



**Course Selection Guide
2021-2022**

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INTRODUCTION

The Mapleton High School Course Selection Guide is provided as an educational tool to assist students and parents in making informed decisions about an educational plan that will guide students toward successful academic achievement and prepare them for career and educational choices after high school.

The course descriptions will provide clarification of the courses offered at Mapleton High School. We encourage you to use this guide to be certain you are scheduling the courses you need in order to meet graduation requirements and prepare for post-high school plans. Please contact the school counselor, teachers, or administration at any time throughout the registration process for assistance.

The high school will make every effort to keep up-to-date records and to inform the student and parents about the student's progress toward the completion of graduation requirements. However, it is the student's responsibility to be acquainted with the necessary requirements to meet this goal.

COURSE SELECTION

The master schedule of classes is developed based on the original course choices from the students. Each student's class schedule is built to accommodate as many of the individual choices as possible. Schedule changes made after the schedule is built greatly hamper the effectiveness of the master schedule and make it impossible to ensure course availability for students.

Students should plan their schedules carefully to minimize the number of schedule changes and submit course registration forms promptly. Students who submit late registration forms risk having limited course choices and may forfeit consideration for a schedule adjustment.

As with any master schedule course offering, the administration reserves the right to set a course minimum/maximum number of students enrolled and determine the number of sections offered.

Prerequisites

A number of courses have prerequisites and/or grade level restrictions that need to be met before the student may enroll. This information is provided with each course description.

SCHEDULE CHANGES

All requests to add or drop a course after the registration deadline must be handled through the Guidance Office. Requests for schedule changes will be considered for the following reasons:

1. Accepted into the College Credit Plus program, Ag Co-op or CBI programs, or a Career Center program.
2. To meet graduation requirements and/or Honors Diploma criteria.
3. Adding a class within the first FIVE days of the semester.
4. Completed a summer school course.
5. Did not pass a prerequisite class.
6. Placement in the wrong level as determined by the teacher.

7. Computer error.

There will be a FIVE DAY LIMIT beginning with the first day of class in each semester on any schedule changes initiated by the student. Dropping a course after FIVE days will result in Withdraw Failing (WF) from that course. A Withdraw Failing mark is figured into a student's cumulative GPA as if that student had failed the class for the semester or year.

A course may be dropped upon recommendation of the teacher, counselor, or principal and with parent notification. Based upon the situation, the time frame for dropping the class and grade penalty will be determined by what is in the best interest of the student.

GRADUATION REQUIREMENTS - Class of 2021 & 2022

To graduate from Mapleton High School, a student must complete **21 units of credit** AND meet the additional requirements prescribed by the Ohio Department of Education.

1. Cover the Basics

- English Language Arts - 4 credits
- Health - ½ credit
- Mathematics - 4 credits (*must complete Algebra II or the equivalent*)
- Physical Education - ½ credit (*may complete PE Waiver*)
- Science - 3 credits (*must include life science, physical science, and one advanced science*)
- Social Studies - 3 credits (*must include World Studies, American History, American Government*)
- Fine Arts - 1 credit (*may be completed with Choir, Band, Art or Drama; CTE courses may be used to complete the high school fine arts requirement but may not satisfy college entrance requirements*)
- Electives - 5 credits (*any combination of courses not otherwise required*)

Please note that while not a state requirement for graduation, many four-year colleges and universities require a minimum of two years of sequential world language study at the secondary level as a college admissions requirement. This is the case for many in-state and out-of-state colleges and universities.

High school students can gain state recognition for exceeding Ohio's graduation requirements through an honors diploma. Students challenge themselves by taking and succeeding at high-level coursework and in real-world experiences.

Ohio students have the opportunity to choose to pursue one of six honors diplomas:

The links provide detailed information about each honors diploma.

- [Academic Honors Diploma](#)
- [International Baccalaureate Honors Diploma](#)
- [Career Tech Honors Diploma](#)
- [STEM Honors Diploma](#)
- [Arts Honors Diploma](#)
- [Social Science and Civic Engagement Honors Diploma](#)

2. Show you are ready

- Ohio's State Tests

Earn at least 18 points on seven end of course exams. Students earn from 1-5 points on each test based on their performance.:

English Language Arts I and II - must earn a minimum of 4 points between the 2 tests

Algebra I and Geometry - must earn a minimum of 4 points between the 2 tests

American History, American Government, Biology - must earn a minimum of 6 points across the 3 tests

- OR... Industry credential and workforce readiness:

Earn a minimum of 12 points by receiving a State Board of Education-approved, industry-recognized credential or group of credentials in a single career field and earn the required score on WorkKeys, a work-readiness test. The state of Ohio will pay one time for you to take the WorkKeys test.

This pathway corresponds to Career-Technical Pathways offered at Ashland County-West Holmes Career Center

- OR... College and career readiness

Earn remediation-free scores in mathematics and English language arts on either the ACT or SAT. The Ohio Department of Higher Education works with Ohio's universities to set the remediation-free scores for the ACT and SAT tests. Periodically, for a variety of reasons, these scores may be adjusted. For all high school juniors, the remediation-free scores set by Feb. 1 of their junior year will be used to meet their graduation requirement. The most up-to-date information regarding remediation-free scores can be found on the Department's graduation requirements webpage.

*****You can meet new requirements by demonstrating competency and readiness for a job, college, military or a self-sustaining profession.*****

3. Show competency AND...

- OPTION 1 - Demonstrate Two Career-Focused Activities (at least one must be a Foundational Skill)

:

Foundational

Proficient scores on WebXams A 12-point industry credential

A pre-apprenticeship or acceptance into an approved apprenticeship program

Supporting

Work-based learning

Earn the required score on WorkKeys

Earn the OhioMeansJobs Readiness Seal

- OPTION 2 - Enlist in the Military :

Show evidence that you have signed a contract to enter a branch of the U.S. armed services upon graduation.

- OPTION 3 - Complete College Coursework:
Earn credit for one college-level math and/ or college-level English course through Ohio's free College Credit Plus program.

4. ... Show readiness

Earn two of the following diploma seals, choosing those that line up with your goals and interests. These seals give you the chance to demonstrate academic, technical and professional skills and knowledge that align to your passions, interests and planned next steps after high school. At least one of the two must be Ohio-designed:

OhioMeansJobs Readiness Seal (Ohio)

Industry-Recognized Credential Seal (Ohio)

College-Ready Seal (Ohio)

Military Enlistment Seal (Ohio)

Citizenship Seal (Ohio)

Science Seal (Ohio)

Honors Diploma Seal (Ohio)

Seal of Biliteracy (Ohio)

Technology Seal (Ohio)

Community Service Seal (Local)

Fine and Performing Arts Seal (Local)

Student Engagement Seal (Local)

Students who have met all of the curriculum requirements for graduation but have not met all required pathways before their intended date of graduation will not graduate with their classmates. Students may not participate in graduation ceremonies according to Mapleton Local School District board policy.

GRADUATION REQUIREMENTS - Class of 2023 and beyond

To graduate from Mapleton High School, a student must complete **21 units of credit** AND meet the additional requirements prescribed by the Ohio Department of Education.

1. Cover the Basics

- English Language Arts - 4 credits
- Health - ½ credit
- Mathematics - 4 credits (*must complete Algebra II or the equivalent*)
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- Science - 3 credits (*must include life science, physical science, and one advanced science*)
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- Electives - 5 credits (*any combination of courses not otherwise required*)

Please note that while not a state requirement for graduation, many four-year colleges and universities require a minimum of two years of sequential world language study at the secondary level as a college admissions requirement. This is the case for many in-state and out-of-state colleges and universities.

High school students can gain state recognition for exceeding Ohio’s graduation requirements through an honors diploma. Students challenge themselves by taking and succeeding at high-level coursework and in real-world experiences.

Ohio students have the opportunity to choose to pursue one of six honors diplomas:

The links below provide detailed information about each honors diploma:

- [Academic Honors Diploma](#)
- [International Baccalaureate Honors Diploma](#)
- [Career Tech Honors Diploma](#)
- [STEM Honors Diploma](#)
- [Arts Honors Diploma](#)
- [Social Science and Civic Engagement Honors Diploma](#)

2. Show competency

- OHIO’S STATE TESTS

Earn a passing score on Ohio’s high school Algebra I and English II tests. Students who do not pass the test will be offered additional support and must retake the test at least once.

Is testing not your strength? After you have taken your tests, there are three additional ways to show competency!

- OPTION 1 - Demonstrate Two Career-Focused Activities (at least one must be a Foundational Skill) :

Foundational

Proficient scores on WebXams A 12-point industry credential

A pre-apprenticeship or acceptance into an approved apprenticeship program

Supporting

Work-based learning

Earn the required score on WorkKeys

Earn the OhioMeansJobs Readiness Seal

- OPTION 2 - Enlist in the Military :

Show evidence that you have signed a contract to enter a branch of the U.S. armed services upon graduation.

- OPTION 3 - Complete College Coursework:

Earn credit for one college-level math and/ or college-level English course through Ohio’s free College Credit Plus program.

3. Show readiness

Earn two of the following diploma seals, choosing those that line up with your goals and interests. These seals give you the chance to demonstrate academic, technical and professional skills and knowledge that align to your passions, interests and planned next steps after high school. At least one of the two must be Ohio-designed:

OhioMeansJobs Readiness Seal (Ohio)
Industry-Recognized Credential Seal (Ohio)
College-Ready Seal (Ohio)
Military Enlistment Seal (Ohio)
Citizenship Seal (Ohio)
Science Seal (Ohio)

Honors Diploma Seal (Ohio)
Seal of Biliteracy (Ohio)
Technology Seal (Ohio)
Community Service Seal (Local)
Fine and Performing Arts Seal (Local)
Student Engagement Seal (Local)

Page 12 of [this document](#) provides detailed information about earning each of the Ohio seals.

Mapleton’s Local Readiness Seals are detailed below. Only ONE of the two diploma seals needed for graduation may be a local seal:

Community Service Seal

Definition of Community Service: Unpaid work or service that is designed to help an individual, group or community.

In order to earn the Community Service Seal at Mapleton Local Schools under the Ohio graduation requirements for students in graduating class 2023 and beyond. Each student will need to complete 40 hours of community service. It is recommended that students complete 10 hours of community service each year. Community Service Hours must be pre-approved by school counselors through completion of a plan.

That plan should include the following:

1. Description of Community Service that will be performed
2. Location of Community Service
3. Total number of hours logged 40
4. Signature from a representative at the organization where the community service will be completed.
5. Students will track their hours
6. Completed service hours and documentation is due by May of senior year.

Fine and Performing Arts Seal

In order to earn the Fine and Performing Arts Seal in Mapleton Local Schools under the Ohio graduation requirements for students graduating in class of 2023 and beyond. Each student will need to complete 3 Points in the Fine and Performing Arts Department. If you are unsure if the credit you are taking is acceptable, please seek guidance from a school counselor.

That plan should include the following:

1. Every one fine art credit earned is equal to one point. ½ credit classes will earn ½ of a point.
2. Every performance or competition you complete outside of school requirements is equal to ½ a point.
3. Total number credits must equal 3 or more.
4. Signature from a school representative must be completed.
5. Completed points and documentation is due by May of senior year.

Certified Student Engagement Seal

In order to earn the Student Engagement Seal in Mapleton Local Schools under the Ohio graduation requirements for students graduating in class of 2023 and beyond. Each student will need to complete 4 activities in a non-academic credited course. If you are unsure if the credit you are taking is acceptable, please seek guidance from a school counselor.

