# Marquette Senior High School Course Offerings 



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## AN IMPORTANT MESSAGE TO PARENTS AND STUDENTS

The annual course selection process is central to the purpose and success of each student's education plan. This course offerings book will aid your planning efforts as it contains information about the registration process and course offerings for the next school year. Students and parents should read the guide together to develop and/or refine a four-year plan of courses based upon graduation requirements and the student's interests, abilities, and future plans. We have included space in this guide for you to map out your four-year plan.

A successful registration process depends on close cooperation between school and home. Our counselors and teachers will be glad to provide additional assistance in the selection process. Please take care to make good decisions because the opportunity for schedule changes later is extremely limited. Remember that choosing alternatives is as important as primary requests. Also, be sure to observe the prerequisites and grade levels included in this guide as they are a crucial aspect of the registration process.

The scheduling process allows students to request courses of interest. However, courses requested may not be offered depending on the overall demand for those courses every semester or every year.

If we can be of any assistance with this important activity, please do not hesitate to contact us.

## MSHS Guidance Office

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## ADVANCED PLACEMENT COURSES (AP)

AP courses are designed for the student who is ready to have a college-level learning experience in high school. Certain prerequisites are necessary for admission into AP courses: previous courses and grades, work ethic, department approval, and commitment to the workload of the college-level course. Specific requirements are listed with each AP course description.

Students interested in taking AP courses need to understand the commitment of time (at least one hour per night per class) and the other commitments they take on (i.e., athletics, clubs, activities, work). It is the expectation of the school that students who enroll in AP courses are committed for the entire year.

Students may take a national exam in the spring that may give them college credit. The fee to take the test is the responsibility of the student. Contact your School Counselor for more information or go to https://www.collegeboard.org/.

## TESTING OUT OF COURSES

Students who are interested in testing out of courses in order to advance to higher level courses should refer to School Board Policy \#5461 (https://mshs.mapsnet.org/resources).

The deadlines for requesting to test out are April 15th for testing out in May/June, and December 1st for testing out in January. All requests must be submitted to the Guidance Office on a "Test Out Request" Form 5460B- F1. Information regarding when test out forms are available will be posted in the MSHS Bulletin as well as on the student announcements.

## STUDENT ATHLETES

At Marquette Senior High School, students must have passed five classes the previous semester to be eligible to participate in a sport the next semester. Students should refer to the Athletic Code in the Student Handbook.

If you want to play sports at an NCAA Division I or II school, you will need to start by registering for a Certification Account with the NCAA Eligibility Center at eligibilitycenter.org.

Prospective student athletes should begin monitoring eligibility requirements on this website beginning in 9th grade. Be sure to check the NCAA for current information as you complete your high school course selections.

## MSHS Graduation Requirements

Students graduating from MSHS must accumulate a minimum of $\mathbf{2 5 . 5}$ credits, including successful completion of the following required courses. It is the responsibility of the student and parent to ensure all requirements are met.
ENGLISH/LANGUAGE ARTS4 CREDITS

- 9th Grade English (1.0 credit)
- 10th Grade English (1.0 credit)- 11th Grade English OR AP Language \& Composition (1.0 credit)- 12th Grade English OR AP Literature \& Composition (1.0 credit)
MATHEMATICS 4 CREDITS
- Algebra I
- Geometry OR Geometry in Construction Math (1.0 credit)- Algebra II OR Algebra II Foundations (1.0 credit)- Senior Year Math Class (1.0 credit)
SCIENCE3 CREDITS
- Earth and Space Science (1.0 credit)
- Biology (1.0 credit)
- Chemistry OR Physics (1.0 credit)
SOCIAL STUDIES ..... 3 CREDITS- 10th Grade: U.S. History OR World History* (1.0 credit)- 11th Grade: World History OR AP U.S. History* (1.0 credit)- 12th Grade: Economics \& Government OR AP Government (1.0 credit)
*Only students who plan to take AP U.S. History as a Junior need to enroll in World History in their Sophomore year.
WORLD LANGUAGE ..... 2 CREDITS
- Option \#1: Two years of the same World Language (2.0 credits)
- Option \#2: One year of World Language + 1.0 extra credit of a Visual, Performing, or Applied Arts (2.0 credits)
VISUAL, PERFORMING OR APPLIED ARTS ..... 1 CREDIT
- Visual, Performing Arts: All courses with a letter " $F$ " preceding the computer number
- Applied Arts: All courses with the letter "P" or "C" preceding the computer number
$\qquad$FRESHMAN SEMINAR0. 5 CREDIT
INTRO TO CYBER ..... 0.5 CREDIT
HEALTH ..... 0. 5 CREDIT
PHYSICAL EDUCATION ..... o. 5 CREDIT
- Lifetime Fitness and Sport OR Aquatics (o. 5 credit)
ALSO REQUIRED:
- Standard Electives 6.5 CREDITS- Students must take the Michigan Merit Exam (11th grade)

Four Year Planning

| 9th Grade |  | 10th Grade |  |
| :---: | :--- | :--- | :--- |
| 1st Semester | 2nd Semester | 1st Semester | 2nd Semester |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  | 2nd Semester |
|  |  |  |  |
|  |  |  |  |
| 1st Semester |  |  |  |
| 11th Grade |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

TYPICAL SCHEDULES

| 9TH GRADE | 10TH GRADE |
| :---: | :---: |
| English 9 <br> Algebra I or Geometry or Geometry in Construction <br> Earth and Space Science <br> Lifetime Health ( 0.5 credit) <br> Lifetime Fitness or Aquatics (o. 5 credit) <br> Freshman Seminar ( 0.5 credit) <br> Intro to Cyber (0.5 credit) <br> World Language <br> 1 Elective | English 10 <br> Geometry, Geometry in Construction, Algebra II, or Algebra II Foundations. <br> US History or World History (if planning on taking AP US History <br> Junior year) <br> Biology <br> 2-3 Electives |
| 11TH GRADE | 12TH GRADE |
| English 11 or AP Language \& Composition Algebra II or Algebra II Foundations World History or AP US History Chemistry or Physics 3 Electives | English 12 or AP Literature \& Composition Senior Math (1.0 credit) Government/Economics or AP Government 4 Electives |

## Overview - Course Sequences for Grades 9 through 12

| Required Courses for Graduation | 9th Grade | 10th Grade | 11th Grade | 12th Grade |
| :---: | :---: | :---: | :---: | :---: |
| Mathematics* 4 credits | Algebra 1 | Geometry or Geometry in Construction | Algebra 2 or <br> Algebra 2 Foundations | Pre-Calc, AP Stats, or Senior Math |
| English* 4 credits | 9th Grade English | 10th Grade English | 11th Grade English or AP Language \& Composition | 12th Grade English or AP Literature \& Composition |
| Science* 3 credits | Earth \& Space Science | Biology | Chemistry or Physics |  |
| Social Studies* 3 credits |  | US History or World History (if planning on taking AP US History) | World History or AP US History | Government \& Economics or AP Government |
| Freshman Seminar 0.5 credit | Freshman Seminar |  |  |  |
| Intro to Cybersecurity 0.5 credit | Intro to Cybersecurity |  |  |  |
| Physical Education o. 5 credit | Aquatics or Physical Education - recommended to take in 9th grade |  |  |  |
| Health 0.5 credit | Health - recommended to take in 9th grade |  |  |  |
| World Language* 2.0 credits | Refer to Course Offerings Book for options. Students must earn 2.0 credits of the same world language or earn 1.0 credit of world language +1.0 extra visual/performing/applied art credit. |  |  |  |
| Visual, Performing, \& Applied Arts 1.0 credit | Refer to Course Offerings Booklet for options. | Refer to Course Offerings Booklet for options. | Refer to Course Offerings Booklet for options. | Refer to Course Offerings Booklet for options. |
| Electives 6.5 credits | Refer to Course Offerings Booklet for options. | Refer to Course Offerings Booklet for options. | Refer to Course Offerings Booklet for options. | Refer to Course Offerings Booklet for options. |

*Opportunities for Advanced Placement Courses in these disciplines. Students may have the opportunity to earn college credit for Advanced Placement Courses.

