HIGH SCHOOL
ACADEMIC PLANNING GUIDE
2021-2022
Board of Education
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Dr. Nancy Nestor-Baker, Vice President
Jennifer Aultman, Board Member
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Rick A. Vilardo, Board Member

Administration
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Nicole Marshall, Treasurer

Administration Offices
936 Eastwind Drive, Westerville, Ohio, 43081
Office Hours: 7:30 AM - 4:30 PM

Important Numbers
Main Office: 614-797-5700
Fax: 614-797-5701

District Website
www.wcsoh.org

Vision Statement
To be the benchmark of educational excellence.

Mission Statement
To prepare students to contribute to the competitive and changing world in which we live.

Statement of Equal Opportunity
All courses are available to students without regard to race, color, national origin, sex, or handicap.

Non-Discrimination Policy
The Board of Education does not discriminate on the basis of race, color, religion, national origin, sex, disability, sexual orientation, military status, ancestry, age, genetic information, or any other legally protected characteristic, in its programs and activities, including employment opportunities.
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</table>
Dear Students and Families,

The High School Academic Planning Guide has been prepared to help you plan your high school program and choose courses for the 2021-2022 school year. It contains essential information about graduation requirements, athletic eligibility, course descriptions, and educational options apart from the traditional high school.

The Westerville City School District offers a rich and diverse selection of courses for all students. We encourage students to step out of their comfort zone and take more rigorous coursework. When students challenge themselves in this way, there is a proven, positive impact on their academic and career preparation, regardless of race, gender, or socioeconomic status.

According to ACT research, taking challenging courses in the quality core content areas will better prepare students for the ACT test, which is a top predictor of college readiness ([www.act.org](http://www.act.org)). In addition, students most likely to complete a college degree are those who engage themselves in demanding coursework over four years of high school.

Ohio has enacted the Ohio Core Graduation Requirements that you will see outlined in this guide. In addition, for students planning to attend a four-year college, the Ohio Department of Higher Education recommends the completion of four years each in English, math, social studies, and science, three years of a world language, and one year of technology or the arts. The Ohio Department of Education also requires students to earn at least two graduation seals beginning with the class of 2023.

The learning opportunities available in our high schools will provide a solid foundation for a successful future. Together we will make these four years a rewarding and effective foundation from which to build your lives!

Please take a moment to view [this message](#) from Dr. Kellogg.

Best regards,

John R. Kellogg, Ed.D., Superintendent

M. Scott Reeves, Executive Director, Secondary Academic Affairs

Tom Lanier, Principal, Westerville Central High School

Kurt Yancey, Principal, Westerville North High School

Mike Hinze, Principal, Westerville South High School
Westerville Central
7118 Mount Royal Avenue
Westerville, OH 43082

Administration
Principal: Tom Lanier
Assistant Principal: Nicholas McIlwain
Assistant Principal: Eric Nickel
Assistant Principal: Roshawn Parker
Athletic Director: Andy Ey

School Counselors
Monica Johnson (A-Co)
Jim Kloepfer (Cr-He)
Megan Lemmon (Hi-Me)
Erica Guice (Mi-Sa)
Carrie Ackerman (Sc-Z)

Important Numbers
Main Office: 614-797-6800
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www.wcsoh.org/wchs

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Westerville North
950 County Line Road
Westerville, OH 43081

Administration
Principal: Kurt Yancey
Assistant Principal: Paul Hershberger
Assistant Principal: Stephanie McGeorge
Assistant Principal: Will Ragland
Athletic Director: Wesley Elifritz

School Counselors
Julie Taylor (A-D)
Melissa Simashkevich (E-K)
Erica Beebe (L-Q)
Dr. Colleen Biederman (R-Z)

Important Numbers
Main Office: 614-797-6200
Attendance: 614-797-4812
Fax: 614-797-6201

www.westervillenorth.com

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Westerville South
303 South Otterbein Avenue
Westerville, OH 43081

Administration
Principal: Mike Hinze
Assistant Principal: Dr. Garrett Carter
Assistant Principal: Kiev Lamarr
Assistant Principal: Julie Wilson
Athletic Director: Jeff Good

School Counselors
Jenny Coulter (A-Di)
Jennifer Stovall (Do-La)
Laura Elliott (Le-Re)
Justin Ferguson (Rh-Z)

Important Numbers
Main Office: 614-797-6000
Attendance: 614-797-6047
Fax: 614-797-6001

www.wcsoh.org/wshs
Graduation Requirements

Graduation requirements include those prescribed by the Ohio Department of Education, but should be considered minimum requirements. Students will generally plan for or earn more than these minimum credits. Ohio law allows high school credits earned prior to ninth grade to be used to satisfy the minimum graduation requirements. The grades earned in these courses will count in the student’s grade point average and class rank. Requirements for high school graduation in Westerville consist of a minimum of 20 credits, which must include the following:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4.0</td>
</tr>
<tr>
<td>Mathematics (including 1 unit of Algebra 2 or its equivalent)</td>
<td>4.0</td>
</tr>
<tr>
<td>Science (including a Physical Science course, a Life Science course, and an Advanced Science course)</td>
<td>3.0</td>
</tr>
<tr>
<td>Social Studies (including American History, World History, and U.S. Government)</td>
<td>3.0</td>
</tr>
<tr>
<td>Health</td>
<td>0.5</td>
</tr>
<tr>
<td>Physical Education</td>
<td>0.5</td>
</tr>
<tr>
<td>Visual and Performing Arts</td>
<td>1.0</td>
</tr>
<tr>
<td>Elective credits</td>
<td>5.0</td>
</tr>
</tbody>
</table>

2 - The Physical Education requirement may be waived under Policy 5460. Please see page 39 for more details.
3 - All students not following a career-technical pathway must complete at least two semesters of fine art at any time throughout grades 7-12.
4 - Elective credits may include visual and performing arts.

College Preparatory Program

Test scores, GPA, and courses taken in high school are all factors affecting college admission. The recommended college preparatory program includes:

- 4 years of English, with emphasis on composition
- 4 years of mathematics
- 4 years of science
- 4 years of social studies
- 2-3 years of one world language *
- 1 year of fine, applied, or performing arts

A robust curriculum assists students in transitioning from high school to college. Since requirements vary from university to university, students are strongly encouraged to check the latest policies regarding course requirements with each university or college admission office.

Recommended Progression of Required Courses

<table>
<thead>
<tr>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 1</td>
<td>English 2</td>
<td>English</td>
<td>English</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Mathematics</td>
<td>Mathematics</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Science</td>
<td>Science</td>
<td>Science</td>
<td>Science</td>
</tr>
<tr>
<td>American History</td>
<td>World History</td>
<td>U.S. Government</td>
<td></td>
</tr>
</tbody>
</table>

Required physical education and health courses may be scheduled at any time throughout grades 9 to 12, although it is strongly recommended that they be completed in grades 9 and 10.

* While two credits in one world language are minimum, successful world language students (grade C or better) are encouraged to take three, four, or five years of the same language if possible.
Ohio Graduation Requirements
In addition to earning course credits, students must demonstrate college or career readiness by meeting the criteria below. Please be sure to review your expected graduation year’s requirements as they may vary from others.

Class of 2023 and beyond (and an alternative for the Class of 2022)
Requirement: Students must earn a minimum of 20 credits.

Requirement: Per guidelines established by the Ohio Department of Education in accordance with HB 487 all students in the graduating classes of 2023 and beyond must show competency on the Ohio State Tests in Algebra 1 and English 2.

Students who do not show competency on the assessments will need to meet one of the following options:

Option 1:
Demonstrate Two Career Focused Activities
● Proficient scores on WebXams
● A pre-apprenticeship or acceptance into an approved apprenticeship program
● Work based learning, earn the required score on WorkKeys, Earn the OhioMeansJobs Readiness Seal

Option 2:
● Show evidence that you have signed a contract to enter a branch of the U.S. armed services upon graduation.

Option 3:
● Earn credit for one college-level math and/or college-level English course through Ohio’s College Credit Plus program.

Requirement: Show readiness by earning two of the following diploma seals, at least one being from the state. These seals students the chance to demonstrate academic, technical, and professional skills and knowledge that aligns to your passions, interests, and planned next steps after high school.

<table>
<thead>
<tr>
<th>State Seals</th>
<th>Local Seals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilingual</td>
<td>Honors Diploma</td>
</tr>
<tr>
<td>Citizenship</td>
<td>Industry-Recognized Credential</td>
</tr>
<tr>
<td>College Ready Seal</td>
<td>Military Enlistment</td>
</tr>
<tr>
<td></td>
<td>OhioMeansJobs Readiness</td>
</tr>
<tr>
<td></td>
<td>Science</td>
</tr>
<tr>
<td></td>
<td>Technology</td>
</tr>
</tbody>
</table>

Please go to http://education.ohio.gov/Topics/Ohio-s-Graduation-Requirements for the most current information. A worksheet for the Class of 2023 and beyond can be found here:
<table>
<thead>
<tr>
<th>Class of 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students earn points toward graduation on seven end-of-course exams:</td>
</tr>
<tr>
<td>English 1, English 2, Algebra 1, Geometry, Biology, American History, and American Government</td>
</tr>
<tr>
<td><strong>---------------------------------------------------------------------------</strong></td>
</tr>
<tr>
<td>Students earn from 1-5 points for each exam, based on performance:</td>
</tr>
<tr>
<td>5 - Advanced  4 - Accelerated  3 - Proficient  2 - Basic  1 - Limited</td>
</tr>
<tr>
<td><strong>---------------------------------------------------------------------------</strong></td>
</tr>
<tr>
<td>Students need a minimum of 18 total points to graduate under this option, with the minimum number needed in each area:</td>
</tr>
<tr>
<td>English - 4 points  Mathematics - 4 points  Science and Social Studies - 6 points</td>
</tr>
<tr>
<td><strong>---------------------------------------------------------------------------</strong></td>
</tr>
<tr>
<td>Students who take Biology, American History or American Government as part of Advanced Placement, International Baccalaureate, or College Credit Plus programs can use their scores from the programs’ end-of-course exams in place of the state end-of-course exam scores to accumulate graduation points.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall Graduation Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students earn “remediation-free” scores in English Language Arts and Mathematics on a nationally recognized college admission exam.</td>
</tr>
<tr>
<td>Students in the class of 2021 and 2022 will have the opportunity to take a college admission exam free of charge; the cost of this exam is covered by the state of Ohio.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Remediation Free Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students earn an approved <a href="https://example.com">industry-recognized credential or group of credentials</a> in a single career field and achieve a <a href="https://example.com">workforce readiness score</a> on the <a href="https://example.com">WorkKeys</a> assessment. The state of Ohio will pay one time for those who take the WorkKeys assessment. Students should see their school counselor for more information.</td>
</tr>
</tbody>
</table>

Consult your school counselor ([page 3](#)) to review and decide the best option for you to earn a high school diploma.
**Honors Diplomas**

A Diploma with Honors is a designation set forth by the Ohio Department of Education. A student may earn an honors diploma either by accomplishing additional criteria in the college preparatory curriculum or in the career-technical curriculum. A seal is affixed to the student’s diploma validating this award.

The Ohio Department of Education continues to update graduation requirements and pathways on their website. Please visit [http://education.ohio.gov/Topics/Ohio-s-Graduation-Requirements](http://education.ohio.gov/Topics/Ohio-s-Graduation-Requirements) for the latest information.

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### COMPARISON OF DIPLOMAS WITH HONORS CRITERIA

*Students need to fulfill all but one of the applicable criteria for the Diploma with Honors.*

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Academic Diploma</th>
<th>Career-Technical Diploma</th>
<th>IB Diploma ¹</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English</strong></td>
<td>4 units</td>
<td>4 units</td>
<td>4 units</td>
</tr>
<tr>
<td><strong>Mathematics</strong></td>
<td>4 units, including Algebra 1, Geometry, Algebra 2 (or equivalent) and one other higher level course OR a 4 course sequence that contains equivalent or higher content</td>
<td>4 units, including Algebra 1, Geometry, Algebra 2 (or equivalent) and one other higher level course OR a 4 course sequence that contains equivalent or higher content</td>
<td>4 units, including Algebra 1, Geometry, Algebra 2 (or equivalent) and one other higher level course OR a 4 course sequence that contains equivalent or higher content</td>
</tr>
<tr>
<td><strong>Science</strong></td>
<td>4 units, including two units of advanced science</td>
<td>4 units, including two units of advanced science</td>
<td>4 units including biology, chemistry and at least one additional advanced science</td>
</tr>
<tr>
<td><strong>Social Studies</strong></td>
<td>4 units</td>
<td>4 units</td>
<td>4 units</td>
</tr>
<tr>
<td><strong>World Languages</strong></td>
<td>3 units of one world language, or no less than 2 units of two world languages studied</td>
<td>2 units of one world language</td>
<td>4 units minimum, including at least 2 units in each language studied</td>
</tr>
<tr>
<td><strong>Fine Arts</strong></td>
<td>1 unit</td>
<td>N/A</td>
<td>1 unit</td>
</tr>
<tr>
<td><strong>Electives</strong></td>
<td>N/A</td>
<td>4 units of Career-Technical minimum. Program must lead to an industry-recognized credential, apprenticeship, or be part of an articulated career pathway which can lead to postsecondary credit.</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Grade Point Average</strong></td>
<td>3.5 on a 4.0 scale</td>
<td>3.5 on a 4.0 scale</td>
<td>3.5 on a 4.0 scale</td>
</tr>
<tr>
<td><strong>ACT/SAT Score</strong></td>
<td>27 ACT / 1280 SAT²</td>
<td>27 ACT / 1280 SAT² WorkKeys (6 Reading &amp; 6 Math)</td>
<td>27 ACT / 1280 SAT²</td>
</tr>
<tr>
<td><strong>Field Experience</strong></td>
<td>N/A</td>
<td>Complete a field experience (experiential learning in either an internship or apprenticeship) and document the experience in a portfolio specific to the student’s area of focus.</td>
<td>Complete a field experience (experiential learning in either an internship or apprenticeship) and document the experience in a portfolio specific to the student’s area of focus.</td>
</tr>
<tr>
<td><strong>Portfolio</strong></td>
<td>N/A</td>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td><strong>Additional Assessment</strong></td>
<td>N/A</td>
<td>Earn an industry-recognized credential or achieve proficiency benchmark for appropriate Ohio Career-technical Competency Assessment or equivalent.</td>
<td>Must complete criterion-referenced assessments in a minimum of six academic disciplines.</td>
</tr>
</tbody>
</table>

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Notes

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International Baccalaureate (IB) Diploma with Honors — The IB track to the Honors Diploma requires full completion of all requirements for an IB Diploma Programme including the Theory of Knowledge course in meta-cognition, the Extended Essay project, and the 150 hour Creativity, Action, and Service (Service Learning) requirement.

These scores are based on the 2017 ACT and SAT assessments. Refer to the Ohio Department of Education for a document outlining equivalent scores for past and future tests that differ from the 2017 versions. Writing sections of either standardized test should not be included in the calculation of the score. The Locating Information test is not included in the calculation of the WorkKeys score.

### COMPARISON OF DIPLOMAS WITH HONORS CRITERIA

Students need to fulfill all but one of the applicable criteria for the Diploma with Honors.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>STEM Honors Diploma</th>
<th>Arts Honors Diploma</th>
<th>Social Science &amp; Civic Engagement Diploma</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4 units</td>
<td>4 units</td>
<td>4 units</td>
</tr>
<tr>
<td>Mathematics</td>
<td>5 units, including Algebra 1, Geometry, Algebra 2 (or equivalent) and one other higher level course OR a 4 course sequence that contains equivalent or higher content</td>
<td>4 units, including Algebra 1, Geometry, Algebra 2 (or equivalent) and one other higher level course OR a 4 course sequence that contains equivalent or higher content</td>
<td>4 units, including Algebra 1, Geometry, Algebra 2 (or equivalent) and one other higher level course OR a 4 course sequence that contains equivalent or higher content</td>
</tr>
<tr>
<td>Science</td>
<td>5 units, including two units of advanced science</td>
<td>3 units, including one unit of advanced science</td>
<td>3 units, including one unit of advanced science</td>
</tr>
<tr>
<td>Social Studies</td>
<td>3 units</td>
<td>3 units</td>
<td>5 units</td>
</tr>
<tr>
<td>World Languages</td>
<td>3 units, including one world language OR no less than 2 units of two world languages studied</td>
<td>3 units, including one world language OR no less than 2 units of two world languages studied</td>
<td>3 units, including one world language OR no less than 2 units of two world languages studied</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>1 unit</td>
<td>4 units</td>
<td>1 unit</td>
</tr>
<tr>
<td>Electives</td>
<td>2 units with a focus in STEM courses</td>
<td>2 units with a focus in fine arts courses</td>
<td>3 units with a focus in social sciences and/or civics</td>
</tr>
<tr>
<td>Grade Point Average</td>
<td>3.5 on a 4.0 scale</td>
<td>3.5 on a 4.0 scale</td>
<td>3.5 on a 4.0 scale</td>
</tr>
<tr>
<td>ACT/SAT Score</td>
<td>27 ACT / 1280 SAT ²</td>
<td>27 ACT / 1280 SAT ²</td>
<td>27 ACT / 1280 SAT ²</td>
</tr>
<tr>
<td>Field Experience</td>
<td>Complete a field experience (experiential learning in either an internship or apprenticeship) and document the experience in a portfolio specific to the student’s area of focus.</td>
<td>Complete a field experience (experiential learning in either an internship or apprenticeship) and document the experience in a portfolio specific to the student’s area of focus.</td>
<td>Complete a field experience (experiential learning in either an internship or apprenticeship) and document the experience in a portfolio specific to the student’s area of focus.</td>
</tr>
<tr>
<td>Portfolio</td>
<td>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.</td>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td>Additional Assessment</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Additional information about honors diploma requirements can be found at [http://www.wcsoh.org/administration/105](http://www.wcsoh.org/administration/105).
Grade Level Progressions

Requirements for Progression to the Next Grade Level
Progression to the next grade level is attained by earning credits for successful completion of courses. Credits required to progress (including those earned from required courses):

<table>
<thead>
<tr>
<th>To be classified as Grade 10</th>
<th>To be classified as Grade 11</th>
<th>To be classified as Grade 12</th>
<th>Credits needed to graduate*</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 credits</td>
<td>10 credits</td>
<td>15 credits</td>
<td>20 credits</td>
</tr>
</tbody>
</table>

*Please see the additional requirements needed to graduate on pages 4-6.

Grade Replacement Procedure
A student may retake a course if she or he received a “D+” or below in the original course, or is recommended to do so by a teacher. The point value of the higher of the two grades (retaken course grade or original grade) will be the only one averaged into the student’s cumulative grade point average. However, the academic record of both courses will be reflected on the student’s transcript. Credit for the course will not be duplicated.

Schedule Change Requests (adding or dropping courses)

Adding a Class

<table>
<thead>
<tr>
<th>Year-long Classes</th>
<th>Can be added up to the 5th day of school. Beyond this time, it is highly recommended a course not be added.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester/Blocked (ie. 2 periods) Classes</td>
<td>Can only be added up to the 5th day of the semester.</td>
</tr>
</tbody>
</table>

Dropping a Class

<table>
<thead>
<tr>
<th>Year-long Classes</th>
<th>A student withdrawing from a year-long course prior to the end of the first grading period may receive a U (unsatisfactory) for the course at the discretion of a building administrator. After the first grading period, a student may receive an F (failing) or U (unsatisfactory) as a final grade for the course.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester/Blocked (ie. 2 periods) Classes</td>
<td>A student withdrawing from a semester/blocked course after the 10th school day may receive a U (unsatisfactory) as a final grade for the course at the discretion of a building administrator. After the first grading period, a student may receive an F (failing) or U (unsatisfactory) as a final grade for the course.</td>
</tr>
</tbody>
</table>

- Courses required for graduation (see pages 4-6) should not be dropped.
- Students not granted authorization to drop a course may appeal to the building principal. Students may not drop below five classes or credits. Dropping below five classes may affect athletic eligibility. A student should be aware that if a course is dropped, there may not be another course to add, especially after the 5th day of instruction.

*Schedule change requests outside of the established window will be reviewed by the administrative and school counselor teams. Requests for schedule changes should be made in writing to a student’s assigned school counselor who will then collaborate with the affected teachers and then contact the student to convey the decision and rationale.

Special Note: With the assistance of school counselors and teachers, students needing to transition from an Honors or AP course to a traditional course may do so during the first semester.
Grade Point Averages

Grading Scales

<table>
<thead>
<tr>
<th>Regular</th>
<th>Honors, IB SL</th>
<th>AP, IB HL, CCP*</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>A+</td>
<td>A+</td>
</tr>
<tr>
<td>4.3000</td>
<td>4.8375</td>
<td>5.3750</td>
</tr>
<tr>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>4.0000</td>
<td>4.5000</td>
<td>5.0000</td>
</tr>
<tr>
<td>A-</td>
<td>A-</td>
<td>A-</td>
</tr>
<tr>
<td>3.7000</td>
<td>4.1625</td>
<td>4.6250</td>
</tr>
<tr>
<td>B+</td>
<td>B+</td>
<td>B+</td>
</tr>
<tr>
<td>3.3000</td>
<td>3.7125</td>
<td>4.1250</td>
</tr>
<tr>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>3.0000</td>
<td>3.3750</td>
<td>3.7500</td>
</tr>
<tr>
<td>B-</td>
<td>B-</td>
<td>B-</td>
</tr>
<tr>
<td>2.7000</td>
<td>3.0375</td>
<td>3.3750</td>
</tr>
<tr>
<td>C+</td>
<td>C+</td>
<td>C+</td>
</tr>
<tr>
<td>2.3000</td>
<td>2.5875</td>
<td>2.8750</td>
</tr>
<tr>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>2.0000</td>
<td>2.2500</td>
<td>2.5000</td>
</tr>
<tr>
<td>C-</td>
<td>C-</td>
<td>C-</td>
</tr>
<tr>
<td>1.7000</td>
<td>1.9125</td>
<td>2.1250</td>
</tr>
<tr>
<td>D+</td>
<td>D+</td>
<td>D+</td>
</tr>
<tr>
<td>1.3000</td>
<td>1.4625</td>
<td>1.6250</td>
</tr>
<tr>
<td>D</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>1.0000</td>
<td>1.1250</td>
<td>1.2500</td>
</tr>
<tr>
<td>D-</td>
<td>D-</td>
<td>D-</td>
</tr>
<tr>
<td>0.7000</td>
<td>0.7875</td>
<td>0.8750</td>
</tr>
<tr>
<td>F</td>
<td>F</td>
<td>F</td>
</tr>
<tr>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Method of Determining Grade Point Average (GPA)

1. Convert letter grades to the numerical value assigned to these grades (see chart).
2. Add these points to determine a total point value.
3. Determine the total number of credits associated with the converted grades.
4. Divide the total point value by the total number of credits to determine the student’s GPA.

Courses taken for Pass/Fail (S/U) are not included in computing grade point average.

*CCP Grading Scale Information

The highest grade that is achievable on the grading scale at the college will have equal weight at the high school. For example, if the high school’s highest grade is an A+ and that equals 5.3 on the high school weighted scale, and the college’s highest grade is an A, then a student earning an A in a College Credit Plus course will earn the same 5.3 weight as the A+ at the high school. This applies only to weighted courses in the same subject area.

Ohio Department of Higher Education Guidance Document

Sample GPA Computation

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester Grade</th>
<th>Value</th>
<th>Credit</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course 1</td>
<td>B -</td>
<td>3.0375</td>
<td>0.50</td>
<td>1.5188</td>
</tr>
<tr>
<td>Honors Course 2</td>
<td>B</td>
<td>3.3750</td>
<td>0.50</td>
<td>1.6875</td>
</tr>
<tr>
<td>AP Course 3</td>
<td>B +</td>
<td>4.1250</td>
<td>0.50</td>
<td>2.0625</td>
</tr>
<tr>
<td>CCP Course @ CSCC</td>
<td>B</td>
<td>4.1250</td>
<td>0.50</td>
<td>2.0625</td>
</tr>
<tr>
<td>Course 5</td>
<td>A</td>
<td>4.0000</td>
<td>0.50</td>
<td>2.0000</td>
</tr>
<tr>
<td>PE</td>
<td>A -</td>
<td>3.7000</td>
<td>0.25</td>
<td>0.9250</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>2.75</td>
<td></td>
<td>10.2563</td>
</tr>
</tbody>
</table>

Points / Credits = GPA  10.2563 / 2.75 = 3.7295
Athletic and Extracurricular Eligibility

Westerville City Schools Students
Requirements for participation in athletic or extracurricular activities include:

- During the grading period immediately preceding participation in the activity, the student must have received passing grades in courses which accumulate to 5.0 credits for the year.
- During the grading period immediately preceding participation in the activity, the student must have earned a minimum 1.75 grade-point average.
- The student must maintain compliance with the district Code of Student Conduct, Code of Conduct for Students Participating in Extracurricular Activities and tobacco/drug/alcohol policies and procedures.
- The student must be in attendance at school at least 1/2 day on the day of the contest/event, when the event occurs on a school day.
- The student must meet all eligibility requirements of the Ohio High School Athletic Association to participate in interscholastic athletics, including but not limited to:
  - Enrollment in school the grading period immediately preceding the grading period of participation; and
  - Current enrollment in school.

Home Educated/Private School/STEM/Community School Students
See Board Policy 9270 for information regarding eligibility requirements at https://go.boarddocs.com/oh/wcsd/board.nsf/public

NCAA Eligibility
Students who plan on participating in college athletics at an NCAA member school must ensure that courses taken throughout his or her high school career meets the eligibility standards as set by the NCAA Eligibility Center. For a complete listing of all requirements as well as all approved and denied courses for each of the Westerville high schools, please visit the NCAA Eligibility Center website at http://eligibilitycenter.org/.
**Academic Support for Students**

**Special Education Students**

A student receiving Special Education support

- has needs solely identified and documented through the Individualized Educational Program (IEP) process.
- receives instructional modifications to the curriculum or accommodations that assist the student in accessing the curriculum.
- has access to a continuum of learning environments* including but not limited to:

<table>
<thead>
<tr>
<th>general education classes</th>
<th>team taught general education classes</th>
<th>self-contained resource classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>no additional support</td>
<td>with special education support</td>
<td>taught by a general education teacher and an intervention specialist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>core classes taught by an intervention specialist with accommodations and specialized instruction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>core classes taught by an intervention specialist with a modified curriculum</td>
</tr>
</tbody>
</table>

AND/OR

- small group intervention
- work study
- job training

*A student’s disability category does not determine the type or level of special education services to be provided.

**Gifted Students**

A student receiving Gifted Education support

- has been identified as gifted in one or more of the following areas: Cognitive, Reading, Math, Science, Social Studies, Creativity.
- has been identified as talented in one or more of the following areas: Dance, Music, Drama and/or Art.

The wide variety of classes and programs at the high school level provides many opportunities for gifted students to take challenging courses. Gifted students are encouraged to pursue Honors, Advanced Placement, International Baccalaureate, and College Credit Plus courses.

Gifted Facilitators at each high school can assist students in choosing courses, as well as provide information on extended learning opportunities within and outside of the Westerville City School district.

**Contact Caley Nestor Baker, Gifted Education Coordinator, for more information.**
614-797-5884; bakerc2@wcsoh.org

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**Contact Guerdie Glass, Director, Special Education for more information.**
614-797-5902; glassg@wcsoh.org
English Learners

A student receiving English Language support

- Has a primary/home/native language other than English, whether born in the U.S. or another country.
- Is not over 21 years of age and is enrolled in the district school.
- Scored less than proficient in one or more areas of English proficiency (reading, writing, listening, and speaking) on tests of English language proficiency administered within the district.
- Has difficulty speaking, reading, writing, or understanding English and may be unable to perform well enough in class or on state tests to meet expected state standards for achievement.

