SHEPHERD HILL REGIONAL HIGH SCHOOL
Dudley, Massachusetts

Program of Studies
2025-2026

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www.dscrd.org

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Foreword

This Program of Studies Guide and the Course Description Catalog were prepared to assist students and their parents in selecting appropriate courses that lead to a high school diploma, as well as provide the academic preparation for postsecondary education or the workforce.

Core Values

"Committed to Excellence" Shepherd Hill Regional High School is dedicated to **educate**, **challenge** and **empower** students to succeed in the 21st century. With **"Pride and Unity",** we foster intellectual achievement, civic responsibility and personal growth.

Statement of Beliefs about Student Learning

Through quality instruction in a safe and stimulating learning environment, we encourage students to be inquisitive, resourceful, and responsible learners. By cultivating respect and a strong work ethic, we are confident that our students will excel in the present and meet the demands of the future.

21st Century Learning Expectations

1. The Shepherd Hill student writes effectively—expressing ideas using conventional standard written English
2. The Shepherd Hill student reads effectively—comprehending material from a written text
3. The Shepherd Hill student demonstrates effective interactive communication skills (speaking and listening)—understanding and responding to a variety of topics and points of view
4. The Shepherd Hill student uses technology effectively—utilizing and evaluating media and technology responsibly
5. The Shepherd Hill student understands and applies personal wellness skills—demonstrating appropriate health related decisions
6. The Shepherd Hill student demonstrates critical thinking—gathering and analyzing information to solve problems
7. The Shepherd Hill student demonstrates cultural literacy—understanding diverse cultures and recognizing global perspectives
8. The Shepherd Hill student demonstrates inventive thinking—using creativity in art, communication, and problem solving
9. The Shepherd Hill student demonstrates civic and social responsibility—being respectful of people, ideas, and property as well as understanding the rights and duties of citizenship

Program Requirements

All students must carry enough courses during a school year to accumulate a minimum of 6.50 (6.00 for seniors) credits. A greater number of courses for credit may be elected, if they serve the best interest of the student, have the approval of the parents and counselor, and there is availability in the course.

Restrictions

- No more than four music performance credits (Band, Chorus, Ensembles) may be applied to the minimum number of credits required for graduation.
- Three different Physical Education Courses need to be completed in order to be applied to credits required for graduation.

Shepherd Hill Graduation Requirements

1. Four credits in English
2. Four credits in Mathematics
3. Three credits in Social Studies; a passing grade in U.S. History 2 is required
4. Three credits in Science
5. Three courses in Physical Education unless medically excused
6. All students are expected to meet the minimum program requirement established by local School Committee policy. The feasibility of a transfer student completing the minimum requirements of particular departments may be affected by the curriculum of the prior school as well as the timing of enrollment at Shepherd Hill. Any exceptions to the requirements will be made on an individual basis by a committee consisting of the Principal, Director of Student Resources and appropriate Department Coordinator.

MassCore Recommended Curriculum

Content	Credits Upon Graduation
English	4
Mathematics	4
Science	3
Social Studies	3
World Language	2
The Arts	1
Other Elective	5
Total Credits	22

Massachusetts State University Requirements

4 years English	4 units
4 years Mathematics	4 units
3 years Science (3 lab)	3 units
2 years Social Studies	2 units
2 years World Language*	2 units
Academic Electives	2 units
*World Language is not yet a requirement for graduation, however all students planning to attend a four-year college are advised to select at least two years of the same language.	

High School Promotion and Graduation

The minimum number of credits for promotion and graduation are as follows:

To be considered a ***sophomore*** ⇒ 5.00
To be considered a ***junior*** ⇒ 10.00
To be considered a ***senior*** ⇒ 15.75
For ***graduation*** ⇒ 22.00

Weighted Grade Scale

Most classes are weighted and used to determine class rank with the following exceptions: Art, Family and Consumer Science, Physical Education, Health, Special Education, Music and certain Business and Technology education courses. Some electives are unleveled which can be found under the Program of Studies Course Description.

Grades		Advanced Placement	Accelerated/ Honors	College Prep	Foundations/ Topics
100-97	A+	4.94	4.24	3.53	3.18
96-93	A	4.71	4.00	3.29	2.944
92-90	A-	4.47	3.77	3.06	2.709
89-87	B+	4.24	3.53	2.82	2.474
86-83	B	4.00	3.29	2.59	2.238
82.80	B-	3.77	3.06	2.35	2.003
79-77	C+	3.53	2.82	2.12	1.768
76-73	C	3.29	2.59	1.88	1.532
72-70	C-	3.06	2.34	1.65	1.297
69-67	D+	2.82	2.12	1.41	1.062
66-63	D	2.59	1.88	1.18	0.827
62-60	D-	2.35	1.65	0.94	0.591
59-Below	F	0.00	0.00	0.00	0.00

Graduation Participation

Seniors who have not met minimum academic requirements by the close of school the Friday prior to graduation will not be allowed to participate in the graduation exercises. Seniors who have not fulfilled school obligations (i.e., failure to attend scheduled graduation rehearsals, outstanding school debt, serious misconduct during senior activities, and/or failure to serve disciplinary time) may be excluded from graduation exercises by the principal.

Eligibility Requirements for Athletics/Activities

A student must pass a minimum of four major subjects during the marking period preceding participation (e.g. second quarter marks and not semester averages determine third quarter eligibility). To satisfy this requirement, a student must have passed sufficient courses for that marking period that carry credits totaling the equivalent of four (4) credits from major subjects (meeting every day.) For fall, passing grades are required for the fourth quarter and final grades from the previous school year.

Course Selection

All courses at Shepherd Hill are open to all students regardless of race, color, gender, religion, national origin, handicap, or sexual orientation. In choosing specific courses, be aware that some have prerequisites that the student must have taken and passed beforehand, and some (AP courses, for example) are selective, based upon past performance and teacher recommendations.

Admission of Transfer Students

A student entering Shepherd Hill must, with their parents or legal guardians, provide official school records from their previous school. Such records will include but are not limited to transfer card, academic records

(including grades to date for the current school year), disciplinary records, health records, and an Individual Education Plan or 504 Accommodation Plan in the case of students with special needs.

Course Changes and/or Drops

All changes in a student's schedule must be processed through the Guidance Office. Certain restrictions apply, namely:

1. No course may be entered after the **first five meeting days** (unless student is changing levels of a course sequence already taken or is transferring into Shepherd Hill Regional High School).
2. Course may be dropped within the first twenty meeting days with no consequences, although students must carry the minimum credit caseload for YOG.
3. Movement to a lower level of a course/sequence must take place before the mid-point of the course/sequence.

Beyond this point a student is expected to seek extra help from the teacher and parents are advised to consult the teacher for academic and study strategies. Communication and concentrated efforts are often the keys to a student finding success. If after these significant efforts both the teacher and the student agree that a level change is appropriate, the student can initiate a schedule change request in guidance. At any time in the course change or drop process, a counselor may require teacher and parent involvement.

Dual Enrollment

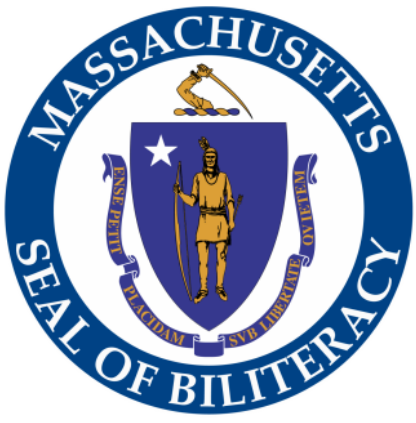
Dual Enrollment is offered to qualified students interested in pursuing concurrent enrollment between high school and college. SHRHS works closely with ***Nichols College, Quinsigamond Community College*** and ***Worcester State University***. The program is designed specifically to offer students who wish to register for college level courses that will also count towards high school graduation. Eligibility is determined through successful completion of a Placement Test and recommendation of the student's current high school.

Criteria for acceptance Includes:

- Currently enrollment at Shepherd Hill Regional High School
- Acceptable ***Grade Point Average (2.5 for Community College, 3.0 for University)***
- ***Recommendation*** by a high school guidance counselor or administrator
- Demonstrates ***satisfactory disciplinary history*** in student's profile
- Take the ***mathematics and English placement tests***
- Plan to enroll in college level courses (developmental coursework is not eligible) that will also count toward high school graduation
  Please note that enrollment in certain college level courses is contingent upon minimum scores on the placement examination.
- Complete a dual enrollment application
- ***Application Deadline – May 15th*** (for fall enrollment)

Seal of Biliteracy

The Dudley-Charlton Regional School District is participating in the Seal of Biliteracy initiative. The Seal of Biliteracy is an award given in recognition of students who have studied and attained proficiency in speaking, reading, and writing in two or more languages by high school graduation. It promotes biliteracy as an asset and rewards students' hard work in becoming bilingual and biliterate. The Seal of Biliteracy will take the form of a seal placed on the student's transcript and is a statement of nationally-recognized biliteracy for future employers and for college admissions. In order to encourage students to continue with their studies of a world language or their native language, students may demonstrate their proficiency through a portfolio-based assessment of the native/target language, in addition to a common assessment. Please note this is not limited to language taught in Dudley-Charlton, but includes any language in which a student is able to demonstrate fluency.



AP Capstone Diploma

AP Capstone™ is a diploma program based on two year-long AP courses: AP Seminar and AP Research. These courses are designed to complement other AP courses that the AP Capstone student may take.

Instead of teaching specific subject knowledge, AP Seminar and AP Research use an interdisciplinary approach to develop the critical thinking, research, collaboration, time management, and presentation skills students need for college-level work.

The College Board developed the AP Capstone Diploma program at the request of higher education professionals, who saw a need for a systematic way for high school students to begin mastering these skills before college.

Program Details

Students typically take AP Seminar in grade 10 or 11, followed by AP Research. Each course is yearlong, and AP Seminar is a prerequisite for AP Research.

In both courses, students investigate a variety of topics in multiple disciplines. Students may choose to explore topics related to other AP courses they're taking.

Both courses guide students through completing a research project, writing an academic paper, and making a presentation on their project.

Over the course of the two-year program, students are required to:

- Analyze topics through multiple lenses to construct meaning or gain understanding.
- Plan and conduct a study or investigation.
- Propose solutions to real-world problems.
- Plan and produce communication in various forms.
- Collaborate to solve a problem.
- Integrate, synthesize, and make cross-curricular connections.