Advanced Mathematics Pathway

| Courses | 9th Grade | 10th Grade | 11th Grade | 12th Grade |
| :--- | :---: | :---: | :---: | :---: |
| Mathematics* <br> 4 credits | Geometry or Geometry <br> in Construction | Algebra 2 | Pre-Calculus or AP <br> Statistics | AP Calculus or AP <br> Statistics |

ENGLISH

| E410 | 12th Grade English - 1 |
| :--- | :--- |
| E420 | AP Literature \& Composition - 1 |

MATH
M520 Algebra II - 1
M522 Algebra II Foundations - 1
M524 Pre-Calculus - 1
M528 AP Calculus A/B-1
M530 AP Statistics - 1

## SCIENCE

| S706 | Astronomy - 1 |
| :--- | :--- |
| S712 | AP Biology - 1 |
| S716 | Chemistry+ - 1 |
| S721 | Environmental Biology - 1 |
| S723 | Anatomy \& Physiology - 1 |
| S724 | AP Chemistry+ - 1 |
| S724L | AP Chemistry Lab - 1 |
| S726 | Physics+ - 1 |
| S728 | AP Physics+ - 1 |
| S729 | Science for Inventors - 1 |

## SOCIAL STUDIES

| A844 | U.S. Government - o.5 |
| :--- | :--- |
| A848 | AP U.S. Govt and Politics - 1 |
| A850 | Economics -0.5 |
| A852 |  <br> Behavior- o.5 |
| A853 | Psychology: Learning, Motivation <br>  <br>  <br> \& Memory - 0.5 |

## WORLD LANGUAGE

| L302 | French I - 1 |
| :--- | :--- |
| L304 | French II -1 |
| L306 | French II -1 |
| L308 | French IV-1 |
| L312 | Spanish I -1 |
| L314 | Spanish II - 1 |
| L316 | Spanish III -1 |
| L320 | AP Spanish - 1 |

## VISUAL ARTS

| F203 | Design - o.5 |
| :--- | :--- |
| F204 | Drawing \& Composition - 0.5 |
| F205 | Ceramics \& Sculpture - 0.5 |
| F206 | Painting - o.5 |
| F207 | Media Fusion - o.5 |
| F209 | Adv. Drawing \& Painting - 1 |
| F210 | Adv. Ceramics \& Sculpture - 1 |

## PERFORMING ARTS

F220 Mixed Chorus - 1
F228 MSHS Chorale* - 1
F230 Symphony Orchestra* ${ }^{\text {- }} 1$
F238 Concert Orchestra*-1
F234 Symphony Band* - 1
F236 Wind Ensemble* - 1

## JOURNALISM

## F262 Script Writing - 1

F265 Intro to Film (Previously Lit \& Film) - 1

## APPLIED ARTS

| Co14 | Computer Applications -1 |
| :--- | :--- |
| Po21 | Business Management -1 |
| Po22 | Marketing -1 |
| Poo8 | Business Finance+ - o.5 |
| Co20 | Digital Design -1 |
| Co25 | Advanced Web Design -1 |
| Co30 | AP Computer Science A* $+\mathbf{- 1}$ |
| C256 | Graphic Design-Yearbook -1 |
| Po14 | Accounting I +-1 |

## CONSUMER \& LIFE STUDIES

Po40 Cooking \& Nutrition - 0.5
Po45 Cultural Cuisine- o.5

## TECHNICAL EDUCATION

P462 Wood Technology - 1
P468 Building Constr \& Remodel +- 2
P474 Automotive Technology +-2
P476 Metals Technology I \& II - 1
P478 Metals Technology III \& IV - 1

## PHYSICAL EDUCATION

H602 Lifetime Health - 0.5
G604 Lifetime Fitness and Sport - 0.5
Go20 Max Sport - 0.5
Go21 Max Fitness - 0.5
G612 Aquatics - 0.5

## GENERAL STUDIES

T15212 Learning Center (Sem 1) - 0.5
T15312 Learning Center (Sem 2) - 0.5
T210 Links: Peer to Peer-1

## SPECIAL EDUCATION

987 Life Skills I* - 1/hour
997 Support Study 12* - 1

## WORK BASED PROGRAMS

966 Internship Program** - 1-2
P934 Health Occupations Program +- 2

CAREER \& TECHNICAL EDUCATION
Welding Occupations** +-2
Hospitality \& Culinary Arts** + - 2
Automotive Technician** +-2

## ONLINE COURSES

See michiganvirtual.org

[^0]
## ENGLISH



[^1]
## TECHNICAL EDUCATION

P462 Wood Technology - 1
P468 Building Constr \& Remodel - 2
P474 Automotive Technology - 2
P476 Metals Technology I \& II - 1
P478 Metals Technology III \& IV - 1

## PHYSICAL EDUCATION

H602 Lifetime Health - 0.5
G604 Lifetime Fitness and Sport - 0.5
Max Sport - 0.5
Go21 Max Fitness - 0.5
G612 Aquatics - 0.5

GENERAL STUDIES
T15211 Learning Center (Sem 1) - 0.5
15311 Learning Center (Sem 2) - 0.5
T210 Links: Peer to Peer-1

## SPECIAL EDUCATION

987 Life Skills I* - 1/hour
996 Support Study 11* - 1

## CAREER \& TECHNICAL EDUCATION

Welding Occupations** - 2
Hospitality \& Culinary Arts** - 2
Automotive Technician** ${ }^{*}$ 2

## ONLINE COURSES

See michiganvirtual.org

## ENGLISH

| E210 | 1oth Grade English - 1 |
| :--- | :--- |
| MATH |  |
| M510 | Geometry I - 1 |
| M511 | Geometry in Construction - 1 |
| M520S | Algebra II - 1 |

## SCIENCE

| S706 | Astronomy - 1 |
| :--- | :--- |
| S710 | Biology - 1 |
| S716S | Chemistry - 1 |
| S723 | Anatomy \& Physiology - 1 |
| S729 | Science for Inventors - |

## SOCIAL STUDIES

| A830 | US History - 1 |
| :--- | :--- |
| A840S | World History - $\mathbf{1}$ |

## WORLD LANGUAGE

| L302 | French I - 1 |
| :--- | :--- |
| L304 | French II - 1 |
| L312 | Spanish I-1 |
| L314 | Spanish II -1 |

## VISUAL ARTS

| F203 | Design - 0.5 |
| :--- | :--- |
| F204 | Drawing \& Composition - 0.5 |
| F205 | Ceramics \& Sculpture - 0.5 |
| F206 | Painting - o.5 |
| F207 | Media Fusion - o.5 |
| F209 | Adv. Drawing \& Painting - 1 |
| F210 | Adv. Ceramics \& Sculpture -1 |

## PERFORMING ARTS

| F220 | Mixed Chorus -1 |
| :--- | :--- |
| F228 | MSHS Chorale -1 |
| F230 | Symphony Orchestra* $^{*}-1$ |
| F238 | Concert Orchestra* -1 |
| F234 | Symphony Band* -1 |
| F236 | Wind Ensemble* -1 |

## APPLIED ARTS

Co14 Computer Applications - 1
Po21 Business Management - 1
Po22 Marketing-1
Poo8 Business Finance - 0.5
Co20 Digital Design-1
Co25 Advanced Web Design- 1
Po14 Accounting I-1

## CONSUMER \& LIFE STUDIES

Po40 Cooking \& Nutrition - 0.5
Po45 Cultural Cuisine- o.5

## TECHNICAL EDUCATION

P462 Wood Technology - 1
P466 Geometry in Construction (Applied Arts) - 1
P476 Metals Technology I \& II - 1
P478 Metals Technology III \& IV - 1

## PHYSICAL EDUCATION

| H602 | Lifetime Health - o.5 |
| :--- | :--- |
| G604 | Lifetime Fitness and Sport - 0.5 |
| Go20 | Max Sport - 0.5 |
| Go21 | Max Fitness -0.5 |
| G612 | Aquatics - 0.5 |

## GENERAL STUDIES

T15210 Learning Center (Sem 1) - 0.5
T15310 Learning Center (Sem 2) - 0.5
T210 Links: Peer to Peer - 1

## SPECIAL EDUCATION

987 Life Skills I* - 1/hour
995 Support Study 10* - 1

## ONLINE COURSES

See michiganvirtual.org

## ENGLISH

E110 9th Grade English - 1

## MATH

| M506 | Algebra I-1 |
| :--- | :--- |
| M510F | Geometry I-1 |
| M511 | Geometry in Construction - 1 |

## SCIENCE

S703 Earth and Space Science - 1
S710F Biology-1

## WORLD LANGUAGE

| L302 | French I - 1 |
| :--- | :--- |
| L312 | Spanish I-1 |

## VISUAL ARTS

| F203 | Design - o.5 |
| :--- | :--- |
| F204 | Drawing \& Composition - 0.5 |
| F205 | Ceramics \& Sculpture - 0.5 |
| F206 | Painting - 0.5 |

## PERFORMING ARTS

| F220 | Mixed Chorus -1 |
| :--- | :--- |
| F228 | MSHS Chorale* -1 |
| F23O | Symphony Orchestra* $-1^{\text {F238 }}$ |
| Concert Orchestra* -1 |  |
| F234 | Symphony Band* -1 |
| F236 | Wind Ensemble -1 |
| F246 | 9th Grade Band -1 |

## APPLIED ARTS

Co14 Computer Applications - 1
Po21 Business Management - 1
Co20 Digital Design-1
Co15 Intro to Cyber -0.5

## CONSUMER \& LIFE STUDIES

| Po40 | Cooking \& Nutrition - 0.5 |
| :--- | :--- |
| Po45 | Cultural Cuisine - 0.5 |