That plan should include the following:

1. Every sport season must be finished and completed or no credit will be given.
2. Every club or activity must be finished and completed the entire year for credit to be given.
3. Total number of extracurricular school sanctioned activities must equal 4 or more.
4. The extracurricular event cannot be counted as an academic credit to meet this requirement.
5. Signature from a school representative must be completed.
6. Completed points and documentation is due by May of senior year.

Students who have met all of the curriculum requirements for graduation but have not met all required pathways before their intended date of graduation will not graduate with their classmates. Students may not participate in graduation ceremonies according to Mapleton Local School District board policy.

ASHLAND COUNTY-WEST HOLMES CAREER CENTER

The Ashland County-West Holmes Career Center (ACWHCC) offers students an opportunity to combine academic courses with industry skills while completing high school. The curriculum focuses on preparing students for college and/or a career, in the specific field of the students' choice.

The Career Center offers students the opportunity to take academic courses, including CCP classes, earn college credits and earn industry credentials/certifications, while exploring a college or career pathway, before any money is spent on post-secondary education or training – the Career Center is 100% fee free.

The curriculum at the Career Center specializes in specific industry skills and classroom learning related to a selected occupation. A full range of academic classes is part of each student's career program, including College Credit Plus courses in math and English for those students who qualify. On campus programs include the following:

Animal and Veterinary Science	Culinary Careers/Management
Auto Body Technology	Cybersecurity & Networking
Automotive Technology	Early Childhood Education
Construction Technology	Health Technology
Cosmetology	Robotics & Advanced Manufacturing
Criminal Justice	Welding Technology

Most students apply to the Career Center during their sophomore year, to be enrolled in career programs for their junior year of high school. Students who choose to attend the Career Center remain enrolled at Mapleton High School. If all requirements are met, the student will receive a Mapleton High School diploma along with their Career Center certificate of completion and Career Passport.

Though fully involved in educational and social activities at the Career Center, students may be part of extracurricular activities such as athletics, band, choir, or a variety of other student organizations at Mapleton High School.

Career Center students who successfully complete a Career Technical Education program may earn articulated college credits at specific local colleges. More program-specific information can be obtained from the Career Center.

ENROLLMENT DECISIONS ARE MADE BY THE CAREER CENTER STAFF.

Additional Programs Offered by Referral Only:

Career Based Intervention: A program designed to support sophomore students who have an interest in career technical education, and are unsure if they will have enough credits to participate in a career-tech program as a junior. Students spend one period per day in a career-tech lab to observe and/or participate in (4) different career-tech programs throughout the year, giving the student the opportunity to choose their preferred program to enroll in as a junior.

High School Students with Special Needs: Students will choose between two programs (Hospitality or Maintenance Training) focused on preparing them for future employment. By offering these hands-on training programs, students are able to expand their opportunities, who may be best served in a career center environment.

CREDIT FLEXIBILITY

Senate Bill 311 requires all school districts in the state of Ohio to fully implement a plan that would enable “students to earn units of high school credit based on a demonstration of subject area competency, instead of or in combination with completing hours of classroom instruction.”

Students may earn credit through any of the following:

1. The completion of traditional classroom courses offered for credit by Mapleton Local Schools in addition to courses approved by the Ohio Department of Education that may not be offered at Mapleton;
2. The completion of college/university coursework through the College Credit Plus program;
3. Credit Flexibility Test Out Option for students who already have mastery of course key competencies through prior learning. This option may include not only written or oral assessment but also one or more of the following: research paper, project-based learning assignment, portfolio of work, performance, or other demonstration or performance-based task;
4. The Flex Course Option is for those students who do not already have skills for mastery but need or wish to take a course in a non-traditional method. A plan will be developed by the student and teacher of record, which may include but is not limited to: research paper, on-line course, blended learning, class work, project-based learning assignment, portfolio of work, performance, internship, or other demonstration or performance-based task.

Note: Some of the credit flexibility options above could affect NCAA athletic eligibility.

EDUCATIONAL OPTIONS

The Board of Education recognizes the need to provide alternative means by which students achieve the goals of the District. The Superintendent/designee shall prepare a plan of educational options for use in meeting special needs. Such options may include, but not be limited to, distance learning, online coursework, tutorial program, independent study, correspondence courses, educational travel, mentorship programs, summer school, and early college entrance. Prior approval of the educational option application by the Superintendent/designee is required before a student participates in one of the available educational options.

Prior permission of a parent or guardian shall also be required before a student under age 18 participates in one of the available educational options. Participation in some of the Educational Options listed below require a separate application to the agency administering the program.

A. International Baccalaureate Program

The International Baccalaureate (IB) Diploma Program is a highly-intense college preparatory program for juniors and seniors. Students must enter in the beginning of their junior year and remain committed to the program through the end of their senior year. Students graduate with a diploma from their own school and the opportunity to earn the International Baccalaureate Diploma. In addition to receiving superior college preparation, students may also receive college credit at the end of the program by taking exams in individual subjects. Colleges and universities typically grant credit for high scores on these exams.

The IB program is located on the campus of Wooster High School, and students are responsible for their own transportation. Students can continue to participate in sports or other extracurricular activities at their home school. Students will need to complete rigorous college preparatory coursework their freshmen and sophomore years before entering the program. Additional information is available in the Guidance Office.

B. College-NOW Program at North Central State College

The College-Now Program is a partnership between local school districts and North Central State College that allows students to earn associate degrees while completing their 11th and 12th grade year of high school. Students may participate in College-Now in the following areas:

- BioScience
- Engineering Technology
- Business

Students attend classes at North Central State College full time for the BioScience and Engineering Technology programs. Students in the Business program will attend classes at Ashland University.

Students participating in College-Now programs graduate with a Mapleton High School diploma as well as an associate degree in their chosen program and are able to remain active in afterschool sports, clubs, and activities. Students are responsible for their own transportation. Additional information is available in the Guidance Office.

C. Sci-Med Academy at North Central State College

The Sci-Med Academy will provide three distinct pathways designed to prepare students who plan to pursue advanced degrees in: 1) Bioscience, Biology, Chemistry, 2) Health/Medical Studies, or 3) Science Education. Students will enroll in the Sci-Med Academy at the beginning of their junior year of high school. They will be enrolled full-time at NC State throughout their junior and senior years. All classes will take place on the North Central State College campus.

Successful graduates will receive an Associate of Science degree. They will simultaneously complete the requirements to receive their high school diploma while enrolled in the Sci-Med Academy.

The Sci-Med Academy is not designed as a terminal degree. Instead, students will be provided the opportunity to engage in college-level coursework in foundational studies of the natural sciences, anatomy, physiology, etc. The degree will prepare students to transition to a four-year university to pursue a higher-level degree. All courses, except Bioscience, are included in either the Ohio Transfer Module (OTM) or Transfer Assurance Guide (TAG) for transfer credit to any public institution in Ohio.

D. College Credit Plus

College Credit Plus allows high schools, colleges, and universities to engage in partnerships that allow students to earn both high school and college credit. Courses may be taken at Mapleton High School, on the college/university campus, or online.

1. A student interested in taking CCP courses must turn in a Letter of Intent to the high school counselor by April 1 prior to each year they plan on participating in CCP courses.
2. Each college/university will have its own application forms and criteria for acceptance into CCP. Students must go through the procedures established by the college/university to apply to College Credit Plus and to enroll in the course(s).
3. A college placement test to make sure students are college-ready is also required.

Information regarding specific steps for applying can be found on the college/university website. *It is the responsibility of the student* to meet all Ohio Department of Education deadlines and requirements as well as the admission/participation requirements of each college/university. The Intent to Participate form must be filled out, signed, and returned to the guidance office by April 1st, 2021 for students wishing to participate in CCP for the 2021-2022 school year.

Additional information about the College Credit Plus program is available in the Guidance Office or on the Guidance Department website.

Possible CCP Courses offered at Mapleton High School*

Once students have completed all of the requirements to participate in CCP, they can select from any of the following college courses taught at Mapleton High School:

Course Title	Credit Hours	College/University Partner
College Composition I	3	Lorain County Community College
College Composition II	3	Lorain County Community College
Introduction to Fiction	3	Lorain County Community College
Statistics	3	Lorain County Community College
College Algebra	3	Lorain County Community College
College Study Skills	3	Ashland University
possible history class	3	Ashland University
possible science class	3	Ashland University
possible art class	3	Ashland University

***Additional CCP courses may be considered for the 2021-2022 school year as they are offered to MHS by cooperating colleges and universities. These courses would be held at Mapleton High School and taught or facilitated by Mapleton High School faculty. Students will be notified as these classes become available.**

**Please find 15 and 30 hour pathways for CCP students for [LCCC](#), [Ashland University](#), and [NCSC](#) by clicking the name of the university.

PROSPECTIVE COLLEGE ATHLETES

The NCAA Initial-Eligibility Clearinghouse is an organization that works with the National Collegiate Athletic Association (NCAA) to determine a student's eligibility for athletics participation in his or her first year of college enrollment. Students who want to participate in college sports at a Division I or Division II school must register with the Clearinghouse. (NCAA Division III requirements are left up to the individual schools. Contact the college/university of interest for more information.)

Guidelines:

1. Initial eligibility requirements for each division can be reviewed at: www.ncaaclearinghouse.net
2. Register with the NCAA Clearinghouse online at the beginning of your junior year.
3. Sign the transcript release forms after registering with the Clearinghouse and return them to the Guidance office.

4. *When taking the ACT/SAT, the scores must be sent directly to the Clearinghouse. Test scores on transcripts will not be used.*
5. Continue to check your grades, classes, and ACT/SAT scores against the NCAA requirements as you go through your senior year.

There are a variety of excellent resources from the NCAA Eligibility Center on the NCAA website. If you are considering collegiate athletics, please take the time to explore this link devoted to potential future athletes!
www.ncaa.org

SUMMER SCHOOL

Students deficient in credits or interested in accelerating their high school curriculum may choose to enroll in summer school. It will be the student's responsibility to pay for all expenses associated with summer school. Information regarding summer school offerings is available in the Guidance Office in mid-April. Coursework must receive prior approval.

EARLY GRADUATION

Sophomores who wish to graduate early must submit a referral for early graduation to the school counselor by the end of their sophomore year (no later than June 1). Review of the referral will follow guidelines set forth by the Mapleton Board of Education. Additional information is available in the Guidance Office.

ATHLETIC ELIGIBILITY POLICY

Participation requirements to remain eligible for athletics including cheerleaders and dance team members are as follows:

1. The Ohio High School Athletic Association (OHSAA) mandates that high school students must be passing a minimum of five (one credit) courses or the equivalent each grading period. NOTE: PHYSICAL EDUCATION COURSES WORTH .25 CREDITS CANNOT BE USED TO MEET THE MINIMUM FIVE (ONE CREDIT) COURSE TOTAL. There is no probationary period permitted for this standard. Changes in athletic eligibility will become effective as soon as the quarterly grades are finalized.
2. OHSAA mandates that students in grades 7 & 8 must be currently enrolled in a member school and have received passing grades in a minimum of five subjects in which enrolled the immediately preceding grading period.
3. For eligibility, summer school grades may not be used to substitute for failing grades received in the final grading period of the regular school year or for a lack of enough courses taken the preceding grading period.
4. Mapleton Local School Board Policy mandates that students participating in athletics maintain a grade point average of 1.6 or better each grading period. Students not meeting this standard will become ineligible as soon as the quarterly grades are finalized.
5. There will be no weekly or cumulative eligibility. Eligibility will be on a nine-week basis only.
6. If a student receives a WF (withdraw failing) or I (incomplete), it will be figured into the GPA as an F.
7. The building principal is ultimately responsible for the athletes, cheerleaders, and dance team members as outlined by the OHSAA and the Mapleton Board of Education.