Visit the AP Seminar and AP Research course pages to learn more.

Send your students to the AP Seminar and AP Research pages on our AP Students site to explore the courses.

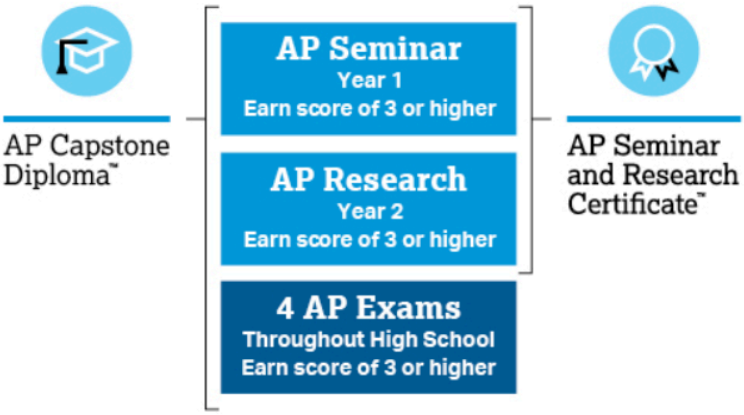
Assessment

AP scores for both courses are based on teacher assessment of student presentation components and College Board scoring of student-written components plus an end-of-course exam (for AP Seminar only).

Visit the AP Seminar Exam page and the AP Research Exam page to learn more about the assessment of student work in AP Capstone courses.

Awards

Students who earn scores of 3 or higher in AP Seminar and AP Research and on four additional AP Exams of their choosing receive the AP Capstone Diploma™. Students who earn scores of 3 or higher in AP Seminar and AP Research but not on four additional AP Exams receive the AP Seminar and Research Certificate™.



Students who earn these awards can view and print their diploma or certificate online. The award is also acknowledged on any AP score report that is sent to colleges after the award has been conferred.

Note: the AP Capstone Diploma and AP Seminar and Research Certificate are reported to colleges and universities as AP Scholar Awards and appear in Scholar Roster reports.

Above description taken directly from College Board:

https://apcentral.collegeboard.org/courses/ap-capstone/how-ap-capstone-works

Course Registration Process

The Guidance Department works diligently to make schedules based on student requests. Sometimes requests need to be reworked because of availability, enrollment numbers, and master schedule flexibility. Students *mark electives in order of preference*, and always write down some alternatives, just in case guidance needs to resort to those options.

Students are encouraged to explore different electives! Try something new! But please understand we work very hard to create a schedule with the classes requested, so often times a request to change a schedule *AFTER* it is posted to the portal in the summer, *may not* be possible. But we will do our very best to help all students!

The best thing a student can do is to get information about the electives you choose- go introduce yourself to the teacher, ask questions, ask peers what they learned in the class, and most important—read the course description in the Course Catalog. (It is online, but students can also ask their guidance counselor.) Keep in mind some courses also have prerequisites. It's very important we all follow the guidelines and make informed choices to make sure students are eligible for their desired courses.

Courses run based on student interest. If not enough students sign up for a course, it will not run that year.

Course Scheduling Timeline

Timeline	Scheduling Event
End of November	Program of Studies Changes Due (New courses, Deletion of Courses, Changes to Descriptions)
December	Program of Studies for subsequent year revised

January	Teachers make course and level recommendations online
February/March	Students meet with Guidance Counselors to review teacher recommendations
April/May	Master schedule created, revised and reviewed
June	Students placed into courses

Teacher Recommendations

The different levels of courses are designed to provide for the varying instructional needs of students. Courses are Advanced Placement (AP), Accelerated, Honors, College Prep, or Non-Leveled. AP Learners fulfill high standard prerequisites. Honors and Accelerated Learners absorb new information readily, have strong self-advocacy skills, and strong organizational skills. College Prep Learners may need additional reinforcement of concepts, instructional strategies, and teacher attention. Non-Leveled courses are designed to allow a student to explore areas of interest. Most of these courses are in the elective areas.

Teachers give serious thought to both the student and the curriculum in making recommendations; students are encouraged to discuss each level recommendation with their teacher. If a student and parent wish to override a teacher recommendation into a more advanced level, there is a process that must be followed through the guidance department. Any student enrolling in a course at an override level is committing to the course for the academic year. To ensure enrollment and a balanced schedule for all, overrides must be requested by a parent at the same time recommendations are made. Due to the increasing number of summer enrollments, any requests for overrides initiated after course schedules have been posted to the portal in the summer will be held for evaluation until the start of school.

Accreditation

Shepherd Hill Regional High School is accredited by the New England Association of Schools and Colleges, Inc. (NEASC), a non-governmental, nationally recognized organization whose affiliated institutions include elementary schools through collegiate institutions offering post-graduate instruction. Inquiries regarding the status of an institution's accreditation by NEASC should be directed to the administrative staff of the school or college. Individuals may also contact the association: New England Association of Schools and Colleges, 209 Burlington Road, Bedford, MA 01730-1433, (781) 271-0022.

Non-Discrimination Statement

"It is the policy of the Dudley-Charlton Regional School District not to discriminate on the basis of sex in its educational programs, activities, or employment policies as required by the Title IX of the 1972 Educational Amendment."

"It is the goal of the Dudley-Charlton Regional School District to promote an environment that is free from discrimination and affirmatively provides access to employment and equal educational opportunity. Discrimination, including that based on race, color, sex, religion, national origin, ancestry, disability or sexual orientation of an individual occurring in the workplace or in other settings in which individuals may be entitled access to educational opportunity is unlawful and will not be tolerated by this organization. Further, any retaliation against an individual for cooperating with an investigation of a discrimination complaint is similarly unlawful and will not be tolerated. To achieve our goal, acts of discrimination or harassment will not be tolerated and we have provided procedures by which inappropriate conduct will be addressed, if encountered by an employee, student or member of the community."

The following person has been designated to handle inquiries regarding the non-discrimination policies:

BUILDING PRINCIPAL
Mr. Darren C. Elwell

Dudley-Charlton Regional School Mission Statement

" . . . to advance the knowledge and well-being of our children and our community.

Innovation Pathway

Shepherd Hill Regional High School is included in the 25% of high schools in the Commonwealth to receive official designation status for Innovation Pathway programs by the Department of Secondary and Elementary Education. These Pathways are designed to connect students' learning to a particular career pathway through college-level coursework and work-based experiences.

Innovation Pathways expose students to career options in different industries, particularly STEM fields. High School students gain knowledge and skills in a particular field by taking college-level courses, technical instruction, and working at internships with employers who collaborate with local high schools.

Schools that applied for designation for Innovation Pathways were required to follow five design principles:

- Equitable access for all students
- Guided academic pathway, which, in the case of Innovation Pathways, must relate to one of five specified broad industry sectors
- Enhanced student supports
- Relevant connections to career
- Deep partnerships between high schools and employers or workforce development boards

Shepherd Hill Regional High School offers Innovation Pathways in Healthcare and Manufacturing that will serve approximately 170 students when fully enrolled. The school is partnering with MassHire Central Region Workforce Board and Gentex Optics in Dudley. Students will participate in Project Lead the Way curriculum and capstone course opportunities, and have opportunities to earn industry recognized credentials and participate in college courses offered through Quinsigamond Community College and various other Advanced Placement courses.

We are excited to bring these opportunities to our students and community. These programs will prepare students for college and career in significant ways and train students to enrich the businesses right here in Central MA.

My Career and Academic Plan (MyCAP)

My Career and Academic Plan (MyCAP) is a student-centered, multi-year planning tool designed to provide students with ongoing opportunities to plan for their academic, personal/social and career success. Because the primary author of MyCAP is the student with guidance from at least one identified caring adult in the school setting and in consultation with parents/guardians, students are empowered to seek out learning opportunities that align with their individual career interests and self-defined goals. Through identification of interests and goals along with an acknowledgement of any barriers to success and supports necessary to overcome those barriers, MyCAP maps the academic plan, personal/social skill attainment, and workplace readiness activities required for postsecondary success. As the student comes to own their choices and future planning, MyCAP may also improve student engagement.

MyCAP implementation supports district and school goals such as: completion of MassCore (MA recommended program of high school study); increasing the number of students who take and pass Advanced Placement (AP) and college level academic courses; increasing student attendance and engagement; increasing high school graduation rates; and increasing the number of students enrolling, pursuing and attaining a postsecondary credential.

MyCAP is intended for ALL students beginning as early as sixth grade. The MyCAP tool consists of both a process and an electronic platform. The electronic platform provides a place to organize and record progress related to academic achievement, personal/social skill development, and career development information that leads to workplace readiness. However, it is within the process that students: set attainable goals based on individual interests and strengths; engage in activities that promote academic achievement, personal social skill development and career development education; promote communication between students, school staff, parents, and other influential adults; and support school and district improvement efforts that are responsive to students' interests and needs.

Source: http://www.doe.mass.edu/ccte/ccr/mycap/

Career Pathways

Shepherd Hill Regional High School recognizes the need for students and parents to plan a high school program that enables each student to fulfill the Massachusetts Graduation requirements while providing for

individual interests, needs, and career goals. It is also recognized that every student is on a pathway to a career—whether in the near or distant future. How does a student get there, and will they be properly prepared? Has the student selected an educational career plan suited to their interests and abilities? These are all important questions for the student to consider before entering the competitive and technical workforce for the 21st century.

The Pathway program, along with Naviance career exploration software, will provide the direction needed to answer these questions. This program, based on best educational practices nationwide, was developed to assist students and parents in the course selection process. The five "pathways" include arts, business, engineering/STEM (Science, Technology, Engineering, Math), global studies and science. They will:

- Help students in making career decisions
- Identify how specific courses could correspond to specific careers
- Improve students' skills and increase their potential for employability and further training and education

Shepherd Hill Career Pathways, along with Naviance exploration, provide information for students and parents to create a career plan that:

- Facilitates entry into a specific field of higher education with prior background knowledge
- Provides understanding and knowledge of the variety of jobs within a career field
- Creates awareness of training and educational opportunities

It is the goal of Shepherd Hill Regional High School to ensure that the needs of all students are met. Collaboration among students, parents, teachers and guidance counselors is essential to ensure that each student selects an appropriate course of study. The suggested Career Pathways that follow may not provide a pathway of study that meets the needs and interests of each student. In that case, an individualized plan can be developed to best serve the student's goals for the future. Students may also reconsider their pathway choice as their interests and goals develop or change.

