic Design using

Adobe Illustrator, Photoshop, and InDesign Photo Editing

Web Design

Creating & Editing Videos

Embroidery

Airbrushing

Printing on Mugs & Mouse pads

Create Vinyl Decals

Desktop Publishing

Packaging Design

Safety Practices

Learn about the Printing Industry

BUSINESS, MANAGEMENT, MARKETING AND TECHNOLOGY CAREER PATHWAY

CULINARY ARTS/ HOSPITALITY MANAGEMENT/ Credit: 2.5

With the ProStart® and ServSafe® curriculums sponsored by the National Restaurant Association

Educational Foundation this program offers a current overview of the food industry. Students will learn kitchen essentials, including equipment and culinary techniques and management essentials such as communication, cost control and customer service. This course is fast-paced and includes the opportunity for four nationally recognized certificates of achievement.

Related careers:

Chef, Restaurant Owner/Manager Food Science, Dietician/Health Services Director of Food Services Catering & Event Management Sales & Marketing Lodging/Hospitality Services

Articulation Agreements

College partnerships/articulation credit: West Shore Community College, Ferris State University and other nationally recognized colleges and universities (for more information see the ProStart® website www.nraef.org).

DIGITAL MEDIA TECHNOLOGY / Credit: 2.5

Digital Media is a project based class focused on several different areas of technology.

Students will Experience: Creating Websites, Creating and Editing Videos Animation and Flash Animation Photo Editing, Audio Mixing and Creating and Printing Designs.

Related Careers:

- Computer Programmer Computer Security Professional Computer Service Technician
- Computer System Analyst Micro Computer Specialist Website Designer Webmaster
- Internet Consultant

What High School Classes Will Help?

Technical Writing, English, and Algebra

Articulation Agreement

CTE students completing one year of Digital Media will be eligible, upon meeting certain guidelines and upon graduation from high school, to receive advanced credit at West Shore Community College.

BEDP 110 Intro. to Comp. Concepts - 3 cr.

BEDP 160 Desktop Applications - 3 cr.

Total Possible Credits: 6

IT: NETWORKING/Credit: 2.5

- Learn how to troubleshoot technology issues in real-world scenarios
- Explore emerging technologies including virtual reality, tablets, smartphones, and cybersecurity
- Obtain a CompTia IT Fundamentals, CompTia A+ and/or CompTia Network+ certification, which are highly marketable certifications in the Information Technology field.

Related Careers:

Network Administrator, PC Technician, Information Security, and Computer Systems Analysis

ENGINEERING/MANUFACTURING AND INDUSTRIAL TECHNOLOGIES CAREER PATHWAY

AUTOMOTIVE TECHNOLOGY / Credit: 2.5

Students will have the opportunity to work and learn from many vehicle brands and models just as industry certified technicians experience on a daily basis within a dealership or independent automotive service shop setting. Upon completion of requirements, students can become National Automotive Technicians Education Foundation (NATEF) Certified.

Related Careers:

Automotive Service Technician

Maintenance and Light Repair Service Technician Automotive Service Writer

Automotive Service Manager

Automotive Designer/Engineer

Automotive Parts Specialist

Vehicle Sales Representative

Airplane Technician

Automotive Welder

Collision Repair Technician

Race Car Fabricator/Builder

Racecar Pit Crew Member

Motorcycle Service Technician

Power Boat Technician

Articulation Agreements:

West Shore Community College Baker College

Muskegon Community College Ferris State University

CONSTRUCTION TRADES/ Credit: 2.5

This course covers all phases required to build a house. Content areas include cement work, plumbing, wiring, heating, roofing, dry walling, painting, etc. Students study building codes, learn how to obtain building permits and how to estimate the cost of building a structure. This is an ideal class for students who expect to earn their living in one of the building trades or for students who want to learn building techniques/skills for their own personal use. Students wishing to take a second year of Building Trades Technology must have the instructor's approval. This class is 95% hands on and students will spend most of their day using tools and materials to build structures.

Related Careers:

Carpenter

Cement Mason

Iron Worker

Air Hammer Operator,

Maintenance Worker

Concrete Paving Laborer

Construction Worker

Equipment Operator

Construction Management

Electrician

Fabricator

Drywaller

Plumber

Articulation Agreements:

Ferris State University

MECHATRONICS/ Credit: 2.5

The advanced manufacturing course is designed to give students educational experiences in several different facets of manufacturing. Encourages creative thinking and problem through the use of technology and machinery The course offers students many areas of engineering related skills. Students will learn about CNC machining, robotics, and computer aided design. During the second half of the year students will form teams which will take a project from concept to completion. Students design and build and race an electric car. The students will use design software such as CADKEY, SOLIDWORKS AND MASTERCAM. Mechatronics has a number of state of the art machines used in the manufacturing industry. For example, CNC MILLING machines, CNC lathes, RAPID PROTOTYPING machines and CNC controlled PLASMA cutting equipment.