<table>
<thead>
<tr>
<th>Level</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergent</td>
<td>Students may understand isolated words, but rely on nonverbal cues and require frequent repetition.</td>
</tr>
<tr>
<td>Progressing</td>
<td>Students are beginning to understand more English, but they still have a relatively small vocabulary. As comprehension improves, they gain skills for adequate communication; students understand more complex speech but still require repetition. Reading is more fluent; however errors will still occur.</td>
</tr>
<tr>
<td>Monitor or Trial Mainstream</td>
<td>Students can participate in an academic conversation with minimal support.</td>
</tr>
</tbody>
</table>

Materials and the instructional pace of an EL class are adapted to meet the individual needs of each student. Students move from the "Emergent" level of English proficiency through "Progressing" to "Proficient" as basic skills and English fluency are acquired.

English Learner (EL) courses (page 38) qualify for elective credit. English Language Arts courses for English Learners (EL ELA) (pages 32 - 37) qualify for English Language Arts credit.

Contact Dr. Lucy Rader-Brown, EL Coordinator, for more information.
614-797-5883; brownl@wcsoh.org

******************************************************************************

Educational Options for Success (EOS) Program

The Educational Options for Success (EOS) program is housed at the Academic Enrichment Center. The primary objective for each student attending EOS is to successfully earn credits towards their high school diploma and develop skills to be successful within the school and community environments they will face upon their transition from the program.

A student participating in the EOS program may be

- Considering dropping out of school because they are over age and/or lacking credits.
- Experiencing failure in a charter school or home school situation.
- Choosing to attend EOS in lieu of expulsion.
- Seeking an alternative to the traditional school setting and is interested in pursuing specific goals and aspirations.

Initial referrals and subsequent recommendations for students to attend the EOS program take place at a student’s home high school. A designated staff member in each high school, usually an Assistant Principal, serves as the EOS Program Enrollment Manager.

Contact your school counselor to learn more about the EOS Program.

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2021 Summer Learning Opportunities

A student participating in Summer Learning Opportunities may be

- Taking or retaking courses to recover credit
- Taking courses to work ahead or make room in their future schedules

**Location and dates TBD**

**Dates**

Summer School typically runs throughout June and early July.

Registration will take place in May, 2021. Please visit [https://www.westerville.k12.oh.us/administration/117](https://www.westerville.k12.oh.us/administration/117) for registration dates and deadlines.

**DEADLINE TO REGISTER IS TBD**

Registration closes at 4:30 pm on a date TBD. All registrations and payment must be received by this time. No registrations will be accepted after 4:30 pm on the deadline. If mailing, envelope must be postmarked on or before the deadline.

**On-Line Registration Only**

The on-line registration form can be found at [www.wcsoh.org](http://www.wcsoh.org). From the home page, under “Resources” at the bottom of the page, click Summer School. Information and application links are located under Documents and Links.

<table>
<thead>
<tr>
<th>Online Registration</th>
<th>Paper Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Register for classes via the link (Google Form) Pay online via <a href="http://www.ezpay.com">EZPay</a>, mail a check, or drop check off to the summer school office.</td>
<td>There is no paper registration option this year. All registrations must be completed on-line. You can pay via EZPay, mail check by due date, or drop check off to the summer school office.</td>
</tr>
<tr>
<td>Mailing Address: WCS Summer School Attention: Dr. Scott Ebbrecht, AEC 336 South Otterbein Avenue Westerville, OH 43081</td>
<td>Mailing Address: WCS Summer School Attention: Dr. Scott Ebbrecht, AEC 336 South Otterbein Avenue Westerville, OH 43081 <em>Do not mail cash!</em> Cash will only be accepted in person at the AEC.</td>
</tr>
</tbody>
</table>

**REGISTER EARLY!**

Paid applications are processed in the order that they are received with limited spaces available. DO NOT wait for your final grade card to arrive before you register. Consult your school counselor if you have any questions.

**Course Confirmation**

A confirmation email will be sent to the email address on your registration form, which will confirm receipt of your paid registration. If a change needs to be made, you will be notified prior to the start of the course.

**Refund and Cancellation Policy**

All refunds will be subject to a processing fee. Refer to registration information for fee schedule. Cancellations need to be received in writing/email. Minimum enrollment must be met or a course may be canceled. Full refunds will be provided if: (1) WCS cancels a class; (2) a class is filled before registration is received and no other class options are available; OR (3) a student receives and provides documentation of a passing grade in the course during the school year.
Westerville City Schools provides students many course options and programs based on their career goals, needs, and individual aspirations. Choices students make in high school impact the options they have for future education and job opportunities after high school. A high school’s most important role is to help students attain the knowledge and capabilities that make adult opportunities possible. Students are encouraged to carefully plan a program of studies that will assist them in reaching their educational and occupational goals.

Westerville City School District will make every effort to maintain current records and to keep students and parents informed about the status of progress toward completing the necessary coursework for graduation requirements. However, it is each student’s and parent’s responsibility to be acquainted with the necessary requirements to meet this goal.

To best select courses to fit postsecondary and career plans:
1. Review all requirements for graduation.
2. Complete the chart below: What are your plans after high school?
3. Read the information given about each department and course.

Specific educational opportunities to consider as you plan your schedule are outlined on the following pages:
1. Advanced Placement page 17
2. International Baccalaureate pages 18 - 20
3. Career Technical Programs at Career Centers page 21
4. Career Pathways pages 22 - 23
5. Global Scholars Program page 24
6. College Credit Plus page 25
7. Credit Flexibility page 26

The Ohio Department of Higher Education provides additional information on how to best prepare for life after high school.

Planning for College
Find a Career
## Four-Year Course Planning Guide

### Middle School classes earning high school credit

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Total credits earned</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summer Course(s):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Grade 9 Classes

<table>
<thead>
<tr>
<th></th>
<th>Planned</th>
<th>Earned credit</th>
<th>Total credits planned/earned</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Math:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Science:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social Studies:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Elective:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Elective:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summer Course(s):</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5 credits needed to be classified as Grade 10

### Grade 10 Classes

<table>
<thead>
<tr>
<th></th>
<th>Planned</th>
<th>Earned credit</th>
<th>Total credits planned/earned</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Math:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Science:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social Studies:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Elective:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Elective:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summer Course(s):</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10 credits needed to be classified as Grade 11

### Grade 11 Classes

<table>
<thead>
<tr>
<th></th>
<th>Planned</th>
<th>Earned credit</th>
<th>Total credits planned/earned</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Math:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Science:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social Studies:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Elective:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Elective:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summer Course(s):</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15 credits needed to be classified as Grade 12

### Grade 12 Classes

<table>
<thead>
<tr>
<th></th>
<th>Planned</th>
<th>Earned credit</th>
<th>Total credits planned/earned</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Math:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Science:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social Studies:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Elective:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Elective:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summer Course(s):</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

20 credits required to graduate

---

*Return to Table of Contents*
The Advanced Placement (AP) Program is an academic program designed to provide motivated high school students with college-level academic courses. Westerville City Schools offers 20 AP courses that are more rigorous than traditional high school courses and are designed to develop the skills needed for success in college. Courses follow the College Board’s AP curriculum to prepare students for an AP exam at the end of the year-long course. Course enrollment is self-selected.

Students who take AP courses:
- send a signal to colleges that they’re serious about their education and that they’re willing to challenge themselves with rigorous coursework.
- learn essential time management and study skills needed for college and career success.
- are much more likely than their peers to complete a college degree on time.
- dig deeper into subjects that interest them, and learn to tap their creativity and their problem-solving skills to address course challenges.

Keys to success in an AP course include:
- interest, motivation, self-discipline, and willingness to grow as a learner.
- time and commitment to AP work such as daily review, daily reading, projects outside of class, and assignments to be completed in the summer.

AP courses have a 1.25 weighted credit; students are encouraged (but not required) to take the AP exam.

Westerville City Schools encourages the elimination of barriers that restrict access to AP courses for students from ethnic, racial, and socioeconomic groups that have been traditionally underrepresented in the AP program and makes every effort to ensure that AP classes reflect the diversity of our student population.

Courses Offered in Westerville City Schools*

<table>
<thead>
<tr>
<th>English</th>
<th>Science</th>
<th>Social Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP English Language and</td>
<td>AP Biology</td>
<td>AP World History</td>
</tr>
<tr>
<td>Composition</td>
<td>AP Chemistry</td>
<td>AP US History</td>
</tr>
<tr>
<td>AP English Literature and</td>
<td>AP Environmental Science</td>
<td>AP European History</td>
</tr>
<tr>
<td>Composition</td>
<td>AP Physics 1</td>
<td>AP US Government and Politics</td>
</tr>
<tr>
<td></td>
<td>AP Physics 2</td>
<td>AP Comparative Government and Politics</td>
</tr>
<tr>
<td></td>
<td>AP Physics C: Mechanics</td>
<td>AP Psychology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Math</th>
<th>World Languages</th>
<th>Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP Calculus AB</td>
<td>AP Spanish Language</td>
<td>AP Computer Science Principles</td>
</tr>
<tr>
<td>AP Calculus BC</td>
<td></td>
<td>AP Computer Science A</td>
</tr>
<tr>
<td>AP Statistics</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Other AP courses may be taken through a Credit Flexibility option. Please see page 26 for more information.

Earning College Credit
- AP exams are administered in May. Students wishing to opt out of an AP exam must do so by the College Board deadline.
- Students that wish to take an AP exam that are eligible for free or reduced lunch options should check with their counselors about exam fee waivers.
- Students can earn college credit or advancement in college coursework by earning qualifying scores on these tests. Students who earn a 3 or higher on an AP exam receive credit that is accepted by all of Ohio’s public universities and colleges.
- The number of credits and how they apply towards a degree vary depending on the test and the college. Students can only receive such credit if they take the AP test. Private colleges and universities outside of Ohio have specific policies in place that may vary from Ohio’s public institutions.
International Baccalaureate Courses
www.ibo.org

The Diploma Program of the International Baccalaureate Organization (IBO) is a challenging and rewarding course of study that prepares students for university. It is designed for highly motivated secondary students who are interested in broadening their horizons through immersion into a global curriculum, focusing on real-world experiences and application of knowledge in a wide range of settings and contexts. The program is a comprehensive, two-year (junior & senior year) international curriculum designed to provide students with the skills and attitudes necessary for success in higher education and employment. The curriculum exceeds state and national education requirements.

Research suggests that there are many benefits associated with participation in The IB Diploma Program. The program aims to develop students who have excellent breadth and depth of knowledge - students who flourish physically, intellectually, emotionally and ethically.

Students may participate in the IB program as a:

1. **Diploma Program Candidate** → enrolls in a course from each of the 6 domains AND completes
   a. Extended Essay
   b. Theory of Knowledge course
   c. Creativity, Activity and Service

2. **Course Candidate** → selects individual courses for participation

Westerville City Schools encourages the elimination of barriers that restrict access to IB courses for students from ethnic, racial, and socioeconomic groups that have been traditionally underrepresented in the IB program and makes every effort to ensure that IB classes reflect the diversity of our student population.

**IB Courses Offered by Group**

- Higher Level (HL) courses have a 1.25 weighted credit for each year.
- Standard Level (SL) courses have a 1.125 weighted credit for each year.

<table>
<thead>
<tr>
<th>Group 1 Studies in Language and Literature</th>
<th>Group 2 Language Acquisition</th>
<th>Group 3 Individuals and Societies</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Literature HL (2-year)</td>
<td>Spanish ab initio SL (2-year)</td>
<td>Business Management SL (1-year)</td>
</tr>
<tr>
<td></td>
<td>Spanish SL or HL (2-year)</td>
<td>Business Management HL (2-year)</td>
</tr>
<tr>
<td></td>
<td>French SL (2-year)</td>
<td>History of Americas HL (2-year)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group 4 Experimental Sciences</th>
<th>Group 5 Mathematics</th>
<th>Group 6 The Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology SL or HL (2-year)</td>
<td>Mathematics: Analysis and</td>
<td>Music SL (2-year)</td>
</tr>
<tr>
<td>Chemistry SL (2-year)</td>
<td>Approaches SL or HL (2-year)</td>
<td>Music Theory (2-year)</td>
</tr>
<tr>
<td>Physics HL (2-year)</td>
<td>Mathematics: Application and</td>
<td>Theater SL (2-year)</td>
</tr>
<tr>
<td>Sports, Exercise &amp; Health Science SL (2-year)</td>
<td>Interpretation SL (2-year)</td>
<td>Visual Arts SL or HL (2-year)</td>
</tr>
</tbody>
</table>

**Recommended Course Sequences for International Baccalaureate Courses**

Freshman and Sophomore students can enroll in Pre-IB courses. These courses are intended to prepare students for the types of skills and modes of learning required in the Diploma Program courses.

1. Consider the end goals - Junior/Senior courses - first to determine which IB courses to schedule.
2. Look back to the freshman and sophomore years to determine which courses are suggested to prepare for the end goals. These selections are recommendations only.

Contact Bill Heinmiller, IB Coordinator, for more information. 614-797-6086; heinmilb@wcsd.org

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<table>
<thead>
<tr>
<th>Group 1</th>
<th>Lang &amp; Lit</th>
<th>Freshman Year</th>
<th>Sophomore Year</th>
<th>Junior Year</th>
<th>End Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Honors English 1</td>
<td>Honors English 2</td>
<td>IB English HL</td>
<td>IB English HL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Group 2</td>
<td>Language Acquisition</td>
<td>Honors Spanish 2</td>
<td>Honors Spanish 3</td>
<td>IB Spanish SL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>French 1</td>
<td>Honors French 2</td>
<td>IB French SL</td>
</tr>
<tr>
<td></td>
<td>Group 3</td>
<td>Individuals and Societies</td>
<td>Honors American History</td>
<td>AP World History</td>
<td>IB History of the Americas HL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>IB Psychology SL</td>
<td>IB Bus Management SL</td>
</tr>
<tr>
<td></td>
<td>Group 4</td>
<td>Experimental Sciences</td>
<td>Honors Biology</td>
<td>Honors/AP Chemistry</td>
<td>IB Physics HL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>IB Biology HL</td>
<td>IB Biology HL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Honors Physics</td>
<td>IB Biology SL</td>
<td>IB Biology SL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>IB Chemistry SL</td>
<td>IB Chemistry SL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Honors Chemistry or Honors Physics</td>
<td>IB Sports/Exercise Science SL</td>
<td>IB Sports/Exercise Science SL</td>
</tr>
<tr>
<td></td>
<td>Group 5</td>
<td>Mathematics</td>
<td>Algebra 1</td>
<td>Geometry/Honors Geometry</td>
<td>IB Mathematics: Application and Interpretation SL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Honors Geometry</td>
<td>IB Mathematics: Analysis and Approaches SL</td>
<td>IB Mathematics: Analysis and Approaches SL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Honors Algebra 2</td>
<td>IB Mathematics: Analysis and Approaches HL</td>
<td>IB Mathematics: Analysis and Approaches HL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Honors PreCalculus</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Group 6</td>
<td>Arts</td>
<td>Health &amp; PE 1</td>
<td>PE 2 or Art Foundations or 2-D Visual Art</td>
<td>IB Visual Arts SL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>IB Visual Arts HL</td>
<td>IB Visual Arts HL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>IB Bus Management HL</td>
<td>IB Bus Management HL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>IB Music SL</td>
<td>IB Music SL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>IB Bus Management SL</td>
<td>IB Bus Management SL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>IB Psychology SL</td>
<td>IB Psychology SL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>IB Theater SL</td>
<td>IB Theater SL</td>
</tr>
<tr>
<td></td>
<td>Additional Courses</td>
<td>Music Course</td>
<td>Music Course</td>
<td>Theory of Knowledge</td>
<td>Theory of Knowledge</td>
</tr>
</tbody>
</table>

1 Students taking Spanish ab initio SL may not have any previous Spanish Experience.
2 Government/AP Government—Students who do not take IB History of the Americas HL must take a government course.
Criteria for Participation in the IB Program

- Pass all subject specific state examinations administered up to and including tests the sophomore year.
- Meet with the IB coordinator to sign and adhere to a contract agreeing to the terms of the program as established by the school and the IBO.

IB Enrollment

IBO states that all students participating in the program must be enrolled at the approved IB school. Therefore, any student who wants to participate must be enrolled at Westerville South High School. Enrollment at South can occur through the following procedures:

1. IB Administratively Placed – Any student who wants to participate in the IB program and satisfies the criteria for participation and is assigned a home school other than South can be enrolled at South by being administratively placed to participate in IB. Students who are not enrolled in an IB course offering will be required to return to their home school of residence.

2. Lottery/Open enrollment – All students who are assigned a home school other than South but are enrolled at South through the lottery may participate in IB. Students who are not enrolled in an IB course offering will not be required to return to their home school of residence.

Cost to Student

The IBO assesses student work as direct evidence of achievement against the stated assessment objectives of Diploma program courses. There are only fees for the assessments. The registration fee has been eliminated.

- **CANDIDATE SUBJECT FEE**: paid for each subject taken by an individual student. For two year courses, this fee is assessed in the senior year.

> There is no fee for Theory of Knowledge or the extended essay assessment for full diploma category students.

Currently the approximate cost per examination is $122.00. This would mean an approximate cost to the diploma candidate of $725 over the two years of the program. Fees are considerably reduced for students who qualify for free/reduced lunch. Additionally, assistance is available to reduce IB fees for students who do not qualify for free/reduced lunch. Please contact the IB Coordinator to learn more.

IB Assessments

Students worldwide are held to the same IB standards. The International Baccalaureate Organization will award course grades based on both internal and external assessments.

<table>
<thead>
<tr>
<th>Internal Assessments</th>
<th>End of course exams administered during a three-week period beginning on the first Monday in May; assessed by IB examiners worldwide</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Subject exams have from one to three &quot;papers&quot; (parts); each paper assessed by a different examiner</td>
</tr>
<tr>
<td></td>
<td>Exams are primarily essays; assessment is criterion based</td>
</tr>
<tr>
<td></td>
<td>Represent between 70% and 80% of the IB grade</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>External Assessments</th>
<th>Assessments completed during the course that are based on specific criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Evaluated by the classroom teacher and then externally moderated to ensure that the criterion based scores are accurate</td>
</tr>
<tr>
<td></td>
<td>Represent between 20% and 30% of the IB grade</td>
</tr>
</tbody>
</table>

The IBO compiles scores from all assessments and then awards a final grade for the course. Results and a single culminating grade (below) are sent to both the student and the university of choice in the summer after the senior year.

<table>
<thead>
<tr>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>Very Good</td>
<td>Good</td>
<td>Satisfactory</td>
<td>Mediocre</td>
<td>Poor</td>
<td>Very Poor</td>
</tr>
</tbody>
</table>

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Career-Technical Programs at Career Centers

Westerville students have the option to complete career-technical training during their final two years of high school by attending the Columbus City or Delaware Area Career Centers. Career Centers offer college preparatory and dual college credit academics in addition to nearly 40 career and technical programs designed to prepare students for college and a career. Learn more about each facility and its programs by clicking on the Career Centers below.

Students who take courses at the career centers:
- help themselves prepare for the future – whether planning to go to college or right into a career.
- learn skills hands-on, using industry standard procedures and tools.
- have opportunities to earn college credits and industry certifications.
- often participate in internships and apprenticeships.

Columbus City and Delaware Area Career Center programs are open to all Westerville eleventh and twelfth grade students who demonstrate the ability and interest to attend and are accepted into a program.

Important qualities which assist students in gaining admission include:
- good attendance in school
- infrequent tardies to school and to class
- passing grades in all courses attempted
- a genuine interest in career-technical education

Career Center programs are explored during presentations during sophomore classes and opportunities to attend career-exploration based field trips during the fall of the tenth grade year.

Students planning to enroll in career center programming should complete the following course requirements by the end of grade 10:

<table>
<thead>
<tr>
<th>Subject</th>
<th>English</th>
<th>Math</th>
<th>Science</th>
<th>Social Studies</th>
<th>Elective Credit</th>
<th>Health</th>
<th>Physical Education*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credits</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>1.0</td>
<td>0.50</td>
<td>0.050</td>
</tr>
</tbody>
</table>

*See additional information about the Physical Education graduation requirement on pages 4 and 39.

Students remain enrolled in and graduate from Westerville City Schools.

Students are encouraged to continue participation in extracurricular activities at their Westerville High School.
Career Pathways

Career Pathways give students an opportunity to learn more about their interests before committing to a particular career path after high school. They also allow students to earn an industry credential that may lead to the start of a career while completing a degree program. Westerville City Schools and Columbus State Community College partner to offer students pathway opportunities leading to credentials in Health, Business/Logistics, and Engineering, all high-need industries located in Central Ohio.

Please note that core high school courses are required for graduation. These pathways showcase only those courses within the path. Consult with your school counselor to ensure that your course plan is a best fit and meets all graduation requirements.

Health Pathway

- Students to investigate the roles of biomedical professionals as they study the concepts of human medicine, physiology, genetics, microbiology, and public health.

- Students work collaboratively to understand and design solutions to the most pressing health challenges of today and the future by: investigating the death of a fictional person to learn content in the context of real-world cases; examining structures and interactions of human body systems; and exploring the prevention, diagnosis, and treatment of disease.

- The Health Pathway uses Project Lead the Way lessons, activity-, project-, and problem-based curricula to allow high school students to apply what they know, identify problems, find unique solutions, and lead their own learning.

- College Credit Plus courses allow students to earn a Clinical Lab Assistant Certificate through Columbus State Community College.

*Students can earn college credit through the College Credit Plus program. See page 25 for more information.
Business and Logistics Pathway

- Logistics is the science of managing the movement of objects – food, materials, animals, equipment and liquids – as well as time, information, and energy.

- The Business/Logistics Pathway program for students with an interest in science and technology, as well as problem solving.

- Participating in the Business/Logistics Pathway teaches students to solve real world problems that businesses face everyday, such as saving money and boosting productivity.

See Appendix D on pages 73 - 74 to learn more about the Business and Logistics Pathway.

<table>
<thead>
<tr>
<th>Foundational Courses</th>
<th>Specialized Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Foundations</td>
<td>Business Law 1</td>
</tr>
<tr>
<td>Fundamentals of Business &amp; Administrative Services *</td>
<td>Business Law 2</td>
</tr>
<tr>
<td></td>
<td>Introduction to Management</td>
</tr>
<tr>
<td></td>
<td>Marketing Principles *</td>
</tr>
<tr>
<td></td>
<td>Supply Chain Management *</td>
</tr>
<tr>
<td></td>
<td>Transportation &amp; Traffic Management *</td>
</tr>
</tbody>
</table>

*Students can earn college credit through the College Credit Plus program. See page 25 for more information.

Engineering Pathway

- Engineers and engineer technologists apply principles of science and mathematics to develop economical solutions to technical problems.

- The Engineering Pathway uses Project Lead the Way lessons, activity-, project-, and problem-based curricula to allow high school students to apply what they know, identify problems, find unique solutions, and lead their own learning.

- Participating in the Engineering Pathway teaches students to apply science, math, and technology to solve complex, open-ended problems in a real-world context.

- The opportunities to develop highly transferable skills in collaboration, communication, and critical thinking make the Engineering Pathway relevant to all students, even those who do not plan to pursue engineering after high school.

- Students can become an Autodesk Certified User through Credit Flex Options.

See Appendix E on pages 75 - 76 to learn more about the Engineering Pathway.
Global Scholars Program

Possessing the knowledge, skills, and mindset to thrive in our global society is a critical component to responsible citizenship or successful employment. The Global Scholars Program, a “global education for all” program that thrives on inclusivity, equity, and access for all, develops globally competent students with the knowledge, skills, and mindset necessary for leadership, citizenship, and careers in an interconnected, global society.

In partnership with The Columbus Council on World Affairs, Westerville’s Global Scholars program incorporates

- innovative, interactive, and experiential approaches,
- global community partnerships, and
- collaboration with business, governmental, and academic leaders.

Students typically begin the program in their sophomore year, but the requirements can be completed in two years. Students successfully completing the program will receive a Global Scholars distinction on their diploma.

Global Scholars Diploma Requirements

<table>
<thead>
<tr>
<th>Level</th>
<th>Face-to-Face Experiences</th>
<th>Enrichment Experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>Cross-Cultural, Global Issues, Global Careers, Culminating</td>
<td>Investigate the World, Recognize Perspectives, Communicate Ideas, Take Action</td>
</tr>
<tr>
<td>Level 2</td>
<td>Cross-Cultural, Global Issues, Global Careers, Culminating</td>
<td>Learning Summaries, Assessment</td>
</tr>
<tr>
<td>Level 3</td>
<td>Capstone: Presentation of a Take Action Project that demonstrates a deep understanding of a global issue</td>
<td>Applications, Essays, Profiles</td>
</tr>
</tbody>
</table>

Contact a building coordinator for more information:

Central: Don Ogle (ogled@wcsoh.org)
North: Brandon Allen (allenb@wcsoh.org)
South: Mary Fuchs (fuchs@wcsoh.org)

See Appendix F on pages 77 - 78 to learn more about the Global Scholars Program.
College Credit Plus

College Credit Plus (CCP) provides an opportunity for college-ready students in grades 7-12 to take a college course and earn both high school and college credit. This credit appears on both a student’s high school and college transcripts.

Westerville City School students have an opportunity to complete College Credit Plus coursework both on the high school campus and on a college campus. CCP courses offered in our high schools are taught by teachers who hold credentials as adjunct professors at an Ohio college or university, or work directly with college or university faculty members.

Students are eligible for up to 30 credit hours per academic year that runs Summer Term through Spring Term. Students must register for Level 1 courses through the first 15 hours of CCP work. Successful completion of coursework in the CCP program will earn students both transcripted college credit that can be transferred to universities and colleges as well as 1.25 weighted high school credit.

There is no cost to participate in CCP at public institutions and textbooks are included (students are required to return at the end of the term). Additional fees may apply at private institutions. Optional fees are not covered under CCP including transportation and parking.

**Why choose CCP?**
- Explore post-secondary interests
- Enroll in classes not available at high school
- Be exposed to college faculty/college expectations
- Earn an industry credential (or be well on your way to earning one)
- Transfer college credit, especially between public institutions within Ohio

**How do I participate in CCP?**

**Be Eligible**
- Participate in a mandatory counseling session.
- Score college-ready in English, Reading, and/or Math.
- Complete and turn in an Intent Form.

**Be Admitted**
- Apply and be admitted to the college or university you wish to attend.
- Attend more than one college or university if you like.

**Register for Courses**
- Enroll in CCP courses offered at your high school through high school course requests.
- Enroll in CCP courses offered on college campuses with each institution.

Points to Consider
- Is this a right fit for me based on my strengths and goals? College courses may take more time and run at a quicker pace than high school courses.
- Courses may transfer differently to other institutions. Check out transferology.com to explore credit portability. College courses follow the institution’s guidelines (dates in session, withdraw procedures). You may have college courses during your high school spring break.
- There is a financial obligation to reimburse the district if you fail or do not complete a course, including withdrawing with a W.
- You need to make Satisfactory Academic Progress (SAP) in order to continue receiving federal student aid as a full-time college student. In other words, you have to make good enough grades, and complete enough classes (credits, hours, etc.) to keep moving toward successfully completing your degree or certificate in a time period that is acceptable to your school. Your performance in CCP courses count toward SAP. (https://studentaid.ed.gov/sa/eligibility/staying-eligible)
- The Ohio Department of Higher Education had additional information at www.ohiohighered.org/ccp.

See Appendix A on page 68 to see sample sequences of CCP courses.
See Appendix B on pages 69 - 70 to compare AP, IB and CCP courses.

Visit [http://tiny.cc/WCSCCP](http://tiny.cc/WCSCCP) for more information.

Intent forms due to school counselors by 3 pm on May 1, 2021.
Credit Flexibility Option

Learning opportunities, experiences, and/or activities that extend, enhance, or supplement high school coursework often lie outside the standard curriculum or traditional school setting. Thus, the Credit Flexibility Option allows students to earn high school credit based on the demonstration of subject area competency.