Po45 Cultural Cuisine-0.5

## TECHNICAL EDUCATION

P462 Wood Technology - 1
P466 Geometry in Const. (Applied Arts) - 1
P476 Metals Technology I \& II - 1

## PHYSICAL EDUCATION

H602 Lifetime Health - 0.5
G604 Lifetime Fitness and Sport - 0.5
G612 Aquatics - 0.5

## GENERAL STUDIES

T205 Freshman Seminar - 0.5

## SPECIAL EDUCATION

987 Life Skills I* - 1/hour
993 Support Study 9* - 1

## ONLINE COURSES

See michiganvirtual.org

[^2]
## ENGLISH

| E110 | 9th GRADE ENGLISH/LANGUAGE ARTS* | Grade: 9 | Length: Year | Credit: 1.0 |
| :--- | :--- | :--- | :--- | :--- |
| E210 | 10th GRADE ENGLISH/LANGUAGE ARTS* | Grade: 10 | Length: Year | Credit: 1.0 |
| E310 | 11TH GRADE ENGLISH/LANGUAGE ARTS* | Grade: 11 | Length: Year | Credit: 1.0 |
| E410 | 12TH GRADE ENGLISH/LANGUAGE ARTS* | Grade: 12 | Length: Year | Credit: 1.0 |

These courses will follow the goals and standards prescribed for 9th, 10th, 11th, and 12th graders in the Common Core State Standards for English Language Arts \& Literature. Students will create argumentative, informative and narrative essays; will speak individually and in collaborative groups in a variety of contexts; will learn analysis through the study of literary and informative texts; and will study standard English grammar and usage when speaking and writing.

## E415 AP LANGUAGE AND COMPOSITION* <br> Grade: 11 Length: Year Credit: 1.0 <br> Prerequisites: Assigned coursework includes a required summer reading, essay and vocabulary assignment which must be completed prior to the first day of class.

Students should only enroll in this course if they are talented in the Language Arts and are interested in taking a college-level composition class. Students who have received grades of A- or better during 9th and 1oth grade English classes should consider enrolling.

This year-long, college-level class prepares students for the AP test offered in May. Successful performance on the test may result in college credit. Students strengthen their awareness of language and sharpen their skills in critical reading, logical thinking, and effective writing. In addition to writing personal essays, analytical and argumentative papers, students study and practice speaking and listening skills. AP English Language and Composition follows the guidelines established by the College Board. Students are encouraged to take the AP test upon completion of the course. A fee is required for AP testing.

## E420 AP LITERATURE AND COMPOSITION* <br> Grade: 12 Length: Year Credit: 1.0 Prerequisites: Students who enroll in this course are required to complete a summer reading assignment of significant length before the first day of school.

Students should enroll in this course if they are talented in the Language Arts and are interested in taking a college-level composition class. Students who have received grades of A- or better during their 10th and 11th grade English classes (preferably English Language and Composition) should consider enrolling.

This yearlong, college-level class prepares students for the AP test offered in May. Successful performance on the test may result in college credit. Students strengthen their awareness of language and sharpen their skills in critical reading, logical thinking, and effective writing. The primary focus is on the poem, the short story and the novel. AP English Literature and Composition follows the guidelines established by the College Board. Students are encouraged to take the AP test upon completion of the course. A fee is required for AP testing.

[^3]
## MATHEMATICS

## M506 ALGEBRA ${ }^{*}$

Grade: $9 \quad$ Length: Year Credit: 1.0 The fundamental purpose of this course is to formalize and extend the mathematics that students learned in the middle grades. Because it is built on the middle grades standards, this is a more ambitious version of Algebra I than has generally been offered. Topics will deepen and extend understanding of linear and exponential relationships by contrasting them with each other and by applying linear models to data that exhibit a linear trend, and students engage in methods for analyzing, solving, and using quadratic functions. Algebra I is the foundational math course that prepares for higher level mathematics later in high school and college.

M510 GEOMETRY I* ${ }^{*}$ Grade: 10 Length: Year Credit: 1.0
Prerequisite: Successful completion of Algebra I
M510F GEOMETRY I*
Grade: 9 Length: Year Credit: 1.0
Prerequisite: "B" average or better in MAPS Algebra I and recommendation of MAPS 8th grade math teacher
This course is a study of Euclidean Geometry (geometry of our everyday world). You will be introduced to the study of sets of points as a formal system developed from the ground floor on up. Successful completion of Geometry I is required for graduation.

M511 GEOMETRY IN CONSTRUCTION MATH* Grade: 9, 10 Length: Year Credit: 1.0
Prerequisite for 10th Graders: Successful completion of Algebra I
Prerequisite for 9th Graders: "B" average or better in MAPS Algebra I and recommendation of MAPS 8th grade math teacher

Concurrent enrollment in Geometry in Construction Applied Arts (P466) is required
Geometry in Construction is a nationally recognized program that combines the academics of a traditional geometry course while applying those geometric concepts with the building trade's area. The class is designed for ALL abilities. Annually, students in this class will learn the same academically rigorous math as students in a regular geometry while building a multitude of projects in the woodshop. The class instructors show students exactly how geometry is useful beyond the classroom. This class is a 2 -hour class; therefore completion of this class will count for 1 math credit and 1 applied arts elective credit.

M520 ALGEBRA II ${ }^{*} \quad$ Grade: 11, 12 Length: Year | Credit: 1.0 |
| :--- |
| M520 ALGEBRA II |

Prerequisite: Successful completion of Geometry I or Geometry in Construction
This course is a continuation of Algebra I with topics including, but not limited to: number systems, polynomials, rational expressions, linear and quadratic equations, functions, logarithms, conic sections, and an introduction to trigonometry. Algebra II and Geometry I can be taken concurrently if approved.

M522 ALGEBRA II FOUNDATIONS
Grade: 11, 12 Length: Year Credit: 1.0
Prerequisite: Successful completion of Geometry I or Geometry in Construction
The purpose of this course is to extend the mathematics that students learned in Algebra I, as well as introduce and refine algebraic topics such as the comparison of linear, exponential, and quadratic functions, rational and radical expressions, trigonometry, conic sections, probability, operations of functions, sequences and series, and polynomial functions. This class is designed for students who plan to take an alternative senior math course such as Health Occupations, Accounting, Physics, etc. A student planning on taking Pre-Calculus should enroll in Algebra II instead of Algebra II Foundations.
Note: This course does not meet NCAA eligibility requirements.

Prerequisite: Successful completion of Algebra II
This course is strongly recommended for any college bound students. The first semester is a continuation of Algebra II in which the students will focus on functions (polynomial, exponential, logarithmic, rational, and other basic parents). The second semester will focus on Trigonometry. We will cover the unit circle and its applications to simplifying and solving trigonometric expressions and equations.

## M528 ADVANCED PLACEMENT CALCULUS AB* Grade: 12 Length: Year Credit: 1.0 Prerequisite: "C" or better in Pre-Calculus or department's approval (The AP College Board sets the standardsfor this course.)

This course is an introductory calculus course intended to prepare the student to take the College Board Advanced Placement Exam. Topics include elementary functions (Alg., Trig., Exp., and Log.), differential calculus (derivatives and applications), and integral calculus (antiderivatives, integration techniques, and applications). Only highly motivated, advanced students should attempt this course. College credit may be earned after successful completion of the national AP exam. A fee is required to take the exam.

## M530 ADVANCED PLACEMENT STATISTICS*

Grade: 11, 12 Length: Year Credit: 1.0
Prerequisite: Successful completion of Algebra II (The AP College Board sets the standards for this course.)
The Study of statistics is an ideal course for seniors who are planning on going into higher levels of mathematics study at a college or university. Upwards of $50 \%$ of all undergraduate degrees require some form of statistics as part of their college program.

## SENIOR YEAR MATH CREDIT

All students graduating from the State of Michigan and Marquette Senior High School must earn a math credit their senior year. Once students have earned full credit in Algebra I, Geometry or Geometry in Construction Math, and Algebra II or Algebra II Foundations, students have a variety of options to fulfill this senior year requirement

Courses listed below may be counted towards the senior year math credit unless it is fulfilling another requirement. For further details on the courses, please review the course descriptions on the indicated pages.

Pre-Calculus
Advanced Placement Calculus
Advanced Placement Statistics
Accounting
AP Computer Science A
Business Finance (1/2 credit)
Chemistry
Advanced Placement Chemistry

Advanced Placement Physics
Physics
Health Occupations
Building Construction and Remodeling
Introduction to Automotive Technology
Welding Occupations**
Hospitality \& Culinary Arts**
Automotive Technician**
Robotics**

[^4]
## SCIENCE

S703 EARTH AND SPACE SCIENCE*
Grade: 9 Length: Year Credit: 1.0 Earth and Space Science is an interdisciplinary approach to science that explores questions spanning across deep time-from the beginning of the universe to life on Earth today and into the future. Earth and Space Science explores how we are connected to everything around us and where we may be heading. The course provides a foundation for thinking about the future and the changes that are reshaping our world.