8. Athletes are subject to all policies as set forth in the Athletic Code of Conduct as well as policies set forth by individual coaches.

AGRICULTURAL EDUCATION DEPARTMENT

614 AGRICULTURAL, FOOD & NATURAL RESOURCES/AFNR *(offered every year)*

Grade: 8, 9, 10, 11, 12

Full Year - 1½ credit

AFNR is a prerequisite for ALL Agriculture courses.

Introduction to Agriculture, Food, and Natural Resources (AFNR) introduces students to agricultural opportunities and the pathways of study in agriculture. Science, mathematics, reading, and writing components are woven in the context of agriculture and students will use the introductory skills and knowledge developed in this course throughout the curriculum. Throughout the course are activities to develop and improve employability skills of students through practical applications. Students explore career and post-secondary opportunities in each area of the course.

Students participating in the Introduction to Agriculture, Food, and Natural Resources course experience hands-on activities, projects, and problems. Student experiences involve the study of communication, the science of agriculture, plants, animals, natural resources, and agricultural mechanics. While surveying the opportunities available in agriculture and natural resources, students learn to solve problems, conduct research, analyze data, work in teams, and take responsibility for their work, actions, and learning. For example, students work in groups to determine the efficiency and environmental impacts of fuel sources in a practical learning exercise.

In addition, students will understand specific connections between their lessons and Supervised Agricultural Experience and FFA components that are important for the development of an informed agricultural education student. Students investigate, experiment, and learn about documenting a project, solving problems, and communicating their solutions to their peers and members of the professional community.

The Introduction to Agriculture, Food, and Natural Resources course includes:

- Agricultural Education – Agriculture, FFA, and SAE
- Communication Methods
- Science Processes
- Natural Resources
- Plants and Animals
- Agricultural Power and Technology

626 LIVESTOCK SELECTION, NUTRITION, AND MANAGEMENT *(offered every year)*

Grade: 9, 10, 11, 12

Full Year - 1½ credit

Prerequisite: Agriculture, Food, and Natural Resources

Livestock Selection, Management, and Nutrition - is to expose students to agriculture, animal science, and related career options. Students participating in the Livestock course will have experiences in various animal science concepts with exciting hands-on activities, projects, and problems. Students' experiences will involve the study of animal anatomy, physiology, behavior, nutrition, reproduction, health, selection, and marketing. For example,

students will acquire skills in meeting the nutritional needs of animals while developing balanced, economical rations. Throughout the course, students will consider the perceptions and preferences of individuals within local, regional, and world markets.

Students will explore hands-on projects and activities to learn the characteristics of animal science and work on major projects and problems similar to those that animal science specialists, such as veterinarians, zoologists, livestock producers, and industry personnel, face in their respective careers.

In addition, students will understand specific connections between animal science lessons and Supervised Agricultural Experience and FFA components that are important for the development of an informed agricultural education student. Students will investigate, experiment, and learn about documenting a project, solving problems, and communicating their solutions to their peers and members of the professional community.

The Livestock course of study includes:

- Background and Social Issues of Animal Science
- Anatomy and Physiology
- Nutrition
- Reproduction
- Genetics
- Animal Health
- Animal Selection

620 LEADERSHIP IN THE AGRICULTURE INDUSTRY *(offered every year)*

Grade: 9, 10, 11, 12

Full Year - 1¼ credit

Prerequisite: Agriculture, Food, and Natural Resources

This course provides students with a variety of experiences in the field of agriculture through running the business of the FFA Chapter. Students will complete business, maintain records, report to the public on accomplishments completed by FFA members, and demonstrate leadership skills. Students will be required to be elected to a position of leadership in order to take this class.

622 ENVIRONMENTAL SCIENCE FOR AGRICULTURE & NATURAL RESOURCES *(offered odd years)*

Grade: 9, 10, 11, 12

Full Year - 1¼ credit

Prerequisite: Agriculture, Food, and Natural Resources

The course provides students a variety of experiences in the fields of natural resources and ecology. Students will explore hands-on projects and activities while studying topics such as land use, water quality, stewardship, and environmental agencies. Study of the natural world including biomes, land, air, water, energy, use and care as well as a focus on issues surrounding man's interaction with the Earth will be addressed in this

course. Students will select an ecosystem to study throughout the course and apply principles of natural resources and ecology from each unit of study to that ecosystem.

The Natural Resources and Ecology areas of study include:

- Conservation, Preservation, Exploitation
- Soil, Water, and Air
- Earth's Energy
- Flora and Fauna
- Farming, Forestry, and Ferrous
- Human Impact

618 FOOD SCIENCE AND SAFETY *(offered odd years)*

Grade: 11, 12

Full Year - 1¼ credit

Prerequisites: Agriculture, Food, and Natural Resources AND Livestock Selection, Nutrition & Management

Students will complete hands-on activities, projects, and problems that simulate actual concepts and situations found in the food science and safety industry, allowing students to build content knowledge and technical skills. Students will investigate areas of food science including food safety, food chemistry, food processing, food product development, and marketing.

Students will maintain a research level Laboratory Notebook throughout the course documenting their experiences in the laboratory. Research and experimental design will be highlighted as students develop and conduct industry appropriate investigations.

In addition, students will explore connections between the Food Science and Safety lessons, Supervised Agricultural Experience, and FFA components that are important for the development of an informed agricultural education student. Students will investigate, experiment, and learn about documenting a project, solving problems, and communicating solutions to their peers and members of the professional community.

Food Science and Safety includes the following units of study.

- Introduction to Food Science
- Chemistry of Food
- Safety of Our Food
- Food Processing Preservation and Packaging
- Food Health and Security
- Preference and Product Availability
- Food Product Development

623 AGRICULTURE POWER AND TECHNOLOGY *(offered odd years)*

Grade: 9, 10, 11, 12

Full Year - 1¼ credit

Prerequisite: Agriculture, Food, and Natural Resources

Agricultural Power and Technology (APT) exposes students to mechanics, power, technology, and career options in the world of agriculture. Students participating in the APT will experience mechanical and engineering concepts with exciting hands-on activities, with two to three labs per week. Students will acquire the basic skills to operate, repair, engineer, and design agricultural tools and equipment.

The Agricultural Power and Technology course includes:

- Shop Safety
- Tool Operation
- Material Selection and Uses
- Fabrication
- Energy and Power Production
- Machine Components and Design
- Agricultural Structures
- Engineering Design Process

624 AGRICULTURE BUSINESS FOUNDATIONS *(offered even years)*

Grade: 11, 12

Full Year - 1¼ credit

Prerequisite: Agriculture, Food, and Natural Resources

Agricultural Business Foundations (ABF) introduces students to business management in agriculture. Mathematics, reading, and writing components are woven in the context of agriculture and students will use the introductory skills and knowledge developed in this course throughout agricultural education courses. Throughout the course are practical and engaging activities, projects, and problems to develop and improve business and employability skills. Additionally, students investigate and develop viable business plans in order to solve local problems. The business plan ideas are communicated to student peers and members of the professional community.

The Agricultural Business Foundations course includes:

- Starting a business
- Financial documents
- Risk management
- Writing a business plan

625 MECHANICAL SYSTEMS IN AGRICULTURE *(offered even years)*

Grade: 11, 12

Full Year - 1¼ credit

Prerequisites: Agriculture, Food, and Natural Resources AND Livestock Selection, Nutrition & Management

Mechanical Systems in Agriculture is a specialization-level course designed to provide rigorous applications in the agricultural engineering field. Throughout the course, students apply technical and engineering skills while becoming competent in the processes used to operate, repair, engineer, and design agricultural structures,

engines, and equipment. Students practice technical skills including reading prints, troubleshooting machines, documenting an engine teardown and assembly, reading schematics, researching machine replacement parts, and calculating production efficiencies. The engineering portion of the course includes prototype development, computer aided design(CAD), 3D printing, documentation of machine processes, machine automation and programming, testing designs for structural integrity, and calculating machine speed and power.

Students will maintain an Engineering Notebook throughout the course documenting their experiences in the shop and laboratory. Research and engineering design will be highlighted as students develop and conduct industry appropriate engineering projects. The course concludes with a final engineering project, which students choose based upon course experiences and interest.

Mechanical Systems in Agriculture includes the following units of study.

- Agricultural Engineering
- Structures
- Engines
- Machines
- Engineering Solutions

Planning your Agriculture classes:

	Track #1	Track #2	Track #3
7th Grade	Introduction to Ag		
8th Grade	Agriculture, Food, and Natural Resources	Agriculture, Food, and Natural Resources	
9th Grade	Livestock Selection, Nutrition & Management	Livestock Selection, Nutrition & Management	Agriculture, Food, and Natural Resources
10th Grade	Science & Technology of Food	Ag & Natural Resources	Livestock Selection, Nutrition & Management
11th Grade	Ag Power & Tech	Science & Technology of Food	Ag Power & Tech
12th Grade	Ag Business Foundations	Leadership in the Agricultural Industry	Mechanical Systems in Ag

ENGLISH DEPARTMENT

101 ENGLISH 9

Grade: 9 (Required)

Full Year - 1 credit

The focus of English 9 is to prepare students for the English I end-of-course exam. Grammar and composition will be emphasized throughout the year. A wide variety of literature will be studied as well, while continuing to develop and refine writing skills. Students will also enrich and expand their vocabularies through a year-long program of study. Furthermore, students will enhance their verbal skills throughout this English Language Arts course.

102 ENGLISH 10

Grade: 10 (Required)

Full Year - 1 credit

English 10 will concentrate heavily on composition, literature and nonfiction selections, vocabulary and grammar. Students will improve their writing skills through reading responses and essays. A wide variety of literature will be studied throughout the year while students continue to refine their writing skills. Students will enrich and expand their proofreading skills throughout a year-long program of study. Coursework will be designed to prepare students for the English II end-of-course exam.

103 ENGLISH 11

Grade: 11 (Required)

Full Year - 1 credit

English 11 concentrates on developing composition skills and reading skills in literature and nonfiction for the student who wants to prepare for the possibility of attending a two-year or four-year college. The reading assignments will come primarily from American literature. Grammar, mechanics, vocabulary, and speaking skills will be included in the class. The students will write at least one research paper for the class.

104 ENGLISH 12

Grade: 12 (Required)

Full Year - 1 credit

English 12 is offered to prepare the student for college and career readiness as defined by the Ohio Department of Education: "Being qualified for (1) a degree-granting postsecondary education without remediation; (2) a chosen career, ready for advanced training." The reading and writing assignments will be very similar to assignments in first-year college writing and literature courses. Students will build a superior vocabulary

essential for success in college-level work as well as refine their grammar, usage, and mechanics in the context of writing. Students will also prepare and deliver oral presentations. The reading assignments will come primarily from English literature and non-fiction. The students are required to write at least one research paper.

110 NOVEL STUDY

Grade: 9, 10, 11, 12

Semester – ½ credit

In this course students will explore different types of novels. There will be numerous class discussions on theme, character development, and plot. We will relate novels to everyday life and life lessons. Students will have the opportunity to read a novel on their own and share it with the class.

112 THE SHORT STORY

Grade: 10, 11, 12

Semester - ½ credit

This course is intended to give students an understanding of the basic elements of the short story: plot, setting, characters, theme, tone and point of view. Students will study the works of a variety of authors, with a focus on American Literature. Short stories from different genres will be read throughout the semester with questions to complete that will serve as a springboard for class discussions. A variety of projects may also be completed during the semester, such as writing original short stories and analyzing and creating a lesson on a short story of a student's choice. Students will be expected to complete readings on a timely basis and keep up with class discussions.

