



**Early College  
High School**

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Course Description Book

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2022-2023 Academic Year

Updated: December 2021

## OVERVIEW OF SCHEDULING

	<b>Timeline</b>	<b>Action</b>
<b>1. Gather Data</b>	Jan./Feb.	Courses selected by each student.
<b>2. Verification of requests</b>	Feb.	Students can review requests on Powerschool.
<b>3. Students draft schedules</b>	Apr.-Aug.	Schedules created randomly by computer – Counselors fix schedule conflicts.
<b>Student schedules complete</b>	Aug.	Students will pick up their schedule at ECHS prior to the 1st day of school.

## POWERSCHOOL & UNIFIED CLASSROOM

Access to student grades, assignments, attendance, contact information, etc. is available by using PowerSchool. Access to assignments is also available by using Unified Classroom. Parents and students can create or modify an account by contacting the MECHS Main Office. It is very important to keep your email address up-to-date as we send newsletters, grades, notifications, and other various information via email.

## POWERSCHOOL COURSE REQUEST

*How to Enter Course Requests in the Student Portal:*

The web browser will be open for scheduling beginning February to schedule classes for the upcoming school year. Open PowerSchool in your web browser and enter your username and password, and click enter. Click Class Registration and select your course requests from each department (to see the courses click on the pencil on the right side of the screen). Once you have selected all the courses you want to take—click Submit.

## TRANSCRIPTS

Student transcripts are available upon request in the main office. Students can complete a transcript request form to send transcripts to a college or a scholarship team. Please allow 2 weeks for this process.

**Weighted vs Unweighted courses:** Courses are weighted on a 4.0 GPA scale. AP and college courses use a 5.0 weighted scale. Both weighted and unweighted GPA scales are listed on the transcript.

**PE Met:** If students use a PE waiver, the PE waiver box will say met on the transcript.

**Ranking:** Top 5%, 10% 20% 50%, and 100% will be listed on the transcript.

**Graduation Pathways:** Students must have met a pathway option to graduate.

## CREDIT FLEXIBILITY

The Marysville Board of Education recognizes that an effective educational program is one that provides opportunities for students to customize aspects of their learning around their respective needs and interests. Credit Flexibility is one method to motivate and increase student learning by allowing access to more resources, customization around individual student needs and the use of multiple measures of learning.

Credit Flexibility shifts the focus from “seat time” to performance. Students can earn units of high school credit based on an individually approved Credit Flexibility plan. The intent of Credit Flexibility is to meet increased expectations for high school graduation in response to globalization, technology and demographics, and to meet the demand for college and career readiness skills.

Marysville Early College High School offers Credit Flexibility opportunities to students in grades 8-12 in all classes. To successfully earn credit, mastery of content and certain abilities and skills must be demonstrated through a formal examination, a culminating project, and/or a presentation.

There are three modes of credit flexibility (not for repeat credit):

1. Test Out

2. Virtual Learning

3. Independent Study

### *Credit Flex Results*

Results (grade and credit/no credit) will be made available to the parent and student within a week after the test date. All Credit Flexibility grades will be posted on a student’s transcript and be figured in a student’s GPA.

### *Credit Flex & AP Examinations*

Students may use Credit Flexibility by taking any Advanced Placement Exam (even when not enrolled in an AP class) in May by properly registering with the Guidance Office by February 11th. Fee for 2017 tests is \$93.00 per test (current fee). Students must earn a score of “3 - well qualified” or higher on the AP exam to successfully receive credit for the AP course. Grades will be assigned as 3 = C, 4 = B, and 5 = A.

### *Athletic Eligibility*

Courses attempted or grades received through Credit Flexibility may count toward athletic eligibility under the rules of the Ohio High School Athletic Association. Students will be required to show progress at the end of each quarter to ensure eligibility. Failure to do so would result in the credit NOT to be counted towards OHSAA athletic eligibility. Credit Flexibility credits earned in the summer will not count towards eligibility. However, courses attempted through credit flex may not count at the NCAA Clearinghouse. Please work closely with the athletic director and your counselor if you are thinking about playing sports in college.

## TEST OUT

*Test Out is designed for students who feel that they already know the material and do not need to receive instruction. Test Out is not for repeat credit and will not count towards athletic eligibility. After meeting with your counselor you should follow these steps:*

1. Submit a completed Credit Flex application to a guidance counselor. Applications can be found in the Guidance Office.
2. A confirmation of the request will be emailed to the parent or guardian, which will include the location, date and time for the examination or the due date of the project or presentation. Requests for date and time change must be approved by an administrator.
3. Students attempting to earn credit in courses requiring an examination will be given a textbook and syllabus detailing the course objective. Textbooks are required to be returned on or before the examination date. Students will be assessed the cost (retail for new) of replacing lost textbooks.

## VIRTUAL LEARNING

*At Marysville Early College High School, students have the opportunity to take coursework virtually as part of credit flexibility. The student is responsible for any costs related to Virtual Learning. The procedure for the completion of virtual learning coursework is outlined below.*

1. In order to take advantage of this option, please complete the Application for Virtual Learning. Students may apply to use virtual coursework vendors and institutions such as iLearnOhio by completing the application for Virtual Learning. Coursework through vendors must be pre-approved by the Credit Flexibility Panel (Principal, Guidance Counselor, and Department Chair of the designated department). All course vendors must be accredited institutions.
2. Students will be assigned a grade based upon the institution's scale.
  - Students have the option of accepting the grade for high school credit. These grades are reflected on high school transcripts and impact class rank.
  - Weights, grading, and Carnegie Unit scales will be the same as if the student attended the course. Course credits and weights are listed annually in the Course Description Handbook. Students can also receive credits for AP course tests in this manner.
  - The grading scale of AP tests shall be as follows: A score of 5 on the AP test will receive a weighted "A." A score of 4 on the AP test will receive a weighted "B." A score of 3 on the AP test will receive a weighted "C".

\*\*Please see valedictorian policies.

## NCAA/NAIA CLEARINGHOUSE INFORMATION

### *NCAA*

Any athlete considering participating in the NCAA should register online and read eligibility information at the NCAA Eligibility Center website. It is the student's responsibility to register for and complete required courses per NCAA requirements. Please see the athletic office for additional information.

### *NAIA*

Please refer to the NAIA website for eligibility requirements: <http://www.playnaia.org>.

## INTERNSHIPS/JOB SHADOWING

Our goal is to prepare all students for their future by getting them college and career-ready. Marysville Early College High School is offering internship opportunities for all senior students that are interested in their respective pathways. Once these students begin scheduling, they can access an application form to apply for the internship either during the first semester or second semester. The Internship Coordinator will meet with the student for a brief interview. A writing prompt about why the student wants to participate and plans after high school will be due, along with a sample resume. For the first few weeks, students will spend time in class completing business correspondence, learning about professionalism, career interests, and other career-related topics. More information is outlined in the application.

During a student's junior year, students will have the advantage of any job shadowing opportunities within and outside of school.

### BENEFITS FOR THE STUDENTS

1. Fosters an understanding of in-demand careers in which students might be passionate about.
2. Highlight employer and workplace expectations.
3. Develop job skills as well as soft skills (collaboration, creativity/innovation; communication, critical thinking, and problem-solving.)

## GRADUATION CREDIT REQUIREMENTS

*Completing these requirements makes you eligible to apply to a 4-year public college in Ohio.*

Credits	Subject	Requirements
4	<b>English</b>	
4	<b>Mathematics</b>	Must include Algebra 2 or equivalent
3	<b>Social Studies</b>	Must include 1 credit each of US Government, US History, & World Studies
3	<b>Science</b>	Must include Physical Science, Biology, 1 credit of Advanced Science
0.5	<b>Health</b>	
0.5	<b>Physical Education</b>	Or exemption
1	<b>Fine Arts</b>	Must be taken at high school level (or exemption)
<b>Other Requirements:</b> CPR & AED Curriculum (Wellness, Mental Health, Patient Centered Care)		
<b>Financial Literacy &amp; Economics</b> (U.S. Government, CSCC Economics, Health Science & Technology, Adv Stem Math)		
<b>Elective Credits:</b> Any credits taken in the above Core areas beyond the graduation requirements or taken in any other departments - Agriculture, Business & Technology, Fine Arts, Foreign Language (4 year colleges require at least 2 years in the same world language), Wellness, and Ohio Hi-Point Career Technology.		
5	<b>Elective Credits</b>	If no exemptions used
5.5	<b>Elective Credits</b>	If PE exemption used
5.5	<b>Elective Credits</b>	If ½ credit Art exemption used
6	<b>Elective Credits</b>	If 1 credit Art exemption used
6	<b>Elective Credits</b>	If ½ credit Art and PE exemption used
6.5	<b>Elective Credits</b>	If 1 credit Art and PE exemption used
21	<b>Total credits required to graduate</b>	

## GRADUATION REQUIREMENTS FOR CLASS OF 2023 & Beyond

### GRADUATION 2023

#### **SHOW COMPETENCY**

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. After you have taken your tests and do not show competency, students may use three additional options.

\*\*\*IF testing is not your strength - After you have taken your tests, there are three additional ways to show competency\*\*\*:

#### **Option 1: Demonstrate Two Career-Focused Activities\***

##### **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.

#### **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 with 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)

## PHYSICAL EDUCATION & FINE ART EXEMPTIONS

*Physical Education Exemption* – The Marysville Board of Education adopted a policy to excuse a student for the high school Physical Education Requirement if, during high school, the student has participated in interscholastic athletics, marching band, show choir, or cheerleading for at least two full seasons. However, the student shall be required to complete one-half unit (.50 credits), consisting of at least 60 hours of instruction, in another course of study. This policy is governed by rulings from the Ohio Department of Education. Any student interested in exempting PE should see the Athletic Director get the Physical Education Exemption once they have completed the two seasons that qualify for the exemption.