Examples of experiences that might lead to flexible credit approval may include, but are not limited to:

- An accredited online course (go to this link [http://tinyurl.com/WestervilleCFA](http://tinyurl.com/WestervilleCFA) for approved courses and providers)
- An internship or research experience in the community.
- Dance classes or club sport participation such as rowing. Note that all activities must contain:
  - instructional objectives that align with the district’s curriculum requirements;
  - an outline that specifies instructional activities, materials, and environments; and

Unless otherwise noted, students are responsible for expenses related to Credit Flex programs or options.

| Students who plan on participating in athletics at the Division I College Level should be aware that the credit flexibility test-out option will not be included as part of the NCAA Initial Eligibility Center’s qualifying core classes required for eligibility. Student athletes should consult the [NCAA](http://www.ncaa.org) if they have any questions. |

Credit Flexibility Process

Prior to submitting the Credit Flexibility Application:

1. A parent or guardian must approve participation for any student under the age of eighteen.
2. An instructional plan is created based upon individual student needs, including:
   a. instructional objectives that align with the district’s curriculum requirements
   b. an outline that specifies instructional activities, materials, and environments
   c. a description of criteria and methods for assessing student performance
3. The school counselor and teacher of record review the instructional plan.
4. The teacher of record confirms involvement in providing or supervising instruction and evaluating student performance.
5. The school counselor submits the form to the Office of Alternative Education.

Once submitted, the Credit Flexibility Application:

1. Immediate approval may be granted for preapproved and online accredited courses
2. A team of curricular specialists, teachers, and administrators reviews the application

After completing the Credit Flexibility Option:

1. It is the responsibility of the teacher of record to email the final grade to the Office of Alternative Education.
2. Academic credit will be assigned according to student performance relative to the stated objectives and granted upon successful completion of the program.
3. The credit will be placed on the student’s transcript.
4. Credits earned from educational options may be counted toward graduation requirements in accordance with applicable State Law and Administrative Code.
The following pages contain descriptions of all courses offered throughout Westerville’s three high schools. Students and parents may always seek additional course or program information from the Pupil Services departments or individual subject teachers.

For those courses available at only one of our high schools, students may be provided the opportunity to take the course by attending class at the school where the class is taught. If a course originally planned as an offering in each high school is scheduled for only one building, announcements of the change will be made before student schedules are finalized.

**Student Fees**

Each spring, the Westerville Board of Education establishes student fee schedules for the next school year. Fee levels are established in the winter and take effect for the next school year. In the winter of 2019, the Board of Education removed all course-specific fees. Students and parents are therefore advised that the fees referenced in the 2021-2022 High School Academic Planning Guide reflect those established for the previous school year and are therefore subject to change. The school will notify students of such changes for the 2021-2022 school year in August, prior to the start of the new year.

*A course may not be offered if enrollment is not high enough to offer the course as planned.*
Central Ohio is ripe with opportunities for graduates with a background in business. No matter what field a student ends up pursuing upon graduation, business education will be relevant. Why wait until you graduate high school to gain that background knowledge and experiences? Consider exploring the many great opportunities in the fields of Business during your high school career!

Business Technologies and Information Technologies courses are elective classes.

+ – This is a College Credit Plus (CCP) course. CCP courses allow students to earn credit from both Westerville City Schools and Columbus State Community College while attending class on the high school campus. See page 25 for more information.
1 – This course can count as a Technology elective for students pursuing a STEM Honors diploma. See page 8 for more information.
2 – This course is part of a career pathway. Learn more about career pathways on pages 22 - 23.

### FOUNDATIONAL COURSES

<table>
<thead>
<tr>
<th>Course</th>
<th>Number</th>
<th>Grade</th>
<th>Length</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>21st Century Technology Skills</td>
<td>IT106</td>
<td>9 10 11 12</td>
<td>Semester</td>
<td>0.50</td>
</tr>
<tr>
<td>Business Foundations ²</td>
<td>BU120</td>
<td>9 10 11 12</td>
<td>Semester</td>
<td>0.50</td>
</tr>
<tr>
<td>Introduction to Computer Programming ¹</td>
<td>IT110</td>
<td>9 10 11 12</td>
<td>Semester</td>
<td>0.50</td>
</tr>
<tr>
<td>Fundamentals of Business and Administrative Services ²</td>
<td>BU125</td>
<td>9 10 11 12</td>
<td>Semester</td>
<td>1.00</td>
</tr>
<tr>
<td>Computer Concepts and Applications ²</td>
<td>IT107</td>
<td>9 10 11 12</td>
<td>Semester</td>
<td>1.00</td>
</tr>
</tbody>
</table>

### SPECIALIZED COURSES

<table>
<thead>
<tr>
<th>Course</th>
<th>Number</th>
<th>Grade</th>
<th>Length</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting 1</td>
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Foundational Courses

21st Century Technology Skills

IT106
Grade Levels: 9, 10, 11, 12
Course Length: Semester, 1 Period
Credit: 0.50

Students in 21st Century Technology Skills will master the core technology skills needed to be successful in high school, college, and the workforce. Students will use Microsoft Office to create word documents, spreadsheets, graphs, and presentations. Additionally, students will be introduced to creating and maintaining a database with queries, forms, and reports. If you are interested in taking this as a college course, please see Computer Concepts and Applications. This course counts as a Technology elective for students pursuing a STEM Honors diploma.

Business Foundations

BU120
Grade Level: 9, 10, 11, 12
Course Length: Semester, 1 period
Credits: 0.50

Students will be introduced to business and economics through a broad overview of the different disciplines within the business field. Students will explore the global economy, social and government responsibility, social media communications, and business ethics. Course activities and project-based learning experiences will provide students an opportunity to research business careers including Management, Human Resources, Economics, Marketing, Sales, Accounting, and Finance.

Introduction to Computer Programming

IT110
Grade Levels: 9, 10, 11, 12
Course Length: Semester, 1 Period
Credit: 0.50

Students will be introduced to the fundamentals of computer programming/coding. This hands-on course will require using logical and critical thinking skills during the comprehensive semester. You will learn basic computer science skills that will help jump start an interest in higher level coding and programming. Students will explore the structure of programming, input and output, data types and structures, logical operations and loops using languages such as Scratch and Python. The class is designed as a lab/lecture/programming class with the emphasis on programming and debugging. Students mastering this course content will be poised to be successful in AP Computer Science A. This course counts as a Technology elective for students pursuing a STEM Honors Diploma.

College Credit Plus Courses

College Credit Plus courses allow students to earn credit from both Westerville City Schools and Columbus State Community College while attending class on the high school campus. See page 25 for more information.

Fundamentals of Business and Administrative Services

BU125
Grade Level: 9, 10, 11, 12
Course Length: Semester, 1 Period
Credits: 1.0 and 3 semester college credit hours
1.25 Weighted grade
Prerequisite: Must have an intent form on file and meet CSCC course placement requirements

Students will gain an in-depth view of the different disciplines within business that will impact their personal and professional lives. This course provides an overview of the various functions and activities of business enterprises. Marketing, human resources, accounting and finance, and operations are examined. Additionally, the topics of globalization and economics are covered. Students will need to enroll in Columbus State Community College to participate. Dual credit will be provided for BMGT 1101 offered at CSCC.

Specialized Courses

Computer Concepts and Applications

IT107
Grade Level: 9, 10, 11, 12
Course Length: Semester, 1 Period
Credits: 1.0 and 3 semester college credit hours
1.25 Weighted grade
Prerequisite: Must have an intent form on file and meet CSCC course placement requirements

Computer Concepts and Applications provides students an opportunity to gain a working knowledge of computer concepts and the essential skills necessary for work and communication in today's society. Topics include social networking, computer security, safety, ethics, privacy, operating systems and utility programs, communications and networks, input, output, system units, storage, word processing, spreadsheets, databases and presentation software. This course counts as a Technology elective for students pursuing a STEM Honors diploma. Students will need to enroll in Columbus State Community College (CSCC) to participate. Dual credit will be provided for CSCI 1101 offered at CSCC.

Accounting 1

BU123
Grade Levels: 10, 11, 12
Course Length: Semester, 1 Period
Credit: 0.50

Students will be introduced to manual methods of accounting for a small business during the semester. Basic principles presented include the double-entry system of accounting, the preparation and analysis of financial statements and administering payroll. In addition, business organizational structures will be introduced and evaluated. Students interested in keeping records for a small business, a social organization, or for individual and families are also encouraged to take this course. If students are thinking of majoring in business in college, this course will provide a foundation in basic accounting concepts they will be expected to know in college.

Accounting 2

BU124
Grade Levels: 10, 11, 12
Course Length: Semester, 1 Period
Credit: 0.50

This course is designed for students who have completed Accounting I and are interested in pursuing accounting or other business careers. Students will expand their accounting knowledge by gaining a broader understanding of the financial activities of departmental and corporate accounting. Students will gain an understanding of the financial sustainability of a corporation, as well as studying advanced accounting principles, specialized journals and tax calculations using manual and computerized accounting.

Introduction to Management

BU133
Grade Level: 10, 11, 12
Course Length: Year, 1 period
Credits: 1.0
Recommended:
Business Foundations, Fundamentals of Business and Administrative Services

Students will apply management and motivation theories to plan, organize and direct staff toward goal achievement. They will learn to manage a workforce, lead change, and build relationships with employees and customers. Students will use technology to analyze the internal and external business environment, determine trends impacting business, and examine risks threatening organizational success. Ethical challenges, project management and strategic planning will also be addressed.
Students will develop an approach to lifetime money management and focus on areas of study such as: building a lifetime financial plan, budgeting; real estate; mortgages, insurance; college savings; investment/wealth building options including: purchasing IRAs mutual funds, stocks, and bonds; credit/consumer awareness, debt management, banking and several other individual financial topics. Instructional material is supported and enhanced by Dave Ramsey’s School Curriculum, community involvement and various resources. This course enriches and extends the financial literacy standards covered in Government II. If you are interested in taking this as a college course, please see Personal Finance.

Business Law 1  BU 451
Grade Levels:  10, 11, 12
Course Length:  Semester, 1 Period
Credit:  0.50

Students will examine all aspects of business law including the judicial system, differences between types of laws and origins of laws, administrative and employment laws and laws impacting individuals as well as business. Students will also research real estate and debtor and creditor laws and regulations. Compliance and contract law will be emphasized. Students will study true situations that show how business and personal law impact not only business, but the lives of young people and adults as well. The content covered in the Business Law 1 course is reinforced and enhanced through the use of technology, guest speakers, videos and project-based activities. In addition, because experiential learning is an important aspect of all business courses, a field trip to the courts or other law-related destination may also be offered.

Business Law 2  BU 461
Grade Levels:  10, 11, 12
Course Length:  Semester, 1 Period
Credit:  0.50

In this second Business Law course, students will have an opportunity to not only study trade, employment, consumer, family, and real estate law in depth, but also have the opportunity to explore possible career fields in the areas of business law. Students will study true situations that show how business and personal law impact not only business, but the lives of young people and adults as well. The content covered in the Business Law 2 course is reinforced and enhanced through the use of technology, guest speakers, videos and project-based activities. In addition, because experiential learning is an important aspect of all business courses, a field trip to the Courts or other law-related destination may also be offered.

Advanced Placement and International Baccalaureate Courses
Students may earn college credit or advancement in college coursework with qualifying scores on AP and/or IB exams. See pages 17-20 for more information.

AP Computer Science Principles  BU320
Grade Level:  10, 11, 12
Course Length:  Year, 1 Period
Credits:  1.00
1.25 Weighted grade
Recommended:  Honors Geometry or Geometry
Approximate Cost:  $94 for the AP test (optional)

Advanced Placement (AP) Computer Science Principles is designed to be equivalent to a first-year introductory college computing course. Students will develop computational thinking skills vital to success in all disciplines, including using computational tools for studying data to analyze, visualize, and draw conclusions from trends. Students will apply creative processes when developing computational artifacts and using computer software and other technology to explore topics of interest. They will work individually and collaboratively to solve problems, and discuss and write about the importance of these problems and the impacts to their community, society, and the world. This course counts as a Technology elective for students pursuing a STEM Honors diploma.

AP Computer Science A  BU315
Grade Levels:  11, 12
Course Length:  Year, 1 Period
Credit:  1.00
1.25 Weighted grade
Recommended:  Algebra 2
Approximate cost:  $94 for the AP test (optional)

This Advanced Placement course is the study of computer science using the Java programming language. Topics are compatible with the material normally taught in a first-year college computer programming course and is covered at an accelerated level. This class is for the mature student who is both willing and capable of covering computer science and programming material in this manner. Concepts include using the built-in classes, arrays, sorting, searching, recursion and designing classes. This course counts as a Technology elective for students pursuing a STEM Honors diploma.

IB Business Management SL  IB361S
Grade Levels:  11, 12
Course Length:  Year, 1 Period
Credits:  1.00
1.125 Weighted grade
Recommended:  Successful completion of all Ohio State Tests through the end of sophomore year.
Approximate cost:  $122 for IB test (required)
Location:  Westerville South only

International Baccalaureate Business Management Standard Level is a rigorous one-year course offered at the junior or senior level that includes the study of human interaction in a dynamic business environment. An international perspective is used to promote the importance of cooperation among nations and the value of responsible citizenship in a global economy. Students will develop an understanding of business principles and procedures necessary for day-to-day business operations through the study of business organization and environment, marketing, operations management, finance and accounts, and human resource management. Through the exploration of six concepts (change, culture, ethics, globalization, innovation and strategy), the business management course allows students to develop their understanding of interdisciplinary concepts from a business management perspective.
IB Business Management HL  IB361H (1st Year)  IB362H (2nd Year)

Grade Levels: 11, 12
Course Length: 2 Years, 1 Period
Credits: 1.00 per year
1.125 Weighted grade
Recommended: Successful completion of all Ohio State Tests through the end of sophomore year.
Approximate cost: $122 for IB test (required)
Location: Westerville South only

International Baccalaureate Business Management Higher Level is a rigorous two-year course beginning at the junior level that includes the study of human interaction in a dynamic business environment. An international perspective is used to promote the importance of cooperation among nations and the value of responsible citizenship in a global economy. Students will develop an understanding of business principles and procedures necessary for day-to-day business operations through the study of business organization and environment, marketing, operations management, finance and accounts, and human resource management. Through the exploration of six concepts (change, culture, ethics, globalization, innovation and strategy), the business management course allows students to develop their understanding of interdisciplinary concepts from a business management perspective.

IB Information Technology in a Global Society (ITGS) SL  IB363S (1st Year)  IB364S (2nd Year)

Grade Levels: 11, 12
Course Length: 2 Years, 1 Period
Credits: 1.00 per year
1.125 Weighted grade
Recommended: Successful completion of all Ohio State Tests through the end of sophomore year.
Approximate cost: $122 for IB test (required)
Location: Westerville South only

International Baccalaureate Information Technology in a Global Society Standard Level is a rigorous two-year course beginning at the junior level that includes the study and evaluation of the impacts of information technology (IT) on individuals and society by exploring the advantages and disadvantages of the access and use of digitized information. The aims of ITGS standard level course are to: enable the student to evaluate social and ethical considerations arising from the widespread use of IT by individuals, organizations, and societies at the local and global level; develop the student’s understanding of the capabilities of current and emerging IT systems and to evaluate their impact on a range of stakeholders; enable students to apply their knowledge of existing IT systems to various scenarios and to make informed judgements about the effects of IT developments on them; and encourage students to use their knowledge of IT systems and practice IT skills to justify IT solutions for a specified client or end-user.

Course Placement Requirements

Students will be introduced to the sales process and the key role that sales activities play in any consumer or commercial business endeavor. The course deals with the basic components of selling including understanding customer psychology and building customer relationships. This course also emphasizes the important issues facing customer service providers and customer service managers in business. Special emphasis is placed on the mastery of specific skills and analyzing customer attitudes and behaviors to determine the tasks required to deliver excellent customer service. Students will need to enroll in Columbus State Community College to participate. Dual credit will be provided for MKTG 1230 offered at CSCC.

Personal Finance  BU 401

Grade Levels: 11, 12
Course Length: Semester, 1 Period
Credit: 1.00 high school and 3 semester college hours
1.25 Weighted grade
Prerequisite: Must have intent form on file and meet CSCC placement requirements.

Students will develop a lifetime program of money management for the individual. Topics such as budgets, savings, job search, buying a house, insurance, mutual funds, stock market, real estate investments, taxes, and estate planning are covered. Students will be able to write a basic personal financial plan. Students will need to enroll in Columbus State Community College (CSCC) to participate. Dual credit will be provided for FMGT 1101 offered at CSCC.

Supply Chain Management Principles  BU 610

Grade Levels: 10, 11, 12
Course Length: Semester, 1 Period
Credit: 1.00 and 3 semester college hours
1.25 Weighted grade
Prerequisite: Must have intent form on file and meet CSCC placement requirements.

Supply Chain Management Principles provides an overview of the key processes, concepts, and methodologies of supply chain management. Emphasis is given to the study of the impact that the supply chain management framework, including distribution, procurement, inventory, transportation and information technology components, has on business and the economy. The decision making process within the supply chain is of particular importance as the interrelationships (cost and service trade-offs) between logistics and other areas of business will be covered. The overall focus is the strategic and financial significance the supply chain has on the firm’s ability to add customer value. Students will need to enroll in Columbus State Community College (CSCC) to participate. Dual credit will be provided for SCM 1100 offered at CSCC.

Transportation and Traffic Management  BU 620

Grade Levels: 10, 11, 12
Course Length: Semester, 1 Period
Credit: 1.00 high school and 3 semester college hours
1.25 Weighted grade
Prerequisite: Must have intent form on file and meet CSCC placement requirements.

Transportation and Traffic Management is designed to provide the student with a practical learning experience based on what a person in traffic management may encounter in his or her daily work schedule and also review some of the transition of the manager's job from past to present. The traffic manager's job will be analyzed with regard to his or her daily dealings with others in the supply chain management and how the manager is involved with and must work with each of the other areas. This career-tech course is a part of the Business Logistics Pathway and required course for an Associate's Degree in Supply Chain Management at Columbus State Community College. Students will need to enroll in Columbus State Community College (CSCC) to participate. Dual credit will be provided for SCM 1101 offered at CSCC.

College Credit Plus Courses

College Credit Plus courses allow students to earn credit from both Westerville City Schools and Columbus State Community College while attending classes at the high school campus. See page 25 for more information.

Marketing Principles  BU132

Grade Level: 10, 11, 12
Course Length: Semester, 1 Period
Credits: 1.00 high school and 3 semester college hours
1.25 Weighted grade
Prerequisites: Business Foundations, Fundamentals of Business and Administrative Services
Must have an intent form on file and meet CSCC course placement requirements.
Students are required to take four English Language Arts credits including English 1 and English 2. Only one of the following options counts as English credit toward graduation and for only 1.00 credit total: (1) combination of Speech Arts 1 and Journalism 1; (2) Journalism 2; or (3) Journalism 3. The combination of Speech Arts 1 and Speech Arts 2 does NOT count as 1.00 English credit toward graduation. All other credits that count toward the four English credits required for graduation must come from enrollment in other English courses listed in this section.

+ – This is a College Credit Plus (CCP) course. CCP courses allow students to earn credit from both Westerville City Schools and Columbus State Community College while attending class on the high school campus. See page 25 for more information.

<table>
<thead>
<tr>
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<th>Length</th>
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English 1

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</table>

English 1 follows the Ohio State Standards for English Language Arts. Students explore a variety of literary genres from both classical and modern works including fiction and nonfiction. Listening, speaking, reading, writing, visual, and technological skills are all emphasized.

Honors English 1 follows the Ohio State Standards for English Language Arts. Students explore a variety of literary genres from both classical and modern works including fiction and nonfiction at a more academically rigorous level than English 1. Listening, speaking, reading, writing, visual, and technological skills are all emphasized. This course is recommended for students who demonstrate advanced skills in independent reading and writing and are able to engage in critical analysis and discussions inside and outside the classroom. A summer project is required.

EL English 1 Emergent First Course follows the Ohio State Standards for English Language Arts. Specially designed for Emergent English Learners, this course provides an adapted pace, accommodations, and modifications to meet the needs of English Learners who have attended U.S. schools for less than one year. Students explore a variety of literary genres from both classical and modern works including fiction and nonfiction. Listening, speaking, reading, writing, visual, and technological skills are all emphasized.

EL English 1 Emergent Second Course follows the Ohio State Standards for English Language Arts. Specially designed for Emergent English Learners, this course provides an adapted pace, accommodations, and modifications to meet the needs of English Learners who have attended U.S. schools for less than two years. Students explore a variety of literary genres from both classical and modern works including fiction and nonfiction. Listening, speaking, reading, writing, visual, and technological skills are all emphasized.

English 2

<table>
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English 2 follows the Ohio State Standards for English Language Arts. Students explore a variety of literary genres from both classical and modern works including fiction and nonfiction. Listening, speaking, reading, writing, visual, and technological skills are all emphasized.

Honors English 2 follows the Ohio State Standards for English Language Arts. Students explore a variety of literary genres from both classical and modern works including fiction and nonfiction at a more academically rigorous level than English 2. Listening, speaking, reading, writing, visual, and technological skills are all emphasized. This course is recommended for students who demonstrate advanced skills in independent reading and writing and are able to engage in critical analysis and discussions inside and outside the classroom. A summer project is required.

EL English 2 follows the Ohio State Standards for English Language Arts. This course is specially designed for and provides accommodations and modifications to meet the needs of English Learners. Students explore a variety of literary genres from both classical and modern works including fiction and nonfiction. Listening, speaking, reading, writing, visual, and technological skills are all emphasized.
Contemporary Literature  LA310
Grade Level:  11
Course Length:  Year, 1 Period
Credit:  1.00
Recommended:  English 2 or Honors English 2

Contemporary Literature offers a global approach to literature of the 20th century to the present. Emphasis is placed on critical analysis and research skills necessary for success in college. Students will write creatively by developing their own poems, stories and essays. Contemporary issues and mature language may be encountered in the readings. This course counts as 1.00 credit toward graduation.

Humansities  LA350
Grade Level:  11
Course Length:  Year, 1 Period
Credit:  1.00
Recommended:  English 2 or Honors English 2

Humansities provides an intensive study of literature and composition through its interrelationship with the complementary arts of mythology, philosophy, religion, art and music. Extensive research, reading and writing, and oral participation are required. This course counts as 1.00 English credit toward graduation.

Everyday English Language Arts  LA300
Grade Level:  11
Course Length:  Year, 1 Period
Credit:  1.00
Recommended:  English 2 or Honors English 2

Everyday English Language Arts is offered to students who have been recommended by guidance or through teacher recommendations, because they have demonstrated a need for enhanced language arts skills based on ability, performance and initiative. This course emphasizes improvement and development on language arts skills and reading fluency, including but not limited to: vocabulary development, reading and writing skills, and reading comprehension. Reaction to the literature will include both written and oral components as integral parts to this course. This course counts as 1.00 English credit toward graduation.

EL Everyday English Language Arts  ES301
Grade Level:  11
Course Length:  Year, 1 Period
Credit:  1.00
Recommended:  EL English 2

EL Everyday English Language Arts course follows the Ohio State Standards for English Language Arts, with accommodations and modifications for English Learners provided. This course emphasizes improving and developing language arts skills and reading fluency, including but not limited to, vocabulary development, reading and writing skills, and reading comprehension. Students explore a variety of texts, including adapted texts, fiction, and nonfiction; reaction to the literature will include both written and oral components as integral parts of this course. This course counts as 1.00 English credit toward graduation.

British Literature/Shakespeare and Composition  LA320
Grade Level:  12
Course Length:  Year, 1 Period
Credit:  1.00
Recommended:  English 2 or Honors English 2

British Literature/Shakespeare and Composition surveys literature from the Anglo-Saxon period to the present. It focuses on knowledge and appreciation of the literature as well as on understanding an author’s purpose and writing techniques. Special emphasis is placed on the works of William Shakespeare. Historical and thematic approaches and written literary analysis are also major areas of study. This course counts as 1.00 credit toward graduation.

Comparative Studies  LA330
Grade Level:  12
Course Length:  Year, 1 Period
Credit:  1.00
Recommended:  English 2 or Honors English 2

Comparative Studies in Literature and Composition offers a critical view of themes in literature that are mirrored in various texts. Students will read novels, articles, short stories, films, and other texts. Students will also write critical analyses, criticisms, synthesis, research papers, and narratives. Students will identify and interpret artistic elements as well as author/director purpose. This course counts as 1.00 English credit toward graduation. Important: This course is NOT APPROVED by NCAA for eligibility requirements.

Cultural Studies in Literature  LA340
Grade Level:  12
Course Length:  Year, 1 Period
Credit:  1.00
Recommended:  English 2 or Honors English 2

Cultural Studies in Literature allows students to develop a sophisticated understanding of the social role of local and global texts through multiple perspectives, as well as to recognize their influences on identity, culture, socioeconomic status, politics, and ideology. Units of study may include topics related to race, ethnicity, gender, religion, sexual orientation and other underrepresented voices. This course counts as 1.00 English credit toward graduation.

African American Literature and Composition  LA540
Grade Level:  12
Course Length:  Year, 1 Period
Credit:  1.00
Recommended:  English 2 or Honors English 2
Location:  Westerville North only

The purpose of this course is to develop a sophisticated understanding of the social role of African American texts through multiple perspectives as well as to recognize the influence of African American literature on identity, culture, socioeconomic status, politics, and ideology. Units of study may include topics related to intersections of race with gender, religion, sexual orientation, socioeconomic status, education, incarceration, and other underrepresented voices.
EL Cultural Studies in Literature  ES340  
Grade Level:  12  
Course Length:  Year, 1 Period  
Credit:  1.00  
Recommended:  EL Everyday Language Arts

EL Cultural Studies in Literature allows students to develop a sophisticated understanding of the social role of local and global texts through multiple perspectives, as well as to recognize their influences on identity, culture, socioeconomic status, politics, and ideology. Supplemented with accommodations and modifications for English Learners, units of study may include topics related to race, ethnicity, gender, religion, sexual orientation and other underrepresented voices. This course counts as 1.00 English credit toward graduation.

Elective Courses

Speech Arts 1  LA401  
Grade Levels:  10, 11, 12  
Course Length:  Semester, 1 Period  
Credit:  0.50  
Recommended:  English 1 or Honors English 1

Speech Arts 1 introduces students to the fundamental techniques of public speaking that benefit performance and achievement across the curriculum as well as in life outside school. It incorporates reading, writing, speaking, listening and critical viewing to help students communicate more effectively in both formal and informal contexts. Students will study and demonstrate organization and presentation strategies that help inform, persuade and entertain. This course is aligned to grades 11-12 Ohio content standards, although it is offered to grade 10 students. Students earn .50 credit that can be combined with Journalism 1 (0.50 credit) to count as 1.00 English credit toward graduation. See page 32 for more information.

Speech Arts 2  LA 402  
Grade Levels:  11, 12  
Course Length:  Semester, 1 Period  
Credit:  0.50  
Recommended:  Speech Arts 1

Speech Arts 2 is an advanced course that continues the study of fundamental techniques of public speaking learned in Speech Arts 1. It incorporates reading, writing, speaking, listening and critical viewing to help students communicate more effectively in both formal and informal contexts. Students are exposed to a variety of speaking situations in the school and community in order to support their acquisition of skills and confidence needed to address different audiences in a variety of situations. Students will be introduced to debate, group discussion, and formal ceremonial occasions. This course counts as 0.50 elective credit.

Journalism 1  LA411  
Grade Levels:  10, 11, 12  
Course Length:  Semester, 1 Period  
Credit:  0.50  
Recommended:  English 1 or Honors English 1

Journalism 1 is for students with an interest in media and journalistic writing as well as various perspectives on American journalism. The historical development of journalism is explored from colonial times to the present. This course focuses on writing, research, oral interpretation, and analytical reading. It also addresses various aspects of newspaper publication. This course is aligned to grades 11-12 Ohio content standards, although it is offered to grade 10 students. Students earn 0.50 credits that can be combined with Speech Arts 1 (0.50 credit) to count as 1.00 English credit toward graduation. See page 32 for more information. An extra-curricular component may be offered with the class.

Journalism 2  LA412  
Grade Level:  11, 12  
Course Length:  Year, 1 Period  
Credit:  1.00  
Recommended:  Journalism 1 & Course Application

Journalism 2 is intended for students who participate in the school newspaper staff. This course has an intense focus on writing, research and analytical reading, resulting in publishable articles. Additional emphasis is given to business management of publications. In-depth individualized instruction advances writing and reading skills. Either successful completion of Journalism 1 or recommendation from the newspaper adviser is required. This course counts as one of three options for 1.00 English credit toward graduation. See page 32 for more information. An extra-curricular component may be offered with the class.