Students will:

- Learn about a variety of manufacturing processes and specialized equipment.
- Develop an understanding of the role manufacturing plays in the global marketplace.
- A learning environment that provides a hands-on/project oriented approach.

Curriculum Overview:

Critical Thinking Skills

Practical Problem Solving Skills Team Building Skills

Hands-on Instruction

Field Trips

Integration of Math, Reading, and Technology Career-based Learning Experience

Worldwide Interactive Network (WIN) WorkKeys Tutorial

Cale

Units of Study

Prototyping

Blueprint Reading

Sketching

Precision Measurement

Benchwork

Drafting/Design

CNC-CAM

Materials/Properties

Manual Machining

Machining Operations

Safety

Manufacturing Profile

Mechatronics is designed for the student who is interested in the Engineering, Manufacturing and Industrial Technology career pathway.

Careers in this pathway are related to technologies necessary to design, develop, install, and maintain physical systems. Are you mechanically inclined and practical? Do you like reading diagrams and blueprints? Are you curious about how things work? Do you enjoy learning in a hands-on environment? If so, this class is for you!

Related Careers:

Engineering/Design; Inventor; Architecture; CNC Programmer; Industrial Machinery Mechanics; Mechanical Drafters; Manufacturing Machine Operator; Plastic Injection Mold Maker; Quality Control Specialist; First-Line Supervisors and Managers; Machinist; Multiple Machine Tool Setters

WELDING TECHNOLOGY/ Credit: 2.5

The Welding Technology program is made up of lecture and laboratory instruction in basic oxy acetylene and arc welding. Even though lecture is part of instruction, greater emphasis is placed on "hands-on" laboratory experiences in welding. Instruction includes basic safety principles and introduction to flat and vertical oxyacetylene welding, brazing of mild steel and cast iron. Basic arc welding in flat, horizontal, and vertical positions with mild steel and low hydrogen electrodes is studied and practiced in the laboratory. In addition, operation and application of arc welding, oxyacetylene welding, brazing and cutting will be experienced. Students must pass a welding metal break test for all laboratory projects. Students wishing to take a second year of Welding Technology must have the instructor's approval.

Related Careers:

ARC Welder; Gas Welder; Combination Welder; Experimental Welder; Assembler Welder; Fitter Welder; Assembler Brazier; Gun Welder; Tack Welder; Production Line Welder

What High School Classes will help?

English, Metals I and II, Algebra, Geometry and Physical Science

Articulation Agreement

CTE students completing one year of Welding Technology will be eligible, upon meeting certain guidelines and upon graduation from high school, to receive advanced credit at West Shore Community College.

TWLD 100 Basic Oxy. & Arc Welding - 4 cr. TWLD 101 Welding Technology 1 - 2 cr. TWLD 104 Basic Arc Lab - 4 cr.

Total Possible Credits: 10

Highlights of Program

Hands-On Activities Physical Work

Guest Speakers

Field Trips

State-of-the-Art Equipment

HEALTH SCIENCES CAREER PATHWAY

ALLIED HEALTH SCIENCES/ Credit: 2.5

The Allied Health Technology program is a health care occupations cluster. This program is academically challenging but success is highly achievable. Students, after mastering the "CORE" tasks, move into progressively more specific and/or advanced areas of instruction. The "CORE" curriculum is designed to provide students with the concepts, knowledge, and attitudes basic to further progression in the job specific area. CORE skills are broad and transferable and include the following objectives: academic foundation, communication, systems, employability skills, legal and ethical responsibilities, and safety practices.

Related Careers:

Registered Nurse; Dietitian; Physical Therapist; Clinical Laboratory Worker; Dental Hygienist; Physician's Assistant; Emergency Medical Tech.; Medical Assistant; Physician; Teacher; Radiology Technician

Articulation Agreement:

CTE students completing one year of Allied Health Technology will be eligible, upon meeting certain guidelines and upon graduation from high school, to receive advanced credit at West Shore Community College.

HEALTH OCCUPATIONS

Employment opportunities in the healthcare field are at an all-time high because of qualified worker shortages and increased demand. Careers in the health field offer diversity, personal satisfaction, flexibility, salary and benefit packages and advancement opportunities with experience and further education.

Course Overview

This course is designed to expose students to a variety of health-related occupations. Students taking this class will be interested in providing health care services that can help identify, evaluate, prevent, and treat diseases. The core curriculum addresses the academic foundation as well as the fundamentals of caregiving and the job skills necessary for a variety of healthcare positions. Clinical experiences may include nursing homes, hospitals, pharmacies, clinic positions, veterinary offices, urgent centers, dentists, physicians' offices, laboratories and rehabilitation centers. The program is divided into three components - lecture, laboratory and clinical experience. Science, math (including metrics) and reading are a large part of the course.