*Fine Arts Exemption* – The Ohio Department of Education allows students to use fine arts coursework completed at the 7th and 8th-grade level to satisfy all or part of the high school fine arts requirement. No actual credit is awarded on the high school transcript but the requirement to take Fine Art for graduation is waived (in part or in full). The student, however, is required to complete either one unit (1 credit) or one-half unit (.50 credits), in another course of study to meet the 21 credits required for graduation. Any student wishing to enter a four-year college must follow the “college core” by completing 1 full credit of Fine Art at the high school.

*Design thinking* is a fine art credit students will earn at the end of their junior year. This credit is given as evidence of the design challenges and design critical thinking skills embedded into our Winter and Spring Seminars. Students must participate for 6 semesters.

*How is credit exempted?* One-half credit (.50) is waived if the student has completed a fine arts course(s) for the equivalent of one semester during the student’s 7th and/or 8th-grade year. One full credit (1.0) is waived if the student completed at least two full semesters of fine arts during the student’s 7th and/or 8th-grade year. Credit will be waived from the student’s transcript automatically upon promotion from 8th grade to 9th grade.



## HONORS DIPLOMA FOR COLLEGE PREP & CAREER TECHNICAL CURRICULUM

Students need to fulfill all but **one** criterion for any of the following diplomas with honors:

Subject	Academic Honors Diploma	Career-Technical Honors Diploma	Stem Honors Diploma
<b>English</b>	4 units	4 units	4 units
<b>Mathematics</b>	4 units, Algebra I, Geometry, Algebra II (or equivalent), and one other higher level course or 4 course sequence that contains equivalent or higher content	4 units, Algebra I, Geometry, Algebra II (or equivalent), and one other higher level course or 4 course sequence that contains equivalent or higher content	5 units, Algebra I, Geometry, Algebra II (or equivalent), and one other higher level course or 4 course sequence that contains equivalent or higher content
<b>Science</b>	4 units, including two units of advanced science	4 units, including two units of advanced science	5 units, including two units of advanced science
<b>Social Studies</b>	4 units	4 units	3 units
<b>World Language</b>	3 units of one world language or no less than 2 units of two world languages studied	2 units of one world language studied	3 units of one world language, or no less than 2 units of two world languages studied
<b>Fine Arts</b>	1 unit	N/A	1 unit
<b>Electives</b>	N/A	4 units of Career-Technical minimum.	2 units with a focus in STEM courses
<b>Grade Point Average</b>	3.5 on a 4.0 scale	3.5 on a 4.0 scale	3.5 on a 4.0 scale
<b>ACT/SAT Score</b>	27 ACT / 1280 SAT	27 ACT / 1280 SAT	27 ACT / 1280 SAT
<b>Additional Assessment</b>	N/A	Earn an industry-recognized credential or achieve proficiency benchmark for appropriate Ohio Career-Technical Competency Assessment or equivalent.	N/A
<b>Field Experience/ Portfolio</b>		Develop a comprehensive portfolio of work based on the student's field experience or a topic related to the student's area of focus that is reviewed and validated by external experts.	Complete a field experience and document the experience in a portfolio specific to the student's area of focus Internship Course will fulfill this requirement.

## ACADEMIC RECOGNITION AT COMMENCEMENT

We believe it is important for universities to look carefully at the individual applicant to see beyond class designations, which can sometimes be skewed in a competitive high school like ECHS. Seniors will be honored at commencement based upon the following standards of academic achievement (weighted GPA scale):

- Valedictorians: (Class of 2018 and beyond): 4.1 GPA (seven semesters) Transcripts will reflect 5%, 10%, 20% and 50% of each graduating class.
- Summa Cum Laude: 4.000+ (seven semesters)
- Magna Cum Laude: 3.750 to 3.999 (seven semesters)
- Cum Laude: 3.500 to 3.749 (seven semesters)

Two Valedictorians will be selected to speak at commencements. Candidates will submit an application and speech to a panel of teachers who will make the selections.

## COLLEGE CREDIT PLUS

# COLUMBUS STATE

## COMMUNITY COLLEGE

At Marysville Early College High School, we have a partnership with Columbus State Community College. Our Freshmen start the application process and apply to Columbus State by December of their Freshman year. Students take an Accuplacer test to evaluate what courses they are prepared to take. If a student wishes to use another course as a graduation requirement, it must be approved before taking the course!

<b>MECHS Columbus State Course Offerings</b>			
<b>College Course Name &amp; Number</b>	<b>Credit</b>	<b>Graduation Requirement Equivalence</b>	<b>HS Credit</b>
College Success Skills 1101	1	Introduction course for sophomores	.33
English Composition 1 1100	3	English Requirement	1
English Composition II 2367	3	English Requirement	1
Oral Communication 1105	3	English Requirement	1
Biology 1111 Introduction to Biology	4	Advanced Science	1
Algebra Based Physics 1200	5	Advanced Science	1
Chemistry 1200	5	Advanced Science	1
General Chemistry 1171	5	Advanced Science	1
General Chemistry 1172	5	Advanced Science	1
American History since 1877 - His1152	3	American History	1
Introduction to Psychology 1100	3	Social Studies Elective	1
Introduction to Sociology 1101	3	Social Studies Elective	1
Ethics 1130	3	Social Studies Elective	1
Economics 2200	3	4th Social Studies	1
Introduction to American Government 1100	3	Government	1
College Algebra Plus 1146	5	4th Math	1
Trigonometry 1149	4	4th Math	1
Calculus 1151 & Calculus 1152	5	4th Math	1
Statistics 1450	4	Math Elective	1
Pathway Courses Tentative		Elective	1
**MECHS College Credit Plus courses are on a weighted scale.			
Columbus State requires students to show college readiness through cut-off scores on the Accuplacer, ACT, or SAT.			

[COLLEGE CREDIT PLUS PRESENTATION](#) Please see CCP Checklist on Unified Classroom!

<b>15 Hour Suggested Pathway</b>	
English 1100: Composition 1	3 semester credits
Introduction to Psychology or Sociology 1101	3 semester credits
College Algebra 1146	4 semester credits
History 1152	3 semester credits
College Success 1101	1 semester credit
<b>30 Hour Suggested Pathway</b>	
English 2367 Composition II	3 semester credits
Math 1149	4 semester credits
Introduction to American Government 1100	3 semester credits
Chemistry 1200, Chemistry 1171, or Physics 1200	5 semester credits
Sociology, Psychology, or Ethics	3 semester credits

***Recommended Courses Off ECHS Campus: Personal Finance, Intro to Theater, Biological Sciences 1113***

**Students and parents should attend a College Credit Plus meeting to review requirements and procedures.**

#### **Websites for Students & Parents**

<b>Home Page</b>	<a href="http://www.cscce.edu/">http://www.cscce.edu/</a>
<b>Academic Calendar</b>	<a href="http://www.cscce.edu/academics/calendar/">http://www.cscce.edu/academics/calendar/</a>
<b>Course Catalog</b>	<a href="http://www.cscce.edu/academics/catalog/">http://www.cscce.edu/academics/catalog/</a>
<b>Student Forms (Add/Drop)</b>	<a href="http://www.cscce.edu/services/student-forms.shtml">http://www.cscce.edu/services/student-forms.shtml</a>

#### **TRANSFEROLOGY**

Will my courses transfer? [Click here](#) Transferology (Transferology.com) is a nationwide network designed to help students explore their college transfer options. The goal is to save students time and money by providing a quick, intuitive way of getting their college transfer credit questions answered. Students can answer the question "Will my courses transfer?" by adding coursework, exams, and/or military learning experiences to see how many schools in the Transferology network have matching courses that may be awarded when they transfer.

**CTAG CREDIT**

1. Student completes Park I of the Student Verification Form, found here sorted by program pathway: [Forms](#)
2. Coordinator completes Part II and III of Student Verification and submits to indicated college.

**INDUSTRY CREDENTIALS OFFERED AT ECHS**

<b>Credentials</b>	<b>Pathway</b>	<b>Points</b>
Inventor Certification	Engineering	
Motoman Certification	Engineering	6
OSHA 10-Hour General Industry	Engineering	1
Ohio Department of Health State Tested Nursing Asst (STNA)	Health Sciences	12
CPR First Aid	Health Sciences	1
ASE Student A8 (Engine Performance)	Auto	3
ASE Student A5 (Auto Braking & Steering)	Auto	3
Google Analytics	IT	3
Adobe Certified Profesional: Premiere Pro CC	IT	4

<b>ENGLISH</b>
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9th & 10th	11th	12th
English I English II	English III	English IV English 12 Independent Exploration

***Columbus State Community College***

9th	10th, 11th, 12th	12th
	English 1100 Composition I AP Language & Composition 1105 Oral Communications	English 2367 Composition II

**ENGLISH I (HUMANITIES I) (NCAA)**

Course #: ENG100

Fee: \$22.00

Students will develop composition and communication skills by responding orally and in writing to a variety of literary fiction, drama, and nonfiction genres. Texts will be read and taught as they relate to Contemporary Global Issues. Students will develop their knowledge of Standard English usage and vocabulary through reading, writing, and research.

**ENGLISH II (HUMANITIES II) (NCAA)**

Course #: ENG200

Prerequisite: English 9; OR Analysis and Composition; Credit: 1

Fee: \$22.00 and 2 novels

Students will read selected novels, plays, stories, and poems from various historical periods and examine major themes in American literature. Texts will be read and taught as they relate to U.S. History and for contemporary relevance. Skills to be developed include critical reading, vocabulary, discussion, literary writing, argumentative writing, and research writing.

**ADVANCED HUMANITIES II (English II/US History)**

Students should be self-motivated and should expect denser texts, a faster pace, and a heavier workload both in and outside of class than they would in Humanities II. Students looking to build a stronger foundation for college credit plus coursework will find this class useful.

**ENGLISH III (NCAA)**

Course #: ENG300

Prerequisite: English 10; Credit: 1

Fee: Novels (approx. \$20.00)

Students will read selected novels, plays, and stories from various historical periods, with a focus on how they relate to 20th and 21st-century literature and nonfiction. Skills to be developed include a critical reading of both fiction and nonfiction, argumentative essay, and research presentation, discussion, and connections to rhetorical and evidence-supported writing.