Journalism 3  LA413  
Grade Level:  12  
Course Length:  Year, 1 Period  
Credit:  1.00  
Recommended:  Journalism 1, Journalism 2, and Course Application

Journalism 3 is intended for students who participate as on the school newspaper staff. The central core of the curriculum is the intense focus on writing, research and analytical reading, resulting in published articles. In-depth individualized instruction gives students opportunities to improve writing and reading skills. This course counts as one of three options for 1.00 English credit toward graduation. See page 32 for more information. An extra-curricular component may be offered with the class.

Reading Seminar  LA421  
Grade Levels:  9, 10  
Course Length:  Semester, 1 period (with option to repeat to earn a maximum of 1.00 credit)  
Credit:  0.50 elective credit  
Grade:  Satisfactory or Unsatisfactory (no letter grade)  
Recommended:  Assessment data

Reading Seminar focuses on Instruction and learning activities to provide students with support for developing strategies that aid reading of academic and non-academic texts. Assessment data is used to determine student strengths and weaknesses. This data will inform instruction related to comprehension, fluency, vocabulary knowledge, work/study skills and metacognition. The focus of the class is to develop and support empowered readers. This entails (1) developing cognitive reading strategies that aid students in acquiring, retaining, and demonstrating knowledge of academic content and (2) facilitating authentic communities of readers. Students develop understanding and use of “tools” that serve as an addition to the support they receive in content classrooms and are provided with additional opportunities to read high-interest books and to connect with literacy resources.

Second Semester Enrollment

Enrollment in a second semester of this course provides a more intensive focus on practice, application and generalization of strategies that aid comprehension and retention of content-area texts and serves as an addition to support students receive in content classrooms.
Yearbook

LA500

Grade Levels: 10, 11, 12
Course Length: Year, 1 Period
Credit: 1.00 elective credit
Recommended: Course Application

Yearbook focuses on the process of creating a professionally published book. Using state-of-the-art technology and methods, students will research, report, organize and convey information accurately. Students use communication skills to conduct ad and sales campaigns. Interviewing, copywriting, editing, photography and graphic design are emphasized. The annual yearbook is completed by the end of the course and delivered in early fall. Students should be self-disciplined and able to meet deadlines. This course counts as one elective credit for English Language Arts (LA). An extra-curricular component may be offered with the class.

Advanced Placement and International Baccalaureate Courses

Students may earn college credit or advancement in college coursework with qualifying scores on AP and/or IB exams. See pages 17 - 20 for more information.

AP Language and Composition

Grade Level: 11, 12
Course Length: Year, 1 Period
Credit: 1.25 Weighted grade
Recommended: English 2 or Honors English 2
Approximate cost: $94 for the AP test (optional)

The AP English Language and Composition course focuses on the development and revision of evidence-based analytic and argumentative writing, the rhetorical analysis of nonfiction texts, and the decisions writers make as they compose and revise. Students evaluate, synthesize, and cite research to support their arguments. Additionally, they read and analyze rhetorical elements and their effects in nonfiction texts—including images as forms of text—from a range of disciplines and historical periods. Writing assignments include rhetorical analysis and argumentative essays that require students to analyze, think critically, and support their ideas with appropriate evidence and clear reasoning. The AP English Language and Composition course aligns to an introductory college-level rhetoric and writing curriculum. A summer reading and writing project may be required. This course counts as a 1.00 English credit toward graduation.

AP Literature & Composition

Grade Level: 11 and 12
Course Length: Year, 1 Period
Credit: 1.25 Weighted grade
Recommended: AP Language and Composition
Approximate cost: $94 for the AP test (optional)

The AP English Literature and Composition course focuses on reading, analyzing, and writing about imaginative literature (fiction, poetry, drama) from various periods. Students engage in close reading and critical analysis of imaginative literature to deepen their understanding of the ways writers use language to provide both meaning and pleasure. As they read, students consider a work’s structure, style, and themes, as well as its use of figurative language, imagery, and symbolism. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works. The AP English Literature and Composition course aligns to an introductory college-level literature and writing curriculum. There are no prerequisite courses for AP English Literature and Composition. A summer reading and writing project may be required. This course counts as a 1.00 English credit toward graduation.

IB Language A1 English HL

Grade Levels: 11 and 12
Course Length: 2 Years, 1 Period
Credits: 1.25 Weighted grade
Recommended: Successful completion of all Ohio State Tests through the end of sophomore year
Approximate cost: $122 for IB test (required)
Location: Westerville South only

International Baccalaureate English A1 HL is a rigorous two-year course requiring a minimum of 240 hours of classroom time that includes the study of American and World Literature from the IB Prescribed Book List and the IB Prescribed World Literature List. The course, designed to study literature as a product of art and the author as artist, prepares students to take the IB Language A1 Exam, and requires two world literature assignments, an oral presentation and an oral commentary. Students analyze literature in a variety of ways and on a number of levels. The course includes a study of world literature to ensure a global perspective, enabling the student to gain an appreciation of culture, to recognize experiences common to all humanity, to enhance international awareness, and to develop attitudes of tolerance, empathy and respect for others. English A1 HL aims to have the student, through a detailed analysis of written text, gain an appreciation of a range of literature by studying a variety of authors, periods, genres, places, styles, and contexts. By doing so, the student will be able to broaden his/her perspective of other cultures. The student will understand literary techniques and relationships between works while developing an enjoyment of literature.

College Credit Plus Courses

College Credit Plus courses allow students to earn credit from both Westerville City Schools and Columbus State Community College while attending class on the high school campus. See page 25 for more information.

English 1100 Composition 1

Grade Level: 9, 10, 11, 12
Course Length: Semester, 1 Period
Credit: 1.00 and 3 semester college hours
1.25 weighted grade
Prerequisite: Must have intent form on file and meet CSCC placement requirements

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 an awareness of the interplay among purpose, audience, content, structure, and style while also introducing research and documentation methods, including digital citizenship. Course reading and writing assignments may be thematically organized by the instructor. Students will be required to attend class 5 days each week as they would with a traditional ELA class. Students will need to enroll in Columbus State Community College (CSCC) to participate. Dual credit will be provided for English 1100 offered at CSCC.
English 2367 Composition 2 LA251

Grade Level: 9, 10, 11, 12
Course Length: Semester, 1 Period
Credit: 1.00 and 3 college semester hours
1.25 Weighted grade
Prerequisite: Must have intent form on file and meet CSCC placement requirements

English 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 may be thematically organized by the instructor. Students will need to enroll in Columbus State Community College (CSCC) to participate. Dual credit will be provided for English 2367 offered at CSCC.
ENGLISH LEARNERS (EL)

The work of the English Learning department centers on our vision and mission statements, and adheres to the Ohio English Language Proficiency Assessment (OELPA) standards. Our vision is to be the benchmark of educational excellence in English as a Second Language best practices. Our mission is to empower English learners with the tools they need to be successful in all academic content courses, while simultaneously developing their proficiency in English.

English Learner (EL) courses qualify for elective credit, not English Language Arts credit.

<table>
<thead>
<tr>
<th>Course</th>
<th>Number</th>
<th>Grade</th>
<th>Length</th>
<th>Credit</th>
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<tbody>
<tr>
<td>EL English A</td>
<td>ES106</td>
<td>9, 10</td>
<td>Year</td>
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</tr>
<tr>
<td>EL English B</td>
<td>ES107</td>
<td>9, 10</td>
<td>Year</td>
<td>1.00</td>
</tr>
<tr>
<td>EL English C</td>
<td>ES108</td>
<td>9, 10</td>
<td>Year</td>
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</tr>
<tr>
<td>EL Learning Strategies for Academic Success</td>
<td>ES125</td>
<td>9, 10</td>
<td>Semester</td>
<td>0.50</td>
</tr>
</tbody>
</table>

EL English A

Grade Level: 9, 10, 11, 12
OELPA or District Screening Score of Emergent
Course Length: 1 Year, 1 Period
Credit: 1.00

The design of EL English A is structured around scientifically proven best practices in teaching English language proficiency. This course is the first in a series of courses for English language acquisition, building a foundation for students to learn basic communication skills simultaneously with academic content vocabulary and literacy in a culturally responsive learning community. This course focuses on developing the basic fundamentals of speaking, listening, reading and writing in English for English Learners. Emphasis is placed on vocabulary and developing early English literacy skills. Learning goals align with ELPA (English Language Proficiency Assessment) standards.

EL English B

Grade Level: 9, 10, 11, 12
OELPA or District Screening Score of Progressing
OELPA District Screening Score of 2 in Reading and/or Writing
Course Length: 1 Year, 1 Period
Credit: 1.00

EL English B is the second in a series of courses for English language acquisition, building a foundation for students to learn basic communication skills simultaneously with academic content vocabulary and literacy in a culturally responsive learning community. This course focuses on developing the beginning fundamentals of reading and writing in English for English Language Learners. Emphasis is placed on vocabulary and developing early English literacy skills. Learning goals align with Ohio English Language Proficiency Standards.

EL English C

Grade Level: 9, 10, 11, 12
OELPA or District Screening Score of Progressing
OELPA or District Screening Score of 3 in Reading and/or Writing
Course Length: 1 Year, 1 Period
Credit: 1.00

EL English C focuses on developing the intermediate fundamentals of reading and writing in English for English Language Learners. Emphasis is placed on vocabulary and developing intermediate English literary skills. Learning goals align with Ohio English Language Proficiency Standards. EL English C is designed for students whose primary home language is other than English and would require additional English language support to develop reading, writing, listening and speaking skills. Materials and the instructional pace of this EL course are adapted to meet the individual needs of each student.

EL Learning Strategies for Academic Success

Grade Level: 9, 10, 11, 12
Course Length: 1 Semester, 1 Period
Credit: 0.50

This specially designed course provides English Learners with learning strategies such as how to use resources and technology, how to approach complex learning tasks, and how to prepare for standardized tests. Composed of four modules, this course is individualized to accommodate students with diverse educational backgrounds, English proficiency levels, and instructional needs. EL Learning Strategies for Academic Success provides English Learners with scaffolding and support to assist them with acquiring English language proficiency while at the same time learning sophisticated academic content. This course is graded on a Pass/Fail basis. EL Learning Strategies for Academic Success is structured to allow students to apply the strategies taught in class to practical tasks in their content courses.
HEALTH/PHYSICAL EDUCATION (HPE)

Students are required to take Health, Physical Education 1, and Physical Education 2. The Health curriculum includes the study of mental, physical, and social health issues and provides students with the ability to recognize, correct, and maintain a healthy lifestyle. The Physical Education program is designed to provide opportunities for students to develop physical fitness and efficient use of the body in all activities, as well as develop skills in activities which will provide for personal enjoyment and worthy use of leisure time. Some Physical Education activities take place outside of school and involve a minimum cost to students. However, a student may be excused from these activities.

The following clothing is required to insure safety and complete movement during activity: T-shirt and shorts or sweatpants, as well as tennis shoes and socks. Warm-up outfits, sweatsuits, and sweatshirts are always accepted; a uniform may be required. Students should also have a good combination lock.

Physical Education Waiver: The Westerville City School Board of Education has adopted a policy which allows students who, during high school, participate in interscholastic athletics, marching band, and/or cheerleading for at least two full seasons the option to be excused from the high school Physical Education graduation requirement. Students selecting this option shall be required to complete one-half unit, consisting of at least 60 hours of instruction, in another course. Additional information can be obtained from your high school counselor.

<table>
<thead>
<tr>
<th>Course</th>
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<th>Grade</th>
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<tr>
<td>Health (traditional learning environment)</td>
<td>HPE101</td>
<td>9, 10</td>
<td>Semester</td>
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<tr>
<td>Health (blended learning environment)</td>
<td>HPE102</td>
<td>9, 10</td>
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<td>Physical Education 1</td>
<td>HPE201</td>
<td>9, 10</td>
<td>Semester</td>
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</tr>
<tr>
<td>Physical Education 2</td>
<td>HPE202</td>
<td>9, 10</td>
<td>Semester</td>
<td>0.25</td>
</tr>
</tbody>
</table>

Health emphasizes physical, social and emotional health. The ability to recognize, improve and maintain a healthful condition is critical to full and independent participation in society. This course prepares students to make sound, consistent and accurate decisions to contribute to overall health and well being. The topics covered include but are not limited to mental health, social health, human development, nutrition, personal health and physical fitness, substance abuse, communicable and chronic disease prevention, community health and safety, and health skills. This course meets the graduation requirement for one semester of health education.

HPE101 is offered in a traditional learning environment. Students will have Health scheduled within their school day and will meet in a classroom. Some course content will be accessed and completed online during the class period.

HPE102 will be offered in a blended learning environment. In order to be enrolled in this course, each student must be approved by an administrator. Students will not meet with an instructor daily. Instead, students will be required to check in weekly with their instructor. A student learns, in large part, through the online delivery of content and instruction. During the first week of the semester, all enrolled students are expected to meet with the instructor to acquire a course overview, obtain initial instruction, and establish this face-to-face meeting schedule for the purpose of providing direct instruction and further supporting the student in course completion.

HPE201 provides the opportunity for students to learn the various physical skills and techniques utilized in net/wall games, tumbling and dance along with the rules, regulations and biomechanical principles of each. Students will engage in personal fitness activities, skill development, activity specific tactics and strategies as well as personal and social behavior development. This course will require students to identify and establish personal fitness goals to create and implement a personal fitness plan. Students will learn to evaluate/adjust their personal fitness plan by utilizing technology to track progress and monitor personal goals. Students may also have one classroom day each week to discuss related course material. Students must successfully complete requirements for their portfolio to pass the class.

HPE202 provides the opportunity for students to learn the various physical skills and techniques utilized in striking and fielding, invasion and target games along with the rules, regulations and biomechanical principles of each. Students will engage in personal fitness activities, skill development, activity-specific tactics and strategies as well as personal and social behavior development. This course will require students to identify and establish personal fitness goals to create and implement a personal fitness plan. Students will learn to evaluate and adjust their personal fitness plan by utilizing technology to track progress and monitor personal goals. Students may also have one classroom day each week to discuss related course material. Students must successfully complete requirements for their portfolio to pass the class.
Students are required to take 4 math credits including Algebra 2 or Algebra 2 Essentials. A broad range of mathematics courses is offered so that students may elect those classes that will extend their mathematical competency, and provide a basis for future career preparation. Students should follow the recommendations of their mathematics teacher in determining which courses to select. Successful completion of all mathematics courses is essential for high school graduation. Typical course progression for students taking Algebra 1 and/or Geometry in middle school would be high school honors courses.

All mathematics courses at the high school level require a graphing calculator. The district primarily uses Texas Instruments (TI) calculators. Please check with the teacher for the model that will work best for the course selected. The two calculators most likely to be used are the TI-Nspire CX Graphing Calculator or the TI-84 Plus CE Graphing Calculator.

+ – This is a College Credit Plus (CCP) course. CCP courses allow students to earn credit from both Westerville City Schools and Columbus State Community College while attending class on the high school campus. See page 25 for more information.

1 - While a mathematics-related class, this course is a general elective that can be taken concurrently with other mathematics courses; it does not count as one of the four mathematics credits needed for graduation.

<table>
<thead>
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<th>Course</th>
<th>Number</th>
<th>Grade</th>
<th>Length</th>
<th>Credit</th>
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<tr>
<td>Math Lab (Algebra)</td>
<td>MA101</td>
<td>9 10</td>
<td>Semester</td>
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</tr>
<tr>
<td>Math Lab (Geometry)</td>
<td>MA102</td>
<td>10 11</td>
<td>Semester</td>
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<td>Algebra 1</td>
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<tr>
<td>Geometry</td>
<td>MA302</td>
<td>9 10  11 12</td>
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<td>Honors Geometry</td>
<td>MA312</td>
<td>9 10</td>
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<tr>
<td>Algebra 2</td>
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<td>Honors Algebra 2</td>
<td>MA313</td>
<td>9 10  11 12</td>
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<td>Algebra 2 Essentials</td>
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<tr>
<td>Pre calculus</td>
<td>MA304</td>
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<tr>
<td>Honors Precalculus</td>
<td>MA314</td>
<td>9 10  11 12</td>
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<tr>
<td>Financial Algebra</td>
<td>MA306</td>
<td>11 12</td>
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<tr>
<td>Statistics, Trigonometry, and Functions</td>
<td>MA310</td>
<td>12</td>
<td>Year</td>
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<tr>
<td>AP Statistics</td>
<td>MA515</td>
<td>9 10  11 12</td>
<td>Year</td>
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<tr>
<td>AP Computer Science Principles</td>
<td>MA320</td>
<td>10 11 12</td>
<td>Year</td>
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<tr>
<td>AP Calculus AB</td>
<td>MA315</td>
<td>11 12</td>
<td>Year</td>
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<tr>
<td>AP Calculus BC</td>
<td>MA325</td>
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<td>Mathematical Modeling and Reasoning</td>
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<td>IB Mathematics: Application and Interpretation SL</td>
<td>IB511S – IB512S</td>
<td>11 12</td>
<td>2 years</td>
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<td>IB Mathematics: Analysis and Approaches SL</td>
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<tr>
<td>Mathematics 2153 Calculus 3</td>
<td>MA340</td>
<td>11 12</td>
<td>Semester</td>
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</table>
Math Lab (Algebra)  MA101
Grade Levels:  9, 10
Course Length:  Semester, 1 Period
Credits:  0.50 elective only (can be repeated for up to 2.0 credits)
Grade:  Satisfactory or Unsatisfactory

The goal of Math Lab is to support students in the Algebra classroom by providing the opportunity to acquire the background understandings necessary as well as to front load the Algebra content. Students may enter Algebra 1 having not been successful in previous math courses or not having the prerequisite knowledge and skills necessary to be successful in Algebra. Math Lab will provide opportunities for students to fill gaps and improve on their foundational mathematical knowledge and skills. Assessment data is used to determine student strengths and weaknesses, and individual learning plans are created that monitor progress and achievement of knowledge and skills necessary to be successful learners of algebra. This course serves as an addition to the support students receive in their credit-bearing math courses.

Math Lab (Geometry)  MA102
Grade Levels:  9, 10
Course Length:  Semester, 1 Period
Credits:  0.50 elective only (can be repeated for up to 2.0 credits)
Grade:  Satisfactory or Unsatisfactory

The goal of Math Lab is to support students in the Geometry classroom by providing the opportunity to acquire the background understandings necessary as well as to front load the Geometry content. Students may enter Geometry having not been successful in previous math courses or not having the prerequisite knowledge and skills necessary to be successful in Geometry. Math Lab will provide opportunities for students to fill gaps and improve on their foundational mathematical knowledge and skills. Assessment data is used to determine student strengths and weaknesses, and individual learning plans are created that monitor progress and achievement of knowledge and skills necessary to be successful learners of geometry. This course serves as an addition to the support students receive in their credit-bearing math courses.

Algebra 1  MA301
Grade Levels:  9, 10
Course Length:  Year, 1 Period
Credits:  1.00
Recommended:  Math 8

Along with Geometry, Algebra is one of the main branches of Mathematics and prepares students for further study in math, science and technology. The fundamental purpose of this course is to formalize and extend the mathematics that students learned in the middle grades. Key topics include linear, quadratic, and exponential relationships, contrasting them with each other and learning how to apply these functions to real world phenomena. Students will explore data and build on the skills they learned in middle school to provide a more formal means of assessing how a model fits data. Students use graphical representations and knowledge of the context to make judgments about the appropriateness of their models. The Mathematical Practice Standards apply throughout this course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

Geometry  MA302
Grade Levels:  9, 10, 11, 12
Course Length:  Year, 1 Period
Credits:  1.00
Recommended:  Algebra 1

Geometry - exploring spatial sense and reasoning - is used daily by almost everyone. It is found everywhere: in art, architecture, engineering, and much more. In prior grades students studied Geometry but the rigor is greater in this course. Students will explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. The Mathematical Practice Standards apply throughout this course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

Honors Geometry  MA312
Grade Levels:  9, 10
Course Length:  Year, 1 Period
Credits:  1.00
Recommended:  Algebra 1

Geometry - exploring spatial sense and reasoning - is used daily by almost everyone. It is found everywhere: in art, architecture, engineering, and much more. Students will explore complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. Honors Geometry will include additional standards; students in the Honors course will also be expected to complete additional coursework which will extend or enrich concepts in Geometry. Students will benefit from the richness of the course by completing in depth explorations of the extension activities, increasing their awareness of mathematical applications, further developing their critical thinking and communication skills. The Mathematical Practice Standards apply throughout this course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

Algebra 2  MA303
Grade Levels:  9, 10, 11, 12
Course Length:  Year, 1 Period
Credits:  1.00
Recommended:  Geometry

Algebra 2 continues the expansion of students' algebra skills to structure their understanding of real world applications. Building on work with linear, quadratic, and exponential functions, students extend their repertoire of functions to include polynomial, rational, trigonometric, and radical functions. Students work closely with the expressions that define the functions, and continue to expand and hone their abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful and logical subject that makes use of their ability to make sense of problem situations.
Honors Algebra 2 (MA313)

Grade Levels: 9, 10, 11, 12
Course Length: Year, 1 Period
Credits: 1.00
Recommended: Honors Geometry

Honors Algebra 2 continues the expansion of students' algebra skills to structure their understanding of real world applications. Building on work with linear, quadratic, and exponential functions, students extend their repertoire of functions to include polynomial, rational, trigonometric, and radical functions. Students work closely with the expressions that define the functions, and continue to expand and hone their abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. Honors Algebra 2 will include additional standards; students in the Honors course will also be expected to complete additional coursework which will extend or enrich the included concepts in Algebra 2. Students will benefit from the richness of the course by completing in-depth explorations of the extension activities, increasing their awareness of mathematical applications, further developing their critical thinking and communication skills.

Algebra 2 Essentials (MA307)

Grade Levels: 11, 12
Course Length: Year, 1 Period
Credits: 1.00
Recommended: Geometry

Algebra 2 Essentials continues the expansion of students' algebra skills to structure their understanding of real world applications. Building on work with linear, quadratic, and exponential functions, students extend their repertoire of functions to include polynomial, rational, and radical functions. Students work closely with the expressions that define the functions, and continue to expand and hone their abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful and logical subject that makes use of their ability to make sense of problem situations.

Precalculus (MA304)

Grade Levels: 10, 11, 12
Course Length: Year, 1 Period
Credits: 1.00
Recommended: Algebra 2

Precalculus is a theory-oriented course that covers many topics which provide the necessary prerequisite to the study of Calculus. It extends the study of trigonometry, expands the student's understanding of functions, and how these ideas are applied to other contexts. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful and logical subject that makes use of their ability to make sense of problem situations.

Honors Precalculus (MA314)

Grade Levels: 9, 10, 11, 12
Course Length: Year, 1 Period
Credits: 1.00
Recommended: Honors Algebra 2

Honors Precalculus is a theory-oriented course that covers many topics which provide the necessary prerequisite to the study of Calculus. This course extends the study of trigonometry, expands the student's understanding of function, and how these ideas are applied to other contexts. Honors Precalculus includes additional standards and students in the Honors course will also be expected to complete additional coursework which will extend or enrich the included concepts in Precalculus. Students will benefit from the richness of the course by completing in-depth explorations of the extension activities, increasing their awareness of mathematical applications, further developing their critical thinking and communication skills. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful and logical subject that makes use of their ability to make sense of problem situations.

Financial Algebra (MA306)

Grade Levels: 11, 12
Course Length: Year, 1 Period
Credits: 1.00
Recommended: Algebra 2 or concurrent enrollment

Financial Algebra is an algebra-based, applications-oriented, and technology-dependent mathematical modeling course. The course addresses college preparatory mathematics topics from Advanced Algebra, Statistics, Probability, Precalculus, and Calculus under seven financial umbrellas: Banking, Investing, Credit, Employment and Income Taxes, Automobile Ownership, Independent Living, and Retirement Planning and Household Budgeting. The course allows students to experience the interrelatedness of mathematical topics, find patterns, make conjectures, and extrapolate from known situations to unknown situations. The mathematics topics contained in this course are introduced, developed, and applied in an as-needed format in the financial settings covered. Students are encouraged to use a variety of problem-solving skills and strategies in real-world contexts, and to question outcomes using mathematical analysis and data to support their findings.

Statistics, Trigonometry, and Functions (MA310)

Grade Level: 12
Course Length: Year, 1 Period
Credits: 1.00

Students will deepen their understanding of statistics and probability, as a foundation in statistics is required for most occupations. Students' study of statistics will be grounded in real world applications and opportunities to model real world situations. Trigonometry is a foundation for most mathematics courses beyond high school and in many jobs. Lastly, students will build on their work with quadratic, radical, rational, exponential, and logarithmic functions to extend their repertoire of functions to include polynomial and trigonometric functions. The Mathematical Practice Standards apply throughout this course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. This course counts as a STEM elective for students pursuing a STEM Honors diploma.
This course is designed to promote reasoning, problem-solving, and modeling through thematic units focused on the mathematical practices while reinforcing and extending content in Number and Quantity, Algebra, Functions, Statistics and Probability, and Geometry. Quantitative reasoning and modeling involve the application of mathematics to real-world situations, with careful attention to the choice of units and contextual challenges. Problem-solving requires analyzing an unfamiliar situation and devising a solution strategy. Problem-solving and modeling mathematics together provide opportunities for students to experience success with mathematics not merely improve their self-perception. These habits and skills promote perseverance and cut across disciplines, thus providing a gateway into successful postsecondary education and a variety of careers.

### Mathematical Modeling and Reasoning MA400
- **Grade Level:** 12
- **Course Length:** Year, 1 Period
- **Credits:** 1.00
- **Recommended:** Algebra 2

This course comprises two examinations at the end of the second year. The purpose of this course is to develop students' understanding of the concepts of calculus and to provide experience with its methods and applications. The course emphasizes a multi-representational approach to calculus with concepts, results, and problems being expressed graphically, numerically, analytically, and verbally. The connections among these representations also are important. The focus of the course is neither manipulation nor memorization of an extensive taxonomy of functions, curves, theorems, or problem types. Through the use of the unifying themes of derivatives, integrals, limits, approximation, and applications and modeling, the course becomes a cohesive whole rather than a collection of unrelated topics. This course counts as a STEM elective for students pursuing a STEM Honors diploma.

### Advanced Placement and International Baccalaureate Courses

Students may earn college credit or advancement in college coursework with qualifying scores on AP and/or IB exams. See pages 17 - 20 for more information.

#### AP Statistics MA515
- **Grade Level:** 9, 10, 11, 12
- **Course Length:** Year, 1 Period
- **Credits:** 1.00
- **Recommended:** Algebra 2 or Honors Algebra 2
- **Approximate Cost:** $94 for the AP test (optional)

Advanced Placement (AP) courses are designed to parallel the rigor of an introductory college course. AP Statistics is an excellent option for any secondary school student who has successfully completed Algebra 2. Today, almost all majors require a statistics course at some level. This course is equivalent to a one semester, introductory, non-calculus based college course in statistics. Students are introduced to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Topics include exploring data, sampling and experimentation, anticipating patterns, and statistical inference. AP Statistics emphasizes decision making based upon data analysis. This course counts as a STEM elective for students pursuing a STEM Honors diploma.

#### AP Computer Science Principles MA320
- **Grade Level:** 10, 11, 12
- **Course Length:** Year, 1 Period
- **Credits:** 1.00
- **Recommended:** Honors Geometry or Geometry
- **Approximate Cost:** $94 for the AP test (optional)

AP Computer Science Principles is designed to parallel the rigor of a first-year introductory college computing course. Students will develop computational thinking skills vital to success in all disciplines, including using computational tools for studying data to analyze, visualize, and draw conclusions from trends. Students apply creative processes when developing computational artifacts and using computer software and other technology to explore topics of interest. They work individually and collaboratively to solve problems, and discuss and write about the importance of these problems and the impacts to their community, society, and the world. This course counts as a STEM elective for students pursuing a STEM Honors diploma.