## S710 BIOLOGY*

Grade: 9, 10 Length: Year Credit: 1.0
Prerequisite: Completion of Global Science or concurrent enrollment in Global Science
This course follows a logical sequence through cells, genetics, ecology, evolution, plants, and animals. This class includes labs and in-class activities.

## S706 ASTRONOMY

Grade: 10,11,12 Length: Year Credit: 1.0
Prerequisite: Global Science or concurrent enrollment in Global Science
This course is designed to provide students a working knowledge of the Universe and the tools and modeling we use to understand cosmic phenomena. Topics include observational astronomy, the behavior of light, telescopes, the Sun-Earth-Moon system, the solar system, stars, constellations, galaxies, cosmology, and extraterrestrial life. Students will participate in discussions, hands-on activities, and frequent trips to the Shiras
Planetarium.

S712 ADVANCED PLACEMENT BIOLOGY
Grade: 11,12 Length: Year Credit: 1.0
Prerequisite: "B-" or higher in Biology and Chemistry
AP Biology is an introductory college-level biology course. Students cultivate their understanding of biology through inquiry-based investigations as they explore the following topics: evolution, cellular processes, energy and communication, genetics, information transfer, ecology, and interactions. Students will understand key science practices to develop explanations and predictions of natural phenomena, which they will test and refine through laboratory investigations. Students develop advanced reasoning and collect and analyze data using mathematics and other methods, and interpret that data to draw conclusions. College credit may be earned after successful completion of the national College Board AP Biology Exam. This course has a summer assignment that is required prior to the first day of school.

| S716 | CHEMISTRY* | Grade: 11,12 | Length: Year | Credit: 1.0 |
| :--- | :--- | :--- | :--- | :--- |
| S716S | CHEMISTRY* | Grade: 10 | Length: Year | Credit: 1.0 |

Prerequisite: Strongly recommend Algebra II
This introductory chemistry course includes concepts such as atomic structure, bonding, reactions, acids, bases and stoichiometry. Real life applications are incorporated into the course. Inquiry-based labs will be included with each unit requiring students to strictly follow all safety procedures.

## S721 ENVIRONMENTAL BIOLOGY

Grade: 10,11,12 Length: Year Credit: 1.0

## Prerequisite: "B-" or higher in Biology

Get to know what lives around us in the outdoors. Study the environment by investigating how nature works and how living and nonliving things are interconnected. You will gain an understanding of ecological concepts and principles and learn to analyze the relationships between population, natural resources, animals, plants and human activities. We will focus on local lakes, rivers, and forests. You will have the opportunity to be outside and participate in at least one field trip. This course will also introduce you to the wide variety of career opportunities related to environmental sciences.

This course goes through the anatomy and physiology of organ systems. Dissections are a requirement for this class. Dissections may include: cat, rat, deer heart, sheep's brain and eyes.

## S729 SCIENCE FOR INVENTORS

Grade: 10,11,12 Length: Year Credit: 1.0
Science for Inventors is an inquiry-oriented course in which students will be expected to research, design, and create products to address global problems and societal needs. Students will use engineering techniques and technology applications to address real-world problems. Students will also have an opportunity to choose projects that fit their interests. Technology such as 3D printers, small electronics, computers, virtual reality, and projection lasers are used. Students will utilize game-like learning and must think outside of the box and troubleshoot new skills.

S724 ADVANCED PLACEMENT CHEMISTRY* Grade: 11,12 Length: Year Credit: 1.0<br>Prerequisite: "B+" or higher in Chemistry and Algebra II<br>Students are required to enroll in Advanced Placement Chemistry Lab (S724L)<br>This is a second year Chemistry course which builds on information from first year general Chemistry. Topics covered include kinetics, stoichiometry, gas laws, thermochemistry, reaction mechanisms, equilibrium, and electrochemistry. A strong math background is needed. Labs will be included with most topics and students will be required to maintain a lab notebook. College credit may be earned after successful completion of the national College Board AP Chemistry Exam. This course has a summer assignment that is required prior to the first day of school.

## S724L ADVANCED PLACEMENT CHEMISTRY LAB Grade: 11,12 Length: Year Credit: 1.0

Concurrent enrollment in Advanced Placement Chemistry (S724) is required
For students taking Advanced Placement Chemistry (S724), this course is required due to the amount of content and laboratory experience necessary to prepare students for the national exam in May. All grading and assessments will be calculated under the S724 AP Chemistry course. The lab section will be graded as pass/fail.

## S726 PHYSICS*

Grade: 11 ,12 Length: Year Credit: 1.0
Prerequisite: B+ or better in Geometry or Geometry in Construction. Strongly recommend Algebra II
Physics will be offered every other year, in school years that begin in an odd year and end in an even year. This course is designed to provide students with a conceptual understanding of various topics in physics along with the ability to manipulate mathematical models that describe the physical world. Topics include motion, forces, momentum, energy, waves (sound and light), electricity, the technological applications of these topics. Projects, hands-on activities, discussions, and assignments are used to reinforce concepts while allowing students to focus on individual areas of interest as often as possible.

## S728 ADVANCED PLACEMENT PHYSICS*

Grade: 11, 12 Length: Year Credit: 1.0

## Prerequisite: "B+" or higher in Chemistry and Algebra II

AP Physics will be offered every other year, in school years that begin in an even year and end in an odd year. This course has been accepted by the College Board as an approved Advanced Placement Physics 1 course. This class is designed to be a first year class for students with no prior physics experience. The material will be identical to an algebra-based college physics class, and will include an extensive laboratory component. Topics include kinematics, forces, momentum, work, energy, rotation, electricity, and optics. College credits may be earned by successful completion of the national AP Physics 1 exam. This course has a summer assignment that is required prior to the first day of school.

[^5]
## SOCLAL STUDIES

## A83o UNITED STATES HISTORY*

Grade: 10 Length: Year Credit: 1.0
This high-energy course is designed to cover important events that have shaped the United States from 1877 to the present. You will be viewing and interpreting periods in United States history from various perspectives, including historical, geographical, political, economic, and cultural. Together, these perspectives can help you to understand how the past has led to our present and to appreciate your role in shaping our future. Projects are our favorite! They will include a wide range of activities from interviews, simulations, primary document analysis, to multimedia extravaganzas.

## A836 ADVANCED PLACEMENT U.S. HISTORY* Grade: 11,12 Length: Year Credit: 1.0 Prerequisite: " $\mathrm{B}+$ " average in World History or instructor approval

APUSH makes demands on students that are equivalent to those of a college course. The ultimate goal is preparation for the national AP Exam in May when students will have the opportunity to earn eight college credits. Therefore, we have a very rigorous and strict agenda in order to ensure that each student has the knowledge and skills to master that exam. The course is organized chronologically (divided into periods) and focuses on the various themes, and historical thinking skills suggested by the College Board. Over the course of the year, we will bring history to life through lively discussions, simulations/role playing, and persuasive debates.

## A840S WORLD HISTORY FOR SOPHOMORES*

Grade: 10 Length: Year Credit: 1.0
World History and Geography 10 is designed as a preparatory class for Advanced Placement U.S. History. World History takes a global and comparative approach to studying the world and its past to develop greater understanding of the development of worldwide events, processes, and interactions among the world's people, cultures, societies, and the environment. The course will cover the eras from classical republics through nationalism of the 20th century.

## A840 WORLD HISTORY*

Grade: 11 Length: Year Credit: 1.0 World History is a required year-long course in the Social Studies curriculum. Michigan's World History and Geography takes a global and comparative approach to studying the world and its past to develop greater understanding of the development of worldwide events, processes, and interactions among the world's people, cultures, societies, and environment. The course will cover eras from the Classical Republics through nationalism of the 20th century.

A852 PSYCHOLOGY: MIND, BRAIN \& BEHAVIOR Grade: 11,12 Length: Semester Credit: o. 5 Focuses on the scientific study of the mind and the relationship between human behavior and the brain. Important topics of study include: history and psychological approaches, research, methods, the brain and nervous systems (including psychological disorders and sleep issues).

A853 PSYCHOLOGY: LEARNING, MOTIVATION \& MEMORY Grade: 11,12 Length: Semester Credit: o. 5 Focuses on specific topics in the field of psychology. Important topics of study include: human growth and development, the senses and their relationship to perception, the study of how we learn, store and recall new information as well as what motivates and wears on the individual.

A844 U.S. GOVERNMENT*
Grade: 12 Length: Semester Credit: o. 5
U.S. Government is a one semester course that studies how our government works, how the government affects you, and how you can affect the government. The course focuses on modern political systems, the Constitution, civil rights and civil liberties, the powers of the branches of government, elections, political parties and pressure groups.