130 SPEECH COMMUNICATION

Grade: 11, 12

Semester - ½ credit

In this course students will research, organize, write and deliver a variety of oral presentations. Students will also learn the concepts of oral communication and how to apply them to become effective, poised speakers. The students will learn to incorporate visual aids including PowerPoint to enhance their presentations. *This course is highly recommended for two-year and four-year college-bound students.*

117 THE CREATIVE WRITING WORKSHOP: DEVELOPING THE STORY AND THE SCREENPLAY

Grade: 10, 11, 12

Semester - ½ credit

The Creative Writing Workshop helps students develop awareness and originality and encourages self-expression through writing original fiction in a workshop setting. Students will study the elements of the short story, creative nonfiction, and screenplay. They will then electronically produce original works.

118 CREATIVE WRITING II

Grade: 10, 11, 12

Semester - ½ credit

Creative Writing II is a continuation of The Creative Writing Workshop. This class allows students to make improvements, use advanced techniques, and make major revisions on the pieces that they completed in The Creative Writing Workshop.

125 COLLEGE READINESS

Grade: 10, 11, 12

Semester - ½ credit

The College Readiness course is tailored to your needs as a future college student. You will get assistance with your college applications, letters of recommendation, scholarships, and financial aid information.

College Credit Plus English Courses (offered through Lorain County Community College)

It is the responsibility of the student to meet all Ohio Department of Education deadlines and requirements as well as the admission/participation requirements of each college/university. The Intent to Participate form must be filled out, signed, and returned to the guidance office by April 1st, 2021 for students wishing to participate in CCP for the 2021-2022 school year.

ENGL 161 COLLEGE COMPOSITION I (LCCC)*

**this course can be used to replace English 11 or English 12*

Grade: 11, 12

Semester - 1 credit (this course can be used to replace English 11 or English 12)

Prerequisite: intent form by April 1st AND accepted into LCCC

An introduction to fundamental college-level skills in academic reading and writing. Summary, analysis, synthesis and research documentation are emphasized, along with critical thinking and collaborative learning.

ENGL 162 COLLEGE COMPOSITION II (LCCC)

**this course can be used to replace English 11 or English 12*

Grade: 11, 12

Semester - 1 credit

Prerequisite: intent form by April 1st AND accepted into LCCC; ENGL 161

A writing course continuing the practice of skills introduced in ENGL 161, as well as strategies of argumentation and secondary research leading to a research paper.

ENGL 255 INTRODUCTION TO FICTION

Grade: 11, 12

Semester - 1 credit

Prerequisite: intent form by April 1st AND accepted into LCCC; ENGL 161

Study of short stories and novels to acquaint the general student with important themes and critical perspectives applicable to fiction. Humanities Core Course.

College Credit Plus Elective Courses (offered through Ashland University)

It is the responsibility of the student to meet all Ohio Department of Education deadlines and requirements as well as the admission/participation requirements of each college/university. The Intent to Participate form must be filled out, signed, and returned to the guidance office by April 1st, 2021 for students wishing to participate in CCP for the 2021-2022 school year.

EDAE102M COLLEGE STUDY SKILLS (AU) (offered odd years)

Grade: 9, 10, 11, 12

Semester - 1 credit

Prerequisite: intent form by April 1st AND accepted into AU

This course introduces the study skills crucial to academic success. Emphasis is placed on practice in time management, listening, taking class notes, preparing for examinations, reading textbooks, writing papers, vocabulary building, problem-solving and utilizing educational resources.

EDUC371M 7 HABITS OF HIGHLY SUCCESSFUL COLLEGE STUDENTS (AU) (offered even years)

Grade: 9, 10, 11, 12

Semester - 1 credit

Prerequisite: Intent Form/Application required for College Credit Plus option

This course is a high-impact student success course designed to enhance student engagement, improve persistence, strengthen student learning, and increase retention and completion rates. Within the context of the tenuous relationship between schools (K-20) and society, the course provides students with the opportunity to analyze their past academic performance as well as social issues using key concepts in development psychology, learning theory, social theory and theories of motivation. The theoretical foundations will help students develop strategies that lead to success in college and beyond.

151 YEARBOOK I

Grade: 10, 11, 12

Full Year - 1 credit

Prerequisite: Approval from instructor (APPLICATION REQUIRED)

Students will use **In-Design, PhotoShop, and Walsworth's Online Design** to create, layout, and edit signs, newsletters, illustrated reports, newspapers, and books. Class projects include the production of the Fall and Winter Sports programs and the MHS yearbook, "The Chevalier." All students in the class will also be expected to return after graduation (for as long as it takes) to finish the yearbook. Students in this class will need to be able to work independently, meet deadlines, and show self-initiative. ***Students are also expected to sell advertisements for both the sports programs and the yearbook, as well as selling programs at football and basketball games.***

152 YEARBOOK II

Grade: 11, 12

Full Year - 1 credit

Prerequisite: Yearbook I

Yearbook II provides students with further opportunities to use **In-Design, PhotoShop, and Walsworth's Online Design** to create, layout, and edit signs, newsletters, illustrated reports, newspapers, and books. Class projects include the production of the Fall and Winter Sports programs and the MHS yearbook, "The Chevalier." All students in the class will also be expected to return after graduation (for as long as it takes) to finish the yearbook. Students in this class will need to be able to work independently, meet deadlines, and show self-initiative. ***Students are also expected to sell advertisements for both the sports programs and the yearbook, as well as selling programs at football and basketball games.***

153 YEARBOOK III

Grade: 12

Full Year - 1 credit

Prerequisite: Yearbook II

For the student with advanced skills, Yearbook III provides students with further opportunities to use **In-Design, PhotoShop, and Walsworth's Online Design** to create, layout, and edit signs, newsletters, illustrated reports, newspapers, and books. A student will be expected to provide staff leadership, overseeing section development, concept development, and cooperative learning. Class projects include the production of the Fall and Winter Sports programs and the MHS yearbook, "The Chevalier." All students in the class will also be expected to return after graduation (for as long as it takes) to finish the yearbook. ***Students are also expected to sell advertisements for both the sports programs and the yearbook, as well as selling programs at football and basketball games.***

FINE ARTS: DRAMA DEPARTMENT

121 MAPLETON THEATER PRODUCTIONS: ACTING I

Grade: 10, 11, 12

Semester - ½ credit

Introduction to Drama introduces students to the discipline of the theater along with theater literature. Improvisations, script analysis, performance techniques, and exercises improve vocal and physical range. Students interpret theatrical scenes and learn critical evaluation of various dramatic works of literature. Students will be expected to perform for an audience.

122 MAPLETON THEATER PRODUCTIONS: ACTING II

Grade: 11, 12

Semester - ½ credit

Prerequisite: ACTING I

Drama II provides students with further study of the discipline of the theater along with theater literature. Improvisations, script analysis, performance techniques, and exercises improve vocal and physical range. Students interpret theatrical scenes and learn critical evaluation of various dramatic works of literature. Students will be expected to perform for an audience and assume main roles.

123 MAPLETON THEATER PRODUCTIONS: ACTING III

Grade: 12

Semester - ½ credit

Prerequisite: ACTING II

Drama III provides students with further study of the discipline of the theater along with theater literature. Improvisations, script analysis, performance techniques, and exercises improve vocal and physical range. Students interpret theatrical scenes and learn critical evaluation of various dramatic works of literature. Students will be expected to perform for an audience and assume main roles.

FINE ARTS: MUSIC DEPARTMENT

771 BAND

Grade: 9, 10, 11, 12

Full Year - 1 credit

Prerequisite: Participation in Middle School Band or an equivalent. High School beginning band members may enter the class with approval from the band director.

The primary goal of the Mapleton High School Band is to provide young people with an experience in music that is both enjoyable and educational. The elements of music are taught through the exciting medium of performance. Students in the high school band are automatically members of the Marching, Concert and Pep Bands.

Marching Band takes place primarily through the first nine weeks, and is required of all members, with the exception of members of the Varsity Football team. Band camp will begin the first week in August before school begins in the fall. Band camp will run 8-noon Monday through Friday. All students are required to attend summer rehearsals. The band director will review any scheduling conflicts. The Marching Band plays at all football games, and several weekend events during the fall, all of which are required. Evening practices will be scheduled when necessary.

After Marching Band, the Concert Band meets for the remainder of the year. The Concert Band advances student skills through study of advancing concert literature. Students perform at a Holiday Concert, Winter Concert and a Spring Concert. Concerts are a required part of the course.

In addition, the band may perform for OMEA Large Group Events or a concert band festival. Interested students also can take part in District X Solo and Ensemble Contest as well as honors festivals. Additional performance opportunities may arise from time to time as well. Students may participate in our much-respected winter Pep band. This group provides entertainment at winter sporting events. A small fee will be established to cover the cost of uniform maintenance as well as to cover certain expenses during the year.

772 CHOIR

Grade: 9, 10, 11, 12

Full Year - 1 credit

Prerequisite: Participation in Middle School Choir during the 8th grade year. High School students entering choir must audition for the choir director if they did not participate in choir the year before.

Choir is offered to students desiring to acquire skills that are necessary to meet superior standards of performance. Students must desire to develop the social abilities to work and share with others and to develop a sense of responsibility as an individual for the success of the group. Many styles of Choral performance are introduced from Traditional to Show Choir.

Choir performances include a Holiday Concert, Winter Concert, Spring Concert, and other concerts and assemblies as the opportunities arise. In addition, the choir may perform at the OMEA District X Large Group or other festivals. Students are also encouraged to participate in the District X Solo and Ensemble Contest and various other Music festivals/contests throughout the year. Students are required to attend all performances.

FINE ARTS: VISUAL ART DEPARTMENT

Art classes will be offered on the following two-year rotation:

Year I (2020-2021):

Basic Art	Graphic Design
Ceramics I	Sculpture
Ceramics II	Stage Design & Construction I & II
Drawing	Advanced Art I, II, III, IV

Year II (2021-2022):

Basic Art	Painting
Ceramics I	Stage Design & Construction I & II
Ceramics II	Advanced Art I, II, III, IV
Graphic Design	

Students who are interested in taking a variety of visual art courses should use this information to develop a four-year educational plan.

715 BASIC ART

Grade: 9, 10, 11, 12

Full Year - 1 credit

Basic Art class is a prerequisite for ALL other visual art classes.

This class gives a student a taste of all other art classes offered at the high school level. It is for students who enjoy making art, like a wide variety of projects, and are seeking to fulfill graduation requirements. In this general class, students will explore the media and concepts related to visual art. Areas of study will include selected explorations in drawing, painting, printmaking, clay, sculpture, and graphics/calligraphy. Various artists and their works will be studied and emphasis will be on self-discipline and learning the processes, elements, and principles of art. Students must provide their own sketchbook and complete weekly sketchbook assignments. A written art history report may also be required.

730 MAPLETON THEATER PRODUCTIONS: STAGE DESIGN & CONSTRUCTION

Grade: 10, 11, 12

Semester – ½ credit

Prerequisite: Approval from instructor (APPLICATION REQUIRED)

This semester class will only be offered during the first semester of each school year. Students will design and produce the set and various props for the winter drama production. Much of the design and planning phase will be done as a group and students will be asked to do concept drawings and build scale models. Students will then be split into teams of Artists/Finishers, Builders/Construction, and Prop Creation/Organization. Proper communication is a valuable skill for students in this class and it will be necessary to collaborate within the teams and between other teams in the class. Students must use their time wisely and follow strict deadlines. **Working outside of class to meet deadlines will be required.** This class is high pressure, but also rewarding as you see your creations come to life on stage! Students will NOT be required to perform on stage or serve as stage crew on performance nights.