**ENGLISH IV (NCAA)**

Course #: ENG400RE

Prerequisite: Senior Year; Credit: 1

Fee: Novels (approx. \$20.00)

Students will read selected novels, plays, stories, and poems from various historical periods, with a focus on how they relate to 20th and 21st-century literature and nonfiction. Skills to be developed include critical reading of both fiction and nonfiction, narrative and argumentative essays, as well as research and presentation.

**ENGLISH 12 INDEPENDENT EXPLORATION**

Course #: ENG440

Prerequisite: Senior Year; Credit: 1

Fee: Will Vary.

Students will be coached by the teacher to create an independent plan of study that focuses on the development and application of English skills with a focus of the student's choice. The class will allow students the opportunity to engage and explore topics and projects that interest them. Students will be required to work independently to complete reading and writing within their chosen project.

**AP LANGUAGE & COMPOSITION (Offered 2nd Semester only) (NCAA)**

Course #: ENG501AP

Prerequisite: Teacher Evaluation

Honors Credit: 1

Fee: Students will purchase their own winter reading books - approx. \$66.00. Students are introduced to a college English course with a focus on nonfiction literature. Students will read a variety of complex texts thematically and will comprehend the fundamental elements of rhetoric: writing rich and complex prose for a variety of purposes, addressing and appealing to an audience in a stylistic manner, and citing secondary source material to support a claim, while implementing the stages of the writing process. Students will be required to do winter reading.

**ENGLISH COMPOSITION 1100 (Columbus State Community College) (NCAA)**

Course #: ENGL1100

Prerequisite: Accuplacer score of 5

High School Credit: 1; College Credit: 3

English 1100 is a beginning composition course that develops processes for critically reading, writing, and responding to a variety of texts in order to compose clear, concise, expository essays. The course facilitates awareness of purpose, audience, content, structure, and style, while also introducing research and documentation methods. Course reading and writing assignments may be thematically organized. Sections of this course are S-designated Service-Learning classes.

**ORAL COMMUNICATION (Columbus State Community College)**

Course #: COMM1105

Prerequisite: ENGL 1100

This course studies nonverbal and verbal communication in public contexts.

**ENGLISH COMPOSITION II (Columbus State Community College)(NCAA)**

Course #: ENGL2367

Prerequisite: ENGL 1100; minimum grade of "C" Lab fee: \$5.00

High School Credit: 1; College Credit: 3

ENGL 2367 is an intermediate composition course that extends and refines skills in expository and argumentative writing, critical reading, and critical thinking. This course also refines skills in researching a topic, documenting sources, and working collaboratively. Course reading and writing assignments are organized around the diversity of those who comprise the identities. Sections of this course are S designated Service-Learning classes. Sections of this course are H-designated Honors classes.



<b>MATHEMATICS</b>
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9th	10th	11th	12th
Geometry (Stem Geometry)	Algebra Algebra II with Trig ACT Math	Statistics Precalculus ACT Math	Calculus Advanced Stem Math

CollegeCredit  
PLUS

### *Columbus State Community College*

9th	10th	11th	12th
		Math 1146 College Algebra Math 1149 Trigonometry	Math 1151 Calculus Math 1152 Calculus Stats 1450

### **GEOMETRY (NCAA)**

Course #: MTH200

Credit: 1

This course is a graduation requirement. This class focuses on geometric relationships of lines, points, planes, circles, and polygons as they apply in both two and three dimensions. Students will grow in their ability to think critically and logically as they start to develop formal proofs. Students will be required to apply their understanding of geometric concepts to other courses.

### **ALGEBRA I (NCAA)**

Course #: MTH100

Credit: 1

This course is a first-year Algebra class and is a graduation requirement. The class focuses on linear, quadratic, and exponential functions. Students will work with linear functions through graphing, solving, scatter plots, inequalities, and systems. Work will continue with quadratics where students will work to understand the graph along with how to represent and solve quadratics using multiple methods. Lastly, students will begin work with exponential functions through graphing.

### **ALGEBRA II WITH TRIGONOMETRY (NCAA)**

Course #: MTH310

Prerequisite: Algebra I and Geometry

Credit: 1

This course is a second-year Algebra class and is a graduation requirement. The class focuses on solving and graphing numerous types of functions. Students will work in-depth with polynomial, rational, quadratic, exponential, and logarithmic functions and their transformations while also learning how to solve each of these types of functions. Students will also begin work with trigonometry with a focus not only on right triangle trigonometry but also on the unit circle, radians, angles, and functions. **STUDENTS ARE ADVISED TO TAKE THE ALEK TEST DURING THIS COURSE!**

**STATISTICS (4th Math Requirement) (NCAA)**

Course #: MTH410S

Prerequisite:

Credit: 1

This course will give you an understanding of descriptive and inferential statistics. We will discuss measures of central tendency, standard deviation, combinations, permutations, probability, sampling, and various distributions. A graphing calculator is recommended for this course.

**ADVANCED STEM MATHEMATICS (4th Math Requirement) (NCAA)**

Course #: MTO401

Prerequisite: Algebra, Geometry

Credit: 1

This is an elective math class that focuses on the application of math outside of a school setting. Advanced STEM math has students understanding and making connections between math and topics like finance, construction, statistics, sports, and many others.

**PRECALCULUS (4th Math Requirement) (NCAA)**

Course #: MTH400

Prerequisite: Algebra II with Trigonometry

Credit: 1

This course is designed for students who plan to take Calculus and obtained a B or higher in Algebra II with Trigonometry. This course includes a study of various functions expressed either numerically, graphically, analytically, and/or verbally. A TI-Nspire CX graphing calculator is required.

**CALCULUS (4th Math Requirement) (NCAA)**

Course #: MTH500

Prerequisite: Precalculus

Credit: 1

Students continue the work with functions as they study the fundamental concepts of calculus: limiting behaviors, derivatives, integrals, continuity, and the Fundamental Theorem of Calculus. Students review and extend their knowledge of trigonometry and basic analytic geometry.

**ACT MATH**

Course #:

Prerequisite: Algebra II

Credit: 1 Credit (P/F)

This course is designed to review material commonly found on the ACT Math portion of the assessment. Students will work through the units in class and collaboratively in groups. Topics of review can be found in Geometry, Algebra 1, Algebra 2, and Pre-Calculus. Students must be prepared to fill in the gaps if they arise.

### **COLLEGE ALGEBRA PLUS 1146 (COLUMBUS STATE COMMUNITY COLLEGE) (NCAA)**

Course #: MATH1146

Prerequisite: Aleks Math Placement Test (Aleks score of 46; ACT Math 22)

High School Credit: 1; College Credit: 5

College Algebra Plus is a course in the study of elementary functions. The concept of function is developed from definition and notation through an analysis of the elementary functions: linear, quadratic, absolute value, reciprocal, square root, polynomial, rational, exponential, and logarithmic, as well as piecewise, composite, and inverse functions. The analysis includes function behavior with an introduction to the concepts of continuity and limits, extrema, and zeros, as well as corresponding graphical characteristics. The topic of the average rate of change of a function is included. Analytic techniques include the Rational Zeros Theorem, Intermediate Value Theorem, and Conjugate Pairs Theorem, as well as factoring and transformations. This course is designed to support and strengthen algebraic proficiency within the study of elementary functions and emphasizes the conceptual framework of elementary functions and the quantitative reasoning to apply them.

### **TRIGONOMETRY 1149 (COLUMBUS STATE COMMUNITY COLLEGE) (NCAA)**

Course #: MATH 1149

Prerequisite: MATH 1146; minimum grade of "C"

High School Credit: 1; College Credit: 4

This course is a study of trigonometric functions, vectors, and related applications. Topics include right triangle trigonometry; trigonometry of general angles; the unit circle; the graphs of the trigonometric functions; analytic trigonometry; inverse trigonometric functions; verifying identities; solving trigonometric equations; the Law of Sines; the Law of Cosines; applications of trigonometry; polar coordinates and the graphs of polar equations; geometric and algebraic vectors; vector applications; plane curves and parametric equations; trigonometric form of complex numbers; DeMoivre's Theorem. The conic sections are defined and analyzed algebraically and graphically. Not open to students with credit for MATH 1150 and above.

### **CALCULUS I 1151 (COLUMBUS STATE COMMUNITY COLLEGE) (NCAA)**

Course #: MATH1151

Prerequisite: MATH 1149 or MATH 1150; minimum grade of "C", or placement equivalent (ACT 28/Alek 76-100)

High School Credit: 1; College Credit: 5

This course provides an introduction to differential calculus. Topics presented include functions, limits, continuity, derivatives, differentiation rules, derivatives of trigonometric, exponential, and logarithmic functions, related rates, extrema, curve sketching, and optimization. The course also introduces integral calculus: antiderivatives, the definite integral, Riemann sums, area under a curve, Fundamental Theorem of Calculus, numerical integration, integration by substitution, and derivatives and integrals of inverse trigonometric, hyperbolic, and inverse hyperbolic functions. Applications to problems in science and engineering are highlighted.

**CALCULUS II 1152 (COLUMBUS STATE COMMUNITY COLLEGE) (NCAA)**

Course #: MATH1152

Prerequisite: Prerequisite: MATH 1151, minimum grade of "C"

School Credit: 1; College Credit: 5

This course continues the introduction to integral calculus. Topics covered include integration of exponential, logarithmic, trigonometric, inverse trigonometric functions, volume and surface area of solids of revolution, arc length, and methods of integration. The course also presents L'Hopital's Rule and Improper Integrals. Students will learn to analyze plane curves given parametrically or in polar coordinates, and their differential and integral calculus. Students will learn about infinite sequences and series, their sum and/or convergence, conic sections, vectors in the plane and in space. Applications to problems in science and engineering are noted. Not open to students with credit for MATH 1157 and above.

