



High School Academic Planning Guide

2020-2021



Table of Contents

Welcome	2
High School Profiles	3
Graduation Requirements	4 - 5
Honors Diplomas	6 - 7
Grade Level Progression	8
Grade Point Averages	9
Athletic and Extracurricular Eligibility	10
Academic Support for Students	11 - 13
Special Education	11
Gifted Education	11
English Learning	12
Educational Opportunities for Success (EOS)	12
Summer Learning Opportunities	13
College and Career Readiness and Planning	14 - 26
Four-Year Course Planning Guide	15
Naviance Family Connection	16
Options for Earning College Credit	17 - 26
Advanced Placement Courses (AP)	17
International Baccalaureate Program (IB)	18 - 20
Career Technical Programs at Career Centers	21
Career Pathways	22 - 23
Global Scholars Program	24
College Credit Plus (CCP)	25
Credit Flexibility	26
Course Descriptions	27 - 63
Student Fees	27
Business Technologies (BU) and Information Technologies (IT)	28 - 31
English Language Arts (ELA)	32 - 36
English Learning (EL)	37
Health/Physical Education (HPE)	38
Mathematics (MA)	39 - 43
Science and Engineering (SC)	44 - 50
Social Studies (SS)	51 - 54
Visual and Performing Arts (VPA)	55 - 60
World Languages (WL)	61 - 64
Appendices (click to see full list)	65 - 80

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 2020-2021 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.

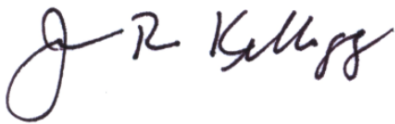
According to ACT research, taking challenging courses in the quality core content areas will better prepare students for the ACT test, which is a top predictor of college readiness (www.act.org). In addition, students most likely to complete a college degree are those who engage themselves in demanding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

Beginning with the class of 2014, 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 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
Attendance: 614-797-6820
Fax: 614-797-6801

www.wcsoh.org/wchs



Westerville North

950 County Line Road
Westerville, OH 43081

Administration

Principal: Kurt Yancey
Assistant Principal: Stephanie McGeorge
Assistant Principal: Will Ragland
Assistant Principal: Chris Saiben
Athletic Director: Wesley Elifritz

School Counselors

Julie Taylor (A-D)
Melissa Simashkevich (E-K)
Whitney Eibon (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



Westerville South

303 South Otterbein Avenue
Westerville, OH 43081

Administration

Principal: Mike Hinze
Assistant Principal: Tammy Hanby
Assistant Principal: Kiev Lamarr
Assistant Principal: Julie Wilson
Athletic Director: Jeff Good

School Counselors

Jenny Coulter (A-DI)
Jennifer Stovall (Do-Kh)
Laura Elliott (Ki-Re)
Justin Ferguson (Rh-Z)

Important Numbers

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

www.wcsoh.org/wsbs

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:

Subject	Credits
English	4.0
Mathematics (including 1 unit of Algebra 2 or its equivalent)	4.0
Science (including a Physical Science course, a Life Science course, and an Advanced Science course)	3.0
Social Studies (including American History, World History, and U.S. Government) ¹	3.0
Health	0.5
Physical Education ²	0.5
Visual and Performing Arts ³	1.0
Elective credits ⁴	5.0

¹ - American Government 2, AP US Government, and IB History of the Americas HL fulfill the financial literacy requirement.

² - The Physical Education requirement may be waived under Policy 5460. Please see [page 38](#) 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

Grade 9	Grade 10	Grade 11	Grade 12
English 1	English 2	English	English
Mathematics	Mathematics	Mathematics	Mathematics
Science	Science	Science	
American History	World History	U.S. Government	

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 2021 and 2022

Overall Graduation Points	<p>Students earn points toward graduation on seven end-of-course exams: English 1, English 2, Algebra 1, Geometry, Biology, American History, and American Government *****</p> <p>Students earn from 1-5 points for each exam, based on performance:</p> <p>5 - Advanced 4 - Accelerated 3 - Proficient 2 - Basic 1 - Limited</p> <p>*****</p> <p>Students need a minimum of 18 total points to graduate under this option, with the minimum number needed in each area:</p> <p>English - 4 points Mathematics - 4 points Science and Social Studies - 6 points *****</p> <p>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.</p>
Remediation Free Score	<p>Students earn “remediation-free” scores in English Language Arts and Mathematics on a nationally recognized college admission exam.</p> <p>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.</p>
Industry Credential and Workforce Score	<p>Students earn an approved industry-recognized credential or group of credentials in a single career field and achieve a workforce readiness score on the WorkKeys 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.</p>

Class of 2023 and beyond (and an alternative to the Classes of 2021 and 2022)

In addition to earning a minimum of 20 credits, students are also required to demonstrate competency on the Algebra 1 and English 2 end-of-course exams and demonstrate readiness by obtaining at least two seals (at least one of which must be a state seal) listed below. If students do not show competency on those two end-of-course exams there are alternative paths. At the time of printing, the Ohio Department of Education is still finalizing those requirements. Please go to <http://education.ohio.gov/Topics/Ohio-s-Graduation-Requirements> for the most current information.

Readiness Seals

<u>State Seals</u>			<u>Local Seals</u>
Biliteracy	Honors Diploma	OhioMeansJobs Readiness	Community Service
Citizenship	Industry-Recognized Credential	Science	Fine and Performing Arts
College-Ready Seal	Military Enlistment	Technology	Student Engagement

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.

For the Academic, International Baccalaureate, and Career Tech Honors Diplomas, students who entered the ninth grade between July 1, 2013 and June 30, 2017 may choose to pursue the diploma by meeting the requirements of these criteria or the [previous criteria](#). Students entering the ninth grade on or after July 1, 2017 must meet the criteria listed on these pages.

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> for the latest information.

COMPARISON OF DIPLOMAS WITH HONORS CRITERIA			
Students need to fulfill all but one of the applicable criteria for the Diploma with Honors.			
Criteria	Academic Diploma	Career-Technical Diploma	IB Diploma ¹
English	4 units	4 units	4 units
Mathematics	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	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	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
Science	4 units, including two units of advanced science	4 units, including two units of advanced science	4 units including biology, chemistry and at least one additional advanced science
Social Studies	4 units	4 units	4 units
World Languages	3 units of one world language, or no less than 2 units of two world languages studied	2 units of one world language	4 units minimum, including at least 2 units in each language studied
Fine Arts	1 unit	N/A	1 unit
Electives	N/A	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.	N/A
Grade Point Average	3.5 on a 4.0 scale	3.5 on a 4.0 scale	3.5 on a 4.0 scale
ACT/SAT Score	27 ACT / 1280 SAT ²	27 ACT / 1280 SAT ² WorkKeys (6 Reading & 6 Math)	27 ACT / 1280 SAT ²
Field Experience	N/A	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.	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.
Portfolio	N/A	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.	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.
Additional Assessment	N/A	Earn an industry-recognized credential or achieve proficiency benchmark for appropriate Ohio Career-technical Competency Assessment or equivalent.	Must complete criterion-referenced assessments in a minimum of six academic disciplines.

Notes

¹ 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.

² These scores are based on the 2017 ACT and SAT assessments. Refer to the [Ohio Department of Education](http://www.ohio.gov/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.			
Criteria	STEM Honors Diploma	Arts Honors Diploma	Social Science & Civic Engagement Diploma
English	4 units	4 units	4 units
Mathematics	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	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	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
Science	5 units, including two units of advanced science	3 units, including one unit of advanced science	3 units, including one unit of advanced science
Social Studies	3 units	3 units	5 units
World Languages	3 units of one world language OR no less than 2 units of two world languages studied	3 units of one world language OR no less than 2 units of two world languages studied	3 units of one world language OR no less than 2 units of two world languages studied
Fine Arts	1 unit	4 units	1 unit
Electives	2 units with a focus in STEM courses	2 units with a focus in fine arts courses	3 units with a focus in social sciences and/or civics
Grade Point Average	3.5 on a 4.0 scale	3.5 on a 4.0 scale	3.5 on a 4.0 scale
ACT/SAT Score	27 ACT / 1280 SAT ²	27 ACT / 1280 SAT ²	27 ACT / 1280 SAT ²
Field Experience	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.	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.	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.
Portfolio	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.	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.	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.
Additional Assessment	N/A	N/A	N/A

Additional information about honors diploma requirements can be found at <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):

To be classified as Grade 10	To be classified as Grade 11	To be classified as Grade 12	Credits needed to graduate*
5 credits	10 credits	15 credits	20 credits

*Please see the additional requirements needed to graduate on [page 5](#).

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

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

Dropping a Class

Year-long Classes	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.
Semester/Blocked (ie. 2 periods) Classes	A student withdrawing from a semester/blocked course after the 10 th 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.

- Courses required for graduation (see [page 4](#)) 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

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

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 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

Course	Semester Grade	Value		Credit		Points
Course 1	B -	3.0375	X	0.50	=	1.5188
Honors Course 2	B	3.3750	X	0.50	=	1.6875
AP Course 3	B +	4.1250	X	0.50	=	2.0625
CCP Course @ CSCC	B	4.1250	X	0.50	=	2.0625
Course 5	A	4.0000	X	0.50	=	2.0000
PE	A -	3.7000	X	0.25	=	0.9250
Total				2.75		10.2563
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 <http://www.neola.com/westerville-oh/>.