To aid in planning a four-year course of study, this publication also includes a comprehensive list of all course offerings available to students. It is strongly recommended that students, parents, teachers, counselors and administrators communicate openly in the planning and course selection process.

Certificate Programs

Students may elect to participate in a Global Awareness Program (GAP), an Engineering/STEM Program, a Biomedical Science Program, a Communications Certificate. These programs will provide students with effective skills for success in the technologically complex, globally competitive world of the twenty-first century. Students who successfully complete the requirements of the program will receive a certificate of recognition and acknowledgement of this accomplishment on their high school transcript. In addition, they will earn a special medal/tassel to wear during the graduation ceremony.

These certificate programs are open to all students, beginning in grade 9, who wish to develop leadership skills and challenge themselves with a rigorous academic program, community service and co-curricular involvement in the school community and beyond. Applications are available in the guidance office or they may be downloaded from the school website.

Global Awareness Program (GAP) Certificate Requirements

1) Completion of Global Studies Pathway
2) 15 hours of community service with a global connection
3) 2 cultural credits each year through the Nichols College Fischer Institute
4) International travel (or approved equivalent)
5) 2 courses* through the Nichols College Accelerator Program with an international focus or approved equivalent
6) Global capstone project

Engineering/STEM Program Certificate Requirements

1) Completion in at least two PLTW Technical courses—Intro to Engineering, Principles of Engineering, Computer Integrated Manufacturing and at least two Advanced Courses—AP Computer Science Principles, AP Computer Science, AP Physics 1, AP Physics 2, MNT100 Manufacturing Safety (QCC), MNT10 Mechanical Drawing 2–CAD 2 (QCC)
2) 15 hours of community service with an engineering/STEM connection
3) Attendance at 2 engineering/STEM workshops/events each year at Worcester Polytechnic Institute, Becker College, or Quinsigamond Community College, or local businesses each year
4) 2 years participation in Robotics Club and/or MA State Science & Engineering Fair
5) Engineering/STEM Capstone project
6) Completion of MyCAP

Biomedical Science Program Certificate Requirements

1) Completion of at least two PLTW Biomedical Science courses—Principles of Biomedical Science, Human Body Systems, Medical Interventions and at least two Advanced Courses—AP Biology, AP Chemistry, AP English Language & Composition
2) 15 hours of community service (i.e. - assist with summer camps, afterschool enrichment activities at elementary schools, Girls STEM Day, etc.)
3) Attendance at pre-arranged or scheduled workshops- at least one per school year (i.e. Becker College, QCC/WPI/Harrington Hospital or other industry/college field trip)
4) 2 years participation in Science & Engineering Fair
5) Completion of Capstone
6) Completion of MyCAP

AP+PLTW recognition can be earned by taking either AP Biology or AP Chemistry and earning qualifying scores on required exams

Communication Certificate Program Requirements

1) Completion of Media/Communications Pathway
2) 15 hours of community service with communications connection
3) Attendance at two (2) communications events (speakers, field trips, conferences)
4) Completion of two workshops (ex: Nichols College green room experience; radio station)
5) Completion of related Accelerator Course at Nichols, AP Capstone, AP Language, AP Literature, or pre-approved on-line course
6) Capstone Presentation (senior year)

*Credits transferrable to most colleges/universities.

Arts Pathway

What type of work is involved in the *Arts* Pathway?

- Individualized expression of creative or musical talent
- Design, performing arts or fine arts
- Application of artistic skills in the fields of photography, graphic arts, and design

What career choices could the *Arts* Pathway begin to prepare me for?

- Musical/Stage Performer
- Graphic Designer
- Textile/Fashion Design Industry
- Video Broadcasting
- Animation & Motion Picture Creator
- Graphic Marketing
- Art/Music Therapy
- Composition/Songwriting

What should you think about when considering following the *Arts* Pathway?

Do you…

- ❖ like art, music, drama, and other creative interests?
- ❖ like to display your imagination through artistic, literary, musical or dramatic abilities?
- ❖ have a need for individualistic expression?
- ❖ prefer free, unstructured situations or unconventional ideas?
- ❖ enjoy being creative, flexible, innovative or imaginative?
- ❖ enjoy being an original thinker?
- ❖ value creative communication and expression of ideas, emotions or sentiments?

If you answered YES to most of these questions, following the *Arts* Pathway, may be for you!

Pathway: Musical Performance

Highlighted Boxes indicate Shepherd Hill graduation requirements

	Grade 9	Grade 10	Grade 11	Grade 12
	• English 9	• English 10	• English 11	• English 12
	• Math	• Math	• Math	• Math
	• World History	• U.S. History 1	• U.S. History 2	
	• Science	• Science	• Science	
	• Spanish 1	• Spanish 2		
	• PE	• PE	• PE	
	• Band or 1 Choral Ensemble	• Band or 1 Choral Ensemble	• Band or 1 Choral Ensemble	• Band or 1 Choral Ensemble
Career Specific Elective Options	• Intro to Guitar (.5) • Intro to Piano (.5) • Hist of American Pop (.5) • Select Chorus • Band (1) • Drama (.5)		• Chamber Singers • Vocal Ensemble (.5) • Concert Choir • Instrumental Workshop (.5)	
			• The Nine, Humanities • Music Theory	
Related Club Opportunities	Jazz Band, Show Choir, Drama Club/Stage Crew, Marching Band, Color Guard, Tri-M Music Honor Society			
Additional College Credit				

Pathway: Visual Fine Arts

Highlighted Boxes indicate Shepherd Hill graduation requirements.

	Grade 9	Grade 10	Grade 11	Grade 12
	• English 9	• English 10	• English 11	• English 12
	• Math	• Math	• Math	• Math
	• World History	• U.S. History 1	• U.S. History 2	
	• Science	• Science	• Science	
	• World Language 1	• World Language 2		
	• PE	• PE	• PE	
	• Art 1 or	• Art 2	• Art 3	• Advanced Art • Advanced Digital Photography
Career Specific Elective Options	• Digital Photography (.5)	• Digital Design (.5) • Digital Photography 2 (.5)		
Related Club Opportunities	National Art Honor Society, District-Wide Art Show, Boston Globe Competition, Anna Maria High School Competition, Youth Art Month (Boston & Worcester), Art All-State			
Additional College Credit				

"If we are to have peace on earth…our loyalties must transcend our race, our tribe, our class, and our nation; and this means we must develop a world perspective."

~Martin Luther King, Jr~

Pathway: Media Communications Technology

Highlighted Boxes indicate Shepherd Hill graduation requirements

	Grade 9	Grade 10	Grade 11	Grade 12
	• English 9	• English 10	• English 11	• English 12
	• Math	• Math	• Math	• Math
	• World History	• U.S. History 1	• U.S. History 2	
	• Science	• Science	• Science	
	• Spanish 1	• Spanish 2		
	• PE	• PE	• PE	
	• Art I, Digital Photography			
Career Specific Elective Options	• Drama 1 (.5) • Business Dynamics (.5)	• Journalism (.5) • Digital Design (.5) • Digital Photography 2	• Creative Writing (.5)	
Related Club Opportunities				
Additional College Credit	• Public Speaking (Nichols College Accelerator Course)—3 credits			

"What's interesting about the shift from an industrial age to a technological age is that we keep inventing new media: movies, records, radio, television, the Internet, and now e-books—and one of the things that's most interesting about the invention of a new medium is watching it reinvent itself as it penetrates the culture."

~David Gerrold~

Business Pathway

What type of work is involved in the *Business* Pathway?

- Building wealth
- Investing in the stock market
- Marketing and advertising
- Financial planning and analysis
- Communicating persuasively
- Interviewing to win the job
- Managing personal finances
- Microsoft Office Skills

What career choices could the *Business* Pathway begin to prepare me for?

- Business Owner
- Investor
- Marketing Manager
- Accountant
- Sales
- Economist
- Finance Manager
- Attorney
- Administrative Assistant
- Bookkeeper/Tax Preparer

What should you think about when considering following the *Business* Pathway?

Do you…

- ❖ like to creatively solve problems?
- ❖ enjoy thinking critically?
- ❖ like to take risks?
- ❖ participate well on teams?
- ❖ possess a conscientiousness about your work?
- ❖ prefer working in an organized space with attention to detail?

If you answered YES to most of these questions, following the *Business* Pathway, may be for you!

Pathway: Business

Highlighted Boxes indicate Shepherd Hill graduation requirements

	Grade 9	Grade 10	Grade 11	Grade 12
	• English 9	• English 10	• English 11	• English 12
	• Math	• Math	• Math	• Math
	• World History	• U.S. History 1	• U.S. History 2	
	• Science	• Science	• Science	• Science
	• Spanish 1	• Spanish 2		
	• PE	• PE	• PE	
Career Specific Elective Options	• Business Applications (.5) • Business Dynamics (.5)	• Accounting 1 (.5) • AP Statistics (1)	• Accounting 2 (.5) • Accounting 3 (.5) • Business Law (.5) • Economics (.5) • Principles of Marketing (.5) • Investments (.5) • Entrepreneurship (.5) • Effective Presentations (.5) • AP Statistics (1)	
Related Club Opportunities	Academic Decathlon, Investments Club, Math Club			
Additional College Credit (Jr/Sr Year)	• Public Speaking (Nichols College Accelerator Course)—3 credits • International Management (Nichols College Accelerator Course)—3 credits			

Engineering/STEM Pathway

What type of work is involved in the *Engineering/STEM* Pathway?

- Responsibility for engineering and structural design in the manufacture, construction, and transportation of products or utilities
- Working with one's hands in a skilled trade concerned with construction, manufacturing, installation or repair of products
- Applying problem solving abilities to design and execute solutions for today's technical challenges
- The creation of systems that perform a useful task

What career choices could *Engineering/STEM* Pathway begin to prepare me for?

- Electrical Engineering
- Mechanical Engineering
- Computer Engineering
- Civil Engineering
- Computer Programmer
- Software Applications Developer
- Website Developer
- Computer App. Designer
- Network Systems Administrator

What should you think about when considering following the *Engineering/STEM* Pathway?

Do you…

- ❖ have an understanding of cause and effect?
- ❖ have problem solving and math skills?
- ❖ enjoy working with tools and equipment?
- ❖ perform work tasks to meet standards of accuracy?
- ❖ have mechanical ability?
- ❖ have manual dexterity and hand-eye coordination?
- ❖ have the ability to form mental images of objects or structures from drawings?
- ❖ have an aptitude in working with computers?

If you answered YES to most of these questions, following the *Engineering/STEM* Pathway, may be for you!