**STATISTICS 1450 THE PRACTICE OF STATISTICS (COLUMBUS STATE COMMUNITY COLLEGE)**

Course #: STAT1450

Prerequisite: Aleks Test 61-75 (Grade C or higher in Math 1146)

School Credit: 1; College Credit: 4 (2 hour lab)

This course is designed to acquaint students with the statistical methods used in gathering and analyzing data. The course includes sampling methods and data classification; descriptive statistics; percentiles and z-scores; basic concepts in probability; binomial and normal probability distributions; the Central Limit Theorem; estimating population parameters; hypothesis testing; linear correlation and regression; interval estimation and hypothesis testing with two samples; and chi-square tests of independence. STAT-1450 is intended primarily for students needing a college level, non-calculus based course in probability and statistics.

<b>SCIENCE</b>
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9th	10th	11th	12th
Biology	Physical Science Chemistry	Advanced Stem Science Anatomy & Physiology	Physics

CollegeCredit  
PLUS

9th	10th	11th	12th
		Biology 1111 Intro to Biology Chemistry 1200	Chemistry 1171 & 1172 Algebra Based Physics I  AP Chemistry

**BIOLOGY I (NCAA)**

Course #: SCI200

Credit: 1; Fee: \$10

An introduction to the fundamental principles of Biology with emphasis on ecology, cells, evolution, and Genetics. This course is taught through project-based learning and blended learning. It will prepare students for physical science and chemistry. This course is required.

**PHYSICAL SCIENCE (NCAA)**

Course #: SCI100

Credit: 1; Fee: \$10

This course emphasizes physical and chemical processes and how they relate to everyday applications. Topics include: Scientific Method, measurements, math in science, speed vs. velocity, forces and Newton's laws, potential vs. kinetic energy, work, power, simple machines, atoms, elements, compounds, mixtures and pure substances, arrangement of electrons around an atom, and static electricity This class can be taken concurrently with Biology. This course is required.

**CHEMISTRY (NCAA)**

Course #: SCI300

Prerequisite: Algebra I

Credit: 1; Fee: \$10

This course focuses on the science of matter and its properties. Topics include the atomic theory of matter and its significance, families of elements, how compounds are formed, states of matter and their properties, stoichiometry, solution chemistry, thermochemistry, acid-base chemistry, and other topics.

**ANATOMY & PHYSIOLOGY (NCAA)**

Course #: SCI230

Prerequisite: Biology I

Credit: 1; Fee: \$10

This course is an introduction to the fundamental principles of human anatomy and physiology. Major systems of the human body will be covered. The course will consist of lectures, laboratories, dissection, and demonstrations.

**ENVIRONMENTAL SCIENCE (Advanced Science Credit) (NCAA)**

Course #: SCI330

Prerequisite: Juniors and Seniors only

Credit: 1; Fee: \$10

This course is project/lab-based and focuses on the physical world around us. Topics include Earth science, sustainability, and the environment, freshwater resources with a focus on The Great Lakes, space science, and service-learning projects.

**PHYSICS (NCAA)**

Course #: SCI410

Prerequisite: Algebra II

Credit: 1

This course is a study of applied mathematics in the theoretical and practical application of physical laws. Acceleration, forces, vectors, momentum, energy, power, heat and its applications, electrical circuits and the laws concerning them, and relativity are among the topics that will be studied.

**INTRODUCTION TO BIOLOGY (COLUMBUS STATE COMMUNITY COLLEGE) (NCAA)**

Course #: BIO1111

Prerequisite: High school biology and placement into ENGL 1100

High School Credit: 1; College Credit: 4

This is an introductory course in general biology for the non major. Topics include cell structure and function, bioenergetics, DNA structure and function, biodiversity, ecology and evolution. Sections of this course are H-designated Honors classes.

**CHEMISTRY 1200 INTRODUCTION TO GENERAL AND ORGANIC CHEMISTRY (NCAA)**

Course #: CHEM1200

Prerequisite: Placement into Engl 1100; High School Chemistry **AND** ACT Math 20 or Aleks 30 or higher

High School Credit: 1; College Credit: 5

This is an introductory course in general chemistry, organic chemistry, biochemistry, and laboratory techniques. Topics include atomic structure, periodic classification of elements, stoichiometry, solutions, acids and bases, pH and buffers, the study of carbon compounds organized according to functional groups, carbohydrates, lipids, proteins, and enzymes.

**GENERAL CHEMISTRY I 1171 (COLUMBUS STATE COMMUNITY COLLEGE) (NCAA)**

Course #: CHEM1171

Prerequisite: Placement into ENGL 1100; Complete Math 1146 (or ALEKS 61+, ACT Math 26+); High School Chemistry completed

High School Credit: 1; College Credit: 5

This is a course in fundamental chemical principles. Topics include measurement, atomic structure, periodic classification, the mole concept, mass relationships in chemical reactions, the behavior of gases, the behavior of liquids, the behavior of solids, thermochemistry, quantum theory and electron configurations, chemical bonding, and molecular geometry.

**GENERAL CHEMISTRY II 1172 (COLUMBUS STATE COMMUNITY COLLEGE) (NCAA)**

Course #: CHEM1172

Prerequisite: Chem1171

High School Credit: 1; College Credit: 5

This is a course in fundamental chemical principles. Topics include intermolecular forces, phase changes, properties of solutions, kinetics, equilibrium, acid-base chemistry and buffers, solubility equilibria, atmospheric chemistry, entropy and free energy, electrochemistry, the chemistry of metals and nonmetals, coordination complexes, and nuclear chemistry. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting and the completion of certain exams and laboratories. This is the second of a two-semester sequence designed for students entering a scientific field. A mandatory safety lesson must be completed before the student is admitted to any chemistry laboratory sessions.

**ALGEBRA-BASED PHYSICS I (COLUMBUS STATE COMMUNITY COLLEGE) (NCAA)**

Course #: Phys1200

Prerequisite: MATH 1146 completed and placement into ENGL 1100; OR Aleks Math 58 or ACT Math 25

High School Credit: 1; College Credit: 5

This is a laboratory course in classical mechanics (kinematics, Newton's laws, gravity, energy, momentum, rotational motion, and angular momentum) as well as fluids, harmonic motion, waves, and sound.

<b>SOCIAL STUDIES</b>
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9th	10th	11th	12th
Contemporary Global Issues	U.S. History	U.S. Government	

CollegeCredit  
PLUS

9th	10th, 11th, 12th
	CSCC American History 1877, CSCC Pols 1100 Intro to American Gov CSCC Intro to Sociology, CSCC Intro to Psychology, CSCC Ethics CSCC Economics

### **CONTEMPORARY GLOBAL ISSUES (HUMANITIES I) (NCAA)**

Course #: SOC101

Prerequisite None

Credit: 1

Students analyze governments, economies, peoples, and cultures from around the world in this course.

Instruction emphasizes the structures and policies of the United States and how they compare to other systems in the international community. Students apply critical thinking and research skills to examine current events and contemporary issues.

### **U.S. HISTORY (HUMANITIES II) (NCAA)**

Course #: SOC200

Prerequisite: None

Credit: 1

Required of all 2nd-year students who are not enrolled in a Columbus State US History Course. As students study United States History from the late 1800's to the present, they will consider geographic, cultural, economic, and governmental changes that have occurred. Students will develop a deeper understanding of their role as a citizen and continue to expand their command of social studies skills and methods. US History is required by all students to graduate.

### **U.S. GOVERNMENT (NCAA)**

Course #: SOC300

Prerequisite: None

Credit: 1

Required of all students except those enrolled in Columbus State Intro to American Government (POLS1100). This course studies the United States Government, including the Constitution, civil rights, political parties, Congress, the presidency, and the Supreme Court. This course will also cover a range of economic policies and issues.



### **INTRODUCTION TO SOCIOLOGY 1101 (COLUMBUS STATE COMMUNITY COLLEGE) (NCAA)**

Course #: SOC1101

Prerequisite: Placement into ENGL 1100 Lab fee

High School Credit: 1; College Credit: 3

This course introduces the basic concepts, methods and findings of sociology as a scientific discipline. The sociological perspective, emphasizing social interaction and structure, is used to explore the following topics: culture; socialization; social groups, including organizations; deviance; various types of social inequality; major social institutions; collective behavior, social movements and social change. Sections of this course are H-designated Honors classes.

### **INTRODUCTION TO PSYCHOLOGY 1100 (COLUMBUS STATE COMMUNITY COLLEGE) (NCAA)**

Course #: Psy1100

Prerequisite: Placement into ENGL 1100

High School Credit: 1; College Credit: 3

This introductory course provides an overview of the origins, growth, content and applications of psychology, including the application of the scientific method to the following topics: research methodology; beginning statistics; theories of physical, cognitive, moral, and emotional development; sensation; perception; learning; motivation; intelligence; memory; personality; coping processes; abnormality; adjustment; and the individual in small groups and pluralistic society. Sections of this course are H-designated Honors classes.

### **HIST 1152 AMERICAN HISTORY SINCE 1877 (COLUMBUS STATE COMMUNITY COLLEGE) (NCAA)**

Course #: Hist1152

Prerequisite: Placement into ENGL 1100

High School Credit: 1; College Credit: 3

This course covers a wide range of topics in modern American history from Reconstruction to the present time. It is an introduction to the study of history and to the political, economic, intellectual, and social themes that have shaped our present society. Sections of this course are H-designated Honors classes.

### **INTRODUCTION TO AMERICAN GOVERNMENT (COLUMBUS STATE COMMUNITY COLLEGE) (NCAA)**

Course #: Pols1100

Prerequisite: Placement into ENGL 1100

High School Credit: 1; College Credit: 3

This course introduces students to the nature, purpose, and structure of the American political system. Attention is given to the institutions and processes that create public policy. The strengths and weaknesses of the American political system are discussed, along with the role of citizens in a democracy.