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:

general education classes		team taught general education classes	self-contained resource classes	
no additional support	with special education support	taught by a general education teacher and an intervention specialist	core classes taught by an intervention specialist with accommodations and specialized instruction	core classes taught by an intervention specialist with a modified curriculum

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.*

Contact Guerdie Glass, Director, Special Education for more information.
614-797-5902; glassg@wsoh.org

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@wsoh.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.

Level	Characteristics
Emergent	Students may understand isolated words, but rely on nonverbal cues and require frequent repetition.
Progressing	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.
Monitor or Trial Mainstream	Students can participate in an academic conversation with minimal support.

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 Learning (EL) courses ([page 37](#)) qualify for elective credit.

English Language Arts courses for English Learners (EL ELA) ([pages 32 - 36](#)) qualify for English Language Arts credit.

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

2020 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

Summer School Office
 336 South Otterbein Avenue
 Westerville, OH 43081

614-797-7750
 hoffmanrh@wcohs.org

Office Hours
 Monday - Friday: 8:00 AM to 4:00 PM
 Closed for lunch: 11:30 AM to 12:30 PM

Location

Westerville Central High School
 7118 Mount Royal Ave., Westerville

Dates

1st Session: June 1 - June 19, 2020
 2nd Session: June 22 - July 10, 2020

Full Term: June 1 - July 10, 2020

DEADLINE TO REGISTER IS TUESDAY, MAY 26, 2020

Registration closes at 4:30 pm on Tuesday, May 26, 2020. All registrations and payment must be received by this time. No registrations will be accepted after 4:30 pm on Tuesday, May 26, 2020. If mailing, envelope must be postmarked on or before May 26, 2020.

On-Line Registration Only

The on-line registration form can be found at www.wcohs.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.

Online Registration	Paper Registration
Register for classes via the link (Google Form) Pay online via EZPay , mail a check, or drop check off to summer school office.	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 summer school office.
Mailing Address: WCS Summer School Attention: Dr. Scott Ebbrecht, AEC 336 South Otterbein Avenue Westerville, OH 43081	<i>*Do not mail cash! Cash will only be accepted in person at the AEC.</i>

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.

College and Career Planning

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.
4. Complete the Four-Year Course Planning Guide on [page 15](#).

What are your plans after high school?			
Describe your career goals (<i>Review your assessments in Naviance Student</i>):		What path might you take to reach your goal? _____ four-year college _____ work _____ two-year college _____ military _____ other (describe)	
If you are interested in taking Honors coursework :	If you are interested in graduating with an Honors diploma :	If you are interested in jumpstarting your career by earning an industry credential :	If you are interested in being a high school student who earns college credit :
Talk with your teachers, parents, and counselor about whether Honors coursework is a good fit for you.	See the various types of Honors diplomas and their requirements on pages 6-7 .	Consider: 1. taking College Credit Plus courses 2. attending a Career Center as a junior and senior	Consider taking: 1. Advanced Placement courses (AP) 2. International Baccalaureate courses (IB) 3. College Credit Plus courses (CCP)

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

<p>Middle School classes earning high school credit</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Summer Course(s): _____</p>	<p>Total credits earned</p> <div style="border: 1px solid black; width: 60px; height: 60px; margin: 0 auto;"></div>
--	---

<p>Grade 9 Classes _____ planned _____ earned credit</p> <p>English: _____</p> <p>Math: _____</p> <p>Science: _____</p> <p>Social Studies: _____</p> <p>Elective: _____</p> <p>Elective: _____</p> <p>Summer Course(s): _____</p>	<p>Total credits planned/earned</p> <div style="border: 1px solid black; width: 60px; height: 60px; margin: 0 auto;"></div> <p>5 credits needed to be classified as Grade 10</p>
--	---

<p>Grade 10 Classes _____ planned _____ earned credit</p> <p>English: _____</p> <p>Math: _____</p> <p>Science: _____</p> <p>Social Studies: _____</p> <p>Elective: _____</p> <p>Elective: _____</p> <p>Summer Course(s): _____</p>	<p>Total credits planned/earned</p> <div style="border: 1px solid black; width: 60px; height: 60px; margin: 0 auto;"></div> <p>10 credits needed to be classified as Grade 11</p>
---	--

<p>Grade 11 Classes _____ planned _____ earned credit</p> <p>English: _____</p> <p>Math: _____</p> <p>Science: _____</p> <p>Social Studies: _____</p> <p>Elective: _____</p> <p>Elective: _____</p> <p>Summer Course(s): _____</p>	<p>Total credits planned/earned</p> <div style="border: 1px solid black; width: 60px; height: 60px; margin: 0 auto;"></div> <p>15 credits needed to be classified as Grade 12</p>
---	--

<p>Grade 12 Classes _____ planned _____ earned credit</p> <p>English: _____</p> <p>Math: _____</p> <p>Science: _____</p> <p>Social Studies: _____</p> <p>Elective: _____</p> <p>Elective: _____</p> <p>Summer Course(s): _____</p>	<p>Total credits planned/earned</p> <div style="border: 1px solid black; width: 60px; height: 60px; margin: 0 auto;"></div> <p>20 credits required to graduate</p>
---	---

Naviance Student

What are your career goals?

How will you achieve them?



Students and families can use Naviance Student, an online tool in grades 6-12 to make plans about colleges and careers.

Naviance Student allows students to:

- **Get involved in the planning and advising process** – Build a resume, complete online surveys, and manage timelines and deadlines for making decisions about colleges and careers.
- **Research colleges** – Compare GPA, standardized test scores, and other statistics to actual historical data from your school for students who have applied and been admitted in the past.
- **Research careers** – Research hundreds of careers and career clusters and take career assessments
- **Create plans for the future** – Create goals and to-do lists, and complete tasks assigned by the school to better prepare you for future college and career goals.

Naviance Student can be accessed from each high school’s web page and students login with the same credentials they use to login to their school computers.

Parents/guardians can access Naviance Student through PowerSchool by following these directions:

- Login to PowerSchool (visit www.wcsoh.org and click on the PowerSchool link on the top right).
- Next, click on the Applications button found in the top right corner of the screen. The button looks like this icon:



- When the next screen opens, click on the Login to Family Connection link.



- Confirm your student’s name and to be logged in to Family Connection on the next screen.

What should my student be doing in Naviance Student this year?

Freshmen (Class of 2024)	Sophomores (Class of 2023)	Juniors (Class of 2022)
<ul style="list-style-type: none"> <input type="checkbox"/> Start to record your high school and extracurricular activities in the resume section. <input type="checkbox"/> Explore careers and add favorite careers to your list. 	<ul style="list-style-type: none"> <input type="checkbox"/> Start to record your high school and extracurricular activities in the resume section. <input type="checkbox"/> Explore careers and colleges. Add favorites to your list. 	<ul style="list-style-type: none"> <input type="checkbox"/> Complete College Match and add favorite colleges to your list. <input type="checkbox"/> Start exploring the scholarship database.

Contact your school counselor with questions about Naviance Student.

Advanced Placement Courses

www.collegeboard.org

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.

See Appendix B on pages 67 - 68 to compare AP, IB and CCP courses.

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*

<p><u>English</u> AP English Language and Composition AP English Literature and Composition</p>	<p><u>Science</u> AP Biology AP Chemistry AP Environmental Science AP Physics 1 AP Physics 2 AP Physics C: Mechanics</p>	<p><u>Social Studies</u> AP World History AP US History AP European History AP US Government and Politics AP Comparative Government and Politics AP Psychology</p>
<p><u>Math</u> AP Calculus AB AP Calculus BC AP Statistics</p>	<p><u>World Languages</u> AP Spanish Language</p>	<p><u>Business</u> AP Computer Science Principles AP Computer Science A</p>

*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

See Appendix B on pages 67 - 68 to compare AP, IB and CCP courses.

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.

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

<p><u>Group 1 Studies in Language and Literature</u> English Literature HL (2-year)</p>	<p><u>Group 2 Language Acquisition</u> Spanish ab initio SL (2-year) Spanish SL or HL (2-year) French SL (2-year)</p>	<p><u>Group 3 Individuals and Societies</u> Business Management SL (1-year) Business Management HL (2-year) Information Technology in a Global Society SL (2-year) History of Americas HL (2-year) Psychology SL (1-year)</p>
<p><u>Group 4 Experimental Sciences</u> Biology SL or HL (2-year) Chemistry SL (2-year) Physics HL (2-year) Sports, Exercise & Health Science SL (2-year)</p>	<p><u>Group 5 Mathematics</u> Mathematics: Analysis and Approaches SL or HL (2-year) Mathematics: Application and Interpretation SL (2-year)</p>	<p><u>Group 6 The Arts</u> Music SL (2-year) Music Theory (2-year) Theater SL (2-year) Visual Arts SL or HL (2-year)</p>

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.

Begin with the end in mind!

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.

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

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.

Internal Assessments	<ul style="list-style-type: none"> • assessments completed during the course that are based on specific criteria • evaluated by the classroom teacher and then externally moderated to ensure that the criterion based scores are accurate • represent between 20% and 30% of the IB grade
External Assessments	<ul style="list-style-type: none"> • end of course exams • administered during a three-week period beginning on the first Monday in May; assessed by IB examiners worldwide • subject exams have from one to three “papers” (parts); each paper assessed by a different examiner • exams are primarily essays; assessment is criterion based • represent between 70% and 80% of the IB grade

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.

7	6	5	4	3	2	1
Excellent	Very Good	Good	Satisfactory	Mediocre	Poor	Very Poor

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.