## A848 AP U.S. GOVERNMENT AND POLITICS* Grade: 12 Length: Year Credit: 1.o Prerequisite: " B " average in AP U.S.History, " $\mathrm{B}+$ " average in World History, or instructor approval

Advanced Placement U.S. Placement and Politics provides a college-level, nonpartisan introduction to key political concepts, institutions, policies, interactions and behaviors that characterize the constitutional system and political culture of the United States. Students will study U.S. foundational documents, Supreme Court decisions, and current events in an engaging way in order to gain an understanding of the relationship and interaction among political institutions, processes, and behaviors. The biggest goal of this class is to equip students to be active and informed members of civil society. Students will have the opportunity to take the AP Exam in May and earn four college credits.
*This course will fulfill a requirement for graduation and will help prepare students for the SAT/MME.

## WORLD LANGUAGES

L302 FRENCH I
L302F FRENCH I

Grade: 10,11,12 Length: Year Credit: 1.0
Grade: 9 Length: Year Credit: 1.0
French I is an introductory course leading to further study of French. Major emphasis is placed on the communication skills of listening, speaking, reading, and writing. The student's ability to communicate effectively on common everyday topics is emphasized and the class is project-based. Proficiency is enhanced through cultural videos, audio clips, skits, games, songs, and the active participation of the student. Students participate in a local field trip as well as Northern Michigan University's French day in the Spring.

## L304 FRENCH II

Grade: 10,11,12 Length: Year Credit: 1.0
Prerequisite: Students must pass both semesters of French $I$ in order to sign up for French II French II offers students a broad range of communication activities using practical and relevant French vocabulary and is project-based. Students build upon the language skills introduced in French I in listening, speaking, reading and writing. Students learn grammar and vocabulary through the use of authentic video, audio and print media. This level allows further exploration of Francophone countries and accents. After successful completion of the first semester, students may be eligible to join the French Honor Society. Students also participate in Northern Michigan University's French Day.

## L306 FRENCH III <br> Grade: 11,12 <br> Length: Year <br> Credit: 1.0 <br> Prerequisite: A grade of "C" or better in French II or approval of instructor <br> This course emphasizes self-expression and dialogue with others in realistic cultural contexts and is project-based. While the traditional vocabulary, grammar and conversational exercises are still present, these are accompanied by activities that are relevant to student's daily lives and encompass such themes as: global challenges, environmental issues, family and community, esthetics, science and technology, contemporary life and identity. Students participate in Northern Michigan University's French Day in the Spring.

L308 FRENCH IV
Grade: 12
Length: Year Credit: 1.0
Prerequisite: A grade of "C" or better in French III or approval of instructor
French IV represents the culmination of the student's study of French, providing a more in-depth understanding of the structure and practical applications of French as a second language. Projects concerning various aspects of French civilization and culture are also part of the course. Extensive use of authentic resources enable students to better understand the Francophone world and to achieve fluency in listening, speaking, reading and writing. Class is conducted entirely in French. Students may earn up to 16 college credits via the College Board CLEP test. Students participate in Northern Michigan University's French Day in the Spring.

| L312 | SPANISH I | Grade: $10,11,12$ | Length: Year | Credit: 1.0 |
| :--- | :--- | :--- | :--- | :--- |
| L312F | SPANISH I | Grade: 9 | Length: Year | Credit: 1.0 |

In Spanish I, students build the language skills, personal attitudes, and cultural insights necessary to experience life "entre culturas," using Spanish to connect with people. Students learn grammar and vocabulary through the use of authentic audio, visual, and print media. In this course students will demonstrate what they can do with the language they have learned through the use of assessments in three modes: interpersonal speaking and writing, interpretive listening and reading, and presentational speaking and writing. Students in Spanish I will learn about the Spanish language through the lens of interculturality, so they can discover appropriate ways to interact with others whose perspectives may be different from their own.

In Spanish II, students build upon the language skills, personal attitudes, and cultural insights introduced in Spanish I. Students learn grammar and vocabulary through the use of authentic audio, visual, and print media. Grammar, vocabulary, and culture are aligned with the content introduced and practiced in Spanish I. This level of Spanish allows learners to interact with students from different Spanish-speaking countries in culturally responsive ways. In this course students will demonstrate what they can do with the language they have learned through the use of assessments in three modes: interpersonal speaking and writing, interpretive listening and reading, and presentational speaking and writing.

## L316 SPANISH III <br> Grade: 11,12 <br> Length: Year Credit: 1.0

Prerequisite: A grade of "C" or better in Spanish II or approval of instructor
Spanish III is an engaging program in which students experience life in many countries through first-person accounts, geographic and cultural tours on DVD, and studies in art and history. While the traditional vocabulary, grammar, and conversational lessons and exercises are still present, these are woven into activities that are relevant to students' daily lives such as conversations between teens, pop culture, daily school life, and current issues. All Spanish III students participate and compete in Northern Michigan University's annual Spanish Day in the spring.

## L320 AP SPANISH LANGUAGE AND CULTURE Grade: 12 Length: Year Credit: 1.0 Prerequisite: A grade of "C" or better in Spanish III or approval of instructor

This course provides students with opportunities to demonstrate their proficiency in each of the three modes of communication (Interpersonal, Interpretive, and Presentational) in the Intermediate to Pre-Advanced range as described in the ACTFL Performance Guidelines for K-12 Learners. As such, the AP Spanish Language and Culture course has been designed to provide advanced high school students with a rich and rigorous opportunity to study the language and culture of the Spanish speaking world that is approximately equivalent to an upper-intermediate college or university Spanish course. All students participate and compete in Northern Michigan University's annual Spanish Day in the spring. Students are encouraged to take the AP exam in May upon the recommendation of the instructor.

Grade: 9, 10,11,12 Length: Semester Credit: 0.5
Design is a basic Art course for students of any ability level. You will learn and improve your drawing and shading skills, how to use color effectively, how to sculpt with clay, and how to start thinking and planning like an artist or designer. This class will give students the knowledge and competency needed to succeed in the more in-depth art courses.

## F204 DRAWING AND COMPOSITION Grade: 9,10,11,12 Length: Semester Credit: o. 5 <br> Prerequisite: Design

This course is designed for students interested in drawing and who have demonstrated an aptitude in this area. It presents an in-depth study of various drawing techniques in pencil, charcoal, chalk pastel, pen \& ink, marker, and colored pencil. Students will become advanced at shading and color application as they learn compositional skills. Several subjects will be explored, with an emphasis on landscape, portraiture, and figure drawing.

## F205 CERAMICS AND SCULPTURE Grade: 9,10,11,12 Length: Semester Credit: 0.5

Prerequisite: Design
This course introduces students to a wide variety of 3-D media, including wood, wire, origami, soft sculpture, and mosaics with a special emphasis on ceramics. Students will learn slab and coil building techniques with clay, and have the opportunity to use the potter's wheel. Emphasis will be placed on individual design, creativity, and craftsmanship.

## F206 PAINTING Grade: 9,10,11,12 Length: Semester Credit: 0.5

## Prerequisite: Design

This course introduces students to the materials, processes, and techniques used to create paintings. Watercolor, tempera, acrylic, and oils will be explored. Composition, craftsmanship, and color theory will be emphasized by application. Our projects will be largely informed by the styles and subjects of famous painters throughout history, and move you toward greater personal expression and conceptual development.

F207 MEDIA FUSION Grade: 10,11,12 Length:Semester Credit: o. 5

## Prerequisite: Design

Discover new methods of producing and publishing art by using combinations of digital and traditional design processes. We'll use the "Maker Movement" model for creation-learning through self-discovery, driven by individual curiosity, creativity, and choice. Use 3D scanning and printing technology, produce your own books, print T-shirts and posters, turn your drawings into animated .gifs, create and manipulate digital photos and videos, make and design models, wearables, props, jewelry, kinetic art, cards, games, and more! This class is geared toward self-motivated learners that can generate original ideas, collaborate with peers, and confidently tinker to learn new tools and methods of making.

## F209 ADVANCED DRAWING AND PAINTING Grade: 10,11,12 Prerequisite: Drawing and Composition or Painting

Length: Year Credit: 1.0
This course is designed for serious students wishing to advance their artistic skills and build a portfolio in preparation for college. Students will learn advanced techniques, explore modern and contemporary art styles, and focus on concept and expression as they further develop their personal style. This course can be added or dropped at semester. (Offered every other year)

This course is designed for serious students wishing to advance their artistic skills using a variety of 3-D media. Students will learn advanced sculptural techniques, try new media not explored previously, and mix media in experimental ways. Students will create an advanced body of work to include in their portfolio. This course can be added or dropped at semester. (Offered every other year)

## PERFORMING ARTS

F22o MIXED CHORUS
Grade: 9,10,11,12 Length: Year Credit: 1.0 This course is designed for both beginning choral students and those with experience, with emphasis on music literacy and proper vocal technique. Singers are encouraged to explore solo and small ensemble singing within the course along with solidifying part singing skills. Performances will occur throughout the school year.