### **ETHICS 1130 (COLUMBUS STATE COMMUNITY COLLEGE)**

Course #: Phil1130

Prerequisite: Placement into ENGL 1100

High School Credit: 1; College Credit: 3

This course introduces students to moral reasoning, examining theories of right and wrong, good and bad, justice and injustice as they have been viewed in the past and as they shed light on contemporary ethical issues. PHIL 1130 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and distributive transfer requirements in philosophy and humanities.

**ECONOMICS 2200 PRINCIPLES OF MICROECONOMICS (COLUMBUS STATE COMMUNITY COLLEGE)**

Course #: ECON2200

Prerequisite: Placement into ENGL 1100; Tested in Aleks Test minimum of 30

High School Credit: 1; College Credit: 3

This course introduces students to the economic decision-making of individuals and firms. Topics include scarcity, opportunity cost, supply and demand, consumer choice, elasticity, market structure, profit maximization, resource markets and international trade. Students who enroll in Economics courses must have been placed into ENGL-1100 and are encouraged either to have completed ENGL-1100 or to be enrolled in that course when scheduling an Economics course.

## WORLD LANGUAGES

### **Things to keep in mind when scheduling world languages:**

As you consider a language, it is important to consider those different colleges and different majors have different requirements and expectations in terms of the number of years taken in high school, placement exam score, and how many courses you will need to take in college if any. For students interested in college, students should take at least two years minimum of one language. Also, three years of the same world language or two years each of two world languages are required for an honors diploma. While world language is not a requirement for high school graduation, the credits earned count toward the elective credits needed for graduation.

### **SPANISH I (NCAA)**

Course #: FL110

Credit: 1

Fee: \$20 (covers class novel, graphic novel, and magazine subscription)

This is a proficiency-based course taught almost entirely in the target language, however, it is intended for students with little or no previous study of Spanish. The beginning level of Spanish focuses on the acquisition of high-frequency vocabulary and grammatical structures about familiar topics through class-created stories, adapted readings, and personalized questioning. Students will develop cultural knowledge of the Spanish-speaking world. Repetition and comprehensible input are critical components of this course. The emphasis is on developing listening and reading skills so that students build a solid mental representation of the language as they become ready to confidently write and speak more in higher levels of Spanish in the future.

### **SPANISH II (NCAA)**

Course #: FL120

Prerequisite: Spanish I

Credit: 1

Fee: \$20 (covers class novels and magazine subscription)

This is a proficiency-based course taught almost entirely in the target language. Students continue to acquire more vocabulary and in-context grammatical structures from class-created stories, adapted readings, free voluntary reading, personalized questioning, class discussions about the novel, authentic sources, and cultural studies. There is a stronger emphasis on speaking and writing to build on the basics acquired in Spanish 1. Students read a level-two novel as a class throughout the semester.

### **SPANISH III (NCAA)**

Course #: FL130

Prerequisite: Spanish II; Credit: 1

Fee: \$20 (covers class novels and magazine subscription)

This is a proficiency-based course taught almost entirely in the target language. Spanish III provides students the opportunity to further develop, improve, and refine their listening, speaking, reading, and writing skills. Students continue to expand their vocabulary and acquire more grammatical structures in the context of stories, free voluntary reading, personalized questioning, class discussions about the novel, authentic sources, and cultural studies. Students will do original presentations on various topics. Students read a level-three novel as a class throughout the semester. Speaking and writing skills are emphasized in this third year of study. Active speaking participation is required.

**SPANISH IV/V**

Course #: FL 150

Prerequisite: Spanish III; Credit: 1

Fee: \$20 (covers class novels and magazine subscription)

This is a proficiency-based course taught almost entirely in the target language. Students continue to acquire further vocabulary and grammatical structures in the context of stories, free voluntary reading, personalized questioning, class discussions about the novel, and cultural studies. There is a greater emphasis on comprehending and interacting with authentic resources as well as making cultural comparisons. Aspects of contemporary Spanish and Hispanic cultures are emphasized in this class. Students read a level-four novel throughout the semester. Active speaking participation is required. As this is an honors class, an 85% or higher will be required to earn mastery on each assignment. This is a combined ½ class. While the majority of the class is integrated, students enrolled in Spanish 5 will be expected to help facilitate class discussions and will complete more advanced independent work.

**JAPANESE I (NCAA)**

Course #: FL200; Credit: 1; Fee: \$10

Japanese 1 provides an introduction to the basic communication skills in Japanese. Students will learn how to communicate with Japanese speakers both in spoken and written forms. Hiragana, Katakana, and Kanji will be taught and students will begin to explore communication through written media. The interrelationships between Japanese culture and language will be studied. Students will also learn how to gain meaning from authentic sources. No prior language knowledge or experience is required.

**JAPANESE II (NCAA)**

Course #: FL210

Prerequisite: Japanese 1 & teacher recommendation; Credit: 1; Fee: \$10

Japanese 2 requires fluency in Hiragana and Katakana usage as well as mastery of the Kanji introduced in year one. Students will grow more fluent in speaking while further developing vocabulary and intermediate-level grammar skills. Students will also work on language production and comprehension through reading and writing using Kanji. Classes will mainly focus on interpersonal communication and analysis of authentic sources. The interrelationships between Japanese culture and language will be further explored while learning about the country's products and practices.

**JAPANESE III (NCAA)**

Course #: FL220

Prerequisites: Japanese 2; Credit: 1; Fee: \$10

Japanese 3 requires fluency in Hiragana and Katakana usage as well as mastery of the Kanji introduced in years one and two. Students will focus on interpersonal speaking skills while further building vocabulary and ease of communication. Students will get more comfortable with identifying unknown kanji based on context clues and radicals. The interrelationships between Japanese culture and language will be further explored through the analysis of existing politeness levels in society. Students will also be exposed to various traditional Japanese arts.

**JAPANESE IV**

Course #: FL230

Prerequisites: Japanese 3; Credit: 1; Fee: \$10

Japanese 4 requires fluency in Hiragana and Katakana usage as well as mastery of the Kanji introduced in years one, two, and three. Students will focus on interpersonal speaking skills while further building vocabulary and ease of communication-based on the AP themes while focusing on the three modes of communication. Students will be analyzing authentic sources while acquiring the kanji in this course. Students will also often engage in debates, argue different points of view, and create persuasive presentations.

## ELECTIVES

### **COLLEGE SKILLS SUCCESS (COLUMBUS STATE COMMUNITY COLLEGE)**

Course #: Cols1101A

High School Credit: .33; College Credit: 1 Prerequisite: Accuplacer Placement Test

College Success Skills' students will develop the skills and resources necessary to be successful in personal, academic, and career-related pursuits. The course expands upon the orientation to college resources, policies, and processes.

### **TRANSITIONS/STUDY SKILLS**

Course #: TR100

High School Credit: .50

Prerequisite: Juniors and Seniors with IEPs

During this one block course, students will receive specific intervention based on their IEP goals and services as outlined in sections 6 & 7. In addition, students will complete transition activities as outlined in section 5 of their IEPs. Each week, students will complete a weekly grade check and/or work plan, transition activities, self-reflection, and reading for intervention, if applicable. There may also be some time for students to work on class assignments and assessments.

### **WELLNESS (Embeds Health Credit)**

Course #: PEH102

High School Credit: 1

This course focuses on the latest trends in health, nutrition, physical activity, and wellness. From stress management and sleep to overall wellbeing, we will explore personal health, health-related attitudes and beliefs, and individual health behaviors. Embedded CPR.

### **PHYSICAL EDUCATION**

Course #: PEH350

High School Credit: .50 (M-F Block Period)

Physical Education classes are designed to practice and develop skills in activities that will help students maintain fitness throughout their life. Students' fitness levels will be assessed in the following areas: cardiovascular endurance, flexibility, muscular strength, and muscular endurance.

### **FINANCIAL LITERACY (Tentative for 2022-23)**

Course #:

High School Credit: .50

This course is designed to introduce the student to basic financial literacy skills to help make responsible financial decisions. Concepts covered include financial planning, bank accounts, credit and loans, wages and taxes, investments, and insurance.

## ENGINEERING MANUFACTURING

### Engineering/Manufacturing (Select 4 courses to complete pathway)

The Engineering and Science Technologies and Manufacturing Technologies Career Field prepares students for careers in design, operations, manufacturing, and STEM (Science, Technology, Engineering, and Math).

Design program areas will provide students with the necessary technical and academic skills to research and create product models with features/functions that meet the needs of the customer, manufacturing, quality, and the overall business. Careers for which this pathway prepares students include Computer Aided Drafting Technician (CAD), Engineer Engineering Technician, Line Operator Maintenance Technician, Quality Technician **Postsecondary majors** for which this pathway prepares students include: Drafting and Design Technology Engineering – Aeronautical/Aerospace, Electrical, Industrial, Manufacturing, Materials Quality Control, and Safety Technology Robotics Technology.

Operations program areas will provide students with the necessary technical and academic skills to administer the manufacturing process, including equipment, installation, tools and dies, logistics, inventory control, assembly, repair, quality and safety. Careers for which this pathway prepares students include: Computer Numeric Control Technician (CNC), Forming Machine Setter, Machine Tool Cutting Setter, Machinist Welder, **Postsecondary majors** for which this pathway prepares students to include: Computer Numerically Controlled (CNC)Machinist Technology, Metallurgical Technology, Precision Metal Working Tool, and Die Technology Welding Technology.

CSCC offers a Mechanical Engineering Technology Plan of study ([Click here](#)).

9th-10th Grade Foundation Courses	10-12th Grade	12th Grade
Intro to Design & Development (IDD)  Computer Integrated Manufacturing (CIM)	Welding Technologies Engineering Design Mechanisms & Drive Robotics CNC with Lathes & Mills Digital Electronics	Internship/Capstone

### INTRODUCTION TO DESIGN & DEVELOPMENT

Course #: ET110 Freshman in the Engineering Pathway will take this course.