[Delaware Area Career Center](#)



[Fort Hayes High School](#)



[Columbus Downtown High School](#)



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:

Subject	English	Math	Science	Social Studies	Elective Credit	Health	Physical Education*
Credits	2.0	2.0	2.0	2.0	1.0	0.50	.050

**See additional information about the Physical Education graduation requirement on pages [4](#) and [38](#).*

Students remain enrolled in and graduate from Westerville City Schools.

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

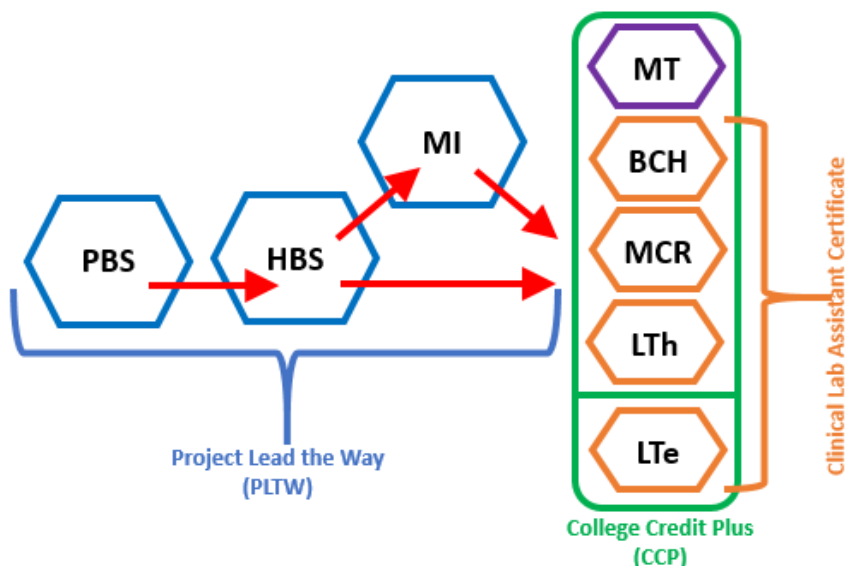
Career Pathways

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 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.



Foundational Courses	Specialized Courses
Principles of Biomedical Science Human Body Systems	Medical Interventions Medical Terminology * Basic Concepts in Health Care * Introduction to Medical Coding and Reimbursement * Lab Theory for Health Industries *

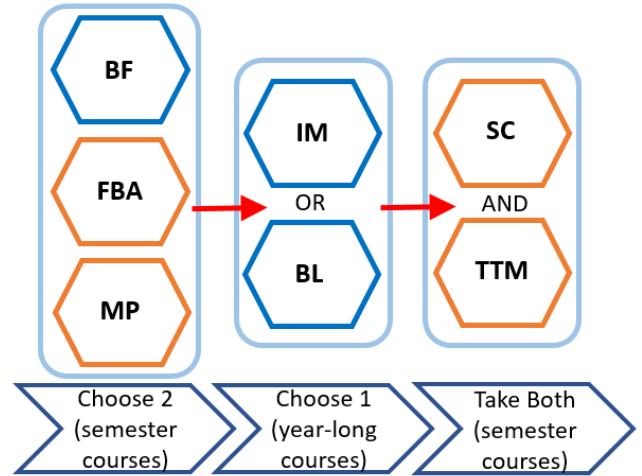
* Students can earn college credit through the College Credit Plus program. See [page 25](#) for more information.

See Appendix C on pages 69 - 70 to learn more about the Health Pathway.

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 71 - 72 to learn more about the Business and Logistics Pathway.

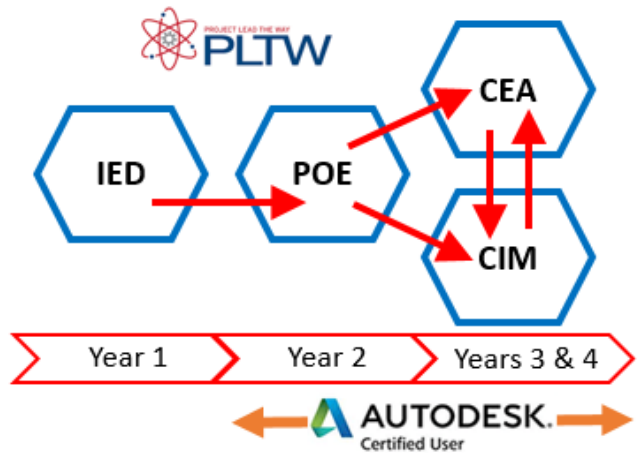


Foundational Courses	Specialized Courses
Business Foundations Fundamentals of Business & Administrative Services *	Business Law 1 Business Law 2 Introduction to Management Marketing Principles * Supply Chain Management * Transportation & Traffic Management *

* 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.



Foundational Courses	Specialized Courses
Introduction to Engineering Design Principles of Engineering	Civil Engineering and Architecture Computer Integrated Manufacturing

See Appendix E on pages 73 - 74 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.



**Columbus Council
on World Affairs**

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

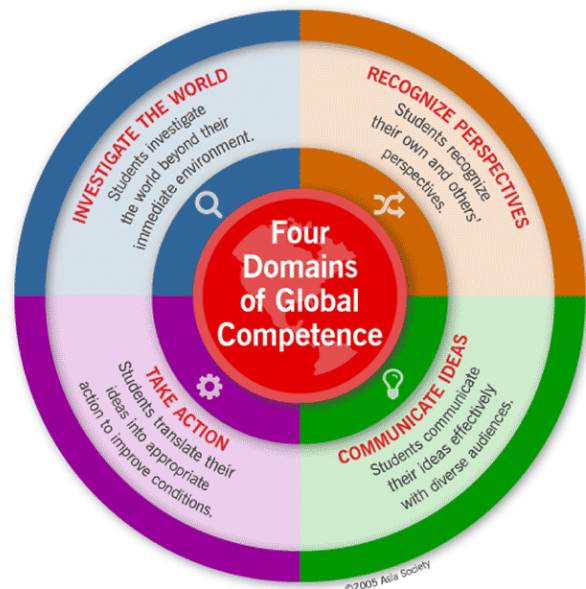
Level 1	Face-to-Face Experiences: Cross-Cultural, Global Issues, Global Careers, Culminating Enrichment Experiences: Investigate the World, Recognize Perspectives, Communicate Ideas, Take Action
Level 2	Face-to-Face Experiences: Cross-Cultural, Global Issues, Global Careers, Culminating Cross-Cultural eCourse: Learning Summaries, Assessment
Level 3	Capstone: Presentation of a Take Action Project that demonstrates a deep understanding of a global issue College and Career Readiness: Applications, Essays, Profiles

Contact a building coordinator for more information:

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



See Appendix F on pages 74 - 75 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 transcribed 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.

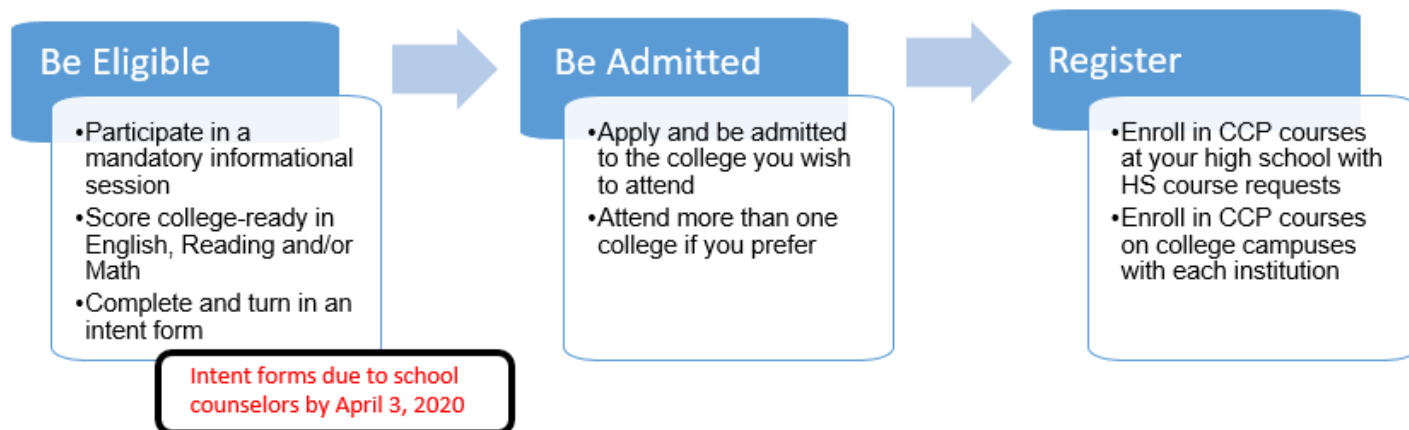
Why choose CCP?

- 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

See Appendix A on page 66 to see sample sequences of CCP courses.

See Appendix B on pages 67 - 68 to compare AP, IB and CCP courses.

How do I participate in CCP?



Points to Consider

Visit <http://bit.do/WCSCCP> for more information.

- 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.

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> 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
 - a description of criteria and methods for assessing student performance.

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](#) 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. Academic credit will be assigned according to student performance relative to the stated objectives and granted upon successful completion of the program.
2. The credit will be placed on the student's transcript.
3. Credits earned from educational options may be counted toward graduation requirements in accordance with applicable State Law and Administrative Code.



High School Course Descriptions

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 2020-2021 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 2020-2021 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.

BUSINESS TECHNOLOGIES (BU) AND INFORMATION TECHNOLOGIES (IT)

Central Ohio is ripe with opportunity 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 7](#) for more information.

2 – This course is part of a career pathway. Learn more about career pathways on [pages 22 - 23](#).