732 MAPLETON THEATER PRODUCTIONS: STAGE DESIGN & CONSTRUCTION II

Grade: 11 & 12

Semester – ½ credit

Prerequisite: Stage Design & Construction; Approval from instructor (APPLICATION REQUIRED)

This semester class will only be offered during the first semester of each school year and is an extension of Stage Design & Construction. This class allows students to do stage design for a second semester and receive credit. Stage Design & Construction II students will take this class during the same period as Stage Design & Construction and will be asked to take on more leadership roles as they have already been through the process. All other requirements will be the same as Stage Design & Construction.

742 CERAMICS I

Grade: 10, 11, 12

Semester - ½ credit

Prerequisite: Basic Art

Ceramics I will explore various selected techniques of working with clay such as but not limited to modeling, subtractive, additive, hand built, slab, coil, and wheel thrown. Media used could include clays such as modeling clay, firing clay, self-hardening clay, and glazes. Students will learn about the processes of firing and glazing and the proper use of a kiln. Pottery from Prehistoric to Contemporary will be briefly studied and selected artists who create in clay and their works will also be discussed. **Class size is limited to 16 including advanced art** students choosing this area to expand upon.

743 CERAMICS II

Grade: 10, 11, 12

Semester - ½ credit

Prerequisite: Ceramics I

Ceramics II will allow the student to create larger clay works, work with more creative pottery techniques, and to concentrate on personal strengths. Emphasis will be on quality of work and technique, with skills on the potter's wheel improved. Fire smoked and Raku pieces will be created and other experimental firing techniques will be encouraged. Pottery from various, selected cultures will be reviewed and a few individual artists will be studied. **Class size is limited to 16 including advanced art students** choosing this area to expand upon.

744 PAINTING

Grade: 10, 11, 12

Semester - ½ credit

Prerequisite: Basic Art

Painting will explore and develop skills in various selected techniques of painting such as but not limited to wet brush, dry brush, sponge, wash, masking, wax resist, painting knives, airbrush, and others. Traditional, as well as contemporary, painting styles and techniques will be practiced and emphasis will be on color theory. Media to be used may include any or all of the following: acrylic, watercolor, oil, and mixed media. Art History will be briefly studied and selected artists who use painting for artistic expression will be discussed.

746 GRAPHIC DESIGN

Grade: 10, 11, 12

Semester - ½ credit

Prerequisite: Basic Art

In Graphic Design, students will explore the various aspects of publication design including letter design, calligraphy, layout, color theory, poster design, sign painting, and other display techniques. We will also use the computer and Adobe Photoshop in this class. T-shirt design, business cards, DVD cases, packaging design, and other design projects will be completed. Various school enhancement projects may be undertaken. Students should consider maintaining some of their own equipment, such as a flash drive, for this class.

751 ADVANCED ART I

753 ADVANCED ART III

752 ADVANCED ART II

754 ADVANCED ART IV

Grade: 11, 12

Semester - ½ credit

Prerequisite: APPLICATION REQUIRED; Basic Art and at least 5 other art classes with permission of instructor. (Students who wish to focus on CERAMICS may take Advanced Art I after taking Basic Art and Ceramics I and II.)

The Advanced Art I - IV classes are specifically designed for the junior or senior art student who has taken at least five of the offered art classes. They are designed so that the student may concentrate and create advanced work in the area of the student's choice and interest. This class is for juniors or seniors only and by permission of the instructor. Sketchbook is recommended but not required. ***ALL ADVANCED ART STUDENTS WILL MEET DURING THE SAME PERIOD EACH DAY.***

FOREIGN LANGUAGE DEPARTMENT

501 SPANISH I

Grade: 9, 10, 11, 12

Full Year - 1 credit

Prerequisite: Minimum of C- in English. Eighth grade students with a final grade of D or F in English are NOT eligible to take Spanish I as a freshman.

Spanish I is the beginning year of Spanish language learning. The four language skills: reading, writing, speaking and listening comprehension are developed through a variety of authentic situations, including conversations on activities, hobbies, family, school, city, and food. Students study various countries and cultures in class.

502 SPANISH II

Grade: 10, 11, 12

Full Year - 1 credit

Prerequisite: Spanish I; teacher recommendation

Spanish II is a continuation of Spanish I. Students will continue to work on the four language skills (reading, writing, listening, and speaking) and apply them to a variety of authentic situations. Cultural studies will also continue. Students will build upon their previous level of knowledge and understanding in terms of grammar, vocabulary, and communicative skills.

503 SPANISH III

Grade: 11, 12

Full Year - 1 credit

Prerequisite: Spanish I & II; teacher recommendation

Spanish III is designed to refine the student's abilities to read, write, speak, and listen to Spanish. New grammar points will be included along with review of previous concepts. Vocabulary growth will continue as will the study of culture.

504 SPANISH IV

Grade: 12

Full Year - 1 credit

Prerequisite: Spanish I, II, & III; teacher recommendation

The Spanish IV curriculum will provide the student with the opportunity to continue to develop their ability to read, write, speak and listen to Spanish. Vocabulary and grammar study will continue. The students will read literature from both Spain and Latin America and continue their study of culture.

INDUSTRIAL TECHNOLOGY DEPARTMENT: **Manufacturing Technologies**

651 INDUSTRIAL TECHNOLOGY I (MANUFACTURING OPERATIONS)

Grade: 9, 10, 11, 12

Full Year - 1 credit

Industrial Technology I builds a broad foundation of knowledge based upon the tools, materials, and processes associated with modern industry. Students gain knowledge and practical experience in measuring, drafting, woodworking, and metalworking. Coursework consists of a balanced blend of conventional classroom work (lecture, tests, videos, etc.) and hands-on project work using traditional tools as well as computers. Students will have the opportunity to gain skill in Computer Aided Drafting (CAD) and CNC machining. Students are expected to approach all work enthusiastically, responsibly, and safely.

Each student keeps a running bill of material, payable at the end of the school year (typically \$40.00-\$60.00). A \$10.00 lab fee, payable at the beginning of the school year, covers school-issued safety glasses and consumables such as glue, fasteners, and finishes.

652 INDUSTRIAL TECHNOLOGY II (HYDRAULICS & PNEUMATICS)

Grade: 10, 11, 12

Full Year - 1 credit

Prerequisite: C average or better in Industrial Technology I

Industrial Technology II is a comprehensive study of the various metalworking technologies: forging, welding, fabricating, foundry, and machining. Coursework builds upon knowledge learned in Industrial Technology I, including drafting as it pertains to the metalworking field. There are required projects and/or practice exercises in each area of study. Most years, students also have the opportunity to complete one or two small elective projects in woods, metals, or a combination. Students will also have plenty of opportunities to learn more about CAD and CNC.

Students are expected to approach the coursework enthusiastically, responsibly, and safely. Each student keeps a running bill of material, payable at the end of the school year. A \$10.00 lab fee, payable at the beginning of the school year, covers school-issued safety glasses and consumables such as solder, welding rods, and finishes.

653 INDUSTRIAL TECHNOLOGY III (MACHINING WITH INDUSTRIAL LATHES)

Grade: 11, 12

Full Year - 1 credit

Prerequisite: C average or better in Industrial Technology I & II

Industrial Technology III offers opportunities for experienced students to use their previously-learned skills on advanced projects and activities. They spend most of the first semester on a class-determined activity in the area of manufacturing or service learning. In manufacturing, students organize a company to mass produce and market a product. In service learning, the class chooses and completes a worthwhile project to benefit the school or the community.

Past projects include constructing the Victory Bell Plaza and building picnic tables for the Ashland County fairgrounds. Students are expected to possess a strong work ethic and a willingness to function as part of a team in order to ensure a successful venture.

Second semester begins with a brief overview of furniture design and construction, after which students begin working on large self-determined projects (typically woodworking) chosen to suit their personal preferences, interests, and needs. Projects must exhibit tasteful, accepted design standards and be crafted using conventional joinery. Students are encouraged to select projects that will challenge and broaden their personal skill level. Final approval of the project will be by the teacher.

654 INDUSTRIAL TECHNOLOGY IV (MACHINING WITH INDUSTRIAL MILLING MACHINES)

Grade: 12

Full Year - 1 credit

Prerequisite: C average or better in Industrial Technology I, II, & III

Due to the independent nature of this course, participants must demonstrate critical thinking, problem solving, and personal responsibility. In addition, students must be in good academic standing in their other classes, which is up to the discretion of the instructor. A C average or better in Industrial Technology I, II, and III is required for this course.

Industrial Technology IV students will construct advanced level projects of their choice using woods, metals, or a combination. Typically, the school year begins with students resuming work on projects begun the previous year. Students are expected to work efficiently and independently. The emphasis is on quality and craftsmanship. The teacher may require students to purchase special items and materials on their own to develop consumer awareness. **All fees must be paid and projects removed prior to graduation unless other arrangements have been made.**

656 Integrated Production Technologies

Grade: 12

Full Year - 1 credit

Prerequisite: C average or better in Industrial Technology I, II, & III; APPLICATION REQUIRED

Students will apply what they learn in physics, chemistry and biology to real-world projects using emerging, cutting-edge materials. Students will work on the frontiers of product development in areas of need. Students will re-engineer existing products to reduce the energy and material costs required to produce them, invent new products, and create more durable and efficient products using automated computer-aided design and manufacturing programs. **All fees must be paid and projects removed prior to graduation unless other arrangements have been made.**

MATHEMATICS DEPARTMENT

202 ALGEBRA I

Grade: 8, 9, 10, 11, 12 (Required)

Full Year - 1 credit

Algebra I will include the following topics: order of operations to simplify expressions; solve, check, and graph linear and quadratic equations and inequalities; solve systems in two variables; apply properties of exponents to simplify expressions and solve equations; and operations with polynomials. Coursework will be designed to prepare students for the Algebra I end-of-course exam.

203 ALGEBRA I RESPONSE TO INTERVENTION

Grade: 9, 10, 11, 12

Full Year – 1 credit

Must be taken concurrently *with* Algebra I

This course is designed to provide support and intervention for students enrolled in Algebra I. Taken in the same year as Algebra I, students will receive a second credit of math.

205 GEOMETRY

Grade: 9, 10, 11, 12 (Required)

Full Year - 1 credit

Prerequisite: Algebra I

Geometry will include the following topics: angle and line relationships, congruence with all types of figures, similar polygons, properties of quadrilaterals, inequalities, properties of triangles, direct and indirect measurement, constructions, properties of polygons, properties of circles, basic trigonometry, inductive reasoning, three dimensional figures, and coordinate geometry. Students will also be exposed to geometry in real life settings. Coursework will be designed to prepare students for the Geometry end-of-course exam.

206 GEOMETRY RESPONSE TO INTERVENTION

Grade: 9, 10, 11, 12

Full Year – 1 credit

Must be taken concurrently with Geometry

This course is designed to provide support and intervention for students enrolled in Geometry. Taken in the same year as Geometry, students will receive elective credit for this course. Students will still need to complete Algebra II to graduate.

212 ALGEBRA II

Grade: 10, 11, 12 (Required)

Full Year - 1 credit

Prerequisite: Geometry

Algebra II covers a review of Algebra I topics on an intermediate level of difficulty, as well as topics such as: polynomials, rational expressions, relations, functions, systems of linear equations, logarithms, inequalities, and statistics. A graphing calculator will be required for the technology aspect. **This class is required for graduation.**

219 PRECALCULUS

Grade: 11, 12

Full Year - 1 credit

Prerequisite: Average of 80% or higher in Algebra II; teacher recommendation

Note: This course is a prerequisite for College Credit Plus math coursework.