Pathway: Engineering/STEM*

Highlighted Boxes indicate Shepherd Hill graduation requirements

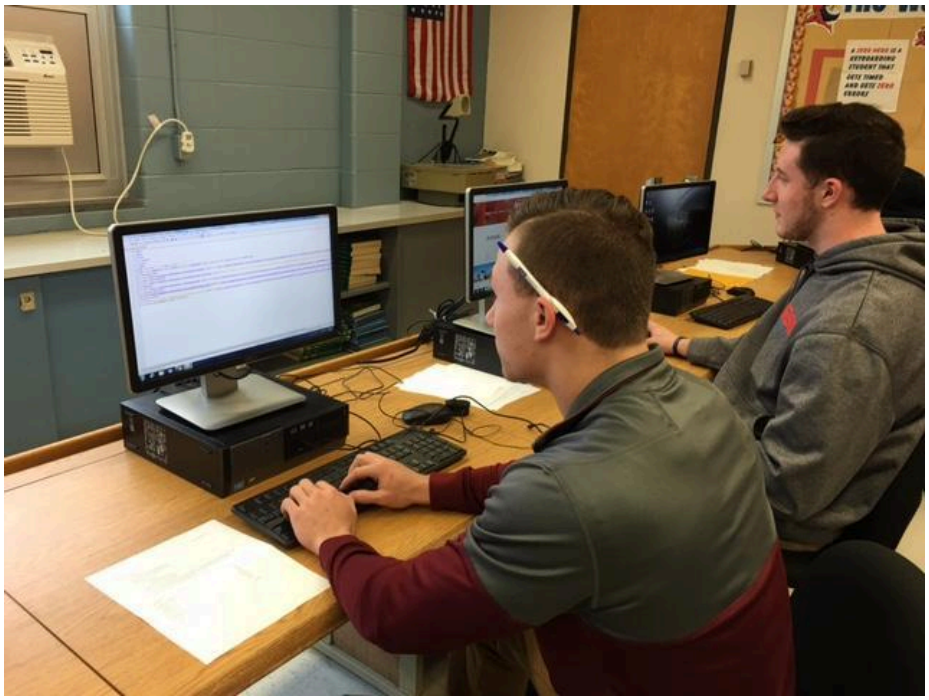
<table>
<tr><th></th><th>Grade 9</th><th>Grade 10</th><th>Grade 11</th><th>Grade 12</th></tr>
<tr><td rowspan="6">  </td><td>• English 9</td><td>• English 10</td><td>• English 11</td><td>• English 12</td></tr>
<tr><td>• Math
(Alg. 1 or Alg. 2)</td><td>• Geometry
• Trigonometry</td><td>• Algebra 2
• Pre-Calculus
• Trigonometry</td><td>• Topics in Adv. Algebra
• Pre-Calculus
• Calculus
• AP Calculus</td></tr>
<tr><td>• World History</td><td>• U.S. History 1</td><td>• U.S. History 2</td><td></td></tr>
<tr><td>• Biology</td><td>• Chemistry</td><td>• Physics</td><td>• Physics or elective</td></tr>
<tr><td>• Spanish 1</td><td>• Spanish 2</td><td></td><td></td></tr>
<tr><td>• PE</td><td>• PE</td><td>• PE</td><td></td></tr>
<tr><td>Career Specific Elective Options</td><td>• Introduction to Engineering Design—PLTW (.5)
• Introduction to Programming (.5)
• Exploring Computer Science (.5)</td><td>• Principles of Engineering (.5)
• CAD 1 (.5)
• CAD 2 (.5)
• Woodworking Tech (.5)
• Wood Construction (.5)
• AP Statistics (1)
• AP Computer Science (1)
• AP Computer Science Principles (1)

(or any Gr.9 electives)</td><td colspan="2"><u>Science Electives</u>
• AP Physics C
• AP Physics 1 (1)
• AP Chemistry (1.5)
• AP Env. Science (1.5)
• Astrophysics (1)
• Gen. Astronomy (1)
<u>Engineering electives not taken in grade 10 and/or</u>:
• Architectural Drawing (.5)
• Robotics 1 & 2 (.5)
• CAD 1 and/or 2 (.5)
• AP Statistics (1)
• AP Computer Science (1)
• AP Computer Science Princ. (1)
• PLTW Computer Integrated Mfg.</td></tr>
<tr><td>Related Club Opportunities</td><td colspan="4">Robotics Club, Math Team, Academic Decathlon, Astronomy Club</td></tr>
<tr><td>Additional College Credit</td><td colspan="4"></td></tr>
</table>

Pathway: Computer Science

Highlighted Boxes indicate Shepherd Hill graduation requirements

	Grade 9	Grade 10	Grade 11	Grade 12
	• English 9	• English 10	• English 11	• English 12
	• Math	• Math	• Math	• Math
	• World History	• U.S. History 1	• U.S. History 2	
	• Biology	• Chemistry	• Physics	• Science
	• World Language 1	• World Language 2		
	• PE	• PE	• PE	
Career Specific Elective Options	• Introduction to Engineering Design—PLTW (1.00) • Exploring Computer Science (.5) • Intro to Programming (.5) • AP Computer Science (1) *(grade 10)* • AP Computer Science Principles (1)		• Robotics 1 & 2 (.5) • AP Computer Science A (1) • Adv. Graphic Programming (1) • AP Computer Science Principles (1)	
Related Club Opportunities	Robotics, Math Team, Academic Decathlon, Astronomy Club			
Additional College Credit				



"Everyone in this country should learn how to program a computer…because it teaches you how to think."
~Steve Jobs~

Global Studies Pathway

What type of work is involved in the *Global Studies* Pathway?

- Being geographically informed regarding people, places and environments from a spatial, cultural, historic and economic perspective
- Understanding the interdependence of the world
- Participating in international experiences
- Thinking about issues from a global perspective
- Evaluating information critically from various sources

What career choices could the *Global Studies* Career Pathway begin to prepare me for?

- International Business (Global sales, business analyst, policy/research analyst, marketing)
- Global Studies
- Congressional Aides/Embassy Assistants
- Foreign Correspondent
- Travel Agent
- Humanitarian Relief Worker
- United Nations Officer
- Archaeologist
- Anthropologist
- Environmental Scientist

What should you think about when considering following *Global Studies* Pathway?

Do you…

- like to travel?
- enjoy learning about other cultures/people groups?
- enjoy collaborating with others on a shared task?
- enjoy communicating in a different language?
- have a curiosity about the world? Have an interest in politics, history, economics, or geography?
- have the ability to problem solve and think creatively?

If you answered YES to most of these questions, following the *Global Studies* Pathway, may be for you!

Pathway: Global Studies

Highlighted Boxes indicate Shepherd Hill graduation requirements

	Grade 9	Grade 10	Grade 11	Grade 12
	• English 9	• English 10	• English 11 or AP Language	• English 12 or AP Literature
	• Math	• Math	• Math	• Math
	• World History	• U.S. History 1	• U.S. History 2	
	• Science	• Science	• Science	
	• Spanish 1	• Spanish 2	• Spanish 3	• Spanish 4 or AP
	• PE	• PE	• PE	
Career Specific Elective Options			• Sociology (.5) • Cradles of Civilization (.5) • The Nine: Humanities (1) • Economics (.5) • AP European History	
Related Club Opportunities	Global Awareness/Foreign Language Club, Environmental Club			
Additional College Credit (Jr/Sr Year)	• Public Speaking (Nichols College Accelerator Course)—3 credits • International Communications (Nichols College Accelerator Course)—3 credits • International Management (Nichols College Accelerator Course)—3 credits			
Additional Opportunities	• International Trip (arranged by SHRHS) • Nichols College Cultural Seminars			

"If we are to have peace on earth…our loyalties must transcend our race, our tribe, our class, and our nation; and this means we must develop a world perspective."

~Martin Luther King, Jr~

Pathway: Humanities and Classical Studies

Highlighted Boxes indicate Shepherd Hill graduation requirements

	Grade 9	Grade 10	Grade 11	Grade 12
	• English 9	• English 10	• English 11 or AP Language	• English 12 or AP Literature
	• Math	• Math	• Math	• Math
	• World History	• U.S. History 1	• U.S. History 2	
	• Science	• Science	• Science	
	• Spanish 1	• Spanish 2	• Spanish 3	Spanish 4
	• PE	• PE	• PE	
Career Specific Elective Options			• Additional World Language • Cradles of Civilization (.5) • The Nine: Humanities (.5) • AP Literature (1) • Sociology (.5)	
Related Club Opportunities	Global Awareness/Foreign Language Club, Junior Classical League			
Additional College Credit				

Science Pathway

What type of work is involved in the *Science* Pathway?

- Planning and conducting research
- Collecting and applying systematic accumulation of knowledge in related branches of mathematics, life, physical and social science
- Observing and classifying facts in laboratory research
- Applying information in the fields of mathematics, medicine, life, physical and social sciences
- Studying the environment

What career choices could the *Science* Pathway begin to prepare me for?

- Nursing
- Doctor/Physician's Assistant
- Veterinarian
- Physical/Occupational Therapist
- Dentist/Orthodontist
- Dental Hygienist
- Marine Scientist/Oceanographer
- Environmental Engineer
- Naturalist/Park Ranger
- Pharmacist
- Sports Trainer

What should you think about when considering following the *Science* Pathway?

Do you…

- ❖ have an aptitude in science or math?
- ❖ have a curiosity about how things work?
- ❖ have the ability to gather and analyze data to solve problems?
- ❖ have a desire to help people resolve medical and health related concerns?
- ❖ have a concern for physical and mental fitness?
- ❖ have an interest in geography?

If you answered YES to most of these questions, following the *Science* Pathway, may be for you!