	Course	Number	Grade				Length	Credit
			9	10	11	12		
FOUNDATIONAL COURSES	21st Century Technology Skills	IT106	9	10	11	12	Semester	0.50
	Business Foundations ²	BU120	9	10	11	12	Semester	0.50
	Introduction to Computer Programming ¹	IT110	9	10	11	12	Semester	0.50
	Fundamentals of Business and Administrative Services ²⁺	BU125	9	10	11	12	Semester	1.00
	Computer Concepts and Applications ¹⁺	IT107	9	10	11	12	Semester	1.00
SPECIALIZED COURSES	Accounting 1	BU123		10	11	12	Semester	0.50
	Accounting 2	BU124		10	11	12	Semester	0.50
	Introduction to Management ²	BU133		10	11	12	Year	1.00
	Personal Money Management	BU231			11	12	Semester	0.50
	Business Law 1 ²	BU451		10	11	12	Semester	0.50
	Business Law 2 ²	BU461		10	11	12	Semester	0.50
	AP Computer Science Principles ¹	BU320		10	11	12	Year	1.00
	AP Computer Science A ¹	BU315			11	12	Year	1.00
	IB Business Management SL	IB361S			11	12	Year	1.00
	IB Business Management HL	IB361H-IB362H			11	12	2 Years	1.00/yr.
	IB Information Technology in a Global Society SL	IB363S-IB364S			11	12	2 Years	1.00/yr.
	Marketing Principles ²⁺	BU132		10	11	12	Semester	1.00
	Personal Finance ⁺	BU401			11	12	Semester	1.00
	Supply Chain Management Principles ²⁺	BU610		10	11	12	Semester	1.00
Transportation and Traffic Management ²⁺	BU620		10	11	12	Semester	1.00	

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.*

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.*

Specialized Courses

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 accounting equation, 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.

Personal Money Management BU231

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

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 IB363S (1st Year)
in a Global Society (ITGS) SL 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.

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.

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 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 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 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.*

ENGLISH LANGUAGE ARTS (LA)

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.

	Course	Number	Grade				Length	Credit
REQUIRED COURSES	English 1	LA101	9				Year	1.00
	Honors English 1	LA103	9				Year	1.00
	EL English 1	ES151	9				Year	1.00
	EL English 1 Emergent First Course	ES135	9				Year	1.00
	EL English 1 Emergent Second Course	ES145		10			Year	1.00
	English 2	LA201		10			Year	1.00
	Honors English 2	LA203		10			Year	1.00
	EL English 2	ES201		10	11		Year	1.00
ELECTIVE COURSES	Contemporary Literature	LA310			11		Year	1.00
	Humanities	LA350			11		Year	1.00
	Everyday English Language Arts	LA300			11		Year	1.00
	EL Everyday English Language Arts	ES301			11		Year	1.00
	British Literature/Shakespeare & Composition	LA320				12	Year	1.00
	Comparative Studies in Literature	LA330				12	Year	1.00
	Cultural Studies in Literature	LA340				12	Year	1.00
	EL Cultural Studies in Literature	ES340				12	Year	1.00
	Speech Arts 1	LA401		10	11	12	Semester	0.50
	Speech Arts 2	LA402			11	12	Semester	0.50
	Journalism 1	LA411		10	11	12	Semester	0.50
	Journalism 2	LA412			11	12	Year	1.00
	Journalism 3	LA413				12	Year	1.00
	Reading Seminar	LA421	9	10			Semester	0.50
	Yearbook	LA500		10	11	12	Year	1.00
	AP Language and Composition	LA324			11	12	Year	1.00
	AP Literature and Composition	LA364			11	12	Year	1.00
	IB Language A1 English HL	IB111H - IB112H			11	12	2 Years	1.00/yr.
	English 1100 Composition I *	LA151	9	10	11	12	Semester	1.00
	English 2367 Composition II *	LA251	9	10	11	12	Semester	1.00

English 1

English 1 LA101
Grade Level: 9
Course Length: Year, 1 Period
Credit: 1.00

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 LA103
Grade Level: 9
Course Length: Year, 1 Period
Credit: 1.00
1.125 Weighted grade

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 ES151
Grade Level: 9
Course Length: Year, 1 Period
Credit: 1.00

EL English 1 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.

EL English 1 Emergent First Course ES135
Grade Level: 9
Course Length: Year, 1 Period
Credit: 1.00

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 ES145
Grade Level: 10
Course Length: Year, 1 Period
Credit: 1.00
Prerequisite: EL English 1 Emergent First Course

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

English 2 LA201
Grade Level: 10
Course Length: Year, 1 Period
Credit: 1.00
Recommended: English 1 or Honors English 1

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 LA203
Grade Level: 10
Course Length: Year, 1 Period
Credit: 1.00
1.125 Weighted grade
Recommended: English 1 or Honors English 1

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 ES201
Grade Level: 10, 11
Course Length: Year, 1 Period
Credit: 1.00
Recommended: EL English 1

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.

English 3

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.

Humanities LA350

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

Humanities 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.

English 4

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.

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 study of fundamental techniques of public speaking learned in Speech Arts I. 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	LA324
Grade Level:	11, 12
Course Length:	Year, 1 Period
Credit:	1.00
	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	LA364
Grade Level:	11 and 12
Course Length:	Year, 1 Period
Credit:	1.00
	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	IB111H (1st Year) IB112H (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

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 critical 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	LA151
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 LEARNING (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 Learning (EL) courses qualify for elective credit, not English Language Arts credit.

Course	Number	Grade				Length	Credit
EL English A	ES106	9	10	11	12	Year	1.00
EL English B	ES107	9	10	11	12	Year	1.00
EL English C	ES108	9	10	11	12	Year	1.00
EL Learning Strategies for Academic Success	ES125	9	10	11	12	Semester	0.50

EL English A ES106
 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 ES107
 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 literary skills. Learning goals align with Ohio English Language Proficiency Standards.

EL English C ES108
 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 ES125
 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.

Course	Number	Grade				Length	Credit
Health (traditional learning environment)	HPE101	9	10	11	12	Semester	0.50
Health (blended learning environment)	HPE102	9	10	11	12	Semester	0.50
Physical Education 1	HPE201	9	10	11	12	Semester	0.25
Physical Education 2	HPE202	9	10	11	12	Semester	0.25

Health **HPE101 OR HPE102**
 Grade Levels: 9, 10, 11, 12
 Course Length: Semester, 1 Period
 Credit: 0.50

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.

Physical Education 1 **HPE201**
 Grade Levels: 9, 10, 11, 12
 Course Length: Semester, 1 Period
 Credit: 0.25

Physical Education 1 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.

Physical Education 2 **HPE202**
 Grade Levels: 9, 10, 11, 12
 Course Length: Semester, 1 Period
 Credit: 0.25
 Recommended: Physical Education 1

Physical Education 2 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.

MATHEMATICS (MA)

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.

Course	Number	Grade				Length	Credit
Math Lab (Algebra)	MA101	9	10			Semester	0.50
Math Lab (Geometry)	MA102		10	11		Semester	0.50
Algebra 1	MA301	9	10			Year	1.00
Geometry	MA302	9	10	11	12	Year	1.00
Honors Geometry	MA312	9	10			Year	1.00
Algebra 2	MA303	9	10	11	12	Year	1.00
Honors Algebra 2	MA313	9	10	11	12	Year	1.00
Algebra 2 Essentials	MA307			11	12	Year	1.00
Precalculus	MA304		10	11	12	Year	1.00
Honors Precalculus	MA314	9	10	11	12	Year	1.00
Financial Algebra	MA306			11	12	Year	1.00
Statistics, Trigonometry, and Functions	MA310				12	Year	1.00
AP Statistics	MA515	9	10	11	12	Year	1.00
AP Computer Science Principles ¹	MA320		10	11	12	Year	1.00
AP Calculus AB	MA315			11	12	Year	1.00
AP Calculus BC	MA325			11	12	Year	1.00
IB Mathematics: Application and Interpretation SL	IB511S – IB512S			11	12	2 years	1.00/yr.
IB Mathematics: Analysis and Approaches SL	IB521S – IB522S			11	12	2 Years	1.00/yr.
IB Mathematics: Analysis and Approaches HL	IB531H – IB532H			11	12	2 Years	1.00/yr.
Mathematics 1152 Calculus 2 ⁺	MA330			11	12	Semester	1.00
Mathematics 2153 Calculus 3 ⁺	MA340			11	12	Semester	1.00

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
 1.125 Weighted grade
 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
1.125 Weighted grade
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
1.125 Weighted grade
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.

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
 1.25 Weighted grade
 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
 1.25 Weighted grade
 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
 1.25 Weighted grade
 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
 1.25 Weighted grade
 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
 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

**IB511S (1st Year)
 IB512S (2nd Year)**

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 is comprised of 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: IB521S (1st Year)
Analysis and Approaches SL IB522S (2nd 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

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 is comprised of 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: IB531H (1st Year)
Analysis and Approaches HL 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 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 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 is comprised of 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 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.

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.

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 (CSCC) to participate. Dual credit will be provided for MATH 1152 offered at CSCC.*

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 (CSCC) to participate. Dual credit will be provided for MATH 2153 offered at CSCC.*

SCIENCE AND ENGINEERING (SC)

See Appendix H on page 81 to learn more about freshmen science options.

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](#).