## F228 MSHS CHORALE

Grade: 9,10,11,12 Length: Year Credit: 1.0
Prerequisite: Personal audition and instructor approval
This course is designed for singers of above average ability and experience in choral or instrumental music.Weekly focus on music literacy will be part of the course. Performances will include concerts, festivals,school and civic events. Students will perform a wide variety of accompanied and a cappella music from across the centuries and genres; including sacred, secular, Broadway and pop.

## F230 SYMPHONY ORCHESTRA Grade: 9,10,11,12 Length: Year Credit: 1.0

Prerequisite: Personal audition; approval of instructor
This class is designed for the most advanced string players. The group studies performance techniques of a variety of orchestral literature and performs at least once per month. Members should have at least four years of playing experience. Although not required, private lessons are recommended. Some after-school rehearsals are needed before concerts.

## F238 CONCERT ORCHESTRA Grade: 9,10,11,12 Length: Year Credit: 1.0 <br> Prerequisite: Personal audition; approval of instructor

This course provides information on proper playing techniques of stringed instruments as well as performance traditions of a variety of orchestral literature. The group performs (attendance required) approximately five times during the school year. Two years of playing experience is recommended. Some after-school rehearsals are needed before concerts.

## F246 NINTH GRADE CONCERT BAND Grade: 9 Length: Year Credit: 1.o

Prerequisite: Approval of instructor
This class is designed as an introductory course to high school band, and is open to all 9th grade students with previous experience in band, or 9th grade beginners with instructor approval. Medium-easy to medium difficulty band literature will be studied. Students advance to either the Symphony Band or Wind Ensemble level after successful completion. It is mandatory that each student participate in all concerts and festivals that occur throughout the school year.

F234 SYMPHONY BAND
Grade: 9, 10,11,12 Length: Year Credit: 1.0
Prerequisite: Approval of instructor
This course is designed as a mid-level music course, and is open to all 10th-12th grade students with previous experience in band. Medium difficulty band literature will be studied. Students advance to either the Symphony Band or Wind Ensemble level after successful completion. It is mandatory that each student participate in all concerts and festivals and ceremonies that occur throughout the school year.

## F236 WIND ENSEMBLE <br> Grade: 9,10,11,12 <br> Length: Year <br> Credit: 1.0 <br> Prerequisite: Approval of instructor and personal audition

This course is designed as an advanced-level music course, and is open to all 9th-12th grade students with previous experience in band. Students obtain entry into the Wind Ensemble with a personal audition and/or approval of the instructor. Medium-advanced and college-level band literature will be studied. Some members of Wind Ensemble will have the opportunity to fill brass, woodwind and percussion positions in the MSHS Symphony Orchestra. It is mandatory that each student participate in all concerts and festivals and ceremonies that occur throughout the school year.

## JOURNALISM

F262 SCRIPTWRITING
Grade: 11,12
Length: Year
Credit: 1.0
Script Writing students will create 'video content' that disseminates important information to MSHS students. parents, teachers and community members while also showcasing all the great happenings that take place at our school. Along with managing an educational media platform, students will learn about filming techniques, script writing and filmmaking.

F265 INTRO TO FILM (Previously Lit \& Film) Grade: 11, 12 Length: Year Credit: 1.0 Students will analyze, critique, and discuss themes, stylistic approaches, filming techniques, genres and plot elements by interacting with film. Podcasting, script writing and discussion will help students express creative and analytical thinking, writing, and filming. The subject material will revolve around instructor selected narrative and documentary films, television shows, music videos and graphic novels. Students will be expected to view films, create original narratives in the form of scripts, compare/contrast films to different mediums and respond and reflect through in-class discussions.

Along with the analysis of media, students will also create their own short narrative films and/or documentaries. Students will learn about different filming techniques, literary devices and editing strategies. Films will be presented in class and an awards ceremony (The Hoffys) will follow.

## APPLIED ARTS

## Co14 COMPUTER APPLICATIONS

Grade: 9,10,11,12 Length: Year Credit:1.0
Students will become efficient users of Microsoft Word, Excel, PowerPoint, and Access. Topics will include tables, charts, formulas, formatting, animation, organizing content and databases. This course will prepare students to pass tests for Microsoft Office certification. Employers in today's workforce are testing for these entry level skills and the efficient use of these programs. Students will also do career exploration using an online assessment.

## Po21 BUSINESS MANAGEMENT

Grade: 9,10,11,12 Length: Year Credit: 1.0
Essential business procedures and employment skills are acquired in this course. Students will explore entrepreneurship, management and marketing, and various business laws and regulations through individual and group activities, class discussion and hands-on experience. Students will go through the beginning stages of starting a business of their choosing. Industry recognized certifications can be earned at the completion of each semester. Anyone interested in business should take this class to get an overall look at what opportunities there are in the business field and the many different paths that can be taken.

Po14 ACCOUNTING I
Grade: 10, 11, 12 Length: Year Credit: 1.0
This year-long course will cover basic accounting principles, concepts, and procedures. Students will perform accounting tasks for a sole proprietorship, partnership and corporation. Students will use computerized accounting skills to enter, analyze and interpret financial data. Any student interested in a career in business or business ownership should seriously consider this class. This course will meet the requirements for a fourth-year math credit.

## Po22 MARKETING

Grade: 10,11,12 Length: Year Credit: 1.0
Marketing is the foundational course for all pathways in Marketing Education. This course addresses all the ways in which marketing satisfies consumer and business needs for products and services. Students develop an understanding of the functions of marketing and how these affect all businesses. Students will be introduced to basic marketing concepts and the role of marketing in our economy. Through our student designed school store, the Wake U.P. Coffee Shop; students also develop skills in applying economic concepts to marketing, distribution and logistics, marketing information management, finance in marketing, product/service planning, pricing mixes, promotional strategies and personal selling.

## Poo8 BUSINESS FINANCE

Grade: 10,11,12 Length: Semester Credit: 0.5
Students will explore financial exchanges, fundamental economic and accounting concepts, and financial goals for both business and personal finance. In-depth coverage of various loans, interest, credit, and sound financial planning will help students become responsible consumers and money managers. This course will meet the requirements for a fourth-year math credit.

Co15 INTRODUCTION TO CYBERSECURITY Grade: $9 \quad$ Length: Semester Credit: 0.5 Introduction to Cybersecurity provides students with a basic understanding of the principles of data and technology that frame and define cybersecurity. Students will gain insight into the importance of cybersecurity and the integral role of cybersecurity professionals. Topics include digital citizenship, cyber hygiene, the basics of cryptography, software security, networking fundamentals and basic system administration.

## Co2o DIGITAL DESIGN

Grade: 9,10,11,12 Length: Year Credit: 1.0
Students will use the latest computer design programs to create interactive graphics, logos, designs for our school store and logos for events/organizations. Adobe Illustrator, Dreamweaver, Animate, Photoshop and Procreate on the iPad are used to develop animations and graphics. The final project is a well-designed and detailed web page which the students may post on the Internet. A focus of this course is on effective teamwork and project management skills.

Co25 ADVANCED WEB DESIGN
Grade: 10, 11,12 Length: Year Credit: 1.0
Prerequisites: Digital Communications is recommended but not required
All students in this course will develop HTML and CSS coding skills which are used in both web design and cybersecurity. The students spend every two weeks mastering these skills and will eventually have the opportunity to earn an industry certification. The students will work on student driven projects which can include learning Adobe Creative Suite Programs, Python, Java, JavaScript or other program languages, Procreate on Ipad Pro, Blender-3D Animation, Unity, developing poster projects for teachers and designing items for our school store.

## Co30 AP COMPUTER SCIENCE A

Grade: 11,12
Length: Year Credit: 1.0

## Prerequisite: Algebra II

NOTE: This is a college level class NOT a beginner's or an applications class (such as word processors, spreadsheets, etc.). Students in this class should be familiar with basic computer terms.

Who should take this Class: Traditionally, students with an interest in careers related to: business, engineering, computer science, information technology, bioinformatics, genetics, physics, chemistry, or math should take AP Computer Science. However, in today's world, almost every occupation or endeavor uses some form of computer software including the fine arts.

The course includes a number of individual programming projects assigned for one week each. The time after the AP CS Exam is devoted to a team project and enrichment activities. The course is based on numerous problem solving exercises, labs, and case studies, which require students to design and implement Java classes.

## C256 GRAPHIC DESIGN-YEARBOOK Grade: 11,12 Length: Year Credit: 1.0 <br> Prerequisite: "B" average in English 9 or 10, or approval of instructor (if enrolling for a second time)

Students will participate in planning, design and layout (creativity) of pages, copywriting, typography, photography, promotion, advertising, and sales of the MSHS yearbook. Average to above average communication, grammar, writing, and computer skills are essential. This course is for the motivated, creative, and reliable student.