#### AP Calculus AB MA315
- **Grade Level:** 11, 12
- **Course Length:** Year, 1 Period
- **Credits:** 1.00
- **Recommended:** Honors Precalculus or Precalculus
- **Approximate Cost:** $94 for the AP test (optional)

Advanced Placement (AP) courses are designed to parallel the rigor of an introductory college course. AP Calculus AB is primarily concerned with developing the students’ understanding of the concepts of calculus and providing experience with its methods and applications. The courses emphasize a multi-representational approach to calculus with concepts, results, and problems being expressed graphically, numerically, analytically, and verbally. The connections among these representations also are important. The focus of the course is neither manipulation nor memorization of an extensive taxonomy of functions, curves, theorems, or problem types. Through the use of the unifying themes of derivatives, integrals, limits, approximation, and applications and modeling, the course becomes a cohesive whole rather than a collection of unrelated topics. This course counts as a STEM elective for students pursuing a STEM Honors diploma.

#### AP Calculus BC MA325
- **Grade Level:** 11, 12
- **Course Length:** Year, 1 Period
- **Credits:** 1.00
- **Recommended:** Honors Precalculus or Precalculus
- **Approximate Cost:** $94 for the AP test (optional)

Advanced Placement (AP) courses are designed to parallel the rigor of an introductory college course. AP Calculus BC is an extension of AP Calculus AB rather than an enhancement; common topics require a similar depth of understanding. Calculus BC is primarily concerned with developing the students’ understanding of the concepts of calculus and providing experience with its methods and applications. The courses emphasize a multi-representational approach to calculus with concepts, results, and problems being expressed graphically, numerically, analytically, and verbally. The connections among these representations also are important. The focus of the courses is neither manipulation nor memorization of an extensive taxonomy of functions, curves, theorems, or problem types. Through the use of the unifying themes of derivatives, integrals, limits, approximation, and applications and modeling, the course becomes a cohesive whole rather than a collection of unrelated topics. This course counts as a STEM elective for students pursuing a STEM Honors diploma.

#### IB Mathematics: Application and Interpretation SL IB511S (1st Year)
- **Application and Interpretation SL IB512S (2nd Year)**
- **Grade Levels:** 11 and 12
- **Course Length:** 2 Years, 1 Period
- **Credits:** 1.00 per year
- **Recommended:** Successful completion of all Ohio State Tests through the end of sophomore year
- **Approximate Cost:** $122 for IB test (required)
- **Location:** Westerville South only

IB Mathematics: Applications and Interpretation SL is a two-year course designed for students possessing the fundamental skills of geometry and algebra. Many students scheduling this class will focus their future studies in humanities and nonmathematical-related fields. Course content includes numbers and algebra, functions, trigonometry, statistics and probability, mathematical modeling and an introduction to calculus. Assessments will include both internal and external assessments. The internal assessment is a mathematical exploration paper based upon a suitable math topic of the student’s choice. The external assessment comprises two examinations at the end of the second year. The purpose
of IB Mathematics: Applications and Interpretation SL is for students to identify and study practical applications for mathematics they will encounter throughout their life experiences. This course recognizes the increasing role that mathematics and technology play in a diverse range of fields in a data-rich world. As such, it emphasizes the meaning of mathematics in context by focusing on topics that are often used as applications or in mathematical modeling. This course counts as a STEM elective for students pursuing a STEM Honors diploma.

IB Mathematics: Analysis and Approaches SL is designed for students who anticipate a need for sound mathematical background in preparing for future studies. This course serves as a rigorous foundation for mathematical concepts without the additional content included in the higher level analysis and approaches course. Course content includes advanced algebra, functions and equations, circular functions and trigonometry, statistics and probability, and calculus topics, including differentiation and integration. Assessments will include both internal and external assessments. The internal assessment is a mathematical exploration paper based upon a suitable math topic of the student’s choice. The external assessment comprises two examinations at the end of the second year. In addition, students will be prepared for and will have the opportunity to take the AP Calculus AB test at the end of their first year. Throughout the course instruction and assessment, there will be a great emphasis on the ability to construct, communicate and justify correct mathematical arguments. This course counts as a STEM elective for students pursuing a STEM Honors diploma.

IB Mathematics: Analysis and Approaches HL is designed for students who anticipate a need for sound mathematical background in preparing for future studies. This course includes the same content as the standard level analysis and approaches course, with the addition of extra topics. Course content includes advanced algebra, functions and equations, circular functions and trigonometry, statistics and probability, in depth calculus topics, vectors, and induction proofs. Assessments will include both internal and external assessments. The internal assessment is a mathematical exploration paper based upon a suitable math topic of the student’s choice. The external assessment comprises three examinations at the end of the second year. In addition, students will be prepared for and will have the opportunity to take the AP Calculus BC test at the end of their first year. Throughout the course instruction and assessment, there will be a great emphasis on the ability to construct, communicate and justify correct mathematical arguments. Students who wish to take Mathematics: Analysis and Approaches at a higher level should have strong algebraic skills and the ability to understand simple proofs. They will be students who enjoy spending time with problems and get pleasure and satisfaction from solving challenging problems. This course counts as a STEM elective for students pursuing a STEM Honors diploma.

IB Mathematics: Analysis and Approaches SL

IB521S (1st Year)
Grade Levels: 11 and 12
Course Length: 2 Years, 1 Period
Credits: 1.00 per year
1.125 Weighted grade
Recommended: Successful completion of all Ohio State Tests through the end of sophomore year
Approximate cost: $122 for IB test (required)
Location: Westerville South only

IB522S (2nd Year)
Grade Levels: 11 and 12
Course Length: 2 Years, 1 Period
Credits: 1.00 per year
1.25 Weighted grade
Recommended: Successful completion of all Ohio State Tests through the end of sophomore year and a "B" or higher in Honors Precalculus
Approximate cost: $122 for IB test (required)
Location: Westerville South only

IB Mathematics: Analysis and Approaches HL

IB531H (1st Year)
Grade Levels: 11 and 12
Course Length: 2 Years, 1 Period
Credits: 1.00 per year
1.25 Weighted grade
Recommended: Successful completion of all Ohio State Tests through the end of sophomore year and a "B" or higher in Honors Precalculus
Approximate cost: $122 for IB test (required)
Location: Westerville South only

IB532H (2nd Year)
Grade Levels: 11 and 12
Course Length: 2 Years, 1 Period
Credits: 1.00 per year
1.25 Weighted grade
Recommended: Successful completion of all Ohio State Tests through the end of sophomore year
Approximate cost: $122 for IB test (required)
Location: Westerville South only

College Credit Plus Courses
College Credit Plus courses allow students to earn credit from both Westerville City Schools and Columbus State Community College while attending class on the high school campus. See page 29 for more information.

Mathematics 1152 Calculus 2 MA330
Grade Level: 11, 12
Course Length: Semester, 1 Period
Credit: 1.00 high school and 5 semester college hours
1.25 Weighted grade
Prerequisite: Must have intent form on file and meet CSCC placement requirements

Mathematics 1152 Calculus 2 provides a continued introduction to integral calculus, focusing on integration of exponential, logarithmic, trigonometric, inverse trigonometric functions, volume and surface area of solids of revolution, arc length, and methods of integration. Topics include: L'Hopital's Rule and improper integrals, analysis of plane curves given parametrically or in polar coordinates, sums and/or convergence of infinite sequences and series, and conic sections and vectors in the plane and in space. Emphasis is placed on the application of these topics to problems in science and engineering. Students will need to enroll in Columbus State Community College (CSCCC) to participate. Dual credit will be provided for MATH 1152 offered at CSCCC.

Mathematics 2153 Calculus 3 MA340
Grade Level: 11, 12
Course Length: Semester, 1 Period
Credit: 1.00 high school and 5 semester college hours
1.25 Weighted grade
Prerequisite: Must have intent form on file and meet CSCC placement requirements

Mathematics 2153 Calculus 3 provides a continuation of the calculus sequence, focusing on introducing multivariable calculus. Topics include: vector-valued functions and motion in the plane and in space, functions of several variables, partial derivatives, directional derivatives, gradients, extrema, multiple integrals, line integrals, Green's theorem, parametric surfaces, divergence theorem, and Stokes theorem. Emphasis is placed on the application of these topics to problems in science and engineering. Students will need to enroll in Columbus State Community College (CSCCC) to participate. Dual credit will be provided for MATH 2153 offered at CSCCC.
**SCIENCE AND ENGINEERING (SC)**

Students are required to take three science credits: one life science credit, one physical science credit, and a third advanced science credit beyond the foundational courses. A science course and the Honors level of that same course are mutually exclusive. For example, students who earn credit for Chemistry may not sign up for Honors Chemistry because the core content of both courses is the same.

+ – This is a College Credit Plus (CCP) course. CCP courses allow students to earn credit from both Westerville City Schools and Columbus State Community College while attending class on the high school campus. See page 25 for more information.

1 – This is a foundational course that can only count as a life or physical science credit; it cannot be used to satisfy the advanced science requirement.

2 – While a science-related class, this course is a general science elective that can be taken concurrently with other science courses; it does not count as one of the life, physical or advanced science credits needed for graduation.

3 – This course is part of a career pathway. Learn more about career pathways on pages 22 - 23.

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<th>Course</th>
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Biology is the foundational life science course and satisfies an Ohio core graduation requirement. Students explore biology from microscopic to macroscopic scales. Topics include cell structures, functions and processes, heredity, evolutionary mechanisms and speciation, and the diversity and interdependence of life in ecosystems. Biology involves “learning by doing” and incorporates scientific practices such as inquiry, experimental design, the use of models, data analysis, critical thinking, and using evidence to construct and communicate explanations. Students are introduced to key concepts and theories preparing them for further study in other sciences and advanced science disciplines.

Honors Biology is a foundational life science course and satisfies an Ohio core graduation requirement. Students explore biology from microscopic to macroscopic scales. Topics include cell structures, functions and processes, heredity, evolutionary mechanisms and speciation, and the diversity and interdependence of life in ecosystems. Honors Biology covers topics at a much greater speed and depth than would occur in Biology; they are expected to know processes and apply knowledge beyond just conceptual understanding. Honors Biology is a foundational course that introduces students to key concepts and theories preparing them for further study in other sciences and advanced science disciplines.

Students in Honors Anatomy and Physiology will study human body systems – including anatomy (structures) and physiology (functions) – as well as how systems work together to keep the body functioning normally. They will also explore disorders and diseases associated with the various body systems. While students “learn by doing,” there is an emphasis on memorization of structures and functions. A significant portion of the year will involve cat dissection. This course is recommended for students wishing to continue their education in the health and medical fields.

Students in Ecology will explore interdisciplinary themes in the environment, such as biotic and abiotic relationships, population growth, biomes, and biodiversity; students will also study how humans impact the environment and will consider ethical, social and economic issues. Ecology involves “learning by doing” and incorporates scientific practices such as inquiry, experimental design, the use of models, data analysis, critical thinking, and using evidence to construct and communicate explanations. Students can expect to be using the outdoors as a learning environment when the weather is appropriate.

Students in Zoology will become familiar with the variety of animal life on our planet from the simplest to most complex. They complete a comprehensive survey of structure and behavior of major and common animal groups, integrating a variety of life science concepts (genetics, natural selection, classification, ecosystem roles and relationships, endangered species, and conservation). Zoology involves “learning by doing” emphasizing data collection and analysis, specimen collection techniques, and detailed study of taxonomic organization. Students may engage in an extended project involving the maintenance, care and behavioral study of one of a variety of classroom specimens. This course is recommended for students wishing to continue their education in veterinary or animal sciences. This class may be blocked, meeting daily for two back-to-back class periods for a semester rather than for one class period for the entire year. Students can expect to be using the outdoors as a learning environment when the weather is appropriate.

Students in Principles of Biomedical Science will study concepts of biology and medicine to determine the factors that led to the death of a fictional person. While investigating the case, students examine autopsy reports, investigate medical history, and explore medical treatments that might have prolonged the person’s life. The activities and projects introduce students to human physiology, basic biology, medicine, and research processes while allowing them to design their own experiments to solve problems. PBS is an advanced science; it does not count toward the foundational life science credit requirement.
Human Body Systems  SC335
Grade Levels:  10, 11, 12
Course Length:  Year, 1 Period
Credit:  1.00 Advanced Science
Recommended:  1.125 Weighted grade

Recommended:  Successful completion of PBS

Project Lead the Way courses use activity-, project-, and problem-based curricula to allow high school students to apply what they know, identify problems, find unique solutions, and lead their own learning. Human Body Systems (HBS) is the second class in a progression of courses that allow students to investigate the roles of biomedical professionals as they study the concepts of human medicine, physiology, genetics, microbiology, and public health. Students in HBS examine the interactions of human body systems as they explore identity, power, movement, protection, and homeostasis. Exploring science in action, students build organs and tissues on a skeletal Manikin®; use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration; and take on the roles of biomedical professionals to solve real-world medical cases. HBS is an advanced science; it does not count toward the life science credit requirement.

Medical Interventions  SC337
Grade Level:  11, 12
Course Length:  Year, 1 Period
Credit:  1.00 Advanced Science
Recommended:  1.125 Weighted grade

Recommended:  Successful completion of PBS and HBS

Project Lead the Way courses use activity-, project-, and problem-based curricula to allow high school students to apply what they know, identify problems, find unique solutions, and lead their own learning. Medical Interventions (MI) is the third class in a progression of courses that allow students to investigate the roles of biomedical professionals as they study the concepts of human medicine, physiology, genetics, microbiology, and public health. Students in MI follow the life of a fictitious family as they investigate how to prevent, diagnose, and treat disease. They explore how to detect and fight infection; screen and evaluate the code in human DNA; evaluate cancer treatment options; and prevail when the organs of the body begin to fail. Through real-world cases, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics. MI is an advanced science; it does not count toward the life science credit requirement.

Advanced Placement and International Baccalaureate Courses

Students may earn college credit or advancement in college coursework with qualifying scores on AP and/or IB exams. See pages 17–20 for more information.

AP Biology  SC304
Grade Levels:  10, 11, 12
Course Length:  Year, 1 Period
Credit:  1.00 Advanced Science
Recommended:  1.25 Weighted grade
Recommended:  Successful completion of Biology 1 & 2 or Honors Biology 1 & 2; successful completion of one year of or concurrent enrollment in Chemistry or Honors Chemistry

Approximate Cost:  $94 for the AP test (optional)

Advanced Placement (AP) courses are designed to parallel the rigor of an introductory college course. AP Biology is a second full year in Biology where students cover topics with greater breadth and depth than in the first year course. Using four cross cutting themes, students will explore cellular energy and communication processes, evolution, genetics, information transfer, ecology and systems interactions. Students engage in a significant portion of investigative laboratory work integrated throughout the course and have opportunities to develop and record evidence of their communication skills through lab reports, summaries of literature and/or scientific investigations, and oral, written, or graphic presentations.

AP Environmental Science  SC314
Grade Levels:  10, 11, 12
Course Length:  Year, 1 Period
Credit:  1.00 Advanced Science
Recommended:  1.25 Weighted grade
Recommended:  Successful completion of Biology 1 & 2 or Honors Biology 1 & 2

Approximate Cost:  $94 for the AP test (optional)

Advanced Placement (AP) courses are designed to parallel the rigor of an introductory college course. Students in AP Environmental Science study interactions among and human influences on Earth systems, including natural resources and energy use and conservation, human and animal population dynamics, and environmental quality. AP Environmental Science involves “learning by doing” and incorporates scientific practices such as inquiry, experimental design, the use of models, data analysis, critical thinking, and using evidence to construct and communicate explanations. Students can expect to be using the outdoors as a learning environment when the weather is appropriate. Although an environmental studies course, AP Environmental Science cannot be counted as an elective course toward the Social Science and Civic Engagement Honors Diploma.

IB Biology SL  IB411S (1st Year)  IB412S (2nd Year)
IB Biology HL  IB411H (1st Year)  IB412H (2nd Year)

Grade Levels:  11, 12
Course Length:  2 Years, 1 Period
Credit:  1.00 per year Advanced Science
Recommended:  1.125 Weighted Grade for SL
Recommended:  1.25 Weighted Grade for HL

Recommended:  Successful completion of all Ohio State Tests through the end of sophomore year
Approximate Cost:  $122 IB test (required)
Location:  Westerville South only

International Baccalaureate (IB) courses are part of a two-year advanced science programme. Standard Level IB Biology and Higher Level IB Biology are rigorous courses designed to prepare highly motivated students for future scientific studies. IB Biology SL is a rigorous introductory course designed to prepare highly motivated students for future scientific studies. Throughout the two years, students learn about cell and molecular biology, genetics, ecology, evolution and biodiversity, and human physiology. Students in IB Biology HL also explore nucleic acids, metabolism, cellular energy processes, plant biology and animal physiology. Students are required to design and execute an extensive independent experiment that will count for a significant portion of students’ final IB scores. Students are expected to take IB exams at the end of the second year of a course.
Prerequisites:
for MLT 1100 at CSCC.

Though facilitated by a secondary science teacher, the course will give students interested in pursuing a career in the health-related professions a set of medically related skills. Designed for students exploring medicine, nursing, phlebotomy (blood drawing), medical assisting, laboratory technology and other health-oriented industries, the background knowledge and skills acquired in the course will help students achieve basic laboratory testing competencies, enhance current job proficiency, or potentially increase employability in entry-level health-related positions. Though facilitated by a secondary science teacher, the course is highly self-directed. Students will need to enroll in Columbus State Community College (CSCC) to participate. Dual credit will be provided for MLT 1112 at CSCC.

Introduction to Medical Coding and Reimbursement SC530
Grade Level: 11, 12
Course Length: Semester, 1 Period
Credit: 0.67 high school (Advanced Science) and 2 semester college credit hours
1.25 Weighted grade
Pre-Requisites: Must have an intent form on file and meet CSCC course placement requirements

Laboratory Theory for Health Industries is designed to provide theoretical concepts (not laboratory techniques) for individuals in or pursuing health-related industries who may be interested in learning an additional set of medically related skills. Designed for students exploring medicine, nursing, phlebotomy (blood drawing), medical assisting, laboratory technology and other health-oriented industries, the background knowledge and skills acquired in the course will help students achieve basic laboratory testing competencies, enhance current job proficiency, or potentially increase employability in entry-level health-related positions. Though facilitated by a secondary science teacher, the course is highly self-directed. Students will need to enroll in Columbus State Community College (CSCC) to participate. Dual credit will be provided for MLT 1112 at CSCC.

Physical Science Courses

Physical Science SC131
Grade Levels: 9
Course Length: Year, 1 Period
Credit: 1.00 Physical Science (foundational course)

Physical Science is a foundational physical science course and satisfies an Ohio core graduation requirement. Students in Physical Science will study the properties of matter, atomic structure, chemical bonds, chemical reactions, and nuclear chemistry. They will also explore energy, forces, motion, waves, electricity, and the universe. Physical Science involves "learning by doing" and incorporates scientific practices such as inquiry, experimental design, the use of models, data analysis, critical thinking, and using evidence to construct and communicate explanations. Physical Science is recommended for students who may need an additional year of general science background knowledge prior to taking Biology.
Students in Chemistry will explore matter, energy, atomic structure, periodic trends, chemical bonding, chemical equations, acids and bases, and stoichiometry (analyzing the outcomes of chemical reactions). Chemistry involves “learning by doing” and incorporates scientific practices such as inquiry, experimental design, the use of models, data analysis, critical thinking, and using evidence to construct and communicate explanations. A significant portion of the course is lab-based. This course introduces students to the foundations in chemistry that are needed for further study in chemistry or any other science course. Chemistry is highly recommended for any student planning to pursue post-secondary education.

Students in Honors Chemistry will explore matter, energy, atomic structure, periodic trends, chemical bonding, chemical equations, and stoichiometry (analyzing the outcomes of chemical reactions). Honors Chemistry involves “learning by doing” and incorporates scientific analysis, critical thinking, and using evidence to construct and communicate explanations. Students study topics in greater depth and with more mathematical analysis than in those in Chemistry. A significant portion of the course is lab-based. This course introduces students to the foundations in chemistry that are needed for further study in chemistry or any other science course. Honors Chemistry is highly recommended for any student planning to pursue post-secondary education.

Students in Geology will explore energy, matter, motion and forces that impact the systems and processes that form Earth’s features, including volcanoes, earthquakes, glaciers, mountain building, weathering, erosion and plate tectonics. The impact of natural disasters on societies, as well as human impact on Earth’s features, will also be studied. The course includes historical geology and evidence for the formation and composition of the universe, solar system, and Earth. Geology involves “learning by doing” and incorporates scientific practices such as inquiry, experimental design, the use of models, data analysis, critical thinking, and using evidence to construct and communicate explanations.

Students in Physics will explore the transformation of energy in systems including linear kinematics, momentum, two-dimensional and circular motion, forces and Newton’s laws, relationships within and between work, energy, and power, electrical circuits, electrostatics, and characteristics and interactions of waves. Using algebra, geometry, and simple trigonometry, Physics focuses on the mathematical and practical application of physics concepts. Physics involves “learning by doing” and incorporates scientific practices such as inquiry, experimental design, the use of models, data analysis, critical thinking, and using evidence to construct and communicate explanations. This course is highly recommended for any student planning to pursue post-secondary education. Students cannot receive credit for both Physics or Honors Physics, as well as AP Physics 1.

Students in Materials Science learn about the nature of materials, specifically metals, ceramics, polymers, and composites through creative and sometimes artistic hands-on activities. Materials Science involves “learning by doing” and incorporates scientific practices such as inquiry, experimental design, the use of models, data analysis, critical thinking, and using evidence to construct and communicate explanations. A significant portion of the course is lab-based. Guest speakers and field trips are incorporated to include local universities and various industrial sites to gain appreciation for use of materials and need for development of new ones to execute 21st century technology.

Advanced Placement (AP) courses are designed to parallel the rigor of an introductory college course. AP Chemistry is a second full year in Chemistry where students cover advanced topics such as acids and bases, electrochemistry, equilibrium, kinetics, and thermochemistry. A significant portion of the course is lab-based.

Advanced Placement (AP) courses are designed to parallel the rigor of an introductory college course. AP Physics 1 is an algebra-based advanced first-year Physics course. Students explore topics such as kinematics, dynamics, circular motion and gravitation, energy, momentum, simple harmonic motion, torque and rotational motion, electric charge and force, DC circuits, mechanical waves, and sound. A significant portion of the course focuses on designing and conducting inquiry-based laboratory investigations to solve problems through first-hand observations, data collection, analysis and interpretation. AP Physics 1 requires a solid understanding of algebra, geometry, and trigonometric functions to understand major concepts. A graphing calculator is recommended. Students cannot receive credit for both Physics or Honors Physics, as well as AP Physics 1.
Advanced Placement (AP) courses are designed to parallel the rigor of an introductory college course. AP Physics 2 is an algebra-based, second full year in Physics. Students explore topics such as fluids, thermodynamics, electrical force, field and potential, electrical circuits, magnetism and electromagnetic induction, optics, and quantum, atomic and nuclear physics. A significant portion of the course focuses on designing and conducting inquiry-based laboratory investigations to solve problems through first-hand observations, data collection, analysis and interpretation. AP Physics 2 requires familiarity with algebraic and trigonometric functions with an understanding of basic calculus concepts. A graphing calculator is recommended.

Advanced Placement (AP) courses are designed to parallel the rigor of an introductory college course. AP Physics C: Mechanics is a calculus-based, second full year in Physics. Students explore topics such as vector math, linear, angular, and simple harmonic kinematics, dynamics, circular motion, momentum, work and energy, and gravity related topics. AP Physics C: Mechanics emphasizes a deep understanding of foundational principles of physics in classical mechanics by applying these principles to complex physical situations that combine multiple aspects of physics rather than present concepts in isolation. A significant portion of the course is lab-based. AP Physics C: Mechanics uses differential and integral calculus to formulate physical principles, solve complex physical problems, and develop critical thinking skills. A graphing calculator is recommended.

International Baccalaureate (IB) courses are part of a two-year advanced science programme. Standard Level IB Chemistry is a rigorous introductory course designed to prepare highly motivated students for future scientific studies. Throughout the two-year programme students learn about measurement and data processing, atomic structure, the periodic table, chemical bonding and structure, stoichiometry, energy, thermochemistry, kinetics, equilibrium, acids and bases, organic chemistry and the application of chemistry to medicine and pharmaceuticals. Students are required to design and execute an extensive independent experiment that will count for a significant portion of students' final IB scores. Students are expected to take IB exams at the end of the second year of a course.

International Baccalaureate (IB) courses are part of a two-year advanced science programme. Higher level IB Physics is a science of theory and explanation. In the first year students learn about measurement, motion analysis, energy, momentum, properties of matter, thermodynamics, electricity and waves. These topics will be studied through experimentation and the formation of models, both concrete and abstract, to explain physical phenomena. In the second year students focus on electromagnetism, atomic and nuclear physics, digital technology, and environmental aspects of physics (including global warming, energy usage and production), special and general relativity, and optics. Students are required to design and execute an extensive independent experiment that will count for a significant portion of students' final IB scores. Students are expected to take IB exams at the end of the second year of a course.
## Engineering Courses

### Introduction to Engineering Design  
**SC435**

<table>
<thead>
<tr>
<th>Grade Levels:</th>
<th>9, 10, 11, 12</th>
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<tbody>
<tr>
<td>Course Length:</td>
<td>Year, 1 Period</td>
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<tr>
<td>Credit:</td>
<td>1.00 Other Science Elective</td>
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<td>1.125 Weighted grade</td>
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</table>

Project Lead the Way courses use activity-, project-, and problem-based curricula to allow high school students to apply what they know, identify problems, find unique solutions, and lead their own learning. Introduction to Engineering Design (IED) is the first class in a progression of courses introducing students to the engineering profession and the engineering design process. Students in IED will progress from completing structured activities to solving open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills. Students will problem solve as they develop skills in project management and review, technical representation and 3D design, and statistical analysis and mathematical modeling. This course is a general science elective that can be taken concurrently with a science course; it does not count toward a physical or advanced science credit.

### Principles of Engineering  
**SC440**

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<tr>
<th>Grade Levels:</th>
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<tbody>
<tr>
<td>Course Length:</td>
<td>Year, 1 Period</td>
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<tr>
<td>Credit:</td>
<td>1.00 Other Science Elective</td>
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<td></td>
<td>1.125 Weighted grade</td>
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</table>

**Recommended:** Completion of Geometry or concurrent enrollment

Project Lead the Way courses use activity-, project-, and problem-based curricula to allow high school students to apply what they know, identify problems, find unique solutions, and lead their own learning. Principles of Engineering (POE) is a foundation course of the PLTW Engineering Program that follows Introduction to Engineering and Design (IED). This survey course exposes students to some of the major concepts that they will encounter in a postsecondary engineering course of study. Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, the strength of materials and structures, automation, and kinematics. The course applies and concurrently develops secondary level knowledge and skills in mathematics, science, and technology. This course is a general science elective that can be taken concurrently with a science course; it does not count toward a physical or advanced science credit.

### Civil Engineering and Architecture  
**SC437**

<table>
<thead>
<tr>
<th>Grade Levels:</th>
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<tbody>
<tr>
<td>Course Length:</td>
<td>Year, 1 Period</td>
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<tr>
<td>Credit:</td>
<td>1.00 Other Science Elective</td>
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<td>1.125 Weighted grade</td>
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</tbody>
</table>

Civil Engineering and Architecture (CEA) is an elective course of the Project Lead the Way Engineering Program that follows Introduction to Engineering and Design (IED) and Principles of Engineering (POE). In CEA students are introduced to important aspects of building and site design and development. They apply math, science, and standard engineering practices to design both residential and commercial projects and document their work using 3D architectural design software. Though both individual and collaborative team activities, projects, and problems, students will solve problems as they practice common design and development protocols such as project management and peer review. Students will develop skill in engineering calculations, technical representation and documentation of design solutions according to accepted technical standards, and use of current 3D architectural design and modeling software to represent and communicate solutions. This course is a general science elective that can be taken concurrently with a science course; it does not count toward a physical or advanced science credit.