Credit: 1.00

Subject Code: 175003

Students will learn the design and production process applied across manufacturing operations. Students will be able to demonstrate a broad array of technical skills with an emphasis given to modeling, quality practices, and power.

**COMPUTER INTEGRATED MANUFACTURING (CIM)**

Course #: ET220

Prerequisite: Introduction to Design &amp; Development

Credit: 1.00

Subject Code: 175006

In this course, students will be introduced to all aspects of computer-integrated manufacturing. They will learn about robotics and automation, manufacturing processes, computer modeling, manufacturing equipment, and flexible manufacturing systems.

**WELDING TECHNOLOGIES**

Course #: ET310

Prerequisite: Introduction to Design &amp; Development

Credit: 1.00 Class size: 20

Subject Code: 176009

Students will use fundamental welding principles involving shielded metal arc, oxyacetylene, gas tungsten, and gas metal arc welding in the flat, horizontal, and vertical positions. An emphasis is given to electrode selection, equipment setup, operating procedures, welding inspection, and testing. Students will learn joint designs and layout and will be introduced to welding codes and standards. Additional topics include employability skills and an emphasis will be given to personal safety.

Credential Name	Point
<a href="#">OSHA 10-Hour General Industry</a> must be Engineering Pathway; Juniors	1

**ENGINEERING DESIGN (ED)**

Course #: ET350

Prerequisite: Introduction to Design &amp; Development

Credit: 1.0 Class size: 28

Subject Code: 175001

This focus of Engineering Design is the application of the engineering design process. Topics include work-processes, optimization methods, design optimization, and risk management tools. Students will use 2D and 3D modeling software to help them design solutions to solve proposed problems, document their work, and communicate solutions. Additionally, students will interpret industry prints, and create working drawings from functional models. Emphasis is given to experimental problem solving in real systems.

**PARAMETRIC CAD** 

Course #: MECH 2215 College Credit: 3

Prerequisite: ENGT 1115 (waived for Engineering students - articulated credit for ENGT 1115)

This course will cover Multiple Parametric CAD platforms used in the production of complete drawing sets for the manufacturing field. Students will create production drawings and documentation required to take a product from concept to design, sales, prototyping, production, and final assembly.

Credential Name	Point Value
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Autodesk Inventor Certified User Certification	4
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## **DIGITAL ELECTRONICS**

Course #:

Subject Code: 175007

Students are introduced to the process of combinational and sequential logic design. The system uses a precise sequence of discrete voltages, representing numbers, non-numeric symbols or commands for input, processing, transmission, storage, or display. Engineering standards and methods for technical documentation will also be learned.

## **MECHANISMS AND DRIVES**

Course #: ET320

Prerequisite: Introduction to Design & Development, Computer Integrated Manufacturing, ED

Credit: 1.00

Subject Code: 175008

Students will learn the kinematics of machines as well as basic machine components such as gears, belts, chains, sprockets, bearings, clutches, and couplings. They will also learn the basic electronics needed to power these machines. In addition, it examines the basic drive systems (electric motors and hydraulic & pneumatic actuators) used to power these components.

## **BASIC MECHANISMS & DRIVES (TENTATIVE)**

Course #: ENGT 2260      College Credit: 4

Prerequisite: ENGT 1115 (waived for Engineering Students)

This course covers the kinematic motion of machines as well as basic machine components such as gears, belts, chains, sprockets, bearings, clutches, and couplings. In addition, it examines the basic drive systems (electric motors and hydraulic & pneumatic actuators) used to power these components.

## **COMPUTER NUMERICAL CONTROL (CNC) TECHNOLOGY WITH LATHES & MILLS**

Course #: ET300

Prerequisite: Engineering/Manufacturing Operations, Computer Integrated Manufacturing, Engineering Design

Credit: 1.00

Subject Code: 176007 (class limit of 16)

In this course, students will use computer numerical control (CNC) programming to mill products comprised of various materials. Students will prepare numerical control programs in positioning systems using standard industrial G and M codes. They will program computerized numerical control mills and lathes.



**ROBOTICS**

Course #: ET330

Prerequisite: Introduction to Design &amp; Development, Computer Integrated Manufacturing, ED

Credit: 1.00

Subject Code: 175004

Students will apply the knowledge and skills necessary to program and operate Robots, using the teach pendant as the main interface point. The Students will learn robotic operations and system configurations. Students will code, compile, and debug programs using the robotic programming language.

**ROBOTICS** 

Course #: MECH 2243      College Credit: 2

Prerequisite: None

This course presents robotic operations and system configurations. Students are required to flowchart, code, compile, and debug programs using the Fanuc Karel programming language.

Hands-on experience with robotic systems is gained through teaching and executing the programs on an articulated 6-axis Fanuc robot.

Credential Name	Point Value
Motoman FS100/DX100 Basic Programming w/Material Handling	6

**ENGINEERING INTERNSHIP/CAPSTONE (SENIORS only)**

Course #: ET400

Credit: 1.0 Subject Code: 175009

Prerequisites: 2 pathway courses in Engineering/Manufacturing

The capstone course provides opportunities for students to apply knowledge, attitudes, and skills that were learned in the Engineering program in a more comprehensive and authentic way. Capstones often include project/problem-based learning opportunities that occur both in and away from school. Under the supervision of the school and through community partnerships, students may combine classroom learning with work experience. This course can be delivered through a variety of delivery methods including cooperative education or apprenticeship.

**WebXam is the Career Technical Education End of Course Exam.**

## FAB LAB

The Fab Lab teaches principles and applications of digital fabrication. It will teach hands-on skills while creating, learning, and/or inventing.

### **FAB LAB I**

Course #: FL100

High School Credit: 1 Fine Arts Credit

Prerequisite: None, open to 9-12 Grades

Course Fee: \$18

This course is geared towards problem-solving and design challenges utilizing the fab lab. The course will embrace several of the traditional areas of design explored in the Arts as well as the design process itself. Students will become well-versed in hand assembly applications as well as equipment such as the 3d Printer, CNC router, and vinyl cutter, and Laser engraver. Student designs will incorporate both hand-drawn and software-based compositions.

### **FAB LAB II**

Course #: FL102

High School Credit: 1 Fine Arts Credit

Prerequisite: FAB LAB I

Course Fee: \$18

This course will be an advanced Fab Lab for students who already have experience in FAB LAB I. Students will have the opportunity to further develop their skills utilizing the Fab Lab equipment. Students will work on building and district improvement projects, both in interior and exterior spaces.

### **ART AND DESIGN with FAB LAB**

Course #: Need

High School Credit: 1 Fine Arts Credit

Prerequisite: FAB LAB I

Course Fee: \$50 (pending)

This is a course for students who are inspired to take their Fab Lab knowledge to the next level. In this course, students will combine their skills from Fab Lab I with the concepts of art and design to create their own projects. Students will drive product development and have opportunities to bring their own designs to life.

## INFORMATION TECHNOLOGY

### Information Technology (Select 4 courses to complete pathway)

The Information Technology Career Field prepares students for careers in Information Support and Services (ISS), Interactive Media (IM), Network Systems (NS), and Programming and Software Development (PSD).

**Interactive Media program** areas will prepare students for careers using multimedia technology to develop online products for business, training, entertainment, communications, and marketing. Students will gain the necessary technical and academic skills to create, design, and produce interactive media products and services. Careers for which this pathway prepares students include Desktop Publisher, Multimedia Specialist, Webmaster, Website Developer. **Postsecondary majors** for which this pathway prepares students include: Digital Communication and Media/Multimedia Digital/Multimedia and Information Resources Design Prepress/Desktop Publishing and Digital Imaging Design Web/Multimedia Management and Webmaster. See Plan of Study from CSCC: [Interactive Media](#).

**Programming and Software Development program** areas will prepare students for careers using technical and academic skills to design, develop, test, document, implement and maintain computer software and database systems. Careers for which this pathway prepares students include: Application Developer, Application Support Specialist, Database Administrator, Database Designer. **Postsecondary majors** for which this pathway prepares students include: Computer Science Information Science/Studies and Software Engineering Video Game Development. See Plan of Study from CSCC: [Software Developer](#)

9	10	11	12
Information Technology	Programming Database Administration Web Design Video & Sound	Mobile Apps Game Design	All Courses Internship

### INFORMATION TECHNOLOGY

Course #: HS402100

Credit: 1.0

Subject Code: 145005

This first course in the IT career field is designed to provide students with a working knowledge of computer concepts and essential skills necessary for work and communication in today's society. Students will learn safety, security, and ethical issues in computing and social networking. Students will also learn about input/output systems, computer hardware and operating systems, and office applications.

## PROGRAMMING

Course #: IT300

Credit: 1.0 Course limit: 28 students

Subject Code: 145060

In this course, students will learn the basics of building simple interactive applications. Students will learn the basic units of logic: sequence, selection, and loop. Students will apply algorithmic solutions to problem-domain scenarios. Students will gain experience in using commercial and open source languages, programs, and applications.

### CSCI 1103 Introduction to Programming Logic

CollegeCredit  
PLUS

Course #: CSCC 1103 College Credit: 3

Prerequisite: Aleks Group C - 30 or ACT Math 20 (NEED TO TAKE Aleks TEST)

CSCI 1103 introduces concepts of programming logic through algorithmic solutions applied to problem-domain scenarios. Examples of these scenarios are Computer Science disciplines such as programming languages, networking, operating systems, databases, and others. The course covers the basic units of logic: sequence, selection, and loop. Students repair faulty algorithmic solutions. The course also uses basic UML (Unified Modeling Language) notation to model problem-domain objects, via classes.

**GATEKEEPER COURSE - many courses use this as a prerequisite!**

## DATABASE ADMINISTRATION

Course #: IT200

Credit: 1.0

Subject Code: 145080

Students will learn about user rights and responsibilities, concurrency security, reliability, backup and recovery to perform tasks involved in the administration and management of a database system. Students will design, extract and transform data ensuring data quality. Knowledge and skills relating to reporting systems, data warehouses, and data mining will be developed.