## CONSUMER AND LIFE STUDIES

## Po40 COOKING AND NUTRITION

Grade: 9,10,11,12 Length: Semester Credit: 0.5
This course is based on the theme of nutrition for wellness, as it relates to food selection and food preparation. The goal is to enhance student awareness in regards to personal food and lifestyle choices for better health. The course will cover nutrition requirements, safety and sanitation practices, and food preparation techniques that will include kitchen laboratory experiences.

## Po45 CULTURAL CUISINE

Grade: 9, 10, 11, 12 Length: Semester Credit: 0.5
This course will cover defining culture and identifying ways food reflects a given culture. Popular dishes will be identified for different countries. Students will analyze the relationship between economic standing and food/culture choices. They will determine ways in which external influences relate to food choices within a given region.

## P462 WOOD TECHNOLOGY

Grade: 9,10,11,12 Length: Year Credit: 1.0 Students have the opportunity to use power tools and equipment to design and make projects individually and as a total class (manufacturing). Students will learn how technology and environmental concerns affect the wood industry. Students will also learn to design and produce projects on the computer-aided ShopBot and laser engraver.

P466 GEOMETRY IN CONSTRUCTION APPLIED ARTS Grade: 9, 10 Length: Year Credit: 1.0
Prerequisite for 10th graders: Successful completion of Algebra I
Prerequisite for 9th graders: " $B$ " average or better in Algebra $I$ and recommendation of 8th grade math teacher.

## Concurrent enrollment in Geometry in Construction Math (M511) is required

Geometry in Construction is a nationally recognized program that combines the academics of a traditional geometry course while applying those geometric concepts with the building trade's area. The class is designed for ALL abilities. Annually, students in this class will learn the same academically rigorous math as students in regular geometry while building a multitude of projects in the woodshop. The class instructors show students exactly how geometry is useful beyond the classroom. This class is a 2-hour class; therefore completion of this class will count for 1 math credit and 1 applied arts elective credit.

## P468 BUILDING CONSTRUCTION AND REMODELING <br> Grade: 11,12 Length: Year Credit: 2.0

Prerequisite: Wood Technology or approval of instructor
This class is structured for students with interests in building construction and maintenance of buildings. Students will have hands-on experiences, reinforcing related mathematics and science, technical skills, problem solving, and occupational safety. The student will learn necessary skills and related technical information for entry into related occupational fields, or for continued education at the post-secondary level.

## P474 AUTOMOTIVE TECHNOLOGY <br> Grade: 11,12 Length: Year Credit: 2.0 Prerequisite: Successful completion of at least one full-year Industrial Arts class with C+ or better average

Designed to assist the students in the introduction and exploration of the automobile and its components through the study of automotive theory, demonstration of tools and equipment, and experience working on automobiles. Emphasis will be placed on safety, proper tool use, braking systems, electronics and electrical systems, parts and service orders, and on-line technology. With the successful completion of the program, students able to pass the ASE exam will receive credit for Brakes and Electrical at Northern Michigan University and Bay de Noc College. Automotive technology fulfills the Senior year math elective graduation requirement.

## P476 METALS TECHNOLOGY I \& II

Grade: 9,10,11,12 Length: Year Credit: 1.0 This course is an overview of machining, welding, and metal fabrication. In this course, students will work to understand use and safety precautions of hand tools, power hand tools, oxy/acetylene welding equipment, arc welding equipment, and station machinery. This class is a balance of introductory shop coursework and assigned shop projects with an emphasis on student proposed projects for the second half of the school year. This course is intended for students interested in career fields such as welding, machining, CADD, construction, metal casting/foundry industry, metal fabrication, automotive, HVAC, and industrial maintenance. Students will also have opportunities to learn design and manufacturing skills through projects produced on the computer aided PlasmaCAM and Industrial Art Department 3D printer.

## P478 METALS TECHNOLOGY III \& IV Grade: 10,11,12 Length: Year Credit: 1.0

## Prerequisite: Metals Technology I \& II

This course is proposed to be an advanced class intended to reintroduce and reinforce many of the principles of welding and metal fabrication processes covered in Metals I \& II. The habits of safe practices while in the shop are of the highest importance. Along with safe work habits, daily participation points and proposed classroom projects serve as a majority of a student's overall grade for the course. Students interested in industrial related career opportunities and/or additional educational programs such as Welding Occupations and Technical Middle College should consider enrolling in Metals III \& IV. Students will also have opportunities to learn additional design and manufacturing skills through projects produced on the computer aided PlasmaCAM and Industrial Art Department's 3D printer.

## PHYSICAL EDUCATION

## H6o2 LIFETIME HEALTH

Grade: 9,10,11,12 Length: Semester Credit: 0.5
This semester course will cover the following Michigan Merit Curriculum Strands: 1) Nutrition and Physical Activity; 2) Alcohol, Tobacco, and Other Drugs; 3) Safety; 4) Social and Emotional Health; 5) Personal Health and Wellness; 6) HIV Prevention; and 7) Sexuality Education. An emphasis will be placed on developing lifetime knowledge and skill in the area of health education.

G604 LIFETIME FITNESS AND SPORT
Grade: 9,10,11,12 Length: Semester Credit: 0.5
This semester course is structured to foster and develop: 1) competence in selected motor skills; 2) assess, achieve, and maintain physical fitness; 3) apply cognitive concepts in making wise lifestyle choices; and 4) exhibit appropriate personal/social character traits while participating in physical activity. Course activities will cover: fitness development/individual, dual, and team sports/rhythmic activities/outdoor pursuits. Grading will be based on daily participation, cooperation, honest effort, class work, and heart rate monitor assessments.

Go2o MAX SPORT
Grade: 10,11,12 Length: Semester Credit: 0.5
Prerequisite: Completion of Lifetime Fitness and Sport
Max sport is a one semester physical education course that is designed for the highly motivated student. Its purpose is to fully develop skills in a variety of team and individual sports. Daily participation in these sports will also enhance personal fitness. Students will gain knowledge and confidence to participate in the sports and activities offered with the anticipation it will support their lifetime health. This course will meet in the gymnasium or outdoors. Grading will be based on daily participation, effort, and consideration for others.

Go21 MAX FITNESS
Grade: 10,11,12 Length: Semester Credit: 0.5
Prerequisite: Completion of Lifetime Fitness and Sport
Max fitness is a one semester physical education course that is designed for the highly motivated student. Its purpose is to fully develop and enhance individual fitness levels. Students will gain knowledge, ability, and confidence to carry out an effective work-out that will improve cardiovascular endurance, muscular strength, muscular endurance, flexibility, and body composition. This course will meet in the weight room and fitness center.
Grading will be based on daily participation, effort, and consideration for others.

G612 AQUATICS
Grade: 9,10,11,12 Length: Semester Credit: 0.5
The semester course consists of three units: 1) Swimming strokes and technique: students learn the six basic swimming strokes and their uses; 2) Water safety: basic diving, safe water entry techniques, use of personal flotation devices, and resuscitation; 3) Recreational fitness activities: water polo, synchronized swimming, and creative water games. Grade will be based on participation, cooperation, and skill tests.

## GENERAL STUDIES

| T15210 | LEARNING CENTER | Grade: 10 | Length: Semester | Credit: 0.5 |
| :--- | :--- | :--- | :--- | :--- |
| T15211 | LEARNING CENTER | Grade: 11 | Length: Semester | Credit: 0.5 |
| T15212 | LEARNING CENTER | Grade: 12 | Length: Semester | Credit: 0.5 |
| 2ND SEMESTER: |  |  |  |  |
| T15310 | LEARNING CENTER | Grade: 10 | Length: Semester | Credit: 0.5 |
| T15311 | LEARNING CENTER | Grade: 11 | Length: Semester | Credit: 0.5 |
| T15312 | LEARNING CENTER | Grade: 12 | Length: Semester | Credit: 0.5 |

The Learning Center is an elective class that provides students the necessary support to be successful in their academics. Grades are not only based on success in the soft skills (attendance, punctuality, effort and time management), but also on productive collaboration with peers and success in the academic areas.

T205 FRESHMAN SEMINAR
Grade: $9 \quad$ Length: Year Credit: 0.5
The purpose of Transitions is to promote educational independence and success, develop interpersonal skills, and to challenge students to envision and plan for their future. Topics covered include study skills, career planning, budgets, personal finance, goal setting, job applications, and post-secondary education goals.

## T210 LINKS: PEER TO PEER Grade: 10, 11, 12 Length: Year Credit: 1.0

This opportunity is designed for students interested in learning about students with diverse needs and applying knowledge while mentoring individual students within our school. Students will work together in an integrated, positive fashion to promote socialization, independence, friendship, and peer-to-peer support. Students interested in participating in this course will develop leadership skills, compassion, and knowledge about working with individuals with diverse needs. Potential activities may include: attending general or special education classes with an identified peer, attending LINKS scheduled meetings, 1:1 meetings with a LINKS coordinator, and appropriate training education sessions with LINKS coordinators. *Preference for placement in course will start with the seniors.