### Computer Integrated Manufacturing  
**SC438**

<table>
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<tr>
<th>Grade Levels:</th>
<th>11, 12</th>
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<tr>
<td>Course Length:</td>
<td>Year, 1 Period</td>
</tr>
<tr>
<td>Credit:</td>
<td>1.00 Other Science Elective</td>
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<td></td>
<td>1.125 Weighted grade</td>
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</tbody>
</table>

Computer Integrated Manufacturing (CIM) is an elective science course of the Project Lead the Way Engineering Program that follows Introduction to Engineering and Design (IED) and Principles of Engineering (POE). Manufacturing transforms ideas into products. Students build upon their Computer Aided Design (CAD) experience through the use of Computer Aided Manufacturing (CAM) software. Learning about manufacturing processes, product design, robotics, and automation, students develop their knowledge and CAD and CAM skills to produce products using a Computer Numerical Controlled (CNC) mill. Students learn and apply concepts related to integrating robotic systems such as Automated Guided Vehicles (AGV) and robotic arms into manufacturing systems. Throughout the course students learn about manufacturing processes and systems. They apply the knowledge and skills gained in this course as they collaborate to design, build, and program factory system models. CIM deepens the skills and knowledge of an engineering student within the context of efficiently creating the products all around us. This course is a general science elective that can be taken concurrently with a science course; it does not count toward a physical or advanced science credit.
SOCIAL STUDIES (SS)

Students are required to take three units of social studies distributed over a combination of six required semester courses and/or three, full-year, Honors or Advanced Placement (AP) courses. All students will be scheduled for a minimum of two semesters of social studies in both grades 9 and 10.

<table>
<thead>
<tr>
<th>Course</th>
<th>Number</th>
<th>Grade</th>
<th>Length</th>
<th>Credit</th>
</tr>
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<tbody>
<tr>
<td>American History</td>
<td>SS123</td>
<td>9</td>
<td>Year</td>
<td>1.00</td>
</tr>
<tr>
<td>Honors American History</td>
<td>SS113</td>
<td>9</td>
<td>Year</td>
<td>1.00</td>
</tr>
<tr>
<td>Modern World History</td>
<td>SS205</td>
<td>10</td>
<td>Year</td>
<td>1.00</td>
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<tr>
<td>AP World History</td>
<td>SS204</td>
<td>10 11 12</td>
<td>Year</td>
<td>1.00</td>
</tr>
<tr>
<td>American Government</td>
<td>SS303</td>
<td>10 11 12</td>
<td>Year</td>
<td>1.00</td>
</tr>
<tr>
<td>AP Government</td>
<td>SS304</td>
<td>10 11 12</td>
<td>Year</td>
<td>1.00</td>
</tr>
<tr>
<td>Psychology</td>
<td>SS501</td>
<td>11 12</td>
<td>Semester</td>
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</tr>
<tr>
<td>Sociology</td>
<td>SS502</td>
<td>11 12</td>
<td>Semester</td>
<td>0.50</td>
</tr>
<tr>
<td>Contemporary World Issues</td>
<td>SS503</td>
<td>11 12</td>
<td>Semester</td>
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<tr>
<td>AP Comparative Government and Politics</td>
<td>SS305</td>
<td>12</td>
<td>Year</td>
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</tr>
<tr>
<td>AP U.S. History</td>
<td>SS404</td>
<td>11 12</td>
<td>Year</td>
<td>1.00</td>
</tr>
<tr>
<td>AP European History</td>
<td>SS414</td>
<td>11 12</td>
<td>Year</td>
<td>1.00</td>
</tr>
<tr>
<td>Race and Ethnic Studies</td>
<td>SS510</td>
<td>11 12</td>
<td>Semester</td>
<td>.50</td>
</tr>
<tr>
<td>African American History</td>
<td>SS520</td>
<td></td>
<td>Year</td>
<td>1.0</td>
</tr>
<tr>
<td>AP Psychology</td>
<td>SS704</td>
<td>11 12</td>
<td>Year</td>
<td>1.00</td>
</tr>
<tr>
<td>IB History of the Americas HL</td>
<td>IB311H – IB312H</td>
<td>11 12</td>
<td>2 Years</td>
<td>1.00/yr.</td>
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<tr>
<td>IB Psychology SL</td>
<td>IB331S</td>
<td>11 12</td>
<td>Year</td>
<td>1.00</td>
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<tr>
<td>POLS 1100 Introduction to American Government *</td>
<td>SS930</td>
<td>9 10 11 12</td>
<td>Semester</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Students who wish to obtain an honors or IB Diploma are required to take four years of social studies.

+ – This is a College Credit Plus (CCP) course. CCP courses allow students to earn credit from both Westerville City Schools and Columbus State Community College while attending class on the high school campus. See page 25 for more information.
# Required Courses

**American History**  
SS123  
Grade Level: 9  
Course Length: Year, 1 Period  
Credits: 1.00

American History examines the history - including the political, economic and social events - of the United States of America from 1877 to the present. Historical thinking introduced in earlier grades continues with students locating and analyzing primary and secondary sources from multiple perspectives to draw conclusions. Students will understand how these perspectives and events came to pass and their meaning, application, and relevance for today's citizens.

**Honors American History**  
SS113  
Grade Level: 9  
Course Length: Year, 1 Period  
Credits: 1.00  
1.125 Weighted Grade

Honors American History 1 & 2 examines the history - including the political, economic and social events - of the United States of America from the 1800s to the present. Historical thinking introduced in earlier grades continues with students locating and analyzing primary and secondary sources from multiple perspectives to draw conclusions. Students will understand how these perspectives and events came to pass and their meaning, application, and relevance for today's citizens. Honors American History is designed for students that have a high interest in understanding, analyzing, and critically thinking about historical events. Students should demonstrate advanced and independent reading and writing skills, and also be willing to engage in critical discussions inside and outside the classroom. All Honors American History students will complete a course project that will integrate research, primary and secondary source analysis, authentic learning, and presentation skills. Enrollment is self-selected.

**Modern World History**  
SS205  
Grade Levels: 10  
Course Length: Year, 1 Period  
Credits: 1.00

Recommended: American History

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

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# Elective Courses

**American Government**  
SS303  
Grade Level: 10, 11, 12  
Course Length: Year, 1 Period  
Credits: 1.00  
Recommended: American History and Modern World History

The Federal Government will provide an in-depth study of the American Government system. Students will study the historical roots of the American federal system, how the system has changed over time, and how it compares to other forms of government, as well as the institutions of the US Government including the Presidency, Congress, and the Supreme Court. Students develop an understanding of the rights and responsibilities of citizenship. Other integral course concepts include: political parties, voting, interest groups, and the impact of media on government.

**Comparative Government, Financial Literacy, and Economics** will build on the student's prior knowledge from United States and Global History 1-4 and United States Government 1. It includes an in-depth study of state and local governments and their relationship to the national government, as well as compares and contrasts the different levels of government in the federal system. Students also study the basic concepts of the economic system of the United States by researching, examining, discussing, and evaluating the economic interactions among individuals, governments, businesses, and communities within domestic and international contexts.

**Race and Ethnic Studies**  
SS410  
Grade Level: 11, 12  
Course Length: Semester, 1 Period  
Credits: 0.50  
Location: Westerville Central and Westerville South only

Race and Ethnic Studies: The Quest for Justice in the US is the study of the historical development and current state of systems of oppression and their impacts. Per Ohio's Historical Thinking Skills for High School, this course draws upon skills found in Advanced Placement U.S. History, Advanced Placement World History, Advanced Placement European History courses, Sociology, and Ethnic Studies. However, the structure of the course allows student choice to dictate the means by which each student will demonstrate their mastery of these skills while allowing for differentiation. Additionally, student inquiry projects add depth to students' shared understanding of key concepts. The course culminates with a Justice Advocacy Project in which students will learn how to challenge discrimination in their world.

**African American History from 1895**  
Grade Levels: 12  
Course Length: Year, 1 Period  
Credits: 1.00  
Location: Westerville North HS Only

This 12th Grade Social Studies elective course, designed to be taken in tandem with African American Literature, presents students with opportunities to examine African American history based on a foundation of skill and content standards provided by the Ohio Department of Education and the College Board. Building on primary source analysis, historical argumentation, and synthesis skills, the course framework centers on developing a sophisticated understanding of the African American community in the United States. Per Ohio's Historical Thinking Skills for High School, this course draws upon skills found in Advanced Placement U.S. History, Advanced Placement World History, and Advanced Placement European History courses. However, the structure of the course allows student choice to dictate the means by which each student will demonstrate their mastery of these skills while allowing for differentiation. Additionally, student inquiry projects add depth to students’ shared understanding of African American history.
**Advanced Placement and International Baccalaureate Courses**

Students may earn college credit or advancement in college coursework with qualifying scores on AP and/or IB exams. See pages 17 - 20 for more information.

### AP World History SS204
- **Grade Levels:** 10, 11, 12
- **Course Length:** Year, 1 Period
- **Credits:** 1.00
- **Recommended:** Honors American History
- **Approximate cost:** $94 for the AP test (optional)

Advanced Placement (AP) courses are designed to parallel the rigor of an introductory college course. The course provides balanced global coverage, with Africa, the Americas, Asia, Oceania and Australia, and Europe all represented. Critical analysis, in-depth writing, and reading skills are emphasized. AP World History provides unique opportunities for students to recognize how the study of history has been shaped by the findings and methods of other disciplines such as anthropology, archaeology, visual arts, literature, economics, geography and political science. Course enrollment is self-selected.

### AP U.S. Government and Politics SS304
- **Grade Levels:** 10, 11, 12
- **Course Length:** Year, 1 Period
- **Credits:** 1.00
- **Recommended:** Honors American History
- **Approximate cost:** $94 for the AP test (optional)

Advanced Placement (AP) courses are designed to parallel the rigor of an introductory college course. AP U.S. Government and Politics introduces students to key political ideas, institutions, policies, interactions, roles, and behaviors that characterize the political culture of the United States. The course examines politically significant concepts and themes, through which students learn to apply disciplinary reasoning, assess the causes and consequences of political events, and interpret data to develop evidence-based arguments. Critical analysis, writing and research skills are emphasized. Course enrollment is self-selected. Credit in this course may replace required credit in American Government.

### AP Comparative Government and Politics SS305
- **Grade Level:** 12
- **Course Length:** Year, 1 Period
- **Credits:** 1.00
- **Recommended:** Honors American History
- **Approximate cost:** $94 for the AP test (optional)

Advanced Placement (AP) courses are designed to parallel the rigor of an introductory college course. AP Comparative Government and Politics introduces students to fundamental concepts used by political scientists to study the processes and outcomes of politics in a variety of country settings. The course aims to illustrate the rich diversity of political life, to show available institutional alternatives, to explain differences in processes and policy outcomes, and to communicate to students the importance of global political and economic changes. In addition to covering the major concepts that are used to organize and interpret what is known about political phenomena and relationships, the course will cover specific countries and their governments including China, Great Britain, Mexico, Nigeria, Iran, and Russia. Course enrollment is self-selected.

### AP U.S. History SS404
- **Grade Levels:** 11, 12
- **Course Length:** Year, 1 Period
- **Credits:** 1.00
- **Recommended:** Honors American History
- **Approximate cost:** $94 for the AP test (optional)

Advanced Placement (AP) courses are designed to parallel the rigor of an introductory college course. AP U.S. History builds on students’ previous knowledge of significant historical events, individuals, developments, and processes from 1491 to the present. Students analyze primary and secondary sources, make historical comparisons and use reasoning about contextualization, causation, continuity and change over time in developing historical arguments. Critical analysis, writing and reading skills are emphasized. Course enrollment is self-selected. Credit in this course may replace required credit in American History.

### AP European History SS414
- **Grade Levels:** 11, 12
- **Course Length:** Year, 1 Period
- **Credits:** 1.00
- **Recommended:** Honors European History
- **Approximate Cost:** $94 for the AP test (optional)

Advanced Placement (AP) courses are designed to parallel the rigor of an introductory college course. AP European History introduces students to investigate significant events, individuals, developments, and processes in four historical periods from approximately 1450 to the present. Emphasis is on understanding some of the principal themes in modern European history, analyzing historical evidence and historical interpretation, and expressing historical understanding in writing. Students analyze primary and secondary sources, make historical comparisons and use reasoning about contextualization, causation, continuity and change over time in developing historical arguments. Critical analysis, writing and reading skills are emphasized. Course enrollment is self-selected.

### AP Psychology SS704
- **Grade Levels:** 11, 12
- **Course Length:** Year, 1 Period
- **Credits:** 1.00
- **Recommended:** Honors Psychology
- **Approximate cost:** $94 for the AP test (optional)

Advanced Placement (AP) courses are designed to parallel the rigor of an introductory college course. AP Psychology is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology, as well as the ethics and methods psychologists use in their science and practice. Course enrollment is self-selected.

### IB History of the Americas HL IB311H (1st Year)
- **Grade Levels:** 11 and 12
- **Course Length:** 2 Years, 1 Period
- **Credits:** 1.00 per year
- **Recommended:** Successful completion of all Ohio State Tests through the end of sophomore year
- **Approximate cost:** $122 for IB test (required)
- **Location:** Westerville South only

IB History of the Americas is a two year course that requires students to make comparisons between similar and dissimilar solutions to common social, economic and political conflicts as well as make comparisons...
between, but not judgments of, different cultures, political systems and national traditions. Students will evaluate the relative successes and failures of diplomatic efforts throughout the Western world as well as increase their knowledge of and empathy for people living in different regions and contexts.

During the first year of the course, students learn the discipline of historical investigation through the practice of both the selection and interpretation of data and its critical analysis. Students also analyze the causes, practices and effects of war with specific focus on the U.S. Independence movement, the United States Civil War, World War I and World War II. Additionally, the origins of authoritarian and single party states in Cuba, Germany, Egypt and the USSR are studied.

In the second year, students evaluate case studies in diplomacy, including the Versailles Conference, the creation of Israel and US-China relations from 1976 to 1989. The course also evaluates independence movements in Central America, the growth of Populist governments in Argentina and Brazil after World War II, the origins of the Cold War, Civil Rights and Social Movements during the 20th century as well as a study of the impacts of domestic policies in the region from 1949 to 2000.

Students will complete an individual historical investigation during the first and second year of the course.

Students who successfully complete both years of this course meet the Ohio requirements of the one year Government course.

**IB Psychology SL IB331S**

| Grade Levels: | 11, 12 |
| Course Length: | Year, 1 Period |
| Credits: | 1.00 |
| Recommended: | 1.125 Weighted grade |
| Approximate cost: | $122 for IB test (required) |
| Location: | Westerville South only |

IB Psychology SL has three main components: (1) four areas of study including the learning perspective, the cognitive perspective, the biological perspective and the dysfunctional perspective of psychology; (2) research methodology and how it fits into experimental studies done around the world; and (3) completion of a simple experimental study (replicating a psychological experiment already done by professionals while applying overall knowledge acquired throughout the course).

**Elective Courses**

**Psychology SS501**

| Grade Levels: | 11, 12 |
| Course Length: | Semester, 1 Period |
| Credits: | 0.50 |

Psychology focuses on understanding, articulation and dissemination of psychology as a science; it infuses perspectives on behavioral issues related to neurobiology, lifespan, cognition and deviation. The course emphasizes active learning and provides a rigorous understanding preparing students for making daily life decisions, and prepares students for an introductory college-level psychology class.

**Sociology SS502**

| Grade Levels: | 11, 12 |
| Course Length: | Semester, 1 Period |
| Credits: | 0.50 |

Sociology focuses on the systematic understanding of social interaction, social organization, social institutions, and social change. Major themes in sociological thinking include the interplay between the individual and society, how society is both stable and changing, the causes and consequences of social inequality, and the social construction of human life. Understanding sociology helps discover and explain social patterns and see how such patterns change over time and in different settings. By making vivid the social basis of everyday life, sociology also develops critical thinking by revealing the social structures and processes that shape diverse forms of human life.

**Contemporary World Issues SS503**

| Grade Levels: | 11, 12 |
| Course Length: | Semester, 1 Period |
| Credits: | 0.50 |

The dynamics of global interactions among nations and regions present issues that affect all humanity. Contemporary issues have geographic, political, economic, social, and historical components. Through the use of social studies skills and methods, students will explore how current global dynamics are impacted by our physical environment, human geography, 21st century communication, and globalization. Students can expect a variety of different instructional approaches, including the use of various types of texts, primary and secondary source documents, the use of 21st century technology, projects, and class discussion.

**College Credit Plus Course**

College Credit Plus courses allow students to earn credit from both Westerville City Schools and Columbus State Community College while attending class on the high school campus. See page 25 for more information.

**POLs 1100 Introduction to American Government SS930**

| Grade Levels: | 9, 10, 11, 12 |
| Course Length: | Semester, 1 Period |
| Credit: | 1.00 and 3 semester college hours |
| Prerequisites: | 1.25 weighted grade |

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. Course reading and writing assignments may be thematically organized by the instructor. Students will be required to attend class five days each week as they would with a traditional Social Studies class. Students will need to enroll in Columbus State Community College (CSCC) to participate. Dual credit will be provided for POLS 1100 offered at CSCC.
**VISUAL AND PERFORMING ARTS (VPA)**

Students must complete 1 credit of visual or performing arts to fulfill the Ohio Department of Higher Education’s recommended college core for state supported universities.

Visual and performing arts education experiences are based on Ohio’s Learning Standards in the Fine Arts and through arts experiences. Students will:
1. understand and appreciate the historical, social, political and cultural context of the arts in societies past and present.
2. engage in the processes of creating and performing works of art.
3. identify and discriminate among the formal, technical, and expressive aspects in visual and performing works of arts.
4. understand why people create, value the arts, and consider differences in personal and community perspective regarding the arts.
5. connect and apply learning in each art discipline to other academic disciplines and to relevant careers.

1 - A co- or extracurricular component may be offered with the class.
2 - Fundraising opportunities may be offered to offset the cost of the music program.

<table>
<thead>
<tr>
<th>Course</th>
<th>Number</th>
<th>Grade</th>
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<tr>
<td>Digital Arts</td>
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<tr>
<td>2-D Visual Arts</td>
<td>VP152</td>
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<td>10 11 12</td>
<td>Semester 0.50</td>
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<tr>
<td>3-D Visual Arts</td>
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<td>10 11 12</td>
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<tr>
<td>Advanced Digital Arts</td>
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<tr>
<td>Advanced 2-D Visual Arts</td>
<td>VP162</td>
<td>10</td>
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<tr>
<td>Advanced 3-D Visual Arts</td>
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<tr>
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<tr>
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<td>IB Visual Art SL</td>
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<tr>
<td>Marching Band 1,2</td>
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<td>10 11 12</td>
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<td>Orchestra Ensemble 1,2</td>
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<td>Concert Choir 1,2</td>
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<td>IB Jazz Band SL</td>
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<tr>
<td>IB Music – Choir SL</td>
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<td>11 12</td>
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<tr>
<td>IB Theater SL</td>
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<td>2 Years 1.00/yr</td>
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</tbody>
</table>
Art Foundations  VP100
Grade Levels:  9, 10, 11, 12
Course Length:  Semester, 1 Period
Credit:  0.50

Art Foundations is the entry level course in the Westerville City Schools High School Visual Art curriculum. It is recommended as the first art class in a sequence of classes. The course is designed to promote critical thinking skills through making artwork, research and aesthetic problem solving. Students are introduced to the history of art and the role of visual art in sociocultural development. Lessons are mainly project-based and designed to encourage students to make connections between visual art and other subject areas. Evaluation is based upon art-making, mastery of concepts, involvement and improvement.

Digital Arts  VP151
Grade Levels:  9, 10, 11, 12
Course Length:  Semester, 1 Period
Credit:  0.50
Recommended:  Art Foundations

Digital Arts is an introduction to digital photography, film and applicable computer programs. Students will learn to apply the elements and principles of design in the capture and enhancement of digital images. Photoshop, Illustrator and other arts-based computer programs will be introduced and used to create and communicate with photographic images. Students will utilize multimedia techniques to create their own visual and film productions. Evaluation is based upon art-making, mastery of concepts and computer programs, involvement and improvement. Art Foundations is highly recommended as a prerequisite. An appropriate camera is required.

2-D Visual Art  VP152
Grade Levels:  9, 10, 11, 12
Course Length:  Semester, 1 Period
Credit:  0.50
Recommended:  Art Foundations

2-D Art is designed for students who want to develop their drawing skills and their abilities to design in a two dimensional format. Students will develop their powers of observation and increase their understanding of compositional elements. Strong emphasis will be placed on visual perception, structural drawing and compositional design. The course will explore the artwork of successful artists, both past and contemporary. Students will learn to critique their own artwork and the work of others, using appropriate visual art vocabulary. Evaluation is based upon art-making, mastery of concepts, involvement and improvement. Art Foundations is highly recommended as a prerequisite for this course.

3-D Visual Art  VP153
Grade Levels:  9, 10, 11, 12
Course Length:  Semester, 1 Period
Credit:  0.50
Recommended:  Art Foundations

3-D Art is designed for students who want to explore a variety of three dimensional media including but not limited to ceramics. Historical, cultural and social contexts will be explored through guided research. Students will be expected to analyze both professional and personal art through oral discussion and written reflections. They will develop an understanding of and appreciation for the artwork of different cultures and experiment with a variety of materials in creating works of art. Evaluation is based on aesthetic design, craftsmanship, art criticism and the knowledge of vocabulary and processes. Art Foundations is highly recommended as a prerequisite for this course.

Advanced Digital Arts  VP161
Grade Levels:  10, 11, 12
Course Length:  Semester, 1 Period
Credit:  0.50
Recommended:  Art Foundations, Digital Arts

This advanced photography course will focus on promoting personal artistic expression through the use of digital media including photography and film. Students will continue to refine skills with Photoshop, Illustrator and other arts based computer programs. A level of understanding of the processes and programs learned in the beginning Digital Arts course is expected. Projects will be more individualized. Evaluation is based upon art-making, mastery of concepts, involvement and improvement. An appropriate camera is required.

Advanced 2-D Visual Art  VP162
Grade Levels:  10, 11, 12
Course Length:  Semester, 1 Period
Credit:  0.50
Recommended:  Art Foundations, 2-D Art

Advanced 2-D Art is designed for students who have successfully completed 2-D art and wish to continue to refine their skills. Students enrolled in Advanced 2D art will utilize a variety of subject matter and explore their own ideas through the use of 2D materials. Strong emphasis will be placed on drawing and design. Evaluation is based upon art-making, mastery of concepts, involvement and improvement.

Advanced 3-D Visual Art  VP163
Grade Levels:  10, 11, 12
Course Length:  Semester, 1 Period
Credit:  0.50
Recommended:  Art Foundations, 3-D Art

Advanced 3-D Art is designed for students who have successfully completed 3-D Art and wish to continue to develop artistic skills with a variety of three dimensional media. The course will focus on the relationship of artistic materials to the scope and intent of each project. Students will investigate contemporary sculptures and new media. Students in Advanced 3-D art are expected to self-reflect and to be able to work independently. Evaluation is based on aesthetic design, craftsmanship, art criticism and the knowledge of vocabulary and processes.
Advanced Painting 1   VP121
Grade Levels: 10, 11, 12
Course Length: Year, 1 Period/Day OR Semester, 2 Periods/Day
Credit: 1.00
Recommended: Art Foundations and 2D Art

Advanced Painting 1 is a continuation of the concepts and drawing skills emphasized in 2D Art. Students will further develop their powers of observation, their understanding of compositional elements, and their ability to interpret the world around them. Color and color theory are an important focus. This course covers paint properties and techniques. It also explores past and contemporary artwork. Students learn to critique their own artwork as well as the work of others. Evaluation is based on aesthetic design, craftsmanship, art criticism, and the knowledge of vocabulary and processes. Successful completion of 2D Art is highly recommended before taking this course.

Advanced Painting 2   VP122
Grade Levels: 10, 11, 12
Course Length: Year, 1 Period/Day OR Semester, 2 Periods/Day
Credit: 1.00
Recommended: 2D Art and Advanced Painting 1

Painting 2 is an opportunity for the advanced art student to continue to develop his/her painting skills. Students will create original works of art that show an understanding of composition, paint techniques, and personal expression. The lessons promote an understanding of historical, cultural, and social contexts. The Advanced Painting 2 student is expected to work independently and develop a personal portfolio. Evaluation is based on aesthetic design, craftsmanship, art criticism, and the knowledge of vocabulary and processes. Successful completion of 2D Art and Advanced Painting 1 are highly recommended before taking this course.

International Baccalaureate Courses
Students may earn college credit or advancement in college coursework with qualifying scores on IB exams. See pages 18 - 20 for more information.

IB Visual Arts Standard Level   IB611S (1st year)   IB612S (2nd year)
Grade Levels: 11, 12
Course Length: 2 Years, 1 Period
Credits: 1.0 per year
1.125 Weighted grade
Required: Successful completion of all Ohio State Tests through the end of sophomore year
Recommended: 2-D Art
Approximate cost: $122 for IB test (required)
Location: Westerville South only

This two-year course satisfies a Standard Level Group 6 requirement for the International Baccalaureate Diploma. IB Visual Arts SLA has a studio and a research component. The course is recommended for students who have had previous success in making art. Students should also have an interest in the study of world cultures and an ability to work independently and meet deadlines. Each student will be responsible for planning, completing, and presenting an exhibition of original artwork, a process portfolio and a comparative study of two artists. Teacher-initiated assignments include studio projects, sketchbook assignments, artist research, collaborative critiques, and response papers. This course differs from IB Visual Art HL in its level of expectation. The student will receive a Westerville South grade as well as an International Baccalaureate score. Evaluation is based on IB criteria. 2-D Art is the recommended prerequisite.

IB Visual Art: Higher Level   IB611H (1st year)   IB612H (2nd year)
Grade Levels: 11 and 12
Course Length: 2 Years, 1 Period
Credits: 1.00 per year
1.250 Weighted grade
Required: Successful completion of all Ohio State Tests through the end of sophomore year
Recommended: 2-D Art
Approximate cost: $122 for IB test (required)
Location: Westerville South only

This two-year course satisfies a Higher Level Group 6 requirement for the International Baccalaureate Diploma. Students may also enroll in the two-year course as a course candidate. IB Visual Art HL has a studio component and a research component. The course is recommended for students who have had experience and success in making art. Students should also have an interest in the study of world cultures and an ability to work independently and meet deadlines. Each student will be responsible for planning, completing, and presenting an exhibition of original artwork, a process portfolio and a comparative study of two artists. Teacher-initiated assignments include studio projects, sketchbook assignments, artist research, collaborative critiques, and response papers. This course differs from IB Visual Art SL in its longer time frame and higher level of expectation. The student will receive a Westerville South grade as well as an International Baccalaureate score. Evaluation is based on IB criteria. 2-D Art is highly recommended as a prerequisite.
Music

Concert Band Ensemble  VP302
Grade Levels:  9, 10, 11, 12
Course Length:  Year, 1 Period
Credits:  1.00
Recommended:  Audition; permission of instructor may be required

Concert Band is an introductory course to high school wind and percussion literature. Emphasis is placed on developing basic performance skills; literature ranges from easy to moderate levels. Students will gain basic instrumental, sight-reading and theory skills as they relate to instrumental music. This is a performance ensemble course that includes public performances outside the school day that support and extend learning in the classroom. A co- or extracurricular component may be offered with the class; fundraising opportunities may be offered to offset the cost of the music program.

Symphonic Band Ensemble  VP303
Grade Levels:  9, 10, 11, 12
Course Length:  Year, 1 Period
Credits:  1.00
Recommended:  Audition; permission of instructor may be required

Symphonic Band is an advanced course for wind and percussion literature. Emphasis is placed on performance of moderate to difficult literature that requires considerable skill. Students will gain advanced instrumental, sight-reading and theory skills as they relate to instrumental music. This is a performance ensemble course that includes public performances outside the school day that support and extend learning in the classroom. A co- or extracurricular component may be offered with the class; fundraising opportunities may be offered to offset the cost of the music program.