Precalculus is a rigorous study that enhances the skills learned in Algebra I, Geometry, and Algebra II. The course also introduces many new topics including: simplifying integral exponents, polynomials, and rational expressions; solving equations and inequalities; analytic geometry; functions and function notation including linear, quadratic, polynomial, rational, exponential, logarithmic, and trigonometric functions; composition of functions; inverse functions; right-triangle trigonometry; trigonometric identities, addition laws, double-angle, and half-angle formulas; inverse trigonometric functions; trigonometric equations; law of sines; law of cosines; the complex number system; polar representation of complex numbers; powers and roots of complex numbers; polynomial theory; division of polynomials; factorization theory of polynomials; polynomial equations; decomposition into partial fractions; arithmetic sequences; geometric sequences; mathematical induction; and the binomial formula.

221 CONSUMER MATH

Grade: 11, 12

Full Year - 1 credit

Prerequisite: Algebra II

This math course focuses on math skills that students need in their adult life, post-high school. The class will be strongly problem and project based, with very few tests or quizzes. Potential topics to be covered in this course:

- cooking (budgeting shopping, unit conversions, unit rates, ratios, proportions)
- nutrition (caloric intake and caloric expenditure)

- job outlook (average yearly salary, budgeting expenses based on income)
- student loans
- banking (writing checks, balancing checkbook, using online banking, choosing a bank/account, savings vs checking accounts, interest rates)
- credit cards (interest rates, credit versus debit, minimum payments)
- income taxes (how to complete forms and file)
- insurance (health, life, accident, car)
- investing
- tips (how to calculate tips at restaurants and other service type locations)
- real estate
- paying bills
- time organization
- Some topics for this course may also be based on student ideas/requests as the course progresses.

This course will allow the student to use the math they have learned in addressing financial issues they will encounter as adults. The student will address real-world problems and the how and why in using a variety of math skills to solve them.

College Credit Plus Math Courses (offered through Lorain County Community College)

It is the responsibility of the student to meet all Ohio Department of Education deadlines and requirements as well as the admission/participation requirements of each college/university. The Intent to Participate form must be filled out, signed, and returned to the guidance office by April 1st, 2021 for students wishing to participate in CCP for the 2021-2022 school year.

MTHM168 STATISTICS (LCCC)

Grade: 12

Semester - 1 credit

Prerequisite: Precalculus; intent form by April 1st AND accepted into LCCC

This course provides a non-calculus based introduction to statistical thinking and statistical methods. The topics discussed in the course include: data collection, data description, basic probability, sampling distributions, probability distributions, confidence intervals and hypothesis tests. An emphasis is placed on using technology to solve problems involving real data and hands-on projects are used throughout the course.

MTHM171 COLLEGE ALGEBRA (LCCC)

Grade: 12

Semester - 1 credit

Prerequisite: Precalculus; intent form by April 1st AND accepted into LCCC

Study of algebraic functions, equations, systems of equations, inequalities, matrices, partial fractions, exponential and logarithmic functions. Designed primarily for the calculus-bound student. Graphing calculator required.

PHYSICAL EDUCATION DEPARTMENT

950 HEALTH

Grade: 10, 11, 12 (Required)

Semester - ½ credit

The purpose of Health is to educate students about the pressing health issues facing them today and in the future. Some of these issues may include AIDS, sex education, teen dating violence prevention, stress, drugs and alcohol, and nutrition. *(Students who plan to attend the Career Center or are interested in alternative educational programs such as College NOW or International Baccalaureate SHOULD complete the Health requirement by the end of 10th grade.)*

Health Education is all about health related issues that affect students today and as well as issues that may affect them in the future. At the conclusion of this course, students will leave with the knowledge and strategies needed to be healthy now and in the future. The major topics discussed in this course are: self-esteem, stress (including depression and suicide), mental health, nutrition, alcohol, tobacco, vaping/e-cigarettes, illegal substances, sexual risk avoidance, teen dating violence, and CPR training. *(Students who plan to attend the Career Center or are interested in alternative educational programs such as College NOW or International Baccalaureate SHOULD complete the Health requirement by the end of 10th grade.)*

GENERAL INFORMATION

Four Physical Education options are available for students. All students have the opportunity to enroll in a Physical Education course. **However, students who have NOT met their Physical Education requirement will be given priority and placed in courses first.** Students who have already completed their Physical Education requirement may elect to take an additional Physical Education course, but enrollment in the course will be based upon class seats available and seniority.

Students may take only ONE Physical Education course each semester. Each Physical Education course will have a maximum capacity of 24 students.

Note: Physical Education courses are ¼ credit each; therefore, they cannot be used to meet the minimum five (one credit) course total for athletic eligibility.

Students who plan to attend the Career Center or are interested in alternative educational programs such as College NOW or the International Baccalaureate SHOULD complete the physical education requirement by the end of 10th grade.

All students enrolled in Physical Education will be required to complete State Mandated Physical Education Assessments for successful completion of their elective Physical Education course. This series of State Mandated PE Assessments includes evaluating personal fitness, developing a plan to improve fitness and healthy living, breaking down training principles of exercise, and developing a marketing plan that encourages others to be active for life.

954 Physical Education I

Grade: 9, 10, 11, 12 (Required)

Semester - ¼ Credit

Physical Education I is a prerequisite for all other PE courses.

Physical Education I is an introductory level high school physical education course. Students will participate in a variety of activities that focus on individual skills development and teamwork skills. Units of study may include: basketball, volleyball, badminton, crossminton, pickleball, eclipse ball, nitro ball, team handball, flag football, rookie rugby, soccer, ultimate frisbee, sabakiball, and slow-pitch softball. Additional games and sports may be added at the discretion of the teacher. In addition to the games and sports listed above, students will also be introduced to strength training exercises and activities. This will primarily focus on exercises that can be performed in the weight room. Students will learn the fundamental movements for basic lifts for each muscle group of the body. The goal of this course is for students to be able to enjoy and understand the physical, mental, and social benefits of exercise and activity, and that students are equipped with the tools to be active for life.

955 Physical Education II: TEAM AND INDIVIDUAL SPORTS

Grade: 9, 10, 11, 12 (Required)

Semester - ¼ credit

Prerequisite: Physical Education I

The primary focus of Team and Individual Sports will be the continued development and improvement of skills necessary for many team and individual sports. At the discretion of the teacher, students will participate in a variety of team and individual sports such as: basketball, volleyball, badminton, crossminton, pickleball, eclipse ball, nitro ball, team handball, flag football, rookie rugby, soccer, ultimate frisbee, sabakiball, and slow-pitch softball. Additional games and sports may be added at the discretion of the teacher.

The secondary area of focus for this course will be improving personal health. In order to achieve this goal, students will learn the necessary skills to develop and execute a strength training plan. Students will learn about weight room safety, the exercises available to Mapleton students in the weight room, performing lifts with proper form, as well as designing a strength training program.

Students will exit this course with an understanding of a wide variety of lifetime sports, games, and activities, as well as with the ability to develop and properly execute a strength training program. By the end of the course the goal is for students to be able to find enjoyment in and understand the physical, mental, and social benefits of exercise and activity.

960 Physical Education II: FIT FOR LIFE

Grade: 9, 10, 11, 12 (Required)

Semester - ¼ credit

Prerequisite: Physical Education I

The overall goal of Fit for Life is to improve cardiorespiratory endurance, muscular strength, muscular endurance, flexibility, and body composition, all while teaching students about principles of fitness and lifetime games and sports. In Fit for Life, students will actively participate in a wide variety of activities aimed at improving health-related fitness. These activities include: Fitness Walking, Kickin' it Cardio!, Yoga, Tabata, P90X, Werq, Core Cardio, Kettlebells, and Zumba. In addition to this, the weight room will also be utilized. While in the weight room, students will learn about strength training exercises that work each muscle group, correct form for a wide variety of strength training exercises, and how to develop a strength training program specific to their goals. Additional games and sport will be added to the course at the discretion of the teacher. The goal is for students to be able to find enjoyment in these fitness activities, and discover the many physical and emotional benefits of being physically active so that they can be Fit for Life!

962 Physical Education II: NET AND RACKET SPORTS

Grade: 9, 10, 11, 12 (Required)

Semester - ¼ credit

Prerequisite: Physical Education I

The overall goal of Net and Racquet Sports is for students to find enjoyment in physical activity through a wide variety of Net and Racquet Sports. In addition to this, students will aim to improve their cardiorespiratory endurance, muscular strength, muscular endurance, flexibility, and body composition. In Net and Racquet Sports, students will activity participate in a wide variety of games and sports such as: Beach Volleyball, Foot Strike, Wall Ball, Badminton, Netball, Crossminton, Nitro Ball, Squish, PickleBall, Volleyball, Eclipse Ball, and Throwball. Students will learn skills and strategies related to each of these sports. Students will also be utilizing the weight room by actively participating in strength training exercises. Students will learn about strength training exercises that work each muscle group, correct form for a wide variety of strength training exercises, and how to develop a strength training program specific to their goals. Additional games and sports will be added to the course at the discretion of the teacher. The goal is for students to be able to find enjoyment in either fitness activities or net, wall, and racquet sports, and will also discover many of the physical and emotional benefits that being physically active has to offer!

965 Physical Education II: STRENGTH AND CONDITIONING

Grade: 9, 10, 11, 12

Semester – ¼ credit

The overall goal of Strength and Conditioning is to improve muscular strength, muscular endurance, flexibility, cardiorespiratory endurance, body composition, and skill-related fitness. These goals will be achieved through strength training exercises and a wide variety of supplemental exercises. Students will learn about strength training exercises that work each muscle group, correct form for a wide variety of strength training exercises, and how to develop a strength training program specific to their goals. Students will spend the majority of class time in the weight room performing lifts, while the remaining time will be split between performing cone

and ladder drills, medicine ball routines, resistance band exercises, flexibility exercises, calisthenics, plyometrics, and body weight exercises. In addition to these areas of focus, students will also participate in an assortment of lifetime games and sports. The goal of this course is to be able to find enjoyment in these activities and discover the many physical and emotional benefits that being active through strength and conditioning exercises has to offer!

970 Physical Education III: ARCHERY

Grade: 12

Semester – ¼ credit

**Prerequisite: Physical Education requirement completed;
approval from instructor and high school principal**

In order to enroll in Physical Education III: Archery, students must have successfully completed their Physical Education requirements needed to graduate. Students will learn basic Archery, according to the National Archery in the Schools Program (NASP). Students will not be allowed to bring in their own personal equipment for this course. Students will be using a Genesis Mathews bow, which is a very simplistic compound bow designed for all ages. Each student will leave this course with an understanding of Archery range etiquette, safety and procedures to participate in Archery safely, Archery technique according to NASP standards, and target scoring. In addition to participating in Archery, students will further continue their strength training development with exercise in the weight room, designing a strength training plan that meets each student's individual needs and goals. The overarching goal of this course is that students are able to find Archery an enjoyable hobby that enhances physical, mental, and social health.

MAPLETON LOCAL SCHOOLS PHYSICAL EDUCATION GRADUATION REQUIREMENT WAIVER FOR HIGH SCHOOL STUDENTS

A student who participates in interscholastic athletics, marching band (including Sweethearts), or cheerleading for at least two (2) full seasons is not required to complete the physical education one-half unit to graduate, although the student must complete one-half unit in another area.

According to Section 3313.603 of the Ohio Revised Code, the board of education of each school district may adopt a policy to excuse from the high school physical education requirement each student who, during high school, has participated in interscholastic athletics, marching band or cheerleading for at least two full seasons.

An athletic season is defined by the rules and bylaws of the Ohio High School Athletic Association. Partial credit will not be granted.

In order to be eligible to graduate, a high school student who is excused from the physical education requirement must complete instruction in 6.5 electives.