### CSCI 1320- Database Fundamentals

CollegeCredit  
PLUS

Course #: College Credit: 3

Prerequisite: None

This course will serve as the foundational course for database. It introduces the student to the fundamental concepts and techniques of relational database management, database technology, structured query language, database design, database management, web database applications and Big data. Students perform hands-on labs with commercial software and databases provided by real-world scenarios.

**WEB DESIGN**

Course #: IT210

Credit: 1.0 Prerequisite: Programming

Subject Code: 145010

Students will learn the dynamics of the Web environment while pursuing an in-depth study of both Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS). Web based protocols such as FTP, TCP/IP, and HTTP will be addressed. Students will create a website with tag text elements, special characters, lines, graphics, hypertext links, and graphical tables. **CTAG CTIM004 Internet & Web Language - accepted at 3 colleges only.**

**CSCI 1145 HTML** 

Course #: College Credit: 3

Prerequisite: CSCI 1103 Programming

CSCI-1145 will teach students the dynamics of the Web environment while pursuing an in-depth study of the most recent version of both Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS). Throughout the course, students will create a real website using HTML and CSS on a live server environment. Students will learn other important topics such as FTP, TCP/IP, and HTTP.

**VIDEO & SOUND**

Course #: IT320

Credit: 1.0

Subject Code: 145110

Students will create professional video and audio productions for distribution in traditional and new media channels. Students will plan, produce, edit, and launch media products. Students will develop scripts and storyboards, compose shots and operate cameras, capture sounds using microphone hardware, apply special effects techniques, and edited to achieve the final product. Students will be able to use animation and graphic design for video. **CTAG CTIM006 Digital Video Production - accepted to 3 colleges only.**

<i>Credentials</i>	<i>Points</i>
<i>Adobe Certified Professional: Premiere Pro CC</i>	<i>4</i>

**GAME DESIGN**

Course #: IT

Credit: 1.0 Prerequisite: Programming

Subject Code:

This course will prepare students to design and program games using commercial and open source programs and applications. Students will learn industry-standard programming language constructs to write programs that integrate classes, class methods, and class instances. Students will learn input method handling, animation, collision detection, game physics, and basic artificial intelligence.

**MOBILE APPS**

Course #: IT330

Credit: 1.0 Prerequisite: Programming

Subject Code: 145020

Students will learn to create applications for mobile devices using a variety of commercial and open source software. They will install these applications, modify them, and develop customer service skills to handle user issues. Knowledge and skills related to customer service in professional offices, small businesses, departments, workgroups, and corporate information services will be addressed.

**CSCI 1660 Programming Fundamentals for Androids**  **(TENTATIVE)**

Course #: College Credit: 3

Prerequisite: CSCI1103 and Alek test (score of minimum 46 )

CSCI 1660 uses the Java programming language as a tool for learning the fundamental programming principles of application development for the Android platform. The course covers implementation of classes, abstract classes, inheritance, polymorphism, interfaces, exception handling, and use of collections and consumption of network services.

<i>Credentials</i>	<i>Points</i>
<i>Google Analytics Industry</i>	3

**IT INTERNSHIP**

Course #: IT400

Credit: 1.0

Subject Code: 145015

Prerequisites: 2 pathway courses in Introduction to Technology

The capstone course provides opportunities for students to apply knowledge, attitudes, and skills that were learned in the Information Technology program in a more comprehensive and authentic way. Capstones often include project/problem based learning opportunities that occur both in and away from school. Under the supervision of the school and through community partnerships, students may combine classroom learning with work experience. This course can be delivered through a variety of delivery methods including cooperative education or apprenticeship.

**TECHNOLOGY CLUB/BUSINESS PROFESSIONALS OF AMERICA (BPA)**

Tech Club is for anyone at ECHS or MHS who is interested in Technology! The agenda for each meeting varies but we have done a bit of the following: hosted video game competitions, created short films, watched and critiqued Hollywood films, and created websites.

Also our tech club is part of Business Professionals of America, or BPA for short. BPA is the leading Career and Technical Student Organization for students pursuing careers in business management, information technology, finance, office administration and other related career fields. BPA provides field trips to meet with industry

professionals and network with other students pursuing careers in IT and business. It creates leadership opportunities, organizes skills competitions at regional, state, and national levels and offers scholarships for students nationwide.

## HEALTH SCIENCES

### Health Sciences (Select 4 courses to complete pathway)

The Health Science Career Field prepares students for careers in Allied Health and Nursing, Exercise Science and Sports Medicine, Health Information Management and Medical Bioscience.

**Allied Health and Nursing program** areas will prepare students with the mathematics, science and technical skills to provide clinical assistance in patient care, emergency interventions (CPR, first-aid, AED), nutrition, dentistry and surgery. Careers for which this pathway prepares students include: Dental Assistant, Licensed Practical Nurse (LPN), Medical Assistant Nurse Aide (including STNA), Phlebotomist, Patient Care Assistant, Pharmacy Aide/Technician Surgical Technician, Respiratory Technician Optometry. **Postsecondary majors** for which this pathway prepares students include: Clinical Nutrition, Community Health and Preventive Medicine, Occupational Health, and Industrial Hygiene Dental Laboratory Technology, Optics/Optical Sciences, Healthcare Administration, Gerontology, Registered Nurse, Training Register, and Nursing Surgical Technology.

CSCC see link: [Nursing](#).

9	10	11	12
Health Science & Technology	Medical Terminology Anatomy & Physiology Mental Health	Nutrition and Wellness Human Pathophysiology	Patient-Centered Care (STNA) Human Path Internship/Capstone

**Medical Bioscience** program areas will prepare students with the mathematics, science and technical skills to apply biotechnology research and development to human health. Careers for which this pathway prepares students include: Biomedical Lab Assistant, Medical Lab Technician, Phlebotomist Lab Technician, Microbiology Generalist. **Postsecondary majors** for which this pathway prepares students include: Biological and Biomedical Sciences, Biomedical Technology, Biotechnology Microbiology.

9	10	11	12
Health Science & Technology	Anatomy & Physiology Medical Terminology	Bio 1111 (see science course descriptions)	Chem 1200 Internship/Capstone

### HEALTH SCIENCE & TECHNOLOGY

Course #: HT100

Prerequisite: None

Credit: 1.0

Subject Code: 072001

This first course in the career field provides students an overview of the opportunities available in the healthcare industry. Students will explore each body system including anatomy, physiology, and pathophysiology. They will

probe the fields of dentistry, nutrition, and eldercare. They will be introduced to exercise science and sports medicine, the field of biomedical research, and the importance of managing health information. They will also learn about pertinent laws and legislation. Students will witness the need for advancing technology and identify how to incorporate engineering and technology into expanding health care.

### **MEDICAL TERMINOLOGY**

Course #: HT210; Subject Code: 072150

Prerequisite: None Credit: 1.0

This course builds vocabulary journeying through each body system. This is a deeper dive than Health Science Technology. Students will be responsible for 100-200 terms per week. Highlights include viewing videos of surgeries and medical procedures, exploring pregnancy and delivery, case studies of patients and medical procedures. This course is approved for CTAG credit (3 credits).

### **MULT 1110 MEDICAL TERMINOLOGY**

Course #: College Credit: 2

Prerequisite: Placement into English 1100

This introductory course provides an overview of medical language. Emphasis will be placed on terms that are practical and commonly found in the day-to-day work of all allied health professions.

This concise course gives basic principles for understanding the language with an overview of terms from many areas of medicine.

### **MENTAL HEALTH**

Course #: HT102 ; Subject Code: 072065

Prerequisite: None Credit: 1.0

This course explores mental health and wellness, and mental and psychiatric illness. Students will learn therapeutic communication skills, how to build a therapeutic environment and how to assess a patient and plan patient care. Students will also explore how to take care of their own mental health so they can care for others. CPR is embedded in this course.

### **NUTRITION**

Course #: HT101 ; Subject Code: 072015

Prerequisite: None Credit: 1.0

Students will explore how nutrition affects our physical and mental health. We will explore the relationship of macro and micronutrients to health and both physical and cognitive output. Students will log their own nutrients to record nutritional intake and learn how to plan meals based on different dietary needs.

### **HUMAN PATHOPHYSIOLOGY**

Course #:

Prerequisite: Health Science and Medical Terminology Credit: 1.0

Subject Code: 072045 In this course, students will identify the causes, processes, and changes in body organs and tissues that occur with human illness. Topics include identification of clinical characteristics and effects of diseases, mechanisms causing alterations in cellular activity, maintenance of cellular tissue oxygenation, fluid and electrolyte balance, neuroendocrine control of the body, and diagnostic methodology. Students will interpret and use clinical data and patient health history to assemble a comprehensive health assessment.



### **PATIENT CENTERED CARE**

Course #: HT320; Subject Code: 072050

Prerequisite: Human Pathophysiology; Students must be 16 to take this course Credit: 1.0

Students will apply psychomotor nursing skills needed to assist individuals in meeting basic human needs. Students will implement interventions following a nursing assistant plan of care. Students will collect patient's vital signs including temperature, pulse rate, respiration rate, and blood pressure. Additionally, students will observe patients' physical, mental, and emotional conditions and document any change. CPR.

*The student who successfully completes this course should have the knowledge and skills needed to provide basic care for clients in the long-term care setting. The student will be eligible to take the state test for nurse aides in Ohio. When the student tests and earns that State Tested Nurse Assistant (STNA) license, he/she will have earned the 3 credits for Columbus State NURC 1001 Nurse Aide Training Program along with the credential to immediately work in a long-term care setting. NOTE: The NURC 1001 course is a prerequisite for specific health technologies at Columbus State.*

<i>Credentials</i>	<i>Points</i>
<i>Ohio Department of Health State Tested Nursing Asst (STNA)</i>	<i>12</i>

### **HEALTH SCIENCE INTERNSHIP**

Course #: HT400

Prerequisite: Senior Year; 2 pathway courses in Health Science Classes

Credit: 1.0

Subject Code: 072105 The capstone course provides opportunities for students to apply knowledge, attitudes and skills that were learned in the Health Sciences program in a more comprehensive and authentic way. Capstones often include project/problem based learning opportunities that occur both in and away from school. Under the supervision of the school and through community partnerships, students may combine classroom learning with work experience. This course can be delivered through a variety of delivery methods including cooperative education or apprenticeship.