	Course	Number	Grade				Length	Credit
LIFE SCIENCE COURSES	Biology 1 ¹	SC211	9	10			Semester	0.50
	Honors Biology 1 ¹	SC212	9	10			Semester	0.50
	Biology 2 ¹	SC221	9	10			Semester	0.50
	Honors Biology 2 ¹	SC222	9	10			Semester	0.50
	Honors Anatomy and Physiology	SC303		10	11	12	Year	1.00
	Ecology	SC311		10	11	12	Year	1.00
	Zoology	SC321		10	11	12	Year	1.00
	PLTW: Principles of Biomedical Science	SC336	9	10	11	12	Year	1.00
	PLTW: Human Body System ³	SC335		10	11	12	Year	1.00
	PLTW: Medical Interventions ³	SC337			11	12	Year	1.00
	AP Biology	SC304		10	11	12	Year	1.00
	AP Environmental Science	SC314		10	11	12	Year	1.00
	IB Biology SL	IB411S – IB412S			11	12	2 Years	1.00/yr.
	IB Biology HL	IB411H – IB412H			11	12	2 Years	1.00/yr.
	IB Sports, Exercise, and Health Science SL	IB471S – IB472S			11	12	2 Years	1.00/yr.
	Medical Terminology ^{3*}	SC338			11	12	Semester	0.67
	Basic Concepts in Health Care ^{3*}	SC339			11	12	Semester	0.67
	Laboratory Theory for Health Industries ^{3*}	SC525			11	12	Semester	0.67
Introduction to Medical Coding and Reimbursement ^{3*}	SC530			11	12	Semester	0.67	
PHYSICAL SCIENCE COURSES	Physical Science 1 ¹	SC111	9				Semester	0.50
	Physical Science 2 ¹	SC121	9				Semester	0.50
	Chemistry	SC401		10	11	12	Year	1.00
	Honors Chemistry	SC402		10	11	12	Year	1.00
	Geology	SC411		10	11	12	Year	1.00
	Physics	SC421		10	11	12	Year	1.00
	Materials Science	SC431			11	12	Year	1.00
	AP Chemistry	SC404			11	12	Year	1.00
	AP Physics 1	SC423		10	11	12	Year	1.00
	AP Physics 2	SC425			11	12	Year	1.00
	AP Physics C: Mechanics	SC426			11	12	Year	1.00
	IB Chemistry SL	IB421S – IB422S			11	12	2 Years	1.00/yr
	IB Physics HL	IB431H – IB432H			11	12	2 Years	1.00/yr
ENGINEERING COURSES	PLTW: Introduction to Engineering Design ^{2,3}	SC435	9	10	11	12	Year	1.00
	PLTW: Principles of Engineering ^{2,3}	SC440		10	11	12	Year	1.00
	PLTW: Civil Engineering and Architecture ^{2,3}	SC437			11	12	Year	1.00
	PLTW: Computer Integrated Manufacturing ^{2,3}	SC438			11	12	Year	1.00

Life Science Courses

Biology 1 SC211
Grade Levels: 9, 10
Course Length: Semester, 1 Period
Credit: 0.50 Life Science (foundational course)

Biology consists of two semester course offerings: Biology 1 and Biology 2. Together these courses prepare students for the state-mandated Biology End of Course Assessment. Students in Biology 1 will learn concepts about biochemistry, cellular transport, photosynthesis and cellular respiration, cellular replication, and DNA and protein synthesis. Biology 1 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. Biology 1 and 2 are foundational courses that introduce students to key concepts and theories preparing them for further study in other sciences and advanced science disciplines.

Honors Biology 1 SC212
Grade Levels: 9, 10
Course Length: Semester, 1 Period
Credit: 0.50 Life Science (foundational course)
1.125 Weighted grade

Honors Biology consists of two semester course offerings: Honors Biology 1 and Honors Biology 2. Together these courses prepare students for the state-mandated Biology End of Course Assessment. Students in Honors Biology 1 will learn concepts about biochemistry, cellular transport, photosynthesis and cellular respiration, cellular replication, and DNA and protein synthesis. Honors Biology 1 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 Honors Biology 1 cover topics at a much greater speed and depth than would occur in Biology 1; they are expected to know processes and apply knowledge beyond just conceptual understanding. Honors Biology 1 and 2 are foundational courses that introduce students to key concepts and theories preparing them for further study in other sciences and advanced science disciplines.

Biology 2 SC221
Grade Levels: 9, 10
Course Length: Semester, 1 Period
Credit: 0.50 Life Science (foundational course)

Biology consists of two semester course offerings: Biology 1 and Biology 2. Together these courses prepare students for the state-mandated Biology End of Course Assessment. Students in Biology 2 will study heredity, human genetics, natural selection and classification, population genetics, and population dynamics. Biology 2 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. Biology 1 and 2 are foundational courses that introduce students to key concepts and theories preparing them for further study in other sciences and advanced science disciplines.

Honors Biology 2 SC222
Grade Levels: 9, 10
Course Length: Semester, 1 Period
Credit: 0.50 Life Science (foundational course)
1.125 Weighted grade

Honors Biology consists of two semester course offerings: Honors Biology 1 and Honors Biology 2. Together these courses prepare students for the state-mandated Biology End of Course Assessment. Students in Honors Biology 2 will learn concepts about heredity, human genetics, natural selection and classification, population genetics, and population dynamics. Honors Biology 2 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 Honors Biology 2 cover topics at a much greater speed and depth than would occur in Biology 2; they are expected to know processes and apply knowledge beyond just conceptual understanding. Honors Biology 1 and 2 are foundational courses that introduce students to key concepts and theories preparing them for further study in other sciences and advanced science disciplines.

Honors Anatomy and Physiology SC303
Grade Levels: 10, 11, 12
Course Length: Year, 1 Period
Credit: 1.00 Advanced Science
1.125 Weighted grade
Recommended: Successful completion of Biology 1 & 2 or Honors Biology 1 & 2

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.

Ecology SC311
Grade Levels: 10, 11, 12
Course Length: Year, 1 Period
Credit: 1.00 Advanced Science
Recommended: Completion of Biology 1 & 2 or Honors Biology 1 & 2

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.

Zoology SC321
Grade Levels: 10, 11, 12
Course Length: Year, 1 Period OR Semester, 2 Periods blocked
Credit: 1.00 Advanced Science
Recommended: Completion of Biology 1 & 2 or Honors Biology 1 & 2

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.

Principles of Biomedical Science SC336

Grade Levels: 9, 10, 11, 12
 Course Length: Year, 1 Period
 Credit: 1.00 Advanced Science
 1.125 Weighted grade
 Recommended: Concurrent enrollment with Biology

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 Biomedical Science (PBS) is the first 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 PBS explore 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
 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 Maniken®; 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
 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

Grade Levels: 10, 11, 12
 Course Length: Year, 1 Period
 Credit: 1.00 Advanced Science
 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
 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
 1.125 Weighted Grade for SL
 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.

IB Sports, Exercise and Health Science SL **IB471S (1st Year)**
IB472S (2nd Year)

Grade Levels: 11, 12
 Course Length: 2 Years, 1 Period
 Credit: 1.00 per year Advanced Science
 1.125 Weighted grade for SL
 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 Sports, Exercise and Health Science is a rigorous introductory course designed to prepare highly motivated students for future scientific studies. Throughout the two years, students learn about science that underpins physical performance, including anatomy and physiology, biomechanics, psychology, nutrition and evaluating fitness performance. 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.

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.

Advanced Medical Terminology **SC338**

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
 Prerequisites: Must have an intent form on file and meet CSCC course placement requirements

Medical Terminology (MT) provides an overview of medical language. Students in MT learn the basic principles for understanding the language emphasizing terms that are practical and commonly found in the day-to-day work of all allied health professions in many areas of medicine. 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 HIMT 1121 at CSCC.

Basic Concepts in Health Care **SC339**

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
 Prerequisites: Must have an intent form on file and meet CSCC course placement requirements

Basic Concepts in Health Care provides a general introduction to health care in the U.S., including the history of Western medicine, legal and ethical issues, alternative medicine, safety issues, and the evolution of hospitals, medical education and insurance. The course will give students interested in pursuing a career in the health-related industry background information beneficial when pursuing further studies. 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 1100 at CSCC.*

Laboratory Theory for Health Industries **SC525**

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.*

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
 Prerequisites: Must have an intent form on file and meet CSCC course placement requirements

Introduction to Medical Coding and Reimbursement provides an overview of hospital-based and physician-based medical coding and reimbursement principles. Students will be introduced to the role of a medical coder, explore professions within the Health Information Management Technology field, and differentiate between the common types of managed care healthcare insurance plans. 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 HIMT 1274 at CSCC.*

Physical Science Courses

Physical Science 1 **SC111**
Grade Levels: 9
Course Length: Semester, 1 Period
Credit: 0.50 Physical Science (foundational course)

Physical Science consists of two semester course offerings: Physical Science 1 and Physical Science 2. Students in Physical Science 1 will learn basic chemistry, studying the properties of matter, atomic structure, chemical bonds, chemical reactions, and nuclear chemistry. Physical Science 1 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 1 is recommended for students who may need an additional year of general science background knowledge prior to taking Biology.

Physical Science 2 **SC121**
Grade Levels: 9
Course Length: Semester, 1 Period
Credit: 0.50 Physical Science (foundational course)

Physical Science consists of two semester course offerings: Physical Science 1 and Physical Science 2. Students in Physical Science 2 will learn basic physics, studying energy, forces, motion, waves, electricity, and the universe. Physical Science 2 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 2 is recommended for students who may need an additional year of general science background knowledge prior to taking Biology.

Chemistry **SC401**
Grade Levels: 10, 11, 12
Course Length: Year, 1 Period
Credit: 1.00 Physical or Advanced Science
Recommended: Successful completion of Algebra 1 or concurrent enrollment

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.