## SPECLAL EDUCATION

Students are selected for this program through parent, teacher, counselor referrals, screening by specific tests, and an Individualized Education Planning Team (IEPT). Most required courses are offered. Only students who are currently enrolled in the Special Education Program may sign up for the following classes.

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993 SUPPORT STUDY }
995 SUPPORT STUDY 10
996 SUPPORT STUDY 11
997 SUPPORT STUDY }1
Prerequisite: Must have a current IEP.
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Grade: 9 Length: Year Credit: 1.0
Grade: 10 Length: Year Credit: 1.0
Grade: 11 Length: Year Credit: 1.0
Grade: 12 Length: Year Credit: 1.0

This elective class is designed to help students achieve school success. Students take this class to receive assistance from a peer tutor/mentor, special education teacher, and aide. Requirements include using an assignment book and using the hour productively on homework and studying. Students will also participate in class activities that teach academic, personal, social and study skills.

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M923A PRE-ALGEBRA A
M923B PRE-ALGEBRA B
    Prerequisite: Must have a current IEP.
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Grade: 9, 10, 11, 12 Length: Year Credit: 1.0
Grade: 9, 10, 11, 12 Length: Year Credit: 1.0

This program focuses on preparation for the world of independent work and living. Basic pre-vocational, pre-employment, and adult living skills will be covered. Community awareness, caring for oneself, money management and transportation will also be covered.

## WORK-BASED PROGRAMS

Students at MSHS have an opportunity to experience a work-based position in our school and community. Due to regulations set by members of the Department of Education, Department of Labor and Economic Growth, and the Career and Technical Education staff, students may not exceed taking three (3) periods of the placement for the course listed below. Students who are less than full-time, may not have over half of their school day be comprised of this Experiential Learning Course.

## 966 INTERNSHIP PROGRAM Grade: 12 Length: Semester/Year Credit: 1.0-2.0 Prerequisite: Excellent attendance, 2.0 minimum G.P.A.

Internship is a 6-10 hour per week independent study course related to a senior student's career pathway, school attendance history and references. The amount of high school credit is based on internship time (i.e. one hour per day for one semester equals one-half credit.) The non-paid time spent will be at a local business site where students are trained and supervised by one or more business site employees. Students will be expected to follow both internship and their business site attendance rules and policies which are usually more stringent than general school policies.

Students will be responsible to make their own transportation arrangements to and from their training site. Internship grades are assigned by the internship coordinator and based on a site supervisor evaluation, student work maturity, learning progress and a daily written journal. Individual site supervisors may assign additional projects/papers. Student letter grades are based on individual site supervisor workplace comparisons and expectations and could vary up or down from a student's usual class grades. Prior to the start of an internship, the business, parent, school, and student must all approve the training schedule.

The application process requires completion of an internship application and resume by a specified date. The student will then interview with the internship program coordinator before the end of the school year. The internship selection committee will review the student application and recommend/not recommend the student for further program consideration. If recommended, students will interview with a business. Most internship students that get to this stage are placed; however, an internship match with a business cannot be guaranteed. If placed, students will be notified prior to the beginning of the school year.

## P934 HEALTH OCCUPATIONS PROGRAM

Grade: 12 Length: Year Credit: 2.0
This course is designed for senior students who wish to explore healthcare careers. The first semester will include an introduction to human anatomy, medical terminology, exposure to basic health care skills, and CPR certification. During the second semester, students participate in clinical rotations at the hospital, med center, dental, veterinary, assisted living, and chiropractic clinics. Hospital rotations include nursing floors, lab, dietetics, and radiology. Students are required to show proof of immunizations (Hepatitis B, dTap, Varicella, MMR, flu shot). Once enrolled in the class, a TB test, criminal background check, and urine drug screen will be required. Enrollment in Anatomy is recommended (but not required).

## CAREER \& TECHNICAL EDUCATION (CTE)

- The following courses require an application, which is available in the Guidance Office.
- Students should sign up for seven credits of regular courses. If accepted into one of these programs, the student's schedule will be adjusted.
- Classes will meet five days each week.

HOSPITALITY \& CULINARY ARTS
Grade: 11,12 Length: Year Credit: 2.0
This Culinary/Hospitality high school course offered at the NMU Jacobetti Center will introduce students to skills and careers in the diverse hospitality industry. The course will cover guest services, culinary arts, baking, sanitation, applied math/finance and safety taught in the lab ( $40 \%$ ) and lecture ( $60 \%$ ) learning experiences. Students will participate in catering and cafeteria operations taught in culinary arts and baking. Students can earn up to 10 NMU credits based on their course performance and faculty recommendations.

## WELDING OCCUPATIONS Grade: 11,12 Length: Year Credit: 2.o

Prerequisites: Metals I \& II and Metals III \& IV
This course teaches the basic types of metal cutting, brazing, and welding techniques. Emphasis is placed on welding in various positions. Students will be prepared for entry level jobs in metal fabrication, maintenance, or construction fields. Upon successful completion of this course to the NMU instructor's satisfaction, students will receive seven credits in NMU's welding program.

## AUTOMOTIVE SERVICE

Grade: 11,12 Length: Year
Credit: 2.0
Students in this program gain an overall technical foundation of theory and practical applications in engine repair, automatic transmissions, chassis systems, power trains, vehicle electrical systems, fuel and ignition systems and computer control systems. State certification tests are offered at the end of each semester. Students can earn up to 16 college credits while in high school.

## MICHIGAN VIRTUAL ONLINE COURSES

Online courses offer students a unique learning opportunity that may or may not suit a student's learning style. Success in an online course requires a student to be independent, self-motivated, and able to manage his or her time effectively. An adult mentor will proctor the class, tests, and exams at MSHS but is not available for tutoring in the course.

Students may sign up for no more than two online courses per semester. Academic online courses are weighted in the academic GPA and rank, and overall GPA. Non-academic courses are only figured into the overall GPA. For a list of available online courses through Michigan Virtual University please visit www.mivhs.org.

Please see your School Counselor for more information and to get an online course application.

## MARQUETTE-ALGER TECHNICAL MIDDLE COLLEGE

Marquette-Alger Technical Middle College (MATMC) is a tuition free program that enables students to earn a high school diploma and a significant number of college credits toward an NMU associate degree or a technical certificate at no cost to the student or their family.

Students apply during the second semester of their sophomore year. They are required to submit an essay, letters of recommendation, and, along with their parents, participate in an interview.

Accepted students enroll in the MATMC prior to their Junior year and take one class at NMU during the second semester of their Junior year. Students take a minimum of one NMU class during each semester of their Senior year. While enrolled, students will participate in Success Seminars and receive support to prepare them academically and socially with the goal that students are ready for the rigor of a full college course load during Grade 13.

The program will consider students who are willing to:

- Commit to a three year program, which includes a mix of high school and college classes in Grades 11 and 12 and a full schedule of college classes at NMU in Grade 13.
- Pursue one of NMU's Associate degrees listed below:


## Health Sciences

- Clinical Laboratory Technology
- Nursing
- Radiography
- Surgical Technology

Professional Trades

- Automotive Service Technology
- Building Technology
- Climate Control Technology - HVACR (Heating, Ventilation, Air Conditioning, and Refrigeration)
- Hospitality Management (Culinary Arts)
- Industrial Maintenance Technology (ladder up from welding certificate)
- Electrical Line Technician
- CNC Technology (Machinist)
- Electrical Technology

Information Technology

- Information Assurance and Cyber Defense (Cybersecurity)

More information can be found at https://www.maresacte.org/marquette-alger-technical-middle-college-matmc.

## DUAL ENROLLMENT

Effective April 1, 1996, Public Act 160 created the Postsecondary Enrollment Options Act, commonly referred to as dual enrollment. This law directs school districts to assist students in paying tuition and fees for courses at Michigan public or private colleges or universities. Students can begin taking dual enrollment classes in 9th grade and to take up to 10 dual enrollment classes in grades 9-12. For more information go to the Michigan Department of Education (MDE) Dual Enrollment Website at www.michigan.gov/dualenrollment and talk with your School Counselor.


[^0]:    * Must have instructor approval to take this class. See course description in booklet.
    ** Special application must be completed
    +Qualifies for a senior math credit

[^1]:    * Must have instructor approval to take this class. See course description in booklet.
    ${ }^{* *}$ Special application must be completed.

[^2]:    * Must have instructor approval to take this class. See course description in booklet.

[^3]:    *This course will fulfill an English requirement for graduation and will help prepare students for the SAT/MME.

[^4]:    *This course will fulfill a math requirement for graduation and will help prepare students for the SAT/MME.
    ${ }^{* *}$ A separate application is required for this course. Pick up an application in the Guidance Office.

[^5]:    *This course will fulfill a science requirement for graduation and will help prepare students for the SAT/MME.