Jazz Ensemble  VP305
Grade Levels:  9, 10, 11, 12
Course Length:  Year, 1 Period
Credits:  1.00
Recommended:  Audition; member of Concert/Symphonic Band

Jazz Ensemble allows students to study and perform music written for this genre. Music in the tradition of Duke Ellington, Count Basie, Benny Goodman, Charlie Parker, Charles Mingus, Thelonius Monk and others will be covered. Students will be placed according to ability level and instrumentation. Students interested in improvisation will have the opportunity to develop this aspect of their playing. This is a performance ensemble course that includes public performances outside the school day that support and extend learning in the classroom. Exceptions must be approved by the instructor. A co- or extracurricular component may be offered with the class; fundraising opportunities may be offered to offset the cost of the music program.

Marching Band  VP310
Grade Levels:  9, 10, 11, 12
Course Length:  Year, 1 Period
Credits:  1.00
Recommended:  Audition; permission of instructor may be required
Additional Fees:  $250-$400 (students participating in Marching Band)

Marching Band is considered a co-curricular option in instrumental music and meets after school. After school extracurricular practice time and band camp are required for marching band members. The marching band program encourages personal growth, self-discipline, responsibility, school spirit, and music education. Students are required to participate in performances outside the school day that support and extend learning in the classroom. A co- or extracurricular component may be offered with the class; fundraising opportunities may be offered to offset the cost of the music program.

Orchestra Ensemble  VP320
Grade Levels:  9, 10, 11, 12
Course Length:  Year, 1 Period
Credits:  1.00
Recommended:  Audition; permission of instructor may be required

Orchestra Ensemble is a large group ensemble for string players. Emphasis will be placed on developing instrumental skills to perform quality string literature from string ensemble, full orchestra and chamber music repertoire. Students will gain basic instrumental, sight-reading and theory skills as they relate to orchestra literature. This is a performance ensemble course that includes public performances outside the school day that support and extend learning in the classroom. A co- or extracurricular component may be offered with the class; fundraising opportunities may be offered to offset the cost of the music program.

Women’s Chorus  VP401
Men’s Chorus  VP402
Grade Levels:  9, 10, 11, 12
Course Length:  Year, 1 Period
Credits:  1.00

This ensemble is especially designed for the needs of new and beginner students. Various styles of choral and solo literature are studied. No audition is needed. All 9th graders are placed into these groups. A co- or extracurricular component may be offered with the class; fundraising opportunities may be offered to offset the cost of the music program.

Concert Choir  VP403
Grade Levels:  9, 10, 11, 12
Course Length:  Year, 1 Period
Credits:  1.00
Recommended:  Audition; permission of instructor may be required

Concert Choir is an introductory course for high school choral literature. Emphasis will be placed on developing vocal skills to perform quality choral literature. Students will gain basic vocal, sight-singing and theory skills as they relate to choral singing. This is a performance ensemble course that includes public performances outside the school day that support and extend learning in the classroom. A co- or extracurricular component may be offered with the class; fundraising opportunities may be offered to offset the cost of the music program.

Symphonic Mixed Choir  VP404
Grade Levels:  9, 10, 11, 12
Course Length:  Year, 1 Period
Credits:  1.00
Recommended:  Audition; permission of instructor may be required

Symphonic Mixed Choir is an advanced course for choral literature. Emphasis is placed on performance of moderate to difficult literature that requires considerable skill. Students will gain advanced vocal, sight-singing and theory skills as they relate to choral singing. This is a performance ensemble course that includes public performances outside the school day that support and extend learning in the classroom. A co- or extracurricular component may be offered with the class; fundraising opportunities may be offered to offset the cost of the music program.
Symphonic Women’s Choir VP405
Grade Levels: 9, 10, 11, 12
Course Length: Year, 1 Period
Credits: 1.00
Recommended: Audition; permission of instructor may be required

Symphonic Women’s Choir is for those wishing to sing in a large, select women’s choir. Emphasis will be on developing vocal skills to perform and on understanding and appreciating all styles of music. Students will gain basic vocal, sight-singing and theory skills as they relate to choral singing. A co- or extracurricular component may be offered with the class; fundraising opportunities may be offered to offset the cost of the music program.

Notables, Soundsations and Jazz Central VP410
Grade Levels: 9, 10, 11, 12
Course Length: Year, 1 Period
Credits: 1.00
Prerequisite: Audition; member of Concert/Symphonic Choirs
Approximate cost: $125 Performance attire

The most active and visible of the vocal music groups, these ensembles perform on a regular basis throughout the community and at festivals and concerts. The music covers a wide variety of styles from pop to Broadway, and jazz. As representatives of their respective buildings, these students are selected by a rigorous audition process. Students are responsible for performance attire and must be a member of Concert or Symphonic Choirs. Exceptions must be approved by the instructor. A co- or extracurricular component may be offered with the class; fundraising opportunities may be offered to offset the cost of the music program.

International Baccalaureate Courses

Students may earn college credit or advancement in college coursework with qualifying scores on IB exams. See pages 18 - 20 for more information.

In order to enroll in the following IB music performance courses, students must be concurrently enrolled in the IB Music Theory and Analysis course (IB 671S junior year and IB 672S senior year). This course meets every other day, 10th period over the course of the junior and senior year.

IB Jazz SL IB631S (1st year) IB632S (2nd year)
Grade Levels: 11, 12
Course Length: 2 years, 1 period
Credits: 1.00 per year 1.125 Weighted grade
Approximate cost: $122 for IB test
Location: Westerville South only

IB Jazz SL is designed as an overview of music theory, history, analysis and performance. The course will balance the performing and theoretical aspects of jazz band music. Students will be exposed to a broad spectrum of jazz music and its western and non-western antecedents, including but not limited to western music, African music, south American and Afro-Caribbean music, field chants, Negro spirituals, and ragtime. Students are given opportunities to creatively develop their knowledge, abilities, and understanding through performances in both an ensemble and solo recital. The IB Music SL scores are based on an internally assessed performance, an externally assessed musical investigation paper, and an exam.

IB Orchestra SL IB641S (1st year) IB642S (2nd year)
Grade Levels: 11, 12
Course Length: 2 years, 1 period
Credits: 1.00 per year 1.125 Weighted grade
Approximate cost: $122 for IB test
Location: Westerville South only

IB Orchestra SL is designed as an overview of music theory, history, analysis and performance. The course will balance the performing and theoretical aspects of orchestral music. Students will be exposed to a broad spectrum of Western music spanning 300 years. Students are given opportunities to creatively develop their knowledge, abilities, and understanding through performances in both an ensemble and solo recital. The IB Music SL scores are based on an internally assessed performance, an externally assessed musical investigation paper, and an exam.

IB Music - Wind Ensemble SL IB651S (1st year) IB652S (2nd year)
Grade Levels: 11, 12
Course Length: 2 years, 1 period
Credits: 1.00 per year 1.125 Weighted grade
Approximate cost: $122 for IB test
Location: Westerville South only

IB Music - Wind Ensemble SL is designed as an overview of music theory, history, analysis and performance. Students that have an aptitude and interest in instrumental music should take this class concurrently with one of our band ensembles. The course will balance the performing, and theoretical aspects of instrumental music. Students will be exposed to a broad spectrum of Western music spanning 300 years. Students are given opportunities to creatively develop their knowledge, abilities, and understanding through performances in both an ensemble and solo recital. The IB Music SL scores are based on an internally assessed performance, an externally assessed musical investigation paper, and an exam.

IB Music - Choir SL IB661S (1st year) IB662S (2nd year)
Grade Levels: 11, 12
Course Length: 2 years, 1 period
Credits: 1.00 per year 1.125 Weighted grade
Approximate cost: $122 for IB test
Location: Westerville South only

IB Choir SL is designed as an overview of music theory, history, analysis and performance. The course will balance the performing and theoretical aspects of choral music. Students will be exposed to a broad spectrum of choral music in western society and international music. Students will also develop appropriate musical language and terminology to describe and reflect their critical understanding of musical examples from different countries, and/or different historical periods. Students are given opportunities to creatively develop their knowledge, abilities, and understanding through performances in both an ensemble and solo recital. The IB Music SL scores are based on an internally assessed performance, an externally assessed musical investigation paper, and an exam.
Introduction to Theatre

Grade Levels: 9, 10, 11, 12
Course Length: Semester, 1 Period
Credit: 0.50

Introduction to Theatre is a course in which students will be exposed to many facets of theatre: the structures and types of plays, historical developments in the theatre arts, an introduction to the basic principles of acting, the viewing of actual productions in the community and an introduction to the technical aspects of theatre. Course fees will go toward purchasing scripts and supplemental materials for instructional purposes and performances. This course counts as 0.50 elective credit toward the visual and performing arts requirement.

Acting

Grade Levels: 9, 10, 11, 12
Course Length: Semester, 1 Period
Credit: 0.50
Recommended: Introduction to Theatre

Acting continues to give primary emphasis to those aspects of actor training that have to do with the development of internal and interpretative skills which were presented in Introduction to Theatre. Some after-school performances may be required as part of the course. Course fees will go toward purchasing scripts and supplemental materials for instructional purposes and performances. This course counts as 0.50 elective credit toward visual and performing arts requirement.

International Baccalaureate Course

Students may earn college credit or advancement in college coursework with qualifying scores on IB exams. See pages 18 - 20 for more information.

IB Theater SL

Grade Levels: 11, 12
Course Length: 2 years, 1 period
Credits: 1.00 per year
1.125 Weighted grade
Approximate cost: $122 for IB test (required)
Location: Westerville South only

IB Theater SL satisfies a Standard Level Group 6 requirement for the International Baccalaureate Diploma. Students may also enroll in the two-year course as a course candidate. IB Theatre SL is multifaceted, giving students the opportunity to engage in theatre as creators, designers, directors and performers. Students will work individually and collaboratively as part of an ensemble. Through research, creating, preparing, presenting, and critically reflecting on theatre, students gain a rich understanding of themselves, their community and the world. Students will have the opportunity to discover and engage with different forms of theatre across time, place and culture, promoting international-mindedness and appreciation of diversity of theatre.
While no world language credit is required for graduation from high school, a minimum of two years of study in one world language is recommended to meet college articulation requirements of most colleges and a third unit or more is suggested.

Students in World Language courses:
1. communicate in languages other than English.
2. gain knowledge and understanding of other cultures.
3. connect with other disciplines and acquire information.
4. develop insight into the nature of language and culture.
5. interact with members of the target language communities.

Studies in American Sign Language, French, and Spanish are available to students in all Westerville high schools.

<table>
<thead>
<tr>
<th>Course</th>
<th>Number</th>
<th>Grade</th>
<th>Length</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>French 1</td>
<td>WL101</td>
<td>9</td>
<td>10 11 12</td>
<td>Year</td>
</tr>
<tr>
<td>French 2</td>
<td>WL102</td>
<td>10 11 12</td>
<td>Year</td>
<td>1.00</td>
</tr>
<tr>
<td>Honors French 3</td>
<td>WL113</td>
<td>11 12</td>
<td>Year</td>
<td>1.00</td>
</tr>
<tr>
<td>Honors French 4</td>
<td>WL114</td>
<td>12</td>
<td>Year</td>
<td>1.00</td>
</tr>
<tr>
<td>IB French SL</td>
<td>IB231S – IB232S</td>
<td>11 12</td>
<td>2 Years</td>
<td>1.00/yr.</td>
</tr>
<tr>
<td>Spanish 1</td>
<td>WL201</td>
<td>9</td>
<td>10 11 12</td>
<td>Year</td>
</tr>
<tr>
<td>Spanish 2</td>
<td>WL202</td>
<td>10 11 12</td>
<td>Year</td>
<td>1.00</td>
</tr>
<tr>
<td>Honors Spanish 2</td>
<td>WL212</td>
<td>9</td>
<td>10 11 12</td>
<td>Year</td>
</tr>
<tr>
<td>Spanish 3</td>
<td>WL203</td>
<td>10</td>
<td>11 12</td>
<td>Year</td>
</tr>
<tr>
<td>Honors Spanish 3</td>
<td>WL213</td>
<td>10 11 12</td>
<td>Year</td>
<td>1.00</td>
</tr>
<tr>
<td>Honors Spanish 4</td>
<td>WL214</td>
<td>11</td>
<td>12</td>
<td>Year</td>
</tr>
<tr>
<td>AP Spanish Language</td>
<td>WL225</td>
<td>12</td>
<td>Year</td>
<td>1.00</td>
</tr>
<tr>
<td>IB Spanish SL</td>
<td>IB211S – IB212S</td>
<td>11 12</td>
<td>2 Years</td>
<td>1.00/yr.</td>
</tr>
<tr>
<td>IB Spanish HL</td>
<td>IB211H – IB212H</td>
<td>11 12</td>
<td>2 Years</td>
<td>1.00/yr.</td>
</tr>
<tr>
<td>IB Spanish ab Initio SL</td>
<td>IB221S – IB222S</td>
<td>11 12</td>
<td>2 Years</td>
<td>1.00/yr.</td>
</tr>
<tr>
<td>American Sign Language 1</td>
<td>WL401</td>
<td>9</td>
<td>10 11 12</td>
<td>Year</td>
</tr>
<tr>
<td>American Sign Language 2</td>
<td>WL402</td>
<td>10 11 12</td>
<td>Year</td>
<td>1.00</td>
</tr>
<tr>
<td>Honors American Sign Language 3</td>
<td>WL413</td>
<td>11 12</td>
<td>Year</td>
<td>1.00</td>
</tr>
<tr>
<td>Honors American Sign Language 4</td>
<td>WL414</td>
<td>12</td>
<td>Year</td>
<td>1.00</td>
</tr>
</tbody>
</table>
French

French 1  WL101
Grade Levels:  9, 10, 11, 12
Course Length:  Year, 1 Period
Credit:  1.00

French 1, the four skills of language learning (listening, speaking, reading and writing), are consistently practiced throughout the year. A variety of cultural knowledge from the French-speaking world is presented, and when possible, students are asked to compare their home culture to the target language culture. Upon completion of this course, students should attain a Novice-mid level of proficiency.

French 2  WL102
Grade Levels:  10, 11, 12
Course Length:  Year, 1 Period
Credit:  1.00
Recommended:  French 1

This course builds upon students' prior knowledge from Level 1 with the goal of increasing their overall language proficiency. The four skills of language learning (listening, speaking, reading and writing), are consistently practiced throughout the year. A variety of cultural knowledge from the Spanish-speaking world is presented, and when possible, students are asked to compare their home culture to the target language culture. Upon completion of this course, students should attain a Novice-high level of proficiency.

Honors French 3  WL113
Grade Levels:  11, 12
Course Length:  Year, 1 Period
Credit:  1.00
Recommended:  French 2

This course builds upon students' prior knowledge from Levels 1 and 2 with the goal of increasing their overall language proficiency. The four skills of language learning (listening, speaking, reading and writing), are consistently practiced throughout the year. A variety of cultural knowledge from the French-speaking world is presented, and when possible, students are asked to compare their home culture to the target language culture. This course builds upon the content of Spanish 2 with an expectation that students will demonstrate greater depth of knowledge of the language and culture through increased academic rigor. Upon completion of this course, students should attain an Intermediate-low level of proficiency.

Honors French 4  WL114
Grade Levels:  12
Course Length:  Year, 1 Period
Credit:  1.00
Recommended:  Honors French 3

This course builds upon students' prior knowledge from Levels 1 and 2 with the goal of increasing their overall language proficiency. The four skills of language learning (listening, speaking, reading and writing), are consistently practiced throughout the year. A variety of cultural knowledge from the French-speaking world is presented, and when possible, students are asked to compare their home culture to the target language culture. This course builds upon the content of Spanish 2 with an expectation that students will demonstrate greater depth of knowledge of the language and culture through increased academic rigor. Upon completion of this course, students should attain an Intermediate-mid level of proficiency.

International Baccalaureate Course

Students may earn college credit or advancement in college coursework with qualifying scores on IB exams. See pages 18 - 20 for more information.

IB French SL  IB231S (1st Year)  IB232S (2nd Year)
Grade Levels:  11 and 12
Course Length:  2 Years
Credits:  1.00 per year
1.125 Weighted grade
Recommended:  French 2
Approximate cost:  $122 for IB test (required)
Location:  Westerville South only

IB French SL is a rigorous two-year course that focuses on the four major skills of learning a second language: listening, speaking, reading and writing. Development of the essential skills learned in previous French courses will be extended through the use of authentic materials. The investigation of other cultures is incorporated directly into the student's language studies. These inquiries provide students with other points of view on world events. IB French SL students are evaluated through various teacher assessments, as well as IB assessments completed during the final year of the course. Students, with guidance from the instructor, will choose to take either the higher or standard level exam. The course will be conducted entirely in French.

Spanish

Spanish 1  WL201
Grade Levels:  8, 9, 10, 11, 12
Course Length:  Year, 1 Period
Credit:  1.00

In Spanish 1, the four skills of language learning (listening, speaking, reading and writing), are consistently practiced throughout the year. A variety of cultural knowledge from the Spanish-speaking world is presented, and when possible, students are asked to compare their home culture to the target language culture. Upon completion of this course, students should attain a Novice-mid level of proficiency.

Spanish 2  WL202
Grade Levels:  9, 10, 11, 12
Course Length:  Year, 1 Period
Credit:  1.00
Recommended:  Spanish 1

This course builds upon students' prior knowledge from Level 1 with the goal of increasing their overall language proficiency. The four skills of language learning (listening, speaking, reading and writing), are consistently practiced throughout the year. A variety of cultural knowledge from the Spanish-speaking world is presented, and when possible, students are asked to compare their home culture to the target language culture. Upon completion of this course, students should attain a Novice-high level of proficiency.

Honors Spanish 2  WL212
Grade Levels:  9, 10, 11, 12
Course Length:  Year, 1 Period
Credits:  1.00
1.125 Weighted grade
Recommended:  Spanish 1

This course builds upon students' prior knowledge from Level 1 with the goal of increasing their overall language proficiency. The four skills of language learning (listening, speaking, reading and writing), are consistently practiced throughout the year. Cultural knowledge from the Spanish-speaking world is presented, and when possible, students are asked to compare their home culture to the target language culture. This course builds upon the content of Spanish 2 with an expectation that students will demonstrate greater depth of knowledge of the language and culture through increased academic rigor. Upon completion of this course, students should attain a Novice-high level of proficiency.
This course builds upon students’ prior knowledge from Levels 1 and 2 with the goal of increasing their overall language proficiency. The four skills of language learning (listening, speaking, reading and writing), are consistently practiced throughout the year. A variety of cultural knowledge from the Spanish-speaking world is presented, and when possible, students are asked to compare their home culture to the target language culture. Upon completion of this course, students should attain an Intermediate-low level of proficiency.

Honors Spanish 2 WL213
Grade Levels: 10, 11, 12
Course Length: Year, 1 Period
Credits: 1.00
Recommended: Honors Spanish 2

This course builds upon students’ prior knowledge from Levels 1 and 2 with the goal of increasing their overall language proficiency. The four skills of language learning (listening, speaking, reading and writing), are consistently practiced throughout the year. A variety of cultural knowledge from the Spanish-speaking world is presented, and when possible, students are asked to compare their home culture to the target language culture. Upon completion of this course, students should attain an Intermediate-low level of proficiency.

Students should be aware that the course requires a great deal of preparation outside of the classroom. Instruction is predominantly in Spanish.

Honors Spanish 4 WL214
Grade Levels: 11, 12
Course Length: Year, 1 Period
Credit: 1.00
Recommended: Honors Spanish 3

This course builds upon students’ prior knowledge from Levels 1, 2 and 3 with the goal of increasing their overall language proficiency. The four skills of language learning (listening, speaking, reading and writing), are consistently practiced throughout the year. A variety of cultural knowledge from the Spanish-speaking world is presented, and when possible, students are asked to compare their home culture to the target language culture. Upon completion of this course, students should attain an Intermediate-mid level of proficiency.

Advanced Placement and International Baccalaureate Courses
Students may earn college credit or advancement in college coursework with qualifying scores on AP and/or IB exams. See pages 17 - 20 for more information.

AP Spanish Language WL225
Grade Levels: 12
Course Length: Year, 1 Period
Credits: 1.00
Recommended: Honors Spanish 4
Approximate cost: $94 AP test (optional)

Advanced Placement (AP) courses are designed to parallel the rigor of an introductory college course. AP Spanish Language emphasizes communication (understanding and being understood by others) by applying the interpersonal, interpretative, and presentational modes of communication in real-life situations. This includes vocabulary usage, language control, communication strategies, and cultural awareness. This course is conducted in Spanish.

IB Spanish SL IB211S (1st Year) SL IB212S (2nd Year)
Grade Levels: 11 and 12
Course Length: 2 Years, 1 Period
Credits: 1.00 per year
Recommended: Successful completion of all Ohio State Tests
Approximate cost: $122 for IB test (required)
Location: Westerville South only

IB Spanish is a rigorous two-year course that focuses on the four major skills of learning a second language: listening, speaking, reading and writing. Development of the essential skills learned in previous Spanish courses will be extended through the use of authentic Hispanic texts, media, and realia. The investigation of other cultures is incorporated directly into the student's language studies. These inquiries will provide students with another point of view on world events. IB Spanish students are evaluated through various teacher assessments, as well as IB assessments completed during the final year of the course. Students, with guidance from the instructor, will choose to take either the higher or standard level exam. The course will be conducted entirely in Spanish. IB Spanish HL is equivalent to a third-year college language course. The study of Hispanic literature is an integral part of the course.

IB Spanish ab Initio SL IB221S (1st Year) IB222S (2nd Year)
Grade Levels: 11 and 12
Course Length: 2 Years, 1 Period
Credits: 1.00 per year
Recommended: Participating in the IB Diploma program as a Diploma or Certificate student
Approximate cost: $122 for IB test (required)
Location: Westerville South only

IB Spanish ab Initio SL is a two-year course beginning in the student's junior year that focuses on the four major skills of learning a second language: listening, speaking, reading and writing. Equal emphasis will be placed on each of the four linguistic skills. Students develop the ability to communicate in speech and in writing in order to enable them to deal adequately with familiar and practical needs. The incorporation of investigating other cultures is tied in directly to the student's language studies. Students are expected to look outside of their worldview and achieve another point of view on world events.
# American Sign Language

**American Sign Language (ASL) 1**  
**Grade Levels:** 9, 10, 11, 12  
**Course Length:** Year, 1 Period  
**Credit:** 1.00

ASL 1 students study deaf culture and literature, as well as vocabulary and structure of ASL. Students will be made aware of opportunities in which to practice their skills within the local deaf community. Daily work outside of the classroom is required. This consists of learning vocabulary and the language structure, practice exercises, and preparing for quizzes, tests, projects and/or presentations.

**American Sign Language (ASL) 2**  
**Grade Levels:** 10, 11, 12  
**Course Length:** Year, 1 Period  
**Credit:** 1.00  
**Recommended:** ASL 1

ASL 2 is designed to develop more fully the study of deaf culture, literature, and linguistics of ASL. Students will be made aware of opportunities in which to practice their skills within the local deaf community. Students should be aware that the course requires daily work outside of the classroom.

**Honors American Sign Language (ASL) 3**  
**Grade Levels:** 11, 12  
**Course Length:** Year, 1 Period  
**Credit:** 1.00  
**Recommended:** ASL 2

This course utilizes an intensive, immersion approach to learning ASL and will focus on grammatical structure, vocabulary, manual alphabet, numbers, non-manual markers and other components of American Sign Language, as well as speaking and listening skill improvement. This comprehensive course is taught in American Sign Language.

**Honors American Sign Language (ASL) 4**  
**Grade Levels:** 12  
**Course Length:** Year, 1 Period  
**Credit:** 1.00  
**Recommended:** Honors ASL 3

Students in ASL 4 will expand their development of syntax, semantics, and pragmatics of ASL. This immersion-based class will include analysis of native speaker's language use and creation of original works in ASL. The student should be aware that the course requires a great deal of preparation outside of class. This comprehensive course is taught in American Sign Language.
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## Appendices

<table>
<thead>
<tr>
<th>A: Sample College Credit Plus Course Sequences</th>
<th>68</th>
</tr>
</thead>
<tbody>
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<td>B: Which is best for me? Comparing AP, IB and CCP Courses</td>
<td>69-70</td>
</tr>
<tr>
<td>C: Health Pathway</td>
<td>71-72</td>
</tr>
<tr>
<td>D: Business and Logistics Pathway</td>
<td>73-74</td>
</tr>
<tr>
<td>E: Engineering Pathway</td>
<td>75-76</td>
</tr>
<tr>
<td>F: Global Scholars Program</td>
<td>77-78</td>
</tr>
<tr>
<td>G: Explanation of Physics Options</td>
<td>79-82</td>
</tr>
<tr>
<td>H: Which is best for me? Freshmen Science Scheduling Guide</td>
<td>83</td>
</tr>
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</table>
**Appendix A: Sample College Credit Plus Course Sequences**

**At a Westerville High School:**
Student earns 12 semester credits over two years taking courses at a high school.

<table>
<thead>
<tr>
<th>Junior Year</th>
<th>Senior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Semester</td>
<td>2nd Semester</td>
</tr>
<tr>
<td>Computer Concepts &amp; Applications CSCI 1101 (3)</td>
<td>Marketing Principles MKTG 1230 (3)</td>
</tr>
<tr>
<td>Composition I ENG 1100 (3)</td>
<td>Composition II ENG 236 (3)</td>
</tr>
</tbody>
</table>

**At Columbus State Community College:**
Student earns 32 semester credits over two years taking courses on a community college campus and at a high school.

<table>
<thead>
<tr>
<th>Junior Year</th>
<th>Senior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Semester</td>
<td>2nd Semester</td>
</tr>
<tr>
<td>Composition I ENG 1100 (3)</td>
<td>Composition II ENG 236 (3)</td>
</tr>
<tr>
<td>Computer Concepts &amp; Applications CSCI 1101 (3)</td>
<td>Marketing Principles MKTG 1230 (3)</td>
</tr>
<tr>
<td>College Algebra MATH 1148 (4)</td>
<td>Trigonometry MATH 1149 (4)</td>
</tr>
<tr>
<td>Intro to Psychology PSY 1100 (3)</td>
<td>Intro to Sociology SOC 1101 (3)</td>
</tr>
</tbody>
</table>

**At Otterbein University:**
Student earns 16 semester credits over two years at a private university.

<table>
<thead>
<tr>
<th>Junior Year</th>
<th>Senior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Semester</td>
<td>2nd Semester</td>
</tr>
<tr>
<td>The American Experience to 1865 HIST 1100 (4)</td>
<td>Psychology for Non-Majors PSYC 1000 (4)</td>
</tr>
<tr>
<td>Calculus I MATH 1700 (4)</td>
<td>Calculus II MATH 1800 (4)</td>
</tr>
</tbody>
</table>

**At Otterbein University:**
Student earns 32 semester credits over two years at a private university.

<table>
<thead>
<tr>
<th>Junior Year</th>
<th>Senior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Semester</td>
<td>2nd Semester</td>
</tr>
<tr>
<td>Statistics MATH 1240 (4)</td>
<td>Elementary Functions MATH 1250 (4)</td>
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<tr>
<td>Calculus I MATH 1700 (4)</td>
<td>Calculus II MATH 1800 (4)</td>
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<tr>
<td>The American Experience to 1865 HIST 1100 (4)</td>
<td>The American Experience since 1865 HIST 1200 (4)</td>
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<tr>
<td>Principles of Microeconomics ECON 2100 (4)</td>
<td>Psychology for Non-Majors PSYC 1000 (4)</td>
</tr>
</tbody>
</table>
Appendix B: Which is best for me? Comparing AP, IB, and CCP Courses

When making scheduling decisions, one of the most asked questions is: “Which one is better - AP, CCP, or IB?” This question does not consider the simple fact that students are all different. Whether it’s the student’s goals, interests, passions, or abilities that make up the differences, there can never be a single “right” approach to a student’s individual growth and development. If there was one best option, that would be the only option for our students.

Please take the time to review and consider the obstacles and opportunities of each program in each content area. Mixing course formats may be a better choice than all of one or another. Choose a path that is as unique as you!