Honors Chemistry **SC402**
Grade Levels: 10, 11, 12
Course Length: Year, 1 Period
Credit: 1.00 Physical or Advanced Science
 1.125 Weighted grade
Recommended: Successful completion of Algebra 1

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.

Geology **SC411**
Grade Levels: 10, 11, 12
Course Length: Year, 1 Period
Credit: 1.00 Physical or Advanced Science
Recommended: Completion of Biology 1 & 2 or Honors Biology 1 & 2

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.

Physics **SC421**
Grade Levels: 10, 11, 12
Course Length: Year, 1 Period
Credit: 1.00 Physical or Advanced Science
Recommended: Completion of Algebra 2 or concurrent enrollment

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.

Materials Science **SC431**
Grade Levels: 11, 12
Course Length: Year
Credit: 1.00 Advanced Science
Recommended: Completion of Chemistry or Honors Chemistry

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 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 Chemistry	SC404
Grade Levels:	11, 12
Course Length:	Year, 1 Period
Credit:	1.00 Advanced Science 1.25 Weighted grade
Recommended:	Successful completion of Chemistry or Honors Chemistry
Approximate Cost:	\$94 AP test (optional)

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.

AP Physics 1	SC423
Grade Levels:	10, 11, 12
Course Length:	Year, 1 Period
Credit:	1.00 Physical or Advanced Science 1.25 Weighted grade
Recommended:	Successful completion of Algebra 2 or concurrent enrollment
Approximate Cost:	\$94 AP test (optional)

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.

AP Physics 2	SC425
Grade Levels:	11, 12
Course Length:	Year, 1 Period
Credit:	1.00 Advanced Science 1.25 Weighted grade
Recommended:	Successful completion of Physics, Honors Physics or AP Physics 1 Completion of Precalculus or concurrent enrollment
Approximate Cost:	\$94 AP test (optional)

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.*

AP Physics C: Mechanics	SC426
Grade Levels:	11, 12
Course Length:	Year, 1 Period
Credit:	1.00 Advanced Science 1.25 Weighted grade
Recommended:	Successful completion of Physics, Honors Physics Completion of Calculus or concurrent enrollment
Approximate Cost:	\$94 AP test (optional)

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.*

IB Chemistry SL	IB421S (1st Year)	IB422S (2nd Year)
Grade Levels:	11, 12	
Course Length:	2 Years, 1 Period	
Credit:	1.00 per year Advanced Science 1.125 Weighted Grade	
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 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.

IB Physics HL	IB431H (1st Year)	IB432H (2nd Year)
Grade Levels:	11 and 12	
Course Length:	2 Years, 1 Period	
Credit:	1.00 per year Advanced Science 1.25 Weighted grade	
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. 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

Grade Levels: 9, 10, 11, 12
Course Length: Year, 1 Period
Credit: 1.00 Other Science Elective
1.125 Weighted grade

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

Grade Levels: 10, 11, 12
Course Length: Year, 1 Period
Credit: 1.00 Other Science Elective
1.125 Weighted grade
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

Grade Levels: 11, 12
Course Length: Year, 1 Period
Credit: 1.00 Other Science Elective
1.125 Weighted grade

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.

Through 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

Grade Levels: 11, 12
Course Length: Year, 1 Period
Credit: 1.00 Other Science Elective
1.125 Weighted grade

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.

Grade 9	Grade 10	Grade 11 or 12
American History 1 American History 2 or Honors American History 1 & 2	Modern World History 1 Modern World History 2 or AP World History	U.S. Government 1 U.S. Government 2 or AP Government

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.

	Course	Number	Grade				Length	Credit
REQUIRED COURSES	American History 1	SS111	9				Semester	0.50
	American History 2	SS112	9				Semester	0.50
	Honors American History 1 & 2	SS113	9				Year	1.00
	Modern World History 1	SS201		10			Semester	0.50
	Modern World History 2	SS202		10			Semester	0.50
	AP World History	SS204		10	11	12	Year	1.00
	U.S. Government 1: The Federal Government	SS301		10	11	12	Semester	0.50
	U.S. Government 2: State, Local, and Economics	SS302		10	11	12	Semester	0.50
	AP Government	SS304		10	11	12	Year	1.00
ELECTIVE COURSES	Psychology	SS501			11	12	Semester	0.50
	Sociology	SS502			11	12	Semester	0.50
	Contemporary World Issues	SS503			11	12	Semester	0.50
	AP Comparative Government and Politics	SS305				12	Year	1.00
	AP U.S. History	SS404			11	12	Year	1.00
	AP European History	SS414			11	12	Year	1.00
	AP Psychology	SS704			11	12	Year	1.00
	IB History of the Americas HL	IB311H – IB312H			11	12	2 Years	1.00/yr.
	IB Psychology SL	IB331S			11	12	Year	1.00
	POLS 1100 Introduction to American Government +	SS930	9	10	11	12	Semester	1.00

Required Courses

American History 1 **SS111**
Grade Level: 9
Course Length: Semester, 1 Period
Credits: 0.50

American History 1 examines the history - including the political, economic and social events - of the United States of America from 1877 to the Great Depression and the New Deal. 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.

American History 2 **SS112**
Grade Level: 9
Course Length: Semester, 1 Period
Credits: 0.50

American History 2 examines the history - including the political, economic and social events - of the United States of America from 1930 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 1 & 2 **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 1 **SS201**
Grade Levels: 10
Course Length: Semester, 1 Period
Credits: 0.50
Recommended: American History 1 & 2

Modern World History 1 examines world events from 1600 to 1945. 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.

Modern World History 2 **SS202**
Grade Level: 10
Course Length: Semester, 1 Period
Credits: 0.50
Recommended: American History 1 & 2

Modern World History 2 examines world events from 1945 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.

U.S. Government 1: **SS301**
The Federal Government
Grade Level: 10, 11, 12
Course Length: Semester, 1 Period
Credits: 0.50
Recommended: American History 1 & 2; Modern World History 1 & 2

United States Government I: 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.

U.S. Government 2: **SS302**
State, Local, and Economics
Grade Levels: 10, 11, 12
Course Length: Semester, 1 Period
Credits: 0.50
Recommended: American History 1 & 2; Modern World History 1 & 2

United States Government 2: 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.

Advanced Placement Courses

Students may earn college credit or advancement in college coursework with qualifying scores on AP exams. See [page 17](#) for more information.

AP World History **SS204**
Grade Levels: 10, 11, 12
Course Length: Year, 1 Period
Credits: 1.00
 1.25 Weighted grade
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
 1.25 Weighted grade
 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 U.S. Government 1 and 2.

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.

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 Comparative Government and Politics SS305

Grade Level: 12
 Course Length: Year, 1 Period
 Credits: 1.00
 1.25 Weighted grade
 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.

AP U.S. History SS404

Grade Levels: 11, 12
 Course Length: Year, 1 Period
 Credits: 1.00
 1.25 Weighted grade
 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 1 & 2.

AP European History SS414

Grade Levels: 11, 12
 Course Length: Year, 1 Period
 Credits: 1.00
 1.25 Weighted grade
 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 of 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
1.25 Weighted grade
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.

**IB History of the Americas HL IB311H (1st Year)
IB312H (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

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
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

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).

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
1.25 weighted grade
Prerequisites: Must have an intent form on file and meet CSCC course placement requirements

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.

	Course	Number	Grade				Length	Credit
			9	10	11	12		
Art	Art Foundations	VP100	9	10	11	12	Semester	0.50
	Digital Arts	VP151	9	10	11	12	Semester	0.50
	2-D Visual Arts	VP152	9	10	11	12	Semester	0.50
	3-D Visual Arts	VP153	9	10	11	12	Semester	0.50
	Advanced Digital Arts	VP161		10	11	12	Semester	0.50
	Advanced 2-D Visual Arts	VP162		10	11	12	Semester	0.50
	Advanced 3-D Visual Arts	VP163		10	11	12	Semester	0.50
	Advanced Painting 1	VP121		10	11	12	Year	1.00
	Advanced Painting 2	VP122		10	11	12	Year	1.00
	IB Visual Art SL	IB611S–IB612S			11	12	2 Years	1.00/yr
IB Visual Art HL	IB611H–IB612H			11	12	2 Years	1.00/yr	
Music	Concert Band Ensemble ^{1,2}	VP302	9	10	11	12	Year	1.00
	Symphonic Band Ensemble ^{1,2}	VP303		10	11	12	Year	1.00
	Jazz Ensemble ^{1,2}	VP305	9	10	11	12	Year	1.00
	Marching Band ^{1,2}	VP310	9	10	11	12	Semester	0.50
	Orchestra Ensemble ^{1,2}	VP320	9	10	11	12	Year	1.00
	Women's Chorus ^{1,2}	VP401	9	10	11	12	Year	1.00
	Men's Chorus ^{1,2}	VP402	9	10	11	12	Year	1.00
	Concert Choir ^{1,2}	VP403	9	10	11	12	Year	1.00
	Symphonic Mixed Choir ^{1,2}	VP404		10	11	12	Year	1.00
	Symphonic Women's Choir ^{1,2}	VP405		10	11	12	Year	1.00
	Notables (WNHS), Soundsations (WSHS) and Jazz Central (WCHS) ^{1,2}	VP410	9	10	11	12	Year	1.00
	IB Jazz Band SL	IB631S–IB632S			11	12	2 Years	1.00/yr
	IB Orchestra SL	IB641S–IB642S			11	12	2 Years	1.00/yr
IB Music – Wind Ensemble SL	IB651S–IB652S			11	12	2 Years	1.00/yr	
IB Music – Choir SL	IB661S–IB662S			11	12	2 Years	1.00/yr	
Theater	Introduction to Theatre	VP200	9	10	11	12	Semester	0.50
	Acting	VP202	9	10	11	12	Semester	0.50
	IB Theater SL	IB681S–IB682S			11	12	2 Years	1.00/yr.