**Suggested CSCC Course at CSCC:** HNTR 1153: Nutrition for a Healthy Lifestyle: Getting Started. A study of the role of nutrition in establishing, promoting, and maintaining good health. The composition and functions of foods, nutrition needs throughout the life cycle, and contemporary nutrition concerns are included in the course.

<i>Credentials</i>	<i>Points</i>
<i>CPR First Aid</i>	<i>1</i>

**WebXam is the Career Technical Education End of Course Exam.**

### **HOSA (Future Health Professional)**

This is a professional extra-curricular club for future health professionals. Students may study any area of health care including: forensic science, dentistry, or community health among 80 other areas of health care. This exploration and preparation culminates in competition days which also offer incredible professional networking

opportunities and career exploration. Participation in this organization prepares students for future professional and scholarship opportunities

**AUTO TECH**

The Auto Tech program will prepare students for technical and professional level careers in Auto Tech. Students will learn various concepts and theories through a hands-on approach in this pathway.

11	12
Auto Maintenance Auto Braking & Steering	Auto Powertrain Auto Engine Performance Transportation Internship/Capstone


**Postsecondary majors for which this pathway prepares students include:** Autobody/Collision and Repair Technology/Technician, Automobile/Automotive Mechanics Technology/Technician, Automotive Engineering Technology/Technician, Diesel Mechanics Technology/Technician, Heavy/Industrial Equipment Maintenance Technologies, Other Mechanic and Repair Technologies/Technicians, and Medium/Heavy Vehicle and Truck Technology/Technician

**AUTO MAINTENANCE (FALL)**

Course #: AT300

Prerequisite: None Credit: 1.0

In this first course, students will apply the skills needed to inspect and perform general service on vehicles. Students will research applicable service information and technical service bulletins, and perform maintenance on vehicles. Students will inspect and service engine, drive train, sus, filters and inspect vehicles for leaks and fluid conditions. Students may participate in "SkillsUSA", which is a career-technical student organization aimed to develop leadership, academic and technology skills in the workplace (some fees apply). Students in this course may earn college credit.



**AUTO 1101 Basic Auto Systems** ..... PLUS **Not offered yet**

Course #: College Credit: 2; High School Credit: .66 (8 week course)

Prerequisite: Placement into Math 1000 (Aleks test) and English 0190 (Accuplacer)

This introductory automotive course covers the basic components and systems of the automobile. Included in this course are automotive terminology and mechanical, hydraulic, and electrical theories as they apply to automobiles and light trucks. Students are strongly encouraged to take AUTO 1106 the same semester.

**AUTO 1106 Shop Orientation & Service**

Course #: College Credit: 2; High School Credit: .66 (8 week course)

Prerequisite: AUTO 1101

This introductory automotive course covers the operation of an automotive shop, the proper use of hand tools and power tools, and basic maintenance operations on cars and light trucks.

**AUTO BRAKING AND STEERING (SPRING)**

Course #: AT303

Subject Code: 177003

Prerequisite: Auto Maintenance

Students will perform inspections, troubleshoot malfunctions and service automotive undercarriage systems. Students will identify poor-performing hydraulic brake systems and replace malfunctioning components. Students will install coil and leaf springs, shock absorbers and struts, and replace wheel bearings. Students will inspect and replace automotive steering components and perform wheel alignments. Additionally, students will disable and enable supplemental restraint systems (SRS) and replace anti lock brake systems components. Students may participate in “SkillsUSA”, which is a career-technical student organization aimed to develop leadership, academic and technology skills in the workplace (some fees apply). Students in this course may earn college credit.

### **AUTO POWERTRAIN (FALL)**

Course #: AT302

Prerequisite: Auto Maintenance & Auto Braking

Subject Code: 177001

Students will inspect, adjust and repair internal combustion engines and drivetrain. Topics include physical and mechanical principles of engines, transmissions and transaxles, differentials and cooling systems. Students will learn precision measurement, inspection, and reconditioning techniques. Students will also identify customer’s needs, determine labor rates, and create estimates. Students may participate in “SkillsUSA”, which is a career-technical student organization aimed to develop leadership, academic and technology skills in the workplace (some fees apply). Students in this course may earn college credit.

### **AUTO ENGINE PERFORMANCE (SPRING)**

Course #:

Prerequisite: Auto Maintenance, Auto Braking, & Power Train

Subject Code: 177006

Students will research vehicle service histories using model specific service bulletins. Students will test and diagnose for engine performance in fuel, air induction and exhaust systems using advanced testing procedures. Topics include computerized engine controls including retrieving and recording diagnostic trouble codes using On Board Diagnostics (OBD). Additionally, students will diagnose driveability and emissions problems resulting from malfunctions of interrelated systems. Students may participate in “SkillsUSA”, which is a career-technical student organization aimed to develop leadership, academic and technology skills in the workplace (some fees apply). Students in this course may earn college credit.

### **TRANSPORTATION CAPSTONE (SENIOR YEAR)**

Course #: AT400

Prerequisite: Senior and permission of Instructor

Subject Code: 177023

The capstone course provides opportunities for students to apply knowledge, attitudes and skills that were learned in the Transportation program in a more comprehensive and authentic way. Capstones often include project/problem based learning opportunities that occur both in and away from school. Under supervision of the school and through community partnerships, students may combine classroom learning with work experience. This course can be delivered through a variety of delivery methods including cooperative education or apprenticeship.

Credentials	Points
ASE Student A8 (Engine Performance)	3

ASE Student A5 (Auto Braking &amp; Steering)

3

## MUSIC OPTIONS AT THE MHS

### WOMEN'S CHORUS

Course #: ART201

Prerequisite: None

Credit: 1

Fee: \$40 (paid to Choral Boosters)

This choir consists of women in grades 9-12 and rehearses every day. This intermediate-level choir focuses on a variety of challenging literature that strengthens vocal technique and expands music reading skills. Quarterly concerts, contests, and assemblies are considered part of the student's grade as is the student's active participation in daily rehearsals. There is no audition required to participate in this choir

### MEN'S CHORUS

Course #: ART202

Prerequisite: None

Credit: 1

Fee: \$40 (paid to Choral Boosters)

This choir consists of men in grades 9-12 and rehearses every day. This intermediate-level choir focuses on a variety of challenging literature that strengthens vocal technique and expands music reading skills. Quarterly concerts, contests, and assemblies are considered part of the student's grade as is the student's active participation in daily rehearsals. There is no audition required to participate in this choir.

### SYMPHONIC CHOIR

Course #:ART210 – Year Long Prerequisite: By Audition Only

Credit: 1

Fee: \* \$40 (paid to Choral Boosters)

Selected by audition only. Students will master and perform highly challenging college-level music of all time periods. They will learn how to maintain a high level of musicianship and increase their vocal abilities. Quarterly concerts, contests, and assemblies are considered part of the student's grade as is the student's active participation in daily rehearsals.

### WOMEN'S SELECT CHOIR (OFFERED IN THE MORNING AT MHS, may conflict with other courses)

Course #: ART230– Year Long Prerequisite: By Audition Only

Credit: 1

Fee: \*Girls in Women's Select Choir will need to purchase a dress for \$60.00.

Selected by audition only. Students will master and perform highly challenging college-level music of all time periods. They will learn how to maintain a high level of musicianship and increase their vocal abilities. Quarterly concerts, contests, and assemblies are considered part of the student's grade as is the student's active participation in daily rehearsals.

**BAND**

Course #: ART300– Year Long Prerequisite: Play a Musical Instrument

Credit: 1

Fee: \*Band Class Fees (Approx. \$300.00) and a Participation fee \$200.00 presently) for Marching Band/Flag Corps that is assessed by the Board of Education to pay for transportation and salaries.

This yearlong course is available to students who have previous band experience and can meet minimum performance standards as determined by the directors. Marching Band, Contest, and Show participation is also dependent upon meeting minimum performance standards. Students must be willing to follow discipline guidelines in rehearsals and performances to insure a quality program. As a course requirement, students will perform at all football games, various parades, festivals, seasonal concerts, contests, and school assemblies. This spirited, highly visible organization is required to attend a weeklong band camp during the summer and one evening rehearsal and one sectional rehearsal per week during football season only. Students are expected to purchase accessory equipment for uniforms. It is possible for students to participate in other fall activities and band. This organization will perform a wide variety of literature that includes classical, jazz, contemporary, and March music. Beginning in early November and continuing through the end of the school year, students will perform in one of the three Concert Bands.

**COLOR GUARD**

Course #: ART321

Prerequisite: Audition

Credit: .25

Program Type: General or College Prep Fee: \*Band Class Fees (Approx. \$300.00) and a Participation fee (\$200.00 presently) for Marching Band/Flag Corps that is assessed by the Board of Education to pay for transportation and salaries.

Members will be selected through an audition in April. Any student wishing to be in the flag corps must audition for the high school band director and flag corps advisor. Marching Band, Contest, and Show participation is dependent upon the student meeting minimum performance standards as determined by the flag instructors and band directors. This nine weeks long course is open to students who are interested in twirling a flag and using dance steps/moves as part of the high school band. Students must be willing to follow discipline guidelines in rehearsals and performances to insure a quality program. As a course requirement, students will perform at all football games, various parades, contests, concerts, and school assemblies, as part of the band. This spirited, highly visible organization is required to attend a weeklong band camp during the summer, one evening rehearsal, and two sectional rehearsals per week during the two-month long football season only. Students are expected to purchase accessory equipment for uniforms. \* Band Class fees are different for each grade level. Please see Mr. Thissen, Band Director, for exact fees.

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**Graduation Tracker**