Participating in interscholastic athletics, marching band (including Sweethearts), and cheerleading is a privilege, and not a right. This policy shall not in any way be construed as granting a student the right to participate in such

district-sponsored activities. Board rules and policies including Code of Conduct continue to apply. In addition, any student participating in this policy shall be subject to any athletic fee and or pay-to-participate fee.

Granting of this waiver becomes effective upon completion of the specified athletic seasons as approved by the band director, athletic coach, or Sweetheart/cheerleading advisor and submission to the Guidance Office.

ELIGIBLE ACTIVITIES		
Fall	Winter	Spring
Football	Girls/Boys Basketball	Baseball
Volleyball	Wrestling	Softball
Girls/Boys Cross Country	Cheerleading	Girls/Boys Track
Girls/Boys Soccer	Sweethearts	
Girls/Boys Golf		
Cheerleading		
Band		
Sweethearts		

Waivers WILL NOT be granted and placed on official transcripts until TWO seasons have been completed and TWO forms are completed and returned to the Guidance Office.

SCIENCE DEPARTMENT

The **Tech Prep/2-Year Post-Secondary** sequence is intended for students who seek vocational training. Students planning to attend the Career Center and/or the state technical colleges should consider this sequence.

The **Core College Bound** sequence is designed for students intending to complete a four-year college program. Students planning to major in a subject other than science in college should consider this sequence.

The **Accelerated Science College Bound** sequence should be considered for students with exceptional ability and interest in science. Students planning to major in science in college should consider this sequence

Mapleton High School <u>Recommended</u> Science Course Sequence 3 credits required for graduation			
	Tech Prep/2-Year Post-Secondary	Core College Bound	Accelerated Science College Bound
9th Grade	Physical Science	Biology AND/OR Principles of Biomedical Science	Biology AND Principles of Biomedical Science
10th Grade	Biology	Chemistry	Chemistry AND/OR Human Body Systems
11th Grade and/or 12th Grade	CHOOSE AN ELECTIVE: *Chemistry *Environmental Science *Principles of Biomedical Science *Human Body Systems <i>Please note: Exceeding the 3 credit minimum may be recommended for future vocational/ training programs.</i>	CHOOSE AN ELECTIVE: *Physics *Biochemistry *Human Body Systems *Medical Innovations *Biomedical Innovations *Environmental Science <i>Please note: Exceeding the 3 credit minimum is recommended.</i>	CHOOSE AN ELECTIVE: *Physics *Biochemistry *Medical Innovations *Biomedical Innovations <i>Please note: Exceeding the 3 credit minimum is recommended.</i>

400 PHYSICAL SCIENCE

Grade: 9 (Required)*

Full Year - 1 credit

****Note: Physical science is not required if a student meets the requirements to take Biology and/or Principles of Biomedical Science as a freshman. However, an advanced physical science course will be required for graduation.***

This course is meant to be a crash course of introductory topics of multiple different branches of science. Students will begin the year learning about the basics of science from metric conversions, hypothesis writing, and variable identification to lab safety. They will then transition to the topic of chemistry where they will learn about everything from different properties and states of matter to the periodic table and eventually completing and recognizing various kinds of chemical reactions themselves. The focus then shifts to physics based content where students will cover material from simple vector and scalar measurements up to forces and free body diagrams. If time remains after completing the physics portion, students will begin to learn earth and space sciences for the remainder of the year. This will include topics like the Earth and its cycles and layers, weather and climate, the solar system and even the vast universe.

402 BIOLOGY

Grade: 9, 10 (Required)*

Full Year - 1 credit

Prerequisite: Physical Science

****NOTE: Biology may be taken in 9th grade based upon a student meeting three of the four criteria:***

- ***performance on the 8th grade science end-of-course exam (score of 4 or 5)***
- ***final grade earned in Science 8 (B+ or higher)***
- ***teacher recommendation***
- ***or completing Algebra I with a final grade of B or higher***

Students may take either Biology OR Principles of Biomedical Science OR they may take both during the same school year.

Biology I takes an ecological look into the world. Topics that will be covered in Biology I are in line with the Ohio Learning Standards for Science. All of the topics that will be covered in this course are in preparation for students to pass the Biology end-of-course exam. Students will be given the opportunity to study the following contents: the cell, genetics, heredity, biodiversity, classification, ecosystems, biospheres, abiotic and biotic energy cycles, biochemistry and some environmental science. Students will meet their inquiry-based research, communication, and applications through dissections and labs.

405 CHEMISTRY

Grade: 10, 11, 12

Full Year - 1 credit

Prerequisite: Biology AND/OR Physical Science

Chemistry is the science of the composition, structure, properties, and reactions of matter – especially of atomic and molecular systems. In this course, students will learn how elements of matter combine and often rearrange to form new substances. Laboratory experiences will focus on reinforcing concepts and using observational skills to identify chemical processes. Students will gain an appreciation for the apparent complexity of the physical world and the basic properties that underlie the behavior of matter.

407 PHYSICS

Grade: 11, 12

Full Year - 1 credit

Prerequisite: Chemistry AND Algebra II

Note: It is recommended that students have completed Algebra II with at least a "B" average.

This course is a development of vector mechanics, equilibrium, linear and rotational kinematics and dynamics, work, energy and power, impulse and momentum, wave phenomena, fluid mechanics, heat and electromagnetism. Emphasis is placed upon the mathematical formulation of principles and on problem solving. A variety of laboratory experiences are coordinated with topics covered in lectures and problems. Students are expected to be prepared to follow mathematical calculations at an advanced pace. *It is recommended that students have completed Algebra II with at least a "B" average.*

408 INTRODUCTORY ORGANIC AND BIOCHEMISTRY

Grade: 12

Full Year - 1 credit

Prerequisite: Principles of Biomedical Science OR Biology, Human Body Systems, Medical Interventions, Chemistry

This course will give any student looking to go into the biomedical field a jump start on their collegiate studies. Organic and Biochemistry courses are required entry level courses for nursing, chemical engineering, physical training, and chemistry majors. This course will introduce the concepts of these sciences to better prepare students for success in these courses in college.

The first semester will be spent focusing on the basic concepts of organic chemistry. These concepts include: acid/base chemistry, nucleophilicity, electrophilicity, resonance structures of organic compounds, isomers, chirality, the IUPAC naming system, and the basic organic synthesis reactions of SN1, SN2, E1, and E2. If time allows, more complex synthesis reactions like dehydrogenation and hydroxylation reactions will be introduced.

The second semester will focus on the basics of biochemistry with concepts including: carbohydrate chemistry, lipid chemistry, protein chemistry, enzymatic processes, neurotransmitters and hormone chemistry.

410 ECOLOGY AND ENVIRONMENTAL SCIENCE

Grade: 10, 11, 12

Full Year - 1 credit

Prerequisite: Biology

Ecology and Environmental Science is a yearlong course which is designed to be the equivalent of one year's science credit. While this is an upperclassman level course, the content will focus on areas with application to everyday life and interactions within our environment. The main areas of study in the course include: ecology, earth science, populations, ecosystem challenges, pollution, and biodiversity. The topics covered in the class will engage students in laboratory and field-based skills; as well as raise awareness and problem solving in issues such as energy production, population impacts, pollution damage, and ecosystem changes. It candidly examines the

relationship humans have to their natural world. It is also a course that will prepare one for work in the field of biology, conservation, or natural resource management.

Students will be expected to maintain a high standard of academics similar in nature to an upperclassman level course. Daily instruction will consist of lecture, lab/field work, and written reactions to topics relevant to today's changing world.

STEAM: SCIENCE, TECHNOLOGY, ENGINEERING, ARTS & MATHEMATICS

BIOMEDICAL SCIENCE

Working with the same equipment and tools used by lab professionals, PLTW Biomedical Science students are empowered to explore and find solutions to some of today's most pressing medical challenges. Through scaffolded activities that connect learning to life, students step into the roles of biomedical science professionals and investigate topics including human medicine, physiology, genetics, microbiology, and public health. Students work together in teams to find unique solutions, and in the process, learn in-demand, transferable skills like critical thinking and communication.

These are suggested sequences for science and mathematics classes for students wishing to pursue a career in the Biomedical Science field:

Biology AND Biomedical Science	Algebra
Human Body Systems AND Chemistry	Geometry
Medical Interventions AND Biochemistry*	Algebra II
Biological Innovation AND Biochemistry*	PreCalculus
<i>*Biochemistry may be taken in 11th OR 12th grade.</i>	CCP Statistics and College Algebra

420 PRINCIPLES OF BIOMEDICAL SCIENCE

Grade: 9, 10 (Required)*

Full Year - 1 credit

available to 11th and 12th grade students if space is available

***NOTE: Principles of Biomedical Science may be taken in 9th grade based upon a student meeting three of the four criteria:**

- *performance on the 8th grade science end-of-course exam (score of 4 or 5)*

- *final grade earned in Science 8 (B+ or higher)*
- *teacher recommendation*
- *or completing Algebra I with a final grade of B or higher*

Students may take either Biology OR Principles of Biomedical Science OR they may take both during the same school year. Teacher approval is required for upperclassmen.

In the introductory course of the Project Lead The Way Biomedical Science program, the first of a four course series, students explore concepts of biology and medicine to determine factors that led to the death of a fictional person. The activities and projects in the class introduce students to human physiology, basic biology, medicine, and research processes and allow students to design experiments to solve problems. Key biological concepts, including maintenance of homeostasis in the body, metabolism, inheritance of traits, and defense against disease are embedded in the curriculum.

This course is designed to provide an overview of all the courses in the biomedical science program and lay the scientific foundation for subsequent courses. Students practice problem solving with structured activities and progress to open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills. The Biomedical Science program is highly recommended for students interested in the Health Science career pathway.

422 HUMAN BODY SYSTEMS

Grade: 10, 11, 12

Full Year - 1 credit

Prerequisite: Principles of Biomedical Science OR Biology

Note: This course will replace Anatomy and Physiology.

The second course of the Project Lead The Way Biomedical Science program and part of a four course series, this course allows students to examine the interactions of body systems as they explore identity, communication, power, movement, protection, and homeostasis. Students design experiments, investigate the structures and functions of the human body, and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration. Exploring science in action, students build organs and tissues on a skeletal mannequin, work through interesting real-world cases and often play the role of biomedical professionals to solve medical mysteries.

424 MEDICAL INTERVENTIONS

Grade: 11, 12

Full Year - 1 credit

Prerequisite: Human Body Systems

This is the third course of the Project Lead The Way Biomedical Science program and part of a four course series. Students delve into activities like designing a prosthetic arm as they follow the life of a fictitious family and investigate how to prevent, diagnose, and treat disease. Students explore how to detect and fight infection; screen and evaluate the code in human DNA; evaluate cancer treatment options; and prevail when the organs of the body begin to fail. Through real world cases, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.

426 BIOMEDICAL INNOVATION

Grade: 12

Full Year - 1 credit

Prerequisite: Medical Interventions OR teacher recommendation

This is the final course of the Project Lead The Way Biomedical Science program. Students build on the knowledge and skills gained from previous courses to design their own innovative solutions for the most pressing health challenges of the 21st century. Students address topics ranging from public health and biomedical engineering to clinical medicine and physiology. They have the opportunity to work on an independent design project with a mentor or advisor from a university, medical facility, or research institution.

SOCIAL STUDIES DEPARTMENT

303 WORLD STUDIES

Grade: 9 (Required)

Full Year - 1 credit

This course examines world events from 1600 to the present. It explores the impact of the democratic and industrial revolutions, the forces that led to world domination by European powers, the wars that changed empires, the ideas that led to independence movements, and the effects of global interdependence. The concepts of historical thinking introduced in earlier grades continue to build with students locating and analyzing primary and secondary sources from multiple perspectives to draw conclusions.