Pathway: Biomedical Pathway

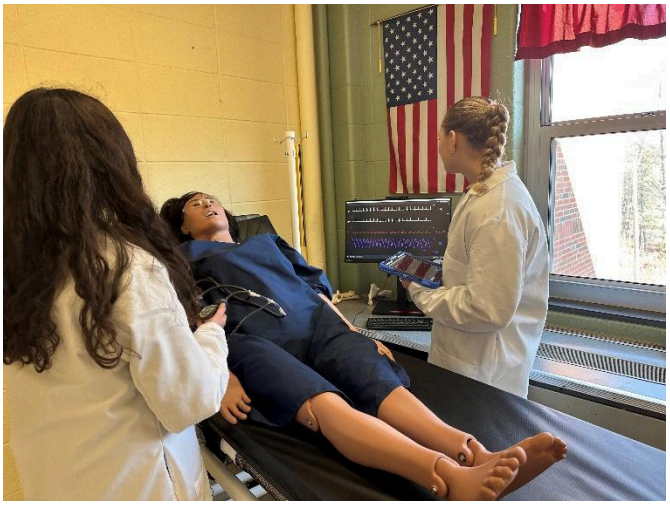
Highlighted Boxes indicate Shepherd Hill graduation requirements

	Grade 9	Grade 10	Grade 11	Grade 12
	• English 9	• English 10	English 11 or • AP Language	• English 12 or AP Literature
	• Math	• Math	• Math	• Math
	• World History	• U.S. History 1	• U.S. History 2	
	• Biology	• Chemistry	• Physics	• Science elective (see below)
	• Spanish 1	• Spanish 2		
	• PE	• PE	• PE	
Career Specific Elective Options		• AP Statistics (1) • Principles of Biomedical Science (1) • Human Body Systems (1)	• AP Physics C and/or 1 (1) • AP Biology (1.5) • Structure of the Human Body (1) • AP Chemistry (1.5) • AP Statistics (1) • Medical Interventions (1) • Human Body Systems (1) • Biomedical Innovations(.5)	
Related Club Opportunities	Academic Decathlon, Environmental Club, Envirothon, Astronomy Club			
Additional College Credit				

Pathway: Environmental Science/ Marine Science/Environmental Engineering

Highlighted Boxes indicate Shepherd Hill graduation requirements

	Grade 9	Grade 10	Grade 11	Grade 12
	• English 9	• English 10	• English 11	• English 12
	• Math	• Math	• Math	• Math
	• World History	• U.S. History 1	• U.S. History 2	
	• Biology	• Chemistry	• Physics	• Science elective (see below)
	• Spanish 1	• Spanish 2		
	• PE	• PE	• PE	
Career Specific Elective Options	• Introduction to Engineering Design—PLTW (1.00)	• Principles of Eng(.5) • CAD 1 (.5) • CAD 2 (.5) • AP Statistics (1)	• Environmental Science (1) • Marine Science (1) • AP Environmental Science (1.5) • AP Physics C (1) • AP Physics 1 (1) • Robotics 1 & 2 (.5) • AP Statistics (1)	
Related Club Opportunities	Envirothon, Math Team, Astronomy Club, Robotics, Environmental Club			
Additional College Credit				



"The science of today is the technology of tomorrow"

Edward Teller

Advanced Placement Courses

All students who meet the prerequisites shall be given the opportunity to enroll in Advanced Placement (AP) courses.

Advanced Placement Testing

Opportunities are available for highly motivated students to participate in the Advanced Placement Program administered by the College Board. Advanced Placement examinations are offered annually to give high school students opportunities to demonstrate college-level achievements. As with other College Board examinations, students pay a fee for each Advanced Placement examination they take. Advanced Placement examinations are administered annually in May. **Students enrolled in Advanced Placement classes in English, Mathematics and Science *must* take the corresponding AP exam.**

Individual students should see school counselors for specific information relative to the Advanced Placement Program. In order to provide instructional assistance to highly motivated students interested in the Advanced Placement Testing, specific course opportunities have been developed at Shepherd Hill.

AP Courses often require pre-requisite requirements. These are specified at the beginning of each AP course description. Courses specifically identified as such include:

Recommended to Grade 10:

- AP Statistics
- AP Biology
- AP Environmental Science
- AP Seminar

Recommended to Grade 11:

- AP English Language & Composition
- AP Pre-Calculus
- AP US History
- AP Chemistry
- AP Physics C: Mechanics
- AP Physics C: Electricity & Magnetism
- AP Computer Science
- (Or any Gr. 10 AP classes)

Recommended to Grade 12:

- AP English Literature & Composition
- AP Calculus AB
- AP Calculus BC
- AP Physics C: Mechanics
- AP Physics C: Electricity & Magnetism
- AP Physics 1
- AP Research
- AP European History
- AP Music Theory
- (Or any Gr. 10 or 11 AP classes)

Students and parents should understand that extra demands are essential for success on the Advanced Placement examinations and that the individual student must pursue studies on a personal basis. In each of the courses designated above, teachers will assist the student in identifying the content covered by a particular Advanced Placement test and offer individualized instructional assistance within the structure of the course.

Course Selections

ENGLISH

Grade	College Prep (CP)	Honors (H)	Advanced Placement (AP)
9	7012 English 9	7011 English 9	X
10	7021 English 10	7022 English 10 7024 English 10 Accelerated (HA)	X
11	7032 English 11	7031 English 11	7035 AP English Lang. & Comp.
12	7042 English 12	7041 English 12	7045 AP English Lit. & Comp.

College Prep (CP)	Honors (H)
7052 Creative Writing (unleveled)	7051Drama
	7061Journalism 1
	7062 Independent Reading

ENGLISH 9 7011, 7012

1.00 Credit Levels: H, CP **Learning Expectations:** 1, 2, 3

Prerequisites: Passing grade in English 8

Objectives:

1. To improve written and oral communication while emphasizing correct grammar usage and vocabulary development
2. To develop an understanding of a variety of literary concepts such as theme, style, and genre
3. To plan and present an oral/media presentation for a variety of purposes

Content: The continued development of spelling, reading, writing, listening, speaking and critical thinking skills will be emphasized. (Several papers are required.)

ENGLISH 10 7024 (ACCELERATED), 7022, 7021

1.00 Credit Levels: HA, H, CP **Learning Expectations:** 1, 2, 3

Prerequisites: Passing grade in English 9

Objectives:

1. To teach the basic tools for self-expression, including grammar, usage, mechanics, syntax, vocabulary, spelling, and composition
2. To develop thinking and communication skills, including logic, organization, and research
3. To expand the student's knowledge and appreciation of the various literary forms, including drama, the short story, the essay, mythology and poetry

Content: Students will read novels, short stories and poetry. They will analyze themes and literary devices in comprehensive written/oral form. The rules of grammar and usage will be tested and their application will be required in written work. Comprehensive vocabulary will be studied and tested.

ENGLISH 11 7031, 7032

1.00 Credit Levels: H, CP **Learning Expectations:** 1, 2, 3

Prerequisites: Passing grade in English 10

Objectives:

1. To identify, evaluate and synthesize the essential ideas or issues in a variety of genres and texts
2. To identify, analyze, evaluate and apply knowledge of authors' use of elements of literature for rhetorical and aesthetic purposes and to use these in original writing
3. To write coherent compositions with a clear focus using adequate detail in well-developed paragraphs
4. To revise to improve style, word choice, and sentence variety
5. To employ the conventions of Standard English to edit writing

Content: Students will read, discuss, and write about some of the greatest novels, poems, essays, dramas and stories of American literary history. Students will write papers of varying lengths. Students will also be expected to prepare and make oral presentations

ENGLISH 12 SENIOR SELECTIONS

Two semester courses = 1.00 Credit
Level: H, CP **Learning Expectations:** 1, 2, 3
Prerequisites: Passing grade in English 11
Objectives:

1. To develop an awareness and appreciation of literature.
2. To further the understanding of the various elements of literature as well as to increase the knowledge of different forms and genres.
3. To prepare students for the kind of writing commonly required in college courses and/or in the world of work.
4. To develop mature patterns of thought so as to be able to effectively organize those patterns for writing and public speaking.
5. To develop knowledge of reference sources including those available on the internet and to develop facility in using research resources effectively.
6. To teach the mechanics of grammar, punctuation and standard usage for use in all forms of communication.
7. To further the development of vocabulary.

Senior Selections (select 2 with one alternative choice):

1. **Dystopian Literature** Students will explore the origins of the genre and how it often follows major historical events such as war, political changes, and terrorist activity. The curriculum will focus on novels and short stories, as well as a study of film adaptations. Students will be assessed on their understanding of the texts/genre and will be tasked with composing literary analysis papers and projects to hone their analysis skills of literature.
2. **The Pen is Mightier: Writing and Non-Fiction**
   Students will explore the craft of nonfiction writing while developing their own writing skills. Students will read a variety of articles, essays, speeches, memoirs, and nonfiction books in order to examine the ways that writers influence and impact their audience.
3. **Chills & Thrills** Students will explore the horror genre through literature and film, examining the many ways in which authors scare us. Students will analyze these works through a critical lens and apply their analysis of the works and the genre in short analysis papers and research projects.
4. **War Stories** Students will read various novels and poems about war and conflict worldwide and from various time frames. Students will explore some of the socio-political reasons for said conflicts and how they impact the author's experience. Students will examine some of the universal truths/themes about cruelty and suffering.

Policies Governing Senior Selection English Courses:

All courses stress writing: a literary analysis and many shorter assignments are required each semester. In addition, major creative assignments and/or research projects are required in most courses.

1. **Required courses for graduation:** Before graduating, every student must take and pass two half-year English elective courses from the list above.
2. **Minimum number of courses:** Students must take a minimum of two semester courses. Students must take a minimum of one course in each semester during the student's senior year.
3. **Space Availability:** On a space-available basis and with the teacher's approval, students may take a second English course in any one semester, either for enrichment or to make up for an English credit deficiency.
4. **Enrollment:** No student will be permitted to enroll in more than two English courses during any semester and in no more than three in an academic year. In rare cases, an independent study may be taken for English credit, but only with the express permission of the guidance coordinator, administration, department coordinator, and the English teacher.
5. **Limiting enrollments:** Staffing and scheduling constraints restrict the number of sections in some traditionally popular elective courses. Seniors should make alternative course selections with this in mind, realizing that they will be placed, whenever possible, in one of their alternate choices if they cannot be scheduled into their first-choice elective.

AP ENGLISH LANGUAGE AND COMPOSITION 7035 Satisfies PLTW Biomedical Science Pathway

1.00 Credit Level: AP **Learning Expectations:** 1, 2, 3

Prerequisites: Passing grade in English 10 (can be substituted for English 11 or English 12)

Requirements of the course: Summer work must be completed before the course begins. **STUDENTS ARE REQUIRED TO TAKE THE AP EXAM**

Objectives:

1. To become skilled analytical readers for rhetorical content
2. To become skilled writers who compose for a variety of purposes
3. To become aware of a writer's purpose, audience and tone

Content: Course readings feature expository, analytical, personal and argumentative texts from a variety of authors and historical contexts. Students examine and work with essays, letters, speeches, images and practice debate techniques. Summer reading and writing are required.