Art

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 medias. 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: 2D 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. Student 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 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 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.

Theater

Introduction to Theatre **VP200**

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 visual and performing arts requirement.

Acting **VP202**

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 **IB681S (1st Year)** **IB658S (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 (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 researching, 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.

WORLD LANGUAGES (WL)

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.

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

French

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.

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
1.125 Weighted grade
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
1.125 Weighted grade
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.

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.

Spanish 3 WL203
 Grade Levels: 10, 11, 12
 Course Length: Year, 1 Period
 Credits: 1.00
 Recommended: 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.

Honors Spanish 3 WL213
 Grade Levels: 10, 11, 12
 Course Length: Year, 1 Period
 Credits: 1.00
 1.125 Weighted grade
 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. 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.

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
 1.125 Weighted grade
 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. This course builds upon the content of Spanish 3 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 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
 1.25 Weighted grade
 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, interpretive, 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)
HL IB211H (1st Year) HL IB222H (2nd Year)
 Grade Levels: 11 and 12
 Course Length: 2 Years, 1 Period
 Credits: 1.00 per year
 1.125 SL Weighted grade
 1.250 HL Weighted grade
 Recommended: Successful completion of all Ohio State Tests through the end of sophomore year and "C" average in Spanish 3 or Honors Spanish 2
 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 in 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
 1.125 Weighted grade
 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 in 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 WL401

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 WL402

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 WL413

Grade Levels: 11, 12
Course Length: Year, 1 Period
Credit: 1.00
1.125 Weighted grade
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 WL414

Grade Levels: 12
Course Length: Year, 1 Period
Credit: 1.00
1.125 Weighted grade
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.

Appendices

A: Sample College Credit Plus Course Sequences	66
B: Which is best for me? Comparing AP, IB and CCP Courses	67 - 68
C: Health Pathway	69 - 70
D: Business and Logistics Pathway	71 - 72
E: Engineering Pathway	73 - 74
F: Global Scholars Program	75 - 76
G: Explanation of Physics Options	77 - 80
H: Which is best for me? Freshmen Science Scheduling Guide	81

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.

Junior Year		Senior Year	
1st Semester	2nd Semester	1st Semester	2nd Semester
Computer Concepts & Applications CSCI 1101 (3)	Marketing Principles MKTG 1230 (3)	Composition I ENG 1100 (3)	Composition II ENG 236 (3)

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*.

Junior Year		Senior Year	
1st Semester	2nd Semester	1st Semester	2nd Semester
<i>Composition I</i> ENG 1100 (3)	<i>Composition II</i> ENG 236 (3)	College Algebra MATH 1148 (4)	Trigonometry MATH 1149 (4)
Computer Concepts & Applications CSCI 1101 (3)	Marketing Principles MKTG 1230 (3)	Introduction to American Government POLS 1100 (3)	Comparative Politics POLS 1200 (3)
	Intro to Psychology PSY 1100 (3)	Intro to Sociology SOC 1101 (3)	

At Otterbein University:

Student earns 16 semester credits over two years at a private university.

Junior Year		Senior Year	
1st Semester	2nd Semester	1st Semester	2nd Semester
The American Experience to 1865 HIST 1100 (4)	Psychology for Non-Majors PSYC 1000 (4)	Calculus I MATH 1700 (4)	Calculus II MATH 1800 (4)

At Otterbein University:

Student earns 32 semester credits over two years at a private university.

Junior Year		Senior Year	
1st Semester	2nd Semester	1st Semester	2nd Semester
Statistics MATH 1240 (4)	Elementary Functions MATH 1250 (4)	Calculus I MATH 1700 (4)	Calculus II MATH 1800 (4)
The American Experience to 1865 HIST 1100 (4)	The American Experience since 1865 HIST 1200 (4)	Principles of Microeconomics ECON 2100 (4)	Psychology for Non-Majors PSYC 1000 (4)

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!

College Board Advanced Placement (AP)	International Baccalaureate Programme (IB)	College Credit Plus (CCP)
<p>Why? Completion of AP courses with qualifying exam grades are accepted for credit, accelerated placement, or both by most colleges and universities.</p>	<p>Why? 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.</p>	<p>Why? Completion of CCP courses allows students to earn transcribed college credit toward a degree or career certification during high school, and is accepted by most colleges and universities.</p>
<p>What? A challenging academic program designed to provide motivated high school students with college-level academic courses.</p> <p>Year-long courses are offered in six subject areas.</p>	<p>What? A rigorous, two-year pre-university program noted for its holistic focus and international perspective.</p> <p>Options exist for students to earn the prestigious IB Diploma or enroll as course candidates in specific classes.</p> <p>Courses are offered at both Higher Level (HL) and/or Standard Level (SL) in six subject areas.</p>	<p>What? An opportunity to take college courses and earn both high school and college credit.</p> <p>Semester-long courses are offered in three subject areas on Westerville’s high school campuses.</p>
<p>When? AP courses are typically available to students at the sophomore, junior, and senior levels.</p>	<p>When? 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.</p>	<p>When? CCP courses are available to any student in grades 7-12 who meets the admission requirements of participating colleges or universities.</p>
<p>Where? Most courses are offered at all high schools, but some may only be offered at specific buildings.</p>	<p>Where? 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.</p>	<p>Where? Courses noted below are offered in at least one high school; other courses can be taken on college campuses.</p>
<p>Assessments Optional exam at the end of each year-long course</p>	<p>Assessments Required at the end of the entire two-year course; one-year in some cases</p>	<p>Assessments At the end of each college or university semester</p>

Courses Offered in Westerville City Schools

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

Appendix C: Health Pathway



Health Pathway



Westerville City Schools



\$63,420

median annual salary for healthcare practitioners and technical occupations



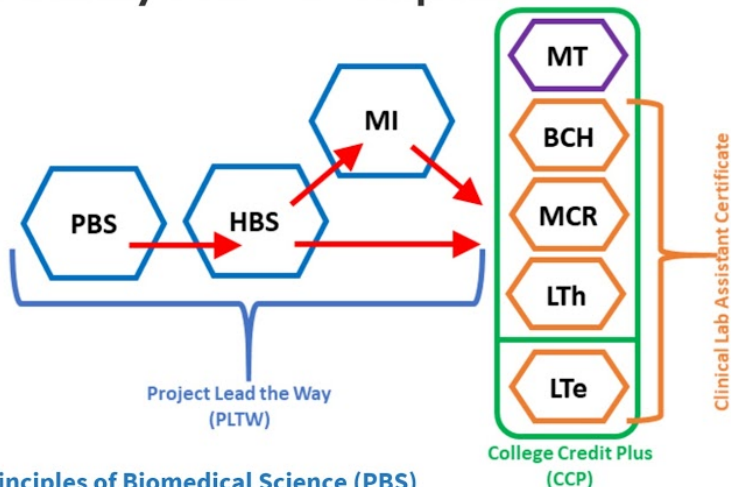
18% projected growth in employment opportunities from 2016 to 2026

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



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.

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



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:



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!



47%

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

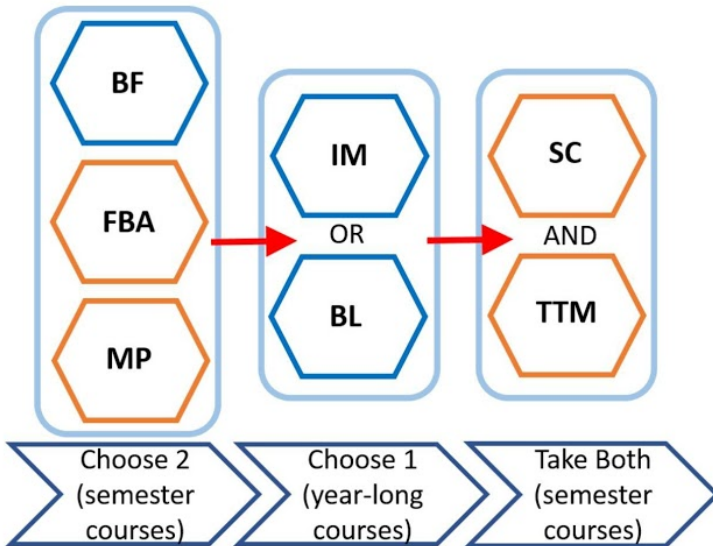


\$71,160

median annual salary for Logisticians in Ohio

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



Business Foundations (BF)

Build a foundation and learn the building blocks of business and economics.

Fundamentals of Business & Administrative Services (FBA)

Gain a college-level overview and understanding of business functions and activities.

Marketing Principles (MP)

Learn valuable customer service skills that come in handy for any profession.

Introduction to Management (IM)

Want to be a leader? A CEO? Understand principles and theories of management.

Business Law 1 & 2 (BL)

Master a fundamental understanding of the legal system and business law.

Supply Chain Management Principles (SC)

Build your business expertise and understand supply chain.

Transportation and Traffic Management (TTM)

Understand how transportation plays a vital role in the supply chain.



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.