<table>
<thead>
<tr>
<th>College Board Advanced Placement (AP)</th>
<th>International Baccalaureate Programme (IB)</th>
<th>College Credit Plus (CCP)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Why?</strong></td>
<td><strong>Why?</strong></td>
<td><strong>Why?</strong></td>
</tr>
<tr>
<td>Completion of AP courses with qualifying exam grades are accepted for credit, accelerated placement, or both by most colleges and universities.</td>
<td>Completion of the IB Diploma Program is recognized as an admissions credential in more than 102 countries. Course credit and/or accelerated placement is awarded at over 1000 US colleges and universities. IB Graduates are prepared to excel in a wide variety of higher education settings.</td>
<td>Completion of CCP courses allows students to earn transcripted college credit toward a degree or career certification during high school, and is accepted by most colleges and universities.</td>
</tr>
<tr>
<td><strong>What?</strong></td>
<td><strong>What?</strong></td>
<td><strong>What?</strong></td>
</tr>
<tr>
<td>A challenging academic program designed to provide motivated high school students with college-level academic courses. Year-long courses are offered in six subject areas.</td>
<td>A rigorous, two-year pre-university program noted for its holistic focus and international perspective. Options exist for students to earn the prestigious IB Diploma or enroll as course candidates in specific classes. Courses are offered at both Higher Level (HL) and/or Standard Level (SL) in six subject areas.</td>
<td>An opportunity to take college courses and earn both high school and college credit. Semester-long courses are offered in three subject areas on Westerville’s high school campuses.</td>
</tr>
<tr>
<td><strong>When?</strong></td>
<td><strong>When?</strong></td>
<td><strong>When?</strong></td>
</tr>
<tr>
<td>AP courses are typically available to students at the sophomore, junior, and senior levels.</td>
<td>IB courses are typically available to juniors or seniors but Westerville South also offers preparation for these courses in Pre-IB classes offered during students’ freshman and sophomore years.</td>
<td>CCP courses are available to any student in grades 7-12 who meets the admission requirements of participating colleges or universities.</td>
</tr>
<tr>
<td><strong>Where?</strong></td>
<td><strong>Where?</strong></td>
<td><strong>Where?</strong></td>
</tr>
<tr>
<td>Most courses are offered at all high schools, but some may only be offered at specific buildings.</td>
<td>IB courses are offered only at Westerville South High School, but this program is available to ALL Westerville students. Students who live outside of Westerville South’s attendance area can apply for administrative placement at South.</td>
<td>Courses noted below are offered in at least one high school; other courses can be taken on college campuses.</td>
</tr>
<tr>
<td><strong>Assessments</strong></td>
<td><strong>Assessments</strong></td>
<td><strong>Assessments</strong></td>
</tr>
<tr>
<td>Optional exam at the end of each year-long course</td>
<td>Required at the end of the entire two-year course; one-year in some cases</td>
<td>At the end of each college or university semester</td>
</tr>
</tbody>
</table>
## Courses Offered in Westerville City Schools

<table>
<thead>
<tr>
<th><strong>College Board Advanced Placement (AP)</strong></th>
<th><strong>International Baccalaureate Programme (IB)</strong></th>
<th><strong>College Credit Plus (CCP)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>English (2-year course)</td>
<td>English</td>
</tr>
<tr>
<td>AP English Language and Composition</td>
<td>IB English Literature HL</td>
<td>Composition I</td>
</tr>
<tr>
<td>AP English Literature and Composition</td>
<td></td>
<td>Composition II</td>
</tr>
<tr>
<td>Math</td>
<td>Math (2-year courses)</td>
<td>Math</td>
</tr>
<tr>
<td>AP Calculus AB</td>
<td>IB Mathematics: Analysis and Interpretation SL</td>
<td>Calculus 2</td>
</tr>
<tr>
<td>AP Calculus BC</td>
<td>Students can earn AP Calculus AB credit after year 1</td>
<td>Calculus 3</td>
</tr>
<tr>
<td>AP Statistics</td>
<td>IB Mathematics: Analysis and Interpretation HL</td>
<td>IB Mathematics: Application and Interpretation SL</td>
</tr>
<tr>
<td>Science</td>
<td>Science (2-year courses)</td>
<td>Science</td>
</tr>
<tr>
<td>AP Biology</td>
<td>IB Biology SL or HL</td>
<td>Basic Concepts in Health Care</td>
</tr>
<tr>
<td>AP Chemistry</td>
<td>IB Chemistry SL</td>
<td>Introduction to Medical Coding and Reimbursement</td>
</tr>
<tr>
<td>AP Environmental Science</td>
<td>IB Physics HL</td>
<td>Laboratory Theory for Health Industries</td>
</tr>
<tr>
<td>AP Physics 1</td>
<td>IB Sports, Exercise &amp; Health Science SL</td>
<td>Medical Terminology</td>
</tr>
<tr>
<td>AP Physics 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AP Physics C: Mechanics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Studies</td>
<td>Social Studies</td>
<td>Social Studies</td>
</tr>
<tr>
<td>AP Comparative Government and Politics</td>
<td>IB History of the Americas HL</td>
<td>Introduction to American Government</td>
</tr>
<tr>
<td>AP European History</td>
<td>2-year course</td>
<td></td>
</tr>
<tr>
<td>AP US Government and Politics</td>
<td>IB Psychology SL</td>
<td></td>
</tr>
<tr>
<td>AP US History</td>
<td>1-year course</td>
<td></td>
</tr>
<tr>
<td>AP Psychology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AP World History</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business</td>
<td>Business</td>
<td>Business</td>
</tr>
<tr>
<td>AP Computer Science A</td>
<td>IB Business Management SL</td>
<td>Computer Concepts and Applications</td>
</tr>
<tr>
<td>AP Computer Science Principles</td>
<td>1-year course</td>
<td>Fundamentals of Business &amp; Administrative Services</td>
</tr>
<tr>
<td></td>
<td>IB Business Management HL</td>
<td>Marketing Principles</td>
</tr>
<tr>
<td></td>
<td>2-year course</td>
<td>Personal Finance</td>
</tr>
<tr>
<td></td>
<td>IB Information Technology in a Global Society SL</td>
<td>Supply Chain Management Principles</td>
</tr>
<tr>
<td></td>
<td>2-year course</td>
<td>Transportation Management</td>
</tr>
<tr>
<td>World Languages</td>
<td>World Languages (2-year courses)</td>
<td>World Languages</td>
</tr>
<tr>
<td>AP Spanish Language</td>
<td>IB Spanish ab initio SL</td>
<td>None currently offered</td>
</tr>
<tr>
<td></td>
<td>IB Spanish SL or HL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IB French SL</td>
<td></td>
</tr>
<tr>
<td>Visual and Performing Arts</td>
<td>Visual and Performing Arts (2-year courses)</td>
<td>Visual and Performing Arts</td>
</tr>
<tr>
<td>None currently offered</td>
<td>IB Music SL</td>
<td>None currently offered</td>
</tr>
<tr>
<td></td>
<td>IB Music Theory</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IB Theater SL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IB Visual Arts SL or HL</td>
<td></td>
</tr>
</tbody>
</table>
Appendix C: Health Pathway

Health Pathway

Westerville City Schools

$63,420
median annual salary for healthcare practitioners and technical occupations

18%
projected growth in employment opportunities from 2016 to 2026

9
number of top 10 spots that are healthcare jobs on US News & World Report’s 2017 Best Jobs

Professionals in biomedical science seek to understand the chemistry and biology of life to diagnose and treat disease, improve health, and ease pain and suffering. This includes doctors, nurses, scientists, pharmacists, veterinarians, administrators, and technicians.

Pathway Course Descriptions

Principles of Biomedical Science (PBS)
Explore concepts of biology and medicine to determine factors that led to the death of a fictional person.

Human Body Systems (HBS)
Examine the interactions of human body systems as you explore power, movement, protection, and homeostasis.

Medical Interventions (MI)
Follow the life of a fictitious family as they investigate how to prevent, diagnose, and treat disease.

Pathway Recognition

Graduation Honors Cord
- successfully complete 6/8 pathway courses

AP + PLTW
- successfully complete 3 pathway courses
- score 3+ on 1 or more related AP courses
- score proficient on 1 or more PLTW end-of-course exams

Medical Terminology (MT)
Learn how word parts help determine the meaning of medical terms

Basic Concepts in Healthcare (BCH)
Get an overview of the US healthcare system.

Intro to Medical Coding and Reimbursement (MCR)
Learn how physicians and hospital code for medical diagnoses and reimbursement.

Lab Theory for Health Industries (LTh)
Learn about basic lab tests and procedures.

Lab Techniques for Health Industries (LTe)
Practice basic lab tests and procedures and must be taken at CSCC’s downtown campus.

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Content provided by:

**Project Lead the Way**
Working with the same tools used by professionals in hospitals and labs, students engage in compelling hands-on activities and work together to find solutions to problems.

**Columbus State Community College**
Students can receive DUAL CREDIT* through Columbus State Community College for CCP courses.

With successful completion of CSCC’s BCH, MCR, LTH, and LTE, students can earn a Clinical Laboratory Assistant Certificate necessary for entry-level laboratory jobs.

Pathway Instructors:

**Central**
Keith Alasti (HBS)
Diana Arko (MI, CCP)
Anastasia Levakis (PBS)
Autumn McCormick (PBS)

**North**
Julie Chance (HBS)
Brooke Cochran (PBS, MI, CCP)

**South**
Shelly Corl (PBS)
Janet Pritchard (HBS, CCP)

Complementary Courses:

- Honors Anatomy & Physiology
- AP Biology
- AP Chemistry
- IB Biology
- IB Chemistry

Career Tech Student Organization:

SkillsUSA

Students share why you should consider the Health Pathway:

“If you're looking to feel secure in what you're going to do in the future and you express interest in the medical field, the health pathway is definitely recommended. You won't be stuck in it if you don't like it, but it lets you try out a lot of similar things that real people in the field do...”

“I think that even if you aren't going into a health profession you should be a part of the health pathway because it can teach you so much about the body and can help you out in the long run. By being in HBS I have been able to connect it with my other classes, like Anatomy and Physiology. Take a health pathway class because it will help you out in ways you might not realize.”

*Dual credit is awarded through Ohio’s College Credit Plus program and allows students to earn high school and college credits simultaneously. More information can be found at https://www.ohiohighered.org/ccp/about.
Appendix D: Business Logistics Pathway

Business Logistics Pathway
Westerville City Schools

47,000
number of logistics/distribution operations in Central Ohio - so many job opportunities!

$71,160
median annual salary for Logisticians in Ohio

47%
of the US population is within a 10 hour drive of the Columbus Region

Logistics is the science of managing the movement of objects - food, materials, animals, equipment, and liquids - as well as time, information, and energy. If you enjoy collaborating with, and communicating with others, designing innovative solutions to problems, taking risks, leading others, and starting projects, this pathway may be a great fit for you!

Pathway Course Options

<table>
<thead>
<tr>
<th>Business Foundations (BF)</th>
<th>Build a foundation and learn the building blocks of business and economics.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundamentals of Business &amp; Administrative Services (FBA)</td>
<td>Gain a college-level overview and understanding of business functions and activities.</td>
</tr>
<tr>
<td>Marketing Principles (MP)</td>
<td>Learn valuable customer service skills that come in handy for any profession.</td>
</tr>
<tr>
<td>Introduction to Management (IM)</td>
<td>Want to be a leader? A CEO? Understand principles and theories of management.</td>
</tr>
<tr>
<td>Business Law 1 &amp; 2 (BL)</td>
<td>Master a fundamental understanding of the legal system and business law.</td>
</tr>
<tr>
<td>Supply Chain Management Principles (SC)</td>
<td>Build your business expertise and understand supply chain.</td>
</tr>
<tr>
<td>Transportation and Traffic Management (TTM)</td>
<td>Understand how transportation plays a vital role in the supply chain.</td>
</tr>
</tbody>
</table>

Choose 2 (semester courses)
Choose 1 (year-long courses)
Take Both (semester courses)

Certification
While enrolled in the Supply Chain Management Principles and Transportation & Traffic Management courses, students will have an opportunity to earn industry recognized credentials as a Certified Logistics Associate and Technician.

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Career Technical Education Standards (CTE)

CTE provides students with the academic and technical skills, knowledge and training necessary to success in future careers and to become lifelong learners. CTE prepares these learners for the world of work by introducing them to workplace competencies, and makes academic content accessible to students by providing it in a hands-on context.

College Credit Plus Partner: Columbus State Community College

Students have the potential to earn 12 college credit hours through Columbus State Community College.

Pathway Instructors

**Central**
Susan Bailey
Brick Davis
Richard Heeren

**North**
Brick Davis
Amanda Mosely

**South**
Cindy Calvin
Linda Mapes
Laurie Marburger

Complementary Courses

AP Computer Science Principles
AP Computer Science A
AP Statistics
AP Calculus
Computer Concepts & Applications

Career Tech Student Organization

**BUSINESS PROFESSIONALS OF AMERICA**

Where can this path lead to after high school?

Supply Chain Management Associate Degree at CSCC

Employment at one of the 4,400 logistics/distribution operations in Central Ohio as a CLA and CLT

Logistics Engineering Technology Associate Degree at CSCC

Bachelor of Science in Operations and Supply Chain Management at Franklin University

Master of Business Logistics Engineering at OSU's Fisher College of Business
Appendix E: Engineering Pathway

Engineering Pathway
Westerville City Schools

$77,900
median annual salary for engineering occupations

86,000
number of people employed by more than 1,700 manufacturers in Central Ohio

193,200
new jobs across the nation in the engineering field to be created by 2026

Graduates from engineering programs often pursue work involving conceptual design or research and development including architectural, civil, mechanical, or industrial systems.

Graduates of engineering technology programs often pursue work involving application and implementation including construction, manufacturing, product design, testing, or technical services.

Pathway Course Descriptions

Introduction to Engineering Design (IED)
Dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects like designing a new toy or improving an existing product.

Principles of Engineering (POE)
Explore a broad range of engineering topics including mechanisms, strength of structure and materials, and automation, and then apply what you know to take on challenges like designing a self-powered car.

Civil Engineering and Architecture (CEA)
Learn important aspects of building and site design and development, and then apply what you know to design a commercial building.

Computer Integrated Manufacturing (CIM)
Learning about manufacturing processes, product design, robotics, and automation, students produce products using a Computer Numerical Controlled (CNC) mill.

Certification

Autodesk® Inventor Certified User (ACU)
Earn credentials for successfully demonstrating digital design skills including creating, modifying, formatting, and sharing 2D sketches, creating parts, viewing, and animating assemblies, and creating presentations and drawings.

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Content provided by:

**Project Lead the Way**
Courses engage students in compelling, real-world challenges that help them become better collaborators and thinkers.

**Certiport**
Through WCS' Credit Flex Option, students complete a half-credit independent study to become an Autodesk Certified User (ACU), confirming their credentials in digital design.

Pathway Instructors:

**Central**
David Elliott (POE, CIM)
Jeff Mengerink (CEA)
Kent Scharff (IED)

**North**
Laura Ferguson (POE, IED)
Matt Whistle (CEA, CIM)
Terry Yates (IED)

**South**
Blake Holderman (POE)
Jeff Owdom (IED)

Complementary Courses:
- AP Computer Science Principles
- AP Computer Science A
- AP Statistics
- AP Calculus
- AP Physics 1, 2, and C
- IB Physics

Career Tech Student Organization:

According to students, the engineering pathway...
"...builds your teamwork skills and gives you a head start in a growing career field."

"...tests our ability to work with others and think outside the box."

"...teaches skills that are useful even if you don't pursue a career in it."

"...incorporates many fields of math and science."

According to students, the coolest activity done in class was...
- "...making a robot!"
- "...designing a model train using CAD!"
- "...constructing a Rube Goldberg machine!"
- "...wiring a circuit!"
- "...3D printing!"
Appendix F: Global Scholars Program

Global Scholars Program
Westerville City Schools

60,661 people employed in the Central Ohio area by Columbus' 20 largest foreign-owned companies

32 number of local companies operating 1,828 establishments in more than 85 countries around the world

1000 number of Central Ohio students working toward earning a Global Scholars diploma

Graduates from the Global Scholars Program often pursue work in the law, international business, information technology, business logistics, health services or education fields.

GLOBAL AWARENESS
a necessity for successfully living in an increasingly interconnected world

GLOBAL COMPETENCE
the disposition and knowledge to understand and act on issues of global significance

Columbus Council on World Affairs

In partnership with The Columbus Council on World Affairs, Westerville high school students have the opportunity to participate in the Global Scholars Diploma Program characterized by:

- innovative, interactive, and experiential approaches
- global community partnerships
- collaboration with business, governmental, and academic leaders

Visit columbusworldaffairs.org for more information.
Global Scholars Diploma Requirements

1
**Level 1**
**Face-to-Face Experiences:** Cross-Cultural, Global Issues, Global Careers, Culminating
**Enrichment Experiences:** Investigate the World, Recognize Perspectives, Communicate Ideas, Take Action

2
**Level 2**
**Face-to-Face Experiences:** Cross-Cultural, Global Issues, Global Careers, Culminating
**Cross-Cultural eCourse:** Learning Summaries, Assessment

3
**Level 3**
**Capstone:** Presentation of a Take Action Project that demonstrates deep understanding of a global issue
**College & Career Readiness Tools:** Applications, Essays, Profiles

Course Alignment

- World Languages
- Humanities
  - Cultural Studies in Literature
- Modern World History 1 & 2
  - Contemporary World Issues

Program Coordinators

- **Central**
  - Don Ogle
- **North**
  - Brandon Allen
- **South**
  - Mary Fuchs

According to Students...

"Global Scholars gives me the opportunity to meet people from other places and have different experiences."

"The more you know about the world, the better you can be at helping change the world and being proactive in your education and career and country."

"It's slowly changing my perspective to be more understanding and more open than I was before."

"The Global Scholars Program was a great opportunity for me to learn about the world and meet experts who succeeded while doing international work."

"Global Scholars gives students more confidence and they feel better about themselves, better about the world, like they can make a difference."
Appendix G: Physics Options

Which is best for me?
Physics Scheduling Guide

Please note: These descriptions are only suggestions. Teachers, counselors, parents and students ultimately need to work together to decide the best course for a student.

In their first year of physics at Westerville Central or Westerville North High School, students may choose from Physics or AP Physics 1.

<table>
<thead>
<tr>
<th>A Student in Physics:</th>
<th>The Physics Course:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Completed Algebra 2 or is concurrently enrolled in it</td>
<td>• Uses algebra, geometry and simple trigonometry to solve problems</td>
</tr>
<tr>
<td>• May not have a strong background in math and/or science, but is curious to learn how the physical world works</td>
<td>• Focuses on the mathematical foundation of physics principles and models, and the nature of scientific inquiry</td>
</tr>
<tr>
<td>• May not be sure of pursuing science as a career, but is open to learning new possibilities</td>
<td>• Includes linear kinematics, momentum, two-dimensional and circular motion, forces and Newton's laws, relationships within and between work, energy, and power, electrical circuits, electrostatics, and characteristics and interactions of waves</td>
</tr>
</tbody>
</table>

OR

<table>
<thead>
<tr>
<th>A Student in AP Physics 1:</th>
<th>The AP Physics 1 Course:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Completed Algebra 2 or is concurrently enrolled in it</td>
<td>• Requires a solid understanding of algebra, geometry, and trigonometric functions to understand major concepts</td>
</tr>
<tr>
<td>• Demonstrated a strong academic performance in previous math courses</td>
<td>• Focuses on designing and conducting inquiry-based laboratory investigations to solve problems through first-hand observations, data collection, analysis and interpretation</td>
</tr>
<tr>
<td>• May have a strong interest in science or is considering a career in science, medicine or engineering</td>
<td>• Involves both independent work and collaboration to investigate physics concepts</td>
</tr>
<tr>
<td>• May be considering AP Physics 2 or C in the future</td>
<td>• Includes kinematics, dynamics, circular, rotational and harmonic motion, gravity, energy, momentum, electric charge and force, circuits, waves and sound</td>
</tr>
<tr>
<td>• Can potentially earn college credit by scoring a 3 or higher on the AP Physics 1 exam (credit typically awarded for the first course in a physics sequence for nonmajors)</td>
<td></td>
</tr>
</tbody>
</table>
In their second year of physics at Westerville Central or Westerville North High School, students may choose from AP Physics 2 or AP Physics C: Mechanics.

<table>
<thead>
<tr>
<th>A Student in AP Physics 2:</th>
<th>The AP Physics 2 Course:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Completed or is concurrently taking Precalculus</td>
<td>• Requires familiarity with algebraic and trigonometric functions with an understanding of basic calculus concepts</td>
</tr>
<tr>
<td>• Successfully completed AP Physics 1 or Honors Physics</td>
<td>• Involves designing and conducting inquiry-based laboratory investigations to solve problems through first-hand observations, data collection, analysis and interpretation</td>
</tr>
<tr>
<td>• May be considering a career in life science, medicine, applied science, or fields not directly related to science</td>
<td>• Involves both independent work and collaboration to investigate physics concepts</td>
</tr>
<tr>
<td>• Has a strong work ethic and good time management skills</td>
<td>• Emphasizes problem solving and developing an understanding of a broad variety of physics concepts</td>
</tr>
<tr>
<td>• Can potentially earn college credit by scoring a 3 or higher on the AP Physics 2 exam (credit awarded for the second course in a physics sequence for nonmajors)</td>
<td>• Includes fluids, thermodynamics, electrical forces, fields and potential, circuits, magnetism, electromagnetic induction, optics, and modern physics</td>
</tr>
</tbody>
</table>

OR

<table>
<thead>
<tr>
<th>A Student in AP Physics C: Mechanics:</th>
<th>The AP Physics C: Mechanics Course:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Completed or is concurrently enrolled in Calculus</td>
<td>• Uses differential and integral calculus to formulate physical principles, solve complex physical problems, and develop critical thinking skills</td>
</tr>
<tr>
<td>• Successfully completed AP Physics 1 or Honors Physics</td>
<td>• Involves designing and conducting inquiry-based laboratory investigations to solve problems through first-hand observations, data collection, analysis and interpretation</td>
</tr>
<tr>
<td>• Is likely considering a career in chemistry, physics, or engineering</td>
<td>• Emphasizes a deep understanding of foundational principles of physics in classical mechanics by applying these principles to complex physical situations that combine multiple aspects of physics rather than present concepts in isolation</td>
</tr>
<tr>
<td>• Has a strong work ethic and possesses exceptional time management skills</td>
<td>• Includes kinematics, Newton’s laws of motion, work, energy and power, systems of particles and linear momentum, circular motion and rotation, oscillations, and gravitation</td>
</tr>
<tr>
<td>• Can potentially earn college credit by scoring a 3 or higher on the AP Physics C: Mechanics exam (credit awarded for the first course in a physics sequence for majors)</td>
<td></td>
</tr>
</tbody>
</table>
In their first year of physics at Westerville South High School, students may choose from Physics, AP Physics 1, or IB Physics HL.

<table>
<thead>
<tr>
<th>A Student in Physics:</th>
<th>The Physics Course:</th>
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<tbody>
<tr>
<td>• Completed Algebra 2 or is concurrently enrolled in it</td>
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| OR |

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<thead>
<tr>
<th>A Student in AP Physics 1:</th>
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</thead>
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<td>• Completed Algebra 2 or is concurrently enrolled in it</td>
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<tr>
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<tr>
<td>• May have a strong interest in science or is considering a career in science, medicine or engineering</td>
<td>• Involves both independent work and collaboration to investigate physics concepts</td>
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<tr>
<td>• May be considering AP Physics 2 or C in the future</td>
<td>• Includes kinematics, dynamics, circular, rotational and harmonic motion, gravity, energy, momentum, electric charge and force, circuits, waves and sound</td>
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<tr>
<td>• Can potentially earn college credit by scoring a 3 or higher on the AP Physics 1 exam (credit typically awarded for the first course in a physics sequence for nonmajors)</td>
<td></td>
</tr>
</tbody>
</table>

| OR |

<table>
<thead>
<tr>
<th>A Student in AP Physics 2:</th>
<th>The AP Physics 2 Course:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Completed or is concurrently taking Precalculus</td>
<td>• Requires familiarity with algebraic and trigonometric functions with an understanding of basic calculus concepts</td>
</tr>
<tr>
<td>• Successfully completed AP Physics 1 or Honors Physics</td>
<td>• Involves designing and conducting inquiry-based laboratory investigations to solve problems through first-hand observations, data collection, analysis and interpretation</td>
</tr>
<tr>
<td>• May be considering a career in life science, medicine, applied science, or fields not directly related to science</td>
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<td>• Has a strong work ethic and good time management skills</td>
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</tr>
</tbody>
</table>
In their second year of physics at Westerville South High School, students may choose from Physics, AP Physics 1, or IB Physics HL.

<table>
<thead>
<tr>
<th>A Student in AP Physics 2:</th>
<th>The AP Physics 2 Course:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Completed or is concurrently taking Precalculus</td>
<td>- Requires familiarity with algebraic and trigonometric functions with an understanding of basic calculus concepts</td>
</tr>
<tr>
<td>- Successfully completed AP Physics 1 or Honors Physics</td>
<td>- Involves designing and conducting inquiry-based laboratory investigations to solve problems through first-hand observations, data collection, analysis and interpretation</td>
</tr>
<tr>
<td>- May be considering a career in life science, medicine, applied science, or fields not directly related to science</td>
<td>- Involves both independent work and collaboration to investigate physics concepts</td>
</tr>
<tr>
<td>- Has a strong work ethic and good time management skills</td>
<td>- Emphasizes problem solving and developing an understanding of a broad variety of physics concepts</td>
</tr>
<tr>
<td>- Can potentially earn college credit by scoring a 3 or higher on the AP Physics 2 exam (credit awarded for the second course in a physics sequence for nonmajors)</td>
<td>- Includes fluids, thermodynamics, electrical forces, fields and potential, circuits, magnetism, electromagnetic induction, optics, and modern physics</td>
</tr>
</tbody>
</table>

OR

<table>
<thead>
<tr>
<th>A Student in IB Physics HL:</th>
<th>The IB Physics HL Course:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Completed the first year of IB Physics HL</td>
<td>- Requires a solid understanding of algebra, geometry, and trigonometric functions to understand major concepts</td>
</tr>
<tr>
<td>- Completed Precalculus or any first-year IB Mathematics course</td>
<td>- Emphasizes a practical approach to teaching physics with a mixture of both short-term and long-term experiments and investigations, as well as an interdisciplinary project</td>
</tr>
<tr>
<td>- Demonstrated a strong academic performance in previous math and science courses</td>
<td>- Includes an individual investigative projects that is continued from the first year</td>
</tr>
<tr>
<td>- Likely has a strong interest in science or is considering a career in science, medicine or engineering</td>
<td>- Covers electromagnetism, atomic and nuclear physics, digital technology, environmental aspects of physics, special and general relativity, and optics</td>
</tr>
<tr>
<td>- Can potentially earn college credit by scoring a 5 or higher on the IB Physics HL exam</td>
<td></td>
</tr>
</tbody>
</table>

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Appendix H: Which is best for me? Freshmen Science Scheduling Guide

Please note: These descriptions are only suggestions. Teachers, counselors, parents and students ultimately need to work together to decide the best course for a student.

### A Freshman in Physical Science
- May or may not be interested in science and may not be interested in pursuing some of the advanced science courses in later years
- Is in Algebra 1, but may have struggled to pass math and/or science as a middle school student
- Was a middle school student who typically demonstrated C quality work or lower
- Would benefit from an additional year of science experience before taking Biology, a course with a mandated state test

### A Freshman in Biology
- May or may not have a strong interest in science but is likely interested in pursuing some of the advanced science courses in later years
- Could be in either Algebra 1 or Geometry
- Was a middle school student who generally received an A, B or C on work
- Could have been considered an average, above average or good student in middle school

### A Freshman in Honors Biology
- Has a strong interest in science and likely wants to pursue a career in science, medicine or engineering
- Could be in Algebra 1, but is likely in Geometry or Honors Geometry
- Was a middle school student who had very high grades (mostly an A) in all of his or her classes (especially science and math)
- Could have been considered a very good or excellent student in middle school
- Is an independent worker and good at critical thinking and time management
- Is planning ahead to make room for multiple advanced science classes in later years

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