AP ENGLISH LITERATURE AND COMPOSITION 7045

1.00 Credit Level: AP **Learning Expectations:** 1, 2, 3

Prerequisites: Passing grade in English 10 (can be substituted for English 11 or English 12)

Requirements of the course: Summer work must be completed before the course begins. **STUDENTS ARE REQUIRED TO TAKE THE AP EXAM**

Objectives:

1. To read and analyze passages of significant literary merit
2. To develop critical thinking skills
3. To write college level compositions
4. To grow in their appreciation of literature

Content: AP English is an in-depth survey of poetry, drama and fiction. The objective is to provide students with a college-level learning experience and prepare them to take the AP examination in English Literature and Composition. The course engages students in becoming skilled readers of literature written in a variety of periods, disciplines and rhetorical contexts and in becoming skilled writers who compose for a variety of purposes. Students should engage in careful reading and critical analysis. Through the close reading of selected texts, students should deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers. As students read, they should consider a work's structure, style and theme, as well as use of figurative language.

ENGLISH ELECTIVES

*Electives may **not** be used to replace any segment of the English 9, 10, 11, 12 graduation requirements*

DRAMA 1 7051

0.50 Credit Level: H **Learning Expectations:** 1, 2, 3

Open to Grades: 9, 10, 11, 12

Objectives:

1. To develop an appreciation for drama
2. To expose the student to stage acting
3. To acquaint the student with various forms of plays, including drama, musicals, monologues, and comedies

Content: Study of American, British and World Theater. Specific genres will be discussed and created. The student will learn the entire process of producing a play, from casting, to the final performance. Acting, directing, production, staging, voice projection and the history of theater will be covered in detail. This is an active class: you will be required to act, memorize, and be very creative.

Term Assignments Required: Besides tests, quizzes and participation, the student will be responsible for a final director project.

AP SEMINAR 7046

1.00 Credit Level: AP **Learning Expectations:** 1, 2, 3

Prerequisites: Honors English 9 OR Teacher Recommendation

Open to Grades: 10 & 11

Ideal Alignment: Alongside Pre-AP English 10

Content: AP Seminar is a foundational course that engages students in cross-curricular conversations that explore the junctions of academic and real-world topics through analyzing varying perspectives. Through an inquiry-based process, students practice reading and analyzing articles, research studies, and foundational and literary texts as well as listening to and viewing speeches and personal accounts. Students learn to synthesize information from multiple sources, develop their own perspectives in research-based written essays, and design and deliver oral and visual presentations, both individually and as part of a team. Ultimately, the course aims to prepare students to analyze and evaluate information with accuracy in order to write and communicate evidence-based arguments.

AP RESEARCH 7047

1.00 Credit Level: AP **Learning Expectations:** 1, 2, 3

Prerequisites: **AP Seminar**

Open to Grades: 11 & 12

Content: AP Research, the second course in the AP Capstone experience, allows students to deeply explore an academic topic, problem, issue, or idea of individual interest. Students design, plan, and implement a yearlong investigation to address a research question. Through this inquiry, they further the skills they acquired in the AP Seminar course by learning research methodology, employing ethical research practices, and accessing, analyzing, and synthesizing information. Students reflect on their skill development, document their processes, and curate the artifacts of their scholarly work through a process and reflection portfolio. The course culminates in an academic paper of 4,000-5,000 words (accompanied by a performance, exhibit, or product where applicable) and a presentation with an oral defense.

JOURNALISM 1 7061

0.50 Credit Level: H **Learning Expectations**: 1, 2, 3

Open to Grades: 10, 11 & 12 students

Content: Students will explore the field of journalism and the level of importance that clear, concise and direct transmission plays in written communication. Ultimately, this course will seek to assist students in furthering establishing their voice, while contributing to an exploration into a potential academic pathway. As the main focus of this course, students will assist in the production, design and distribution of the school newspaper.

CREATIVE WRITING 7052

0.50 Credit **Learning Expectations:** 1, 2, 3

Open to Grades: 11 and 12

Objectives:

1. To identify, analyze and use the elements generally associated with poetry-metaphor, simile, personification, and alliteration
2. To use general dictionaries, thesauruses and other related references as needed
3. To identify and analyze how an author appeals to the senses, creates imagery, suggests mood, and sets tone
4. To help and encourage each student to develop his/her own personal style of writing
5. To encourage the freedom and the self-confidence of each student to voice personal opinions and to try unusual techniques

Content: In an informal atmosphere, students will be able to try different forms of self-expression and will receive criticism from the teacher and fellow writing classmates. Poetry and prose literature readings will supplement class work, providing models and illustrating writing techniques. Written exercises will be assigned daily. Re-writing will be emphasized. Students' work throughout the course will culminate in a final portfolio that showcases their growth as a writer.

WORLD LANGUAGE

ELECTIVES				
Language	**Grades**	**College Prep (CP)**	**Honors (H)**	**Advanced Placement (AP)**
SPANISH	9-12	7452 Spanish 1	7451 Spanish 1 7454 Spanish 1 Accelerated (HA) 7464 Spanish 2 Accelerated (HA)	X
	10-12	7462 Spanish 2	7461 Spanish 2 7464 Spanish 2 Accelerated (HA) 7474 Spanish 3 Accelerated (HA)	X
	11,12	7472 Spanish 3	7471 Spanish 3 7474 Spanish 3 Accelerated (HA) 7481 Spanish 4	X
	12	X	7484 Spanish 5	7485 AP Spanish

SPANISH 1 (ACCELERATED) 7454

1.00 Credit Level: HA **Learning Expectations:** 7, 3

Prerequisites: Middle School or previous Spanish language study

Open to grades: 9–12

Content: Students will study the essentials of Spanish grammar, vocabulary and idiomatic expressions. They will be introduced to Spanish cultures and develop speaking, listening, reading and writing skills appropriate to their level of study. The goal of this class is to provide an immersion experience in Spanish and to prepare students to reach AP Spanish in their senior year.

Objectives:

1. To communicate in the target language using words and expressions
2. To read and interpret informational texts
3. To write lists and short notes
4. To develop first year listening skills
5. To demonstrate knowledge of Hispanic people, geography, history and culture

SPANISH 1 7451

1.00 Credit Level: H **Learning Expectations:** 7, 3

Prerequisites: None

Open to grades: 9–12

Content: Students will study the essentials of Spanish grammar, vocabulary and idiomatic expressions. They will be introduced to Spanish cultures and develop speaking, listening, reading and writing skills appropriate to their level of study.

Objectives:

1. To communicate in the target language using words and expressions
2. To read and interpret informational texts
3. To write lists and short notes
4. To develop first year listening skills
5. To demonstrate knowledge of Hispanic people, geography, history, and culture

SPANISH 2 (ACCELERATED) 7464

1.00 Credit Level: HA **Learning Expectations**: 7, 3

Prerequisites: Passing grade of B or higher in Spanish 1 (HA); Passing grade of A or higher in Spanish 1 (CP)

Open to grades: 9–12

Content: Students will study the essentials of Spanish grammar, vocabulary and idiomatic expressions. With more exposure to the target language they will improve their speaking, listening, reading and writing skills. As they study culture, they will acquire a general knowledge of the Spanish-speaking world. The goal of this class is to provide an immersion experience in Spanish and to prepare students to reach AP Spanish in their senior year.

Objectives: In addition to the Spanish 1

1. To communicate in the target language using phrases
2. To read and interpret short stories and/or poetry
3. To write postcards and short letters
4. To develop second year listening skills

SPANISH 2 7461

1.00 Credit Level: H **Learning Expectations:** 7, 3

Prerequisites: Passing grade of A in Spanish 1 (CP); Passing grade in Spanish 1 (H)

Content: Students will increase their knowledge of Spanish grammar, vocabulary and idiomatic expressions. With more exposure to the target language they will improve their speaking, listening, reading and writing skills. As they study culture, they will acquire a general knowledge of the Spanish-speaking world. This class will be taught in Spanish.

Objectives: In addition to the Spanish 1

1. To communicate in the target language using phrases
2. To read and interpret short stories and / or poetry
3. To write postcards and short letters
4. To develop second year listening skills

SPANISH 2 7462

1.00 Credit Level: CP **Learning Expectations:** 7, 3

Prerequisites: Passing grade in Spanish 1 (CP) or equivalent

Content: Students will increase their knowledge of Spanish grammar, vocabulary and idiomatic expressions. With more exposure to the target language they will improve their speaking, listening, reading and writing skills. As they study culture, they will acquire a general knowledge of the Spanish-speaking world. This class will not move through the material as quickly as the honors class. It will review previous knowledge and begin the second year of language study. The class will be taught in English and Spanish.

Objectives: In addition to Spanish 1

1. To communicate in the target language using phrases
2. To read and interpret short stories and / or poetry
3. To write postcards and short letters
4. To develop second year listening skills

SPANISH 3 (ACCELERATED) 7474

1.00 Credit Level: HA **Learning Expectations**: 7, 3

Prerequisites: Passing grade of B or higher in Spanish 2 (HA); Passing grade of A or higher in Spanish 2 (H)

Open to grades: 9-12

Content: Students will study more advanced Spanish grammar and vocabulary. This will include thematic units. In the third year of second language acquisition the increased use of the target language by the students is the means by which they will improve their listening, speaking, reading, and writing skills. Students will incorporate high order thinking skills. They will continue to use authentic materials in order to express, in Spanish, their knowledge and understanding of Spanish culture. This class will be taught in Spanish using English as necessary to meet the needs of all students.

Objectives: In addition to Spanish 1 and 2

1. To communicate in the target language using sentences
2. To read and comprehend authentic and adapted materials
3. To write letters and short reports

SPANISH 3 7471

1.00 Credit Level: H **Learning Expectations:** 7, 3

Prerequisites: Passing grade of A in Spanish 2 (CP); Passing grade in Spanish 2 (H)

Content: Students will study more advanced Spanish grammar and vocabulary. In the third year of second language acquisition the increased use of the target language by the students is the means by which they will improve their listening and speaking skills. Students will also improve their reading comprehension and writing skills. In this transition year, students will begin to express, in Spanish, their knowledge and understanding of Spanish culture.

Objectives: In addition to Spanish 1 and 2

1. To communicate in the target language using sentences
2. To read and comprehend authentic and adapted materials
3. To write letters and short reports

SPANISH 4 7481

1.00 Credit Level: H **Learning Expectations:** 7, 3

Prerequisites: Passing grade of B or better in Spanish 3 or teacher recommendation

Content: Students will continue to study the more complex structures of Spanish grammar. In this more advanced level of language study, students will begin to communicate entirely in Spanish. As they demonstrate more proficiency orally, they will also continue to improve their listening, reading and writing skills. This year will prepare seniors for college language study and juniors for their final year of Spanish.