304 AMERICAN HISTORY

Grade: 10 (Required)

Full Year - 1 credit

Prerequisite: World Studies

After reviewing the early, foundational years of American History, this course examines the history of the United States of American from 1877 to the present. The federal republic has withstood challenges to its national security and expanded the rights and roles of its citizens. The episodes of its past have shaped the nature of the country today and prepared it to attend to the challenges of tomorrow. Understanding how these events came to pass and their meaning for today's citizens is the purpose of this course. The concepts of historical thinking introduced in earlier grades continue to build with students locating and analyzing primary and secondary sources from multiple perspectives to draw conclusions. Coursework will be designed to prepare students for the American History end-of-course exam.

310 AMERICAN GOVERNMENT

Grade: 11 (Required)

Full Year - 1 credit

Prerequisite: World Studies and American History

This course examines the fundamentals of American Government, the development of Federalism, the constitution and its application, and the political process. The rights and responsibilities of United States citizens along with current events and issues of our political system will also be studied. Coursework will be designed to prepare students for the American Government end-of-course exam.

This course will also include a unit of personal financial management to help students develop financial literacy skills to provide a basis for responsible citizenship, career success, and a lifetime of financial security.

317 PSYCHOLOGY

Grade: 11, 12

Semester - ½ credit

Psychology is the study of human behavior, including the development of personality, intelligence and the behavior of individuals. Topics will include the study of personality, intelligence, values, human growth and development and major psychological theories. The studies of William James, B.F. Skinner, Sigmund Freud and others will be discussed.

318 SOCIOLOGY

Grade: 11, 12

Semester - ½ credit

Sociology studies group behavior in society. We will examine group dynamics, the ways in which people act toward one another, and why we seek companionship and form groups. Other topics such as crime and deviance, social structure and stratification, race and ethnic relations as well as how technology influences the growth of society will be discussed.

319 THE HISTORY OF WARFARE: CAUSES AND CONSEQUENCES

Grade: 11, 12

Full Year - 1 credit

Prerequisite: World Studies and American History with a C or better

Wars have been waged throughout time, and at most turns have changed the very course of human history. This class will study warfare spanning the length of humanity: how battles were fought, how tactics have changed, how technology has impacted warfare, and most importantly how these wars have altered the course of world history. This study will be conducted through extensive examination of primary and secondary sources, classroom re-creations/simulations, and film. As these events are explored, there will be films or film sequences that are shown that are violent and graphic, and a permission slip authorizing viewing these is a requirement for the course.

320 AMERICAN PRESIDENTS AND POLICY

Grade: 11, 12

Semester - ½ credit

American Presidents and Policies is a semester class that will study the lives, presidencies, and policies of the chief executive of the United States. This course will study foreign and domestic policy, presidential elections, debates, campaign efforts and strategies, voting methods, political philosophies, historical facts and much more.

321 ISSUES IN WORLD HISTORY

Grade: 11, 12

Semester - ½ credit

This class will include an in-depth study of important and fascinating events that have occurred in the world's history. We will focus mainly on 20th century events, how they have personally affected our lives, historical reasoning and interpretation, and will have several current event discussions. The dynamics of global interactions among nations and regions present issues that affect all humanity. These dynamics include competing beliefs and goals, methods of engagement, and conflict and cooperation. Contemporary issues have political, economic, social, historic and geographic components. Approaches to addressing global and regional issues reflect historical influences and multiple perspectives. Students can impact global issues through service learning and senior projects.

325 CURRENT EVENTS FALL 21/SPRING 22

Grade: 9, 10, 11, 12

Semester – ½ credit

Using current events, this elective course focuses on world and local issues that affect students' everyday lives, such as economics, government and conflict. This course uses newspapers, online media, cartoons, and newscasts to support class discussion. Additionally, students participate in group projects, presentations and work with primary source materials and opinion pieces in order to better understand the world around them.

STEAM: SCIENCE, TECHNOLOGY, ENGINEERING, ARTS & MATHEMATICS

ARTS & COMMUNICATIONS

800 AUDIO AND VIDEO PRODUCTION I

Grade: 9, 10, 11, 12

Semester - ½ credit

This course is designed for students who want to learn about audio and visual production/communication through the use of audio and video software and equipment. Students will learn how to use DAW programs, interface units, video cameras, microphones and various other audio and video equipment and their proper use; basic Pro Tools, Cubase, Adobe Photoshop (photo editing) and Premiere (video editing), and learn the theories as well as the practical application of audio and video production. The students will learn all of the necessary skills to record, edit and produce their own audio and video projects as well as becoming well versed in the skills of effective audio and visual communication.

802 AUDIO AND VIDEO PRODUCTION II

Grade: 9, 10, 11, 12

Semester - ½ credit

Prerequisite: Audio and Video Production I

Audio and Video Production II provides further study for advanced students who want to increase their learning of audio and visual production/communication through the use of audio and video software and equipment. Students will continue to develop their understanding of DAW programs, interface units, video cameras, microphones and various other audio and video equipment and their proper use; basic Pro Tools, Cubase, Adobe Photoshop (photo editing) and Premiere (video editing), and learn the theories as well as the practical application of audio and video production. The students will continue practicing all of the necessary skills to record, edit and produce their own audio and video projects as well as becoming well versed in the skills of effective audio and visual communication.

804 AUDIO AND VIDEO PRODUCTION III

Grade: 10, 11, 12

Full Year - 1 credit

Prerequisite: Audio and Video Production I & II

Audio and Video Production III offers opportunities for experienced students to use their previously-learned skills on advanced projects and activities. Students will continue to develop their understanding of DAW programs, interface units, video cameras, microphones and various other audio and video equipment and their proper use; basic Pro Tools, Cubase, Adobe Photoshop (photo editing) and Premiere (video editing), and learn the theories as well as the practical application of audio and video production. Students will be expected to provide leadership for class projects and assist A/V Production I & II students when needed.

806 AUDIO AND VIDEO PRODUCTION IV

Grade: 11, 12

Full Year - 1 credit

Prerequisite: Audio and Video Production I, II & III

Audio/Visual IV is designed for students who have completed AV I-III and want to expand their knowledge and skills of audio and visual production/communication. Students will continue to build on their skills using DAW programs, interface units, video cameras, microphones, lighting and various other audio and video equipment. Higher level skills in Pro Tools and Adobe Premiere Pro (video editing) will be taught and the theories as well as the practical application of audio and video production. The students will learn all of the necessary skills to continue creating audio and video projects as well as becoming well versed in the skills of effective audio and visual communication. Students will also serve as student aids to assist and help students enrolled in Audio/Video I and II level courses.

ENGINEERING

From launching space explorations to delivering safe, clean water to communities, engineers find solutions to pressing problems and turn their ideas into reality. Project Lead The Way (PLTW) Engineering empowers students to step into the role of an engineer, adopt a problem-solving mindset, and make the leap from dreamers to doers. The program's courses engage students in compelling, real-world challenges that help them become better collaborators and thinkers. Students take from the courses in-demand knowledge and skills they will use in high school and for the rest of their lives, on any career path they take.

These are suggested sequences for engineering and mathematics classes for students wishing to pursue a career in the Engineering field:

Introduction to Engineering	Algebra
Principles of Engineering	Geometry
Digital Electronics	Algebra II
Engineering Design and Development	PreCalculus

820 INTRODUCTION TO ENGINEERING DESIGN

Grade: 9, 10, 11, 12

Full Year – 1 credit

Prerequisite: Algebra I (can be concurrent enrollment)

In this introductory course of the Project Lead The Way Engineering program, the first of a four course series, the major focus of Introduction to Engineering Design is the design process and its application. Through hands-on projects, students apply engineering standards and document their work. Students use industry standard 3D modeling software to help them design solutions to solve proposed problems, document their work using an engineer's notebook, and communicate solutions to peers and members of the professional community.

822 PRINCIPLES OF ENGINEERING

Grade: 10, 11, 12

Full Year – 1 credit

Prerequisite: Introduction to Engineering Design; teacher recommendation

Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, the strength of structures and materials, and automation. Students develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation.

This course will help students understand the field of engineering/engineering technology. Exploring various technology systems and manufacturing processes help students learn how engineers use math, science, and technology in an engineering problem solving process to benefit people.

824 Digital Electronics

Grade: 11, 12

Full Year – 1 credit

Prerequisite: Introduction to Engineering Design & Principles of Engineering; teacher recommendation

Digital Electronics is a PLTW engineering course that begins to delve into the world of circuitry. Students will begin learning about the basics of circuitry from resistors, ohm's law, datasheets, bread boarding, and analog vs digital signals. They then transition into combinational logic and start designing AOI Logic circuits, simplifying them with Boolean algebra or K-Mapping, and bread boarding them to complete a given problem. From there they shift to sequential logic and begin working more with flip flops, timers, clocks and counters to build their circuits to run automatically. Finally, students will end working with Arduino coding and building microcontrollers.

826 Engineering Design and Development

Grade: 11, 12

Full Year – 1 credit

Prerequisite: Introduction to Engineering Design & Principles of Engineering; teacher recommendation

The knowledge and skills students acquire throughout PLTW Engineering come together in Engineering Design and Development as they identify an issue and then research, design, and test a solution, ultimately presenting their solution to a panel of engineers. Students apply the professional skills they have developed to document a design process to standards, completing Engineering Design and Development ready to take on any post-secondary program or career.

828 Robotics

Grade: 10, 11, 12

Full Year – 1 credit

Students design, build, and program robots, using engineering and coding concepts learned throughout the curriculum. If the student desires, they can participate in area robotics competitions, with a chance to qualify for state-level competition and beyond.

CAREER-BASED INTERVENTION (CBI) PROGRAM

The Career Based Intervention Program is a vocational work experience program designed for sophomore, junior, and senior level students who meet the program requirements determined by the Ohio Department of Education. The purpose of this program is to prepare students to become productive members of society while at the same time equipping them with the skills needed to live independently after graduation. Heavy emphasis is placed upon study skills and academic intervention, career exploration, employability skills, money management, safety awareness, and implementation of a career plan. This program provides work release periods for students which are determined by the particular credit needs of the student.

860 CBI RELATED

Grade: 10, 11, 12

Full year: ½ credit per semester

Prerequisite: APPLICATION REQUIRED; approval from instructor

This program helps students focus on graduation and their future career path. Students will learn employability skills, work-place safety, exploring careers, interviewing skills, professional communication, and managing money. Also covered in this course are occupational information, career education, consumer education, and related topics. The program is designed to help students improve academic competency, develop professional skills, and implement a career plan that will serve them on the path to graduation and beyond. The CBI program utilizes a combination of in-class educational and on-site experiential learning opportunities to maximize student success.

Grade: 10, 11, 12

Full year: Credits vary per semester

Earn while you learn. The CBI program will provide a combination of educational and work-based learning opportunities for student success. Work based learning is a requirement for all students enrolled in this class. Once a CBI student's academic class time is complete, the remainder of the day is spent working in the local business community for which they receive wages, training and high school credit.

The major objective of the CBI program is to assist students in earning their high school diploma and to develop employability skills needed to be productive workers.

Students must have a valid driver's license and be physically able to work. A minimum of 12 hours per week is required, and students must maintain employment for the entire school year. Transportation to and from school and the job site is the responsibility of the student.

Every effort is made to ensure accuracy regarding the course information provided before the Course Selection Guide is printed. Since the Guide is printed so early for scheduling purposes, some changes in course offerings could occur for the 2021-2022 school year. Course availability is based upon the number of student requests. Insufficient enrollment may result in the course being eliminated from the master schedule.