Potential Careers

Participation in Health Occupations and further training can help prepare you for jobs in areas with an **Associate's degree**(2 year)

- Registered Nurse
- Dental Hygienist
- Veterinary Technician
- Radiography Technician
- Respiratory Care
- Health Fitness Specialist
- Surgical Technician
- Medical Office Mgmt.

Bachelor's Degree or Higher

- Physical or Occupational Therapist
- Physician or Physician Assistant
- Health Education Specialist
- Public Health Official
- Exercise Science or Cardiac Rehab
- Dietician
- Counselor or Therapist
- Healthcare Administration

Primary Units of Instruction (lecture, demonstration and lab work):

- Health Careers
- Anatomy & Physiology
- Medical Terminology
- Nutrition and Wellness
- Safety in the Workplace
- Legal/Ethical Standards
- Infection Control
- First Aid/CPR Certification
- Communication
- Patient Assessment (Vital Signs)
- Healthcare Delivery Systems
- Pre-Employment Skills

HUMAN SERVICES CAREER PATHWAY

CRIMINAL JUSTICE / Credit: 2.5

This course will provide an overview of the Criminal Justice System to include: Law Enforcement, Courts, Prosecution, Corrections, and Juvenile Justice. The student will

experience simulations and practical laboratory work in fingerprints, health and fitness requirements, basic CPR and Standard First Aid Training, Crime Scene Investigation, Law Enforcement Information Network (LEIN) operation, traffic operation (including accident re-construction and vehicle stops), the study of controlled substances and mock trials. Field trips may include visits to local courts, a prison, a county jail and a 911 center. Guest speakers will be utilized to present criminal justice vocational options and real life applications of classroom information.

Related Careers:

Police Officer; DNR Officer; Corrections Officer; F.B.I. Agent; Sheriff; Bailiff
Polygraph Examiner; Fire Fighter; Private Investigator

Articulation Agreement:

CTE students completing one year of Criminal Justice will be eligible, upon meeting certain guidelines and upon graduation from high school, to receive advanced credit at West Shore Community College, Ferris State University and Baker College.

EDUCATOR ACADEMY/ Credit: 1.5

The Educator Academy is designed to expand options for students interested in a career in teaching. The Academy pairs future teachers with mentor teachers within their home districts to provide students with experiences in all aspects of school-related activities from school board and parent/teacher meetings to classroom and professional development experiences.

Students will be exposed to a variety of topics related to education. They include classroom teaching strategies, classroom management, State of Michigan K-12 curriculum, brain research, and more. In a process based on interviews, discussions, portfolios of student work, demonstrations, field trips and actual teaching experiences, students will gain a realistic understanding of teaching as a career.

Related Careers:

Teacher; Special Education; Counselor; School Administrator

NATURAL RESOURCES AND AGRISCIENCE CAREER PATHWAY

AGRISCIENCE/ Credit: 2.5

The AgriScience course curriculum strives to provide students with hands-on educational experience developing essential skills in the field of Agriculture and knowledge that will enhance each student's employability skills in the Agriculture Industry. Upon successful completion of the course, students will have valuable skills and knowledge that will prepare them for future successful careers, continued educational opportunities, and a lifetime of informed choices in the global agriculture, food, fiber and natural resources systems.

Program Objectives:

- A. To develop an awareness and appreciation of the career opportunities in agriculture and natural resources.
- B. To develop an understanding of the agricultural and natural resources industry.
- C. To develop an understanding of the basic scientific principles and technology related to the agricultural and natural resources industry.
- D. To develop human relations and social skills required for career success.
- E. To develop competencies needed to enter postsecondary education in the agriculture and natural resources industry.

AgriScience and Natural Resources Education provides students with scientific knowledge and career skills that will prepare them for future employment, education and leadership roles in the agriculture and natural resources industry. It includes classroom and laboratory instruction as described below:

- A. Skill Development: this class is designed to develop fundamental skills and competencies that prepare students for AgriScience and Natural Resources occupations or continuing Education.
- B. Laboratory Instruction: Activities designed to develop competencies needed for employment or continuing education in the curriculum areas listed below.

Curriculum

Natural Resources - Students are exposed to the economic importance of natural resources and agriculture in Michigan. The interrelationships of agriculture, the environment and society will be explored.

Plant Science - The anatomy and functions of plants and the role of soil, nutrients and integrated pest management are covered in this area. Also included would be topics related to field crop and horticulture production.

Animal Science - Animal nutrition, feeding, handling, comparative physiology, breeding, genetics, health, management, evaluation and aquaculture are examined.

Business Management and Marketing - The basic role of financial credit, marketing, record keeping, computer applications and business structures in agriculture are contained within this unit.

Communications, Leadership and Personal Development - Instructional areas include communications, group dynamics, leadership, career planning, community service, FFA and supervised agricultural experience.

Related Careers:

Animal Management; Botanist; Food Processing; Agricultural Marketing; Crop Production and Ag-related Sales.

Articulation Agreement:

Michigan State University