Objectives: In addition to Spanish 1, 2 & 3

1. To communicate in the target language using combinations of phrases
2. To exchange opinions as well as support and/or defend them in the target language
3. To write short essays
4. To read short stories

SPANISH 4 ACCELERATED 7482

1.00 Credit Level: HA **Learning Expectations:** 7, 3

Prerequisites: Passing grade of B or higher in Spanish 3 (HA); Passing grade of A or higher in Spanish 3 (H)

Grades: 11-12

Content: Students will study more advanced Spanish grammar and vocabulary. This will include thematic units. In the third year of Spanish language acquisition, the increased use of the target language by the teacher and students is the means by which they will improve their listening, speaking, reading and writing skills. Students will incorporate higher order thinking skills. They will continue to sue authentic materials in order to express, in Spanish, their knowledge and understanding of the Spanish culture. This class will be taught in Spanish using English as necessary to meet the needs of all students.

Objectives: In addition to Spanish 1, 2 & 3

1. To communicate in the target language
2. To read and comprehend authentic and adapted materials
3. To write letters and short reports

SPANISH 5 7484

1.00 Credit Level: H **Learning Expectations:** 7, 3

Prerequisites: Passing grade of B or better in Spanish 4 or teacher recommendation

Content: Students will review and study more Spanish grammar. In this last year of language study, students will be expected to communicate entirely in Spanish. They will also be reading and writing in the language refining their abilities in preparation for college.

Objectives: Including the Spanish 1, 2, 3 & 4 objectives, students will prepare for college study by reviewing grammar points and refining their listening, speaking, reading, and writing skills.

AP SPANISH 7485

1.00 Credit Level: AP **Learning Expectations:** 7, 3

Open to Grade: 12

Prerequisites: Permission from the instructor for advanced placement status

Content: This course will include direct conversation comprising more practice in aural-oral Spanish and a deeper, wider vocabulary and cultural understanding.

Objectives: Students will understand spoken language in both formal and conversational situations. They will speak with accuracy and fluency using appropriate pronunciation and intonation. They will read literature and informational texts with ease and accuracy. They will write effectively conveying ideas clearly and accurately.

MATHEMATICS

Grades	College Prep (CP)	Honors (H)	Advanced Placement (AP)
9	7211 Pre-Algebra 7212 Algebra 1	7212 Algebra 1 7214 Algebra 1 Accelerated+ (HA) 7234 Algebra 2 Accelerated* (HA)	X
10	7222 Geometry	7221 Geometry 7224 Geometry Accelerated (HA)	X
10-12	X	X	7265 AP Statistics 7275 AP Computer Science
11	7232 Algebra 2 7234 Intermediate Algebra 7255 Math Topics & Application	7231 Algebra 2 7244 Pre-Calculus Accelerated (HA)	7275 AP Computer Science AP Pre-Calculus
12	Financial Algebra 7232 Algebra 2 7234 Intermediate Algebra	Financial Algebra 7261 Topics in Advanced Algebra 7241 Pre-Calculus 7246 Calculus Accelerated (HA)	7245 AP Calculus AB 7256 AP Calculus BC

+ For 8th graders who completed Algebra 1
** For 8th graders who completed Algebra 1 with min. B+ (87+) AND demonstrated exemplary performance on placement exam*

ELECTIVES		
GRADES	**College Prep (CP)**	**Honors (H)**
9-12	X	7272 Exploring Computer Science 7228 Intro to Programming
10-12	X	7280 Elementary Probability and Statistics 7271 Trigonometry

GRADE 9

PRE-ALGEBRA

1.00 Credit **Level: CP** **Learning Expectations:** 6
Prerequisites: None
Objectives:

1. To understand patterns, relations, and functions as related to the number systems.
2. To gain proficiency in working with radicals and integer exponents.
3. Understand the connections between proportional relationships and linear equations.
4. Analyze and solve linear equations and pairs of simultaneous linear equations.
5. To understand the different ways to communicate mathematical ideas: graphical, tabular and algebraic.
6. To define, evaluate and compare functions.
7. To use functions to model relationships between quantities.

Content: Topics include identifying number systems and patterns, converting integer exponents and radicals, investigating relationships between variables, defining and using linear equations, defining functions based on models, solving simultaneous equations, working with different ways of communicating mathematical ideas and solving basic algebraic equations.

ALGEBRA 1 7211

1.00 Credit **Level: H** **Learning Expectations:** 6
Prerequisites: Grade eight teacher recommendation. Proficiency demonstrated on placement test.
Objectives:

1. To understand patterns, relations, and functions as related to the real number system
2. To develop proficiency in operations with polynomials
3. To develop proficiency in handling special products and factoring
4. To develop the ability to work with roots and radicals

Content: Topics include solving equations and inequalities, data analysis, coordinate geometry, polynomials, quadratic equations, functions and relations, selected topics in geometry, elementary probability and statistics.

ALGEBRA 1 7212

1.00 Credit Level: CP **Learning Expectations:** 6

Prerequisites: Passing grade in 8th grade math

Objectives:

1. To understand patterns, relations, and functions as related to the real number system
2. To develop proficiency in operations with polynomials
3. To develop proficiency in handling special products and factoring
4. To develop the ability to work with roots and radicals

Content: Topics include solving equations and inequalities, data analysis, coordinate geometry, polynomials, quadratic equations, functions and relations, selected topics in geometry, elementary probability and statistics.

ALGEBRA 1 (HONORS ACCELERATED) 7214

1.00 Credit Level: HA **Learning Expectations:** 6

Prerequisites: Grade of C or better in Grade 8 Algebra 1

Objectives:

1. To strengthen basic Algebra 1 skills
2. To understand patterns, relations, and functions as related to the real number system
3. To develop proficiency in operations with polynomials
4. To develop proficiency in handling special products and factoring
5. To develop the ability to work with roots and radicals

Content: Topics include solving equations and inequalities, data analysis, coordinate geometry, polynomials, quadratic equations, functions and relations, selected topics in geometry, elementary probability and statistics.

ALGEBRA 2 (HONORS ACCELERATED) 7234

1.00 Credit Level: HA **Learning Expectations:** 4, 6

Prerequisites:

1. Minimum average of B+ in Grade 8 Algebra 1
2. Exemplary performance on placement test

Objectives:

1. To create a clear understanding of the real number system (properties and structure)
2. To demonstrate that two-dimensional geometric figures can be represented algebraically and that the relationship between two variables can be represented graphically and algebraically

Content: A course including a review of Algebra 1, a limited amount of proof and a detailed discussion of the following topics: the real and complex number systems, mathematical models, particularly polynomial, exponential, logarithmic functions, inequalities over the domain of real numbers and subsets thereof, matrices and determinants, instruction in the use of graphing calculators and explore applicable problems related to the subject being taught.

STATISTICAL REASONING THROUGH SPORTS 7282

1.00 Credit Level: CP **Learning Expectations:** 4, 6

Prerequisites: Algebra 1 with a minimum C average

Objectives:

1. To emphasize statistical literacy and develop statistical thinking
2. To use real data, make sense of this data, and understand the role in questioning
3. To use technology for developing concepts, analyzing data, and dealing with big data

Content: Students will be presented overreaching statistical questions from the sports world. This course will introduce statistical methods to give a complete statistically justified response to applicable questions. Real data from professional sports will be used, and statistical software and applets will be utilized.

GRADE 10

GEOMETRY 7221

1.00 Credit Level: H **Learning Expectations:** 6

Prerequisite: Minimum C average in Algebra 1 (H) or Algebra 1 (HA)

Objectives:

1. To develop an understanding of the relationship between Algebra and Geometry
2. To show the relationships among points, lines, and planes in a space
3. To reason logically toward a conclusion

Content: This is a formal course in geometry including both proof and computation in varying degrees of difficulty. Topics studied include principles of logic, sets, angles, angle measures and relationships, perpendicular lines,

parallel lines and planes, congruent triangles and their applications, similar polygons, circles, construction, loci, coordinate geometry, transformations, areas, and volumes.

GEOMETRY (HONORS ACCELERATED) 7224

1.00 Credit Level: HA **Learning Expectations:** 6
Prerequisite: Minimum C average in Algebra 2 (HA)
Objectives:
1. To develop an understanding of the relationship between Algebra and Geometry
2. To show the relationships among points, lines, and planes in a space
3. To reason logically toward a conclusion

Content: This is a formal course in geometry including both proof and computation in varying degrees of difficulty. Topics studied include principles of logic, sets, angles, angle measures and relationships, perpendicular lines, parallel lines and planes, congruent triangles and their application, similar polygons, circles, construction, loci, coordinate geometry, areas, and volumes.

GEOMETRY 7222

1.00 Credit Level: CP **Learning Expectations:** 6
Prerequisites: Passing grade in Algebra
Objectives:
1. To reinforce MCAS skills through extended topics in geometry
2. To demonstrate an understanding between points, lines, planes in space
3. To be able to identify angle relationships
4. To demonstrate an understanding of similarity and congruency

Content: Topics include principles of logic, sets, angles, angle measures and relationships, perpendicular lines, parallel lines and planes, congruent triangles and their applications, congruent polygons, similar polygons, circles, construction, coordinate geometry, transformations, areas, and volumes.

GRADE 11

ALGEBRA 2 7231

1.00 Credit Level: H **Learning Expectations:** 4, 6
Prerequisites: Minimum C average in Algebra 1 (H) and Geometry (H)
Content: A course including a review of Algebra 1, a limited amount of proof and a detailed discussion of the following topics: the real and complex number systems, mathematical models, particularly polynomial, exponential, logarithmic functions, inequalities over the domain of real numbers and subsets thereof, matrices and determinants, instruction in the use of graphing calculators and exploring applicable problems related to the subject being taught.

ALGEBRA 2 7232

1.00 Credit Level: CP **Learning Expectations:** 4, 6
Prerequisites: Minimum of C average in Algebra 1 (CP) and passing grade in Geometry or passing grade in Intermediate Algebra
Objectives:
1. To further develop proficiency in operations with polynomials
2. To further develop proficiency in handling special products and factoring
3. To understand the word relations and functions in a mathematical content
4. To create a clear understanding of the real number system

Content: A course including an intensive review of algebra material, particularly linear and quadratic functions and relations. In addition, inequalities, systems of equations, exponents and logarithms will form the remainder of the course.