MANUFACTURING SKILL STANDARDS COUNCIL

Content provided by:

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



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)

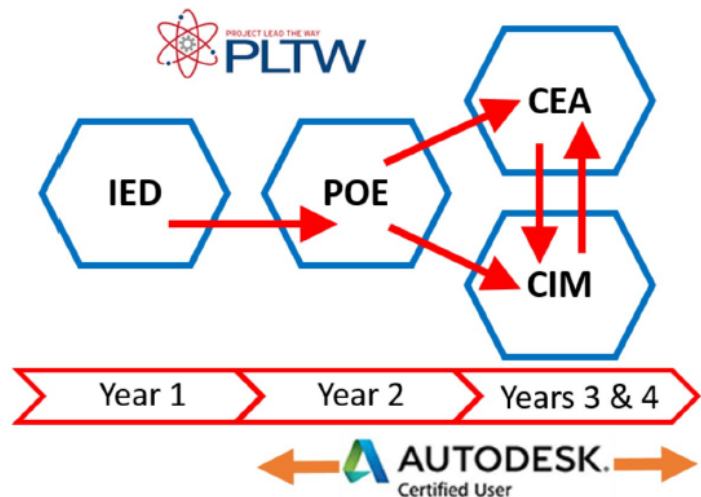
Explore a broad range of engineering topics including mechanisms, strength of structure and materials, and automation, and then apply what you know to take on challenges like designing a self-powered car.

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.



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."

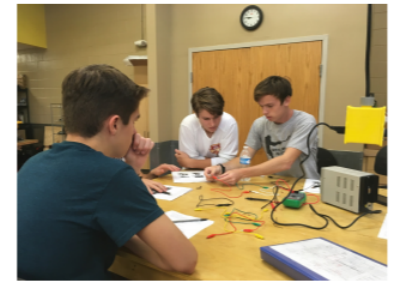
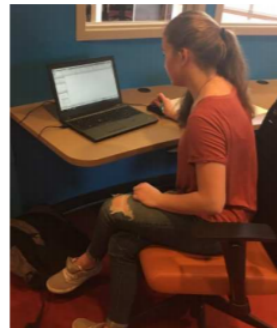
"...tests our ability to work with others and think outside the box."

"...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!"



8.21.19 ABLM

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



**GLOBAL SCHOLARS
DIPLOMA**

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.

<p><u>A Student in Physics:</u></p> <ul style="list-style-type: none">• Completed Algebra 2 or is concurrently enrolled in it• May not have a strong background in math and/or science, but is curious to learn how the physical world works• May not be sure of pursuing science as a career, but is open to learning new possibilities	<p><u>The Physics Course:</u></p> <ul style="list-style-type: none">• Uses algebra, geometry and simple trigonometry to solve problems• Focuses on the <u>mathematical foundation</u> of physics principles and models, and the nature of scientific inquiry• 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
OR	
<p><u>A Student in AP Physics 1:</u></p> <ul style="list-style-type: none">• Completed Algebra 2 or is concurrently enrolled in it• Demonstrated a strong academic performance in previous math courses• May have a strong interest in science or is considering a career in science, medicine or engineering• May be considering AP Physics 2 or C in the future• 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 <u>nonmajors</u>)	<p><u>The AP Physics 1 Course:</u></p> <ul style="list-style-type: none">• Requires a solid understanding of algebra, geometry, and trigonometric functions to understand major concepts• Focuses on <u>designing and conducting inquiry-based laboratory investigations</u> to solve problems through first-hand observations, data collection, analysis and interpretation• Involves both independent work and collaboration to investigate physics concepts• Includes kinematics, dynamics, circular, rotational and harmonic motion, gravity, energy, momentum, electric charge and force, circuits, waves and sound

*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.*

<p><u>A Student in AP Physics 2:</u></p> <ul style="list-style-type: none"> • Completed or is concurrently taking Precalculus • Successfully completed AP Physics 1 or Honors Physics • May be considering a career in life science, medicine, applied science, or fields not directly related to science • Has a strong work ethic and good time management skills • 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 <u>nonmajors</u>) 	<p><u>The AP Physics 2 Course:</u></p> <ul style="list-style-type: none"> • Requires familiarity with <u>algebraic and trigonometric functions</u> with an understanding of basic calculus concepts • Involves designing and conducting inquiry-based laboratory investigations to solve problems through first-hand observations, data collection, analysis and interpretation • Involves both independent work and collaboration to investigate physics concepts • Emphasizes problem solving and developing an understanding of a <u>broad variety of physics concepts</u> • Includes fluids, thermodynamics, electrical forces, fields and potential, circuits, magnetism, electromagnetic induction, optics, and modern physics
OR	
<p><u>A Student in AP Physics C: Mechanics:</u></p> <ul style="list-style-type: none"> • Completed or is concurrently enrolled in Calculus • Successfully completed AP Physics 1 or Honors Physics • Is likely considering a career in chemistry, physics, or engineering • Has a strong work ethic and possesses exceptional time management skills • 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 <u>majors</u>) 	<p><u>The AP Physics C: Mechanics Course:</u></p> <ul style="list-style-type: none"> • Uses <u>differential and integral calculus</u> to formulate physical principles, solve complex physical problems, and develop critical thinking skills • Involves designing and conducting inquiry-based laboratory investigations to solve problems through first-hand observations, data collection, analysis and interpretation • Emphasizes a deep understanding of foundational principles of physics in <u>classical mechanics</u> by applying these principles to complex physical situations that combine multiple aspects of physics rather than present concepts in isolation • Includes kinematics, Newton's laws of motion, work, energy and power, systems of particles and linear momentum, circular motion and rotation, oscillations, and gravitation

*In their **first year of physics at Westerville South High School**, students may choose from **Physics, AP Physics 1, or IB Physics HL.***

<p><u>A Student in Physics:</u></p> <ul style="list-style-type: none">• Completed Algebra 2 or is concurrently enrolled in it• May not have a strong background in math and/or science, but is curious to learn how the physical world works• May not be sure of pursuing science as a career, but is open to learning new possibilities	<p><u>The Physics Course:</u></p> <ul style="list-style-type: none">• Uses algebra, geometry and simple trigonometry to solve problems• Focuses on the <u>mathematical foundation</u> of physics principles and models, and the nature of scientific inquiry• 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
OR	
<p><u>A Student in AP Physics 1:</u></p> <ul style="list-style-type: none">• Completed Algebra 2 or is concurrently enrolled in it• Demonstrated a strong academic performance in previous math courses• May have a strong interest in science or is considering a career in science, medicine or engineering• May be considering AP Physics 2 or C in the future• 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 <u>nonmajors</u>)	<p><u>The AP Physics 1 Course:</u></p> <ul style="list-style-type: none">• Requires a solid understanding of algebra, geometry, and trigonometric functions to understand major concepts• Focuses on <u>designing and conducting inquiry-based laboratory investigations</u> to solve problems through first-hand observations, data collection, analysis and interpretation• Involves both independent work and collaboration to investigate physics concepts• Includes kinematics, dynamics, circular, rotational and harmonic motion, gravity, energy, momentum, electric charge and force, circuits, waves and sound
OR	
<p><u>A Student in AP Physics 2:</u></p> <ul style="list-style-type: none">• Completed or is concurrently taking Precalculus• Successfully completed AP Physics 1 or Honors Physics• May be considering a career in life science, medicine, applied science, or fields not directly related to science• Has a strong work ethic and good time management skills• 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 <u>nonmajors</u>)	<p><u>The AP Physics 2 Course:</u></p> <ul style="list-style-type: none">• Requires familiarity with <u>algebraic and trigonometric functions</u> with an understanding of basic calculus concepts• Involves designing and conducting inquiry-based laboratory investigations to solve problems through first-hand observations, data collection, analysis and interpretation• Involves both independent work and collaboration to investigate physics concepts• Emphasizes problem solving and developing an understanding of a <u>broad variety of physics concepts</u>• Includes fluids, thermodynamics, electrical forces, fields and potential, circuits, magnetism, electromagnetic induction, optics, and modern physics

*In their **second year of physics at Westerville South High School**, students may choose from **Physics, AP Physics 1, or IB Physics HL.***

<p><u>A Student in AP Physics 2:</u></p> <ul style="list-style-type: none">• Completed or is concurrently taking Precalculus• Successfully completed AP Physics 1 or Honors Physics• May be considering a career in life science, medicine, applied science, or fields not directly related to science• Has a strong work ethic and good time management skills• 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 <u>nonmajors</u>)	<p><u>The AP Physics 2 Course:</u></p> <ul style="list-style-type: none">• Requires familiarity with <u>algebraic and trigonometric functions</u> with an understanding of basic calculus concepts• Involves designing and conducting inquiry-based laboratory investigations to solve problems through first-hand observations, data collection, analysis and interpretation• Involves both independent work and collaboration to investigate physics concepts• Emphasizes problem solving and developing an understanding of a <u>broad variety of physics concepts</u>• Includes fluids, thermodynamics, electrical forces, fields and potential, circuits, magnetism, electromagnetic induction, optics, and modern physics
OR	
<p><u>A Student in IB Physics HL:</u></p> <ul style="list-style-type: none">• Completed the first year of IB Physics HL• Completed Precalculus or any first-year IB Mathematics course• Demonstrated a strong academic performance in previous math and science courses• Likely has a strong interest in science or is considering a career in science, medicine or engineering• Can potentially earn college credit by scoring a 5 or higher on the IB Physics HL exam	<p><u>The IB Physics HL Course:</u></p> <ul style="list-style-type: none">• Requires a solid understanding of algebra, geometry, and trigonometric functions to understand major concepts• 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• Includes an individual investigative projects that is continued from the first year• Covers electromagnetism, atomic and nuclear physics, digital technology, environmental aspects of physics, special and general relativity, and optics

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