MATH TOPICS and APPLICATIONS 7255

Will not count for NCAA Clearinghouse initial eligibility

1.00 Credit Level: CP **Learning Expectations**: 6

Prerequisites: Course is designed for students who have completed Algebra 1 (CP)and Geometry (CP) with averages below 67 but who need additional reinforcement of basic skills and concepts involved in Pre-Algebra, Algebra 1 and Geometry. Teacher recommendation will be required.

Objectives:

1. To provide a third year of math for students not ready to take Algebra 2
2. To reinforce basic rules and skills for Algebra 1 and Geometry
3. To provide meaningful applications using basic skills
4. To develop the ability to make inferences from graphical representations
5. To develop a basic working knowledge of probability and statistics
6. To develop and understanding of cost, revenue and profit functions
7. To have a working knowledge of simple interest, compound interest, annuities, credit cards and mortgages

Content: Course will be divided into four components. The first component will review basic algebra skills, absolute value, literal equations, manipulation of formulas, coordinate geometry and modeling. The second component will review basic skills from geometry, conversions of units of measurement, perimeter, area, surface area, volume and applications. The third component will consist of the basics of probability and statistics including graphical representations, measures of central tendency and measures of dispersion. The fourth component will deal with business and finance concepts and their applications.

AP PRECALCULUS 7243

1.00 Credit Level: AP **Learning Expectations:** 4, 6

Prerequisites: Minimum B- average in Alg2(H/A) AND Geometry(H/A) or Passing Grade in Alg2(H/A) and Geometry(H/A) with teacher recommendation

Requirements of the course: Summer work must be completed before the course begins. **STUDENTS ARE REQUIRED TO TAKE THE AP EXAM**

Objectives: 1) Prepare students for AP Calculus
2) Provide students with appropriate curriculum and instruction required for AP Credit

Content: A comprehensive study of functions including polynomial, rational, exponential, logarithmic, trigonometric, and polar. Functions involving parametrics, vectors, and matrices will be explored. Instruction in the use of graphing calculators, and the development of theories and techniques of precalculus as described by College Board will be provided.

GRADE 12

CALCULUS (HONORS ACCELERATED) 7246

1.00 Credit Level: HA **Learning Expectations:** 4, 6

Prerequisites: Passing grade in Pre-Calculus

Objectives:

1. To enable students to handle ideas such as velocity, area, volume, rate of change continuity, tangent lines
2. To gain an understanding and a working knowledge of the words "derivative, and "integral, within the context of two-dimensional space

Content: Differential and integral calculus in two dimensions with applications. The subject includes finding and applying derivatives and integrals. Strengthen student's knowledge of algebraic, trigonometric, and exponential

functions. Provide instruction in the use of graphing calculators and explore applicable problems related to the subject being taught.

AP CALCULUS AB 7245

1.00 Credit Level: AP **Learning Expectations:** 4, 6

Prerequisites: Passing grade in Pre-Calculus

Requirements of the course: Summer work must be completed before the course begins. **STUDENTS ARE REQUIRED TO TAKE THE AP EXAM**

Objectives:

1. To provide students with the appropriate curriculum required for AP credit
2. To enable students to acquire a working understanding and knowledge of derivatives and integrals

Content: Differential and integral calculus in two dimensions with applications; finding and applying derivatives and integrals, increasing student's knowledge of algebraic, trigonometric, exponential, and development of theories and techniques of the calculus as described by the College Board. Provide instruction in the use of graphing calculators and explore applicable problems related to the subject being taught.

Term Assignment Required: Summer work must be completed before the course begins.

AP CALCULUS BC 7256

1.00 Credit Level: AP **Learning Expectations:** 4, 6

Prerequisites: Passing grade in Pre-Calculus

Requirements of the course: Summer work must be completed before the course begins. **STUDENTS ARE REQUIRED TO TAKE THE AP EXAM**

Objectives:

1. To provide students with the appropriate curriculum required for AP credit on the Calculus BC exam as approved by the College Board
2. To enable students to acquire a working understanding and knowledge of derivatives, integrals, and polynomial approximations to functions

Content: Differential and integral calculus in two dimensions with applications; finding and applying derivatives and integrals, developing polynomial approximations of functions, sequences, series, increasing student's knowledge of algebraic, trigonometric, exponential, and development of theories and techniques of the calculus as described by the College Board. Provide instruction in the use of graphing calculators and explore applicable problems related to the subject being taught.

PRE-CALCULUS 7241

1.00 Credit Level: H **Learning Expectations:** 4, 6

Prerequisites: Minimum B+ average in Algebra 2 (H) and B in Geometry (H)

Objectives:

1. To offer an in-depth study of concepts necessary in the study of calculus
2. It is intended for students who will take calculus as a next course

Content: Review of Algebra 2 and geometric concepts as needed. The following topics will be covered in depth: general functions and their properties and graphs; polynomial functions, properties and graphs; exponential and logarithmic functions, properties and graphs; circular functions, properties, graphs and formulas; analytic trigonometry; inverse trigonometric functions; polar coordinates; vectors and their properties; parametric equations. Provide instruction in the use of graphing calculators and explore applicable problems related to the subject being taught.

FINANCIAL ALGEBRA

1.00 Credit Level: CP **Learning Expectations:** 4, 6

Prerequisites: Passing grade in Algebra 2

Objectives:

1. To utilize learned Algebraic concepts and their application to real-life applications
2. To introduce and strengthen personal financial skills
3. To strengthen the real-life needs of students preparing to enter the workforce or college.

Content: In this course, students will apply previously learned algebra skills to real-life applications to improve independent living skills. It will not only review and strengthen previously learned algebra mechanics, but will challenge students in more advanced mathematical topics. The course will explore financial topics both on paper and through various technologies such as spreadsheets and graphing calculators. New topics include, but not limited to, investing, banking, credit, income tax, insurance, auto and home ownership and creating a business. By the end of the course students will be proficient in algebra mechanics as well as problem solving skills to better their money management abilities.

TOPICS IN ADVANCED ALGEBRA 7261

1.00 Credit Level: H **Learning Expectations:** 4, 6

Prerequisites: Grade of C or better in Algebra 2 (H)

Objectives:

1. To demonstrate an understanding of the relationships between cost, revenue and profit functions
2. To demonstrate an understanding of matrices and systems of equations
3. To demonstrate an understanding of linear programming
4. To demonstrate an understanding of the mathematics of finance

Content: This course is designed to help students expand their working knowledge of real numbers, equations, inequalities, radicals, rational expressions, graphing linear models, simultaneous equations, and matrices. Applications will concentrate on cost, revenue, and profit functions; supply and demand functions; break-even analysis. In addition, students will learn how to create feasibility regions; maximize and minimize objective functions; analyze exponential and logarithmic functions and their graphs; use formulas for finance applications. Additional topics may include trigonometry, statistics, and optimizing as related to cost, revenue and profit applications.

INTERMEDIATE ALGEBRA 7234

Will not count for NCAA Clearinghouse initial eligibility

1.00 Credit Level: CP **Learning Expectations**: 4, 6

Prerequisites: Passing grade in Geometry, Algebra or Teacher Recommendation

Objectives:

1. To become more proficient in the knowledge of algebraic concepts
2. To demonstrate the real-life applications of these concepts
3. To strengthen the mathematical background of the student preparing for college
4. To introduce and strengthen personal finance and money management skills

Content: Students will take the AccuPlacer Exam administered by Quinsigamond Community College (QCC) at the beginning of the course. Review of rational and irrational numbers: properties, operations, exponents, and scientific notation. Review of algebra: solving and graphing linear and quadratic equations and inequalities, variations, functions and systems of equations. Students have the opportunity to be placed into MAT100 at QCC with successful completion of this course.

MATHEMATICS ELECTIVES

*Electives may **not** be used to replace any segment of the Mathematics graduation requirements*

TRIGONOMETRY 7271

0.50 Credit Level: H **Learning Expectations:** 4, 6

Prerequisites: Passing grade in Algebra 2

Objectives:

1. To provide an opportunity to learn the skills needed by students who plan on a technical career or who plan to further their mathematical study
2. To understand the structure and functions of angles
3. To be able to use trigonometry as a tool for studying other topics

Content: Review of algebraic and geometric concepts as needed. The following topics will then be covered: trigonometric functions and their graphs; inverse trigonometric equations; trigonometric identities; use of calculators in doing trigonometric calculations; trigonometric formulas and their uses.

ELEMENTARY PROBABILITY & STATISTICS 7280

1.00 Credit Level: H **Learning Expectations:** 4, 6

Prerequisites: Passing grade in Algebra 1

Objectives:

1. To become an aware citizen by being exposed to the uses, misuses, and abuses of statistics
2. To know the various types of discrete and continuous probability distributions
3. To understand and use the concepts of linear regression and correlation

Content: A course dealing with collecting and analyzing raw data and making inferences from the data. Distributions, hypothesis testing, and predication constitute major areas of study. This course will be very useful for those students interested in the social and physical sciences. The computer and calculators will be useful tools.

AP STATISTICS 7265

1.00 Credit Level: AP **Learning expectations:** 4, 6

Prerequisite: Passing grade in Elementary Probability and Statistics or Algebra 2

Requirements of the course: Summer work must be completed before the course begins. **STUDENTS ARE REQUIRED TO TAKE THE AP EXAM**

Objectives:

1. To explore data and observe patterns and departures from patterns
2. To collect data according to a well-developed plan and analyze it properly
3. To produce models using probability theory and simulation
4. To use statistical inference as a guide in the selection of appropriate models

Content: The course will focus on the exploration of statistical concepts and problems that are the core of the Advanced Placement Statistics curriculum, with a strong emphasis on inferential statistics. Students will take part in hands-on investigations of statistical data and models, and be instructed in the effective use of graphing calculators and statistical software.

Term Assignment Required: Summer work must be completed before the course begins.

COMPUTER PROGRAMMING

EXPLORING COMPUTER SCIENCE 7272

0.50 Credit Level: H **Learning Expectations:** 4, 6

Grades: 9-10

Objectives:

1. To provide students with a rigorous but accessible introduction to computer science.
2. To enable students to acquire a working understanding and knowledge of programming.

Content:

1. Introduction to human computer interaction
2. Problem solving
3. Web design
4. Introduction to programming
5. Computing and data analysis
6. Robotics
7. Problem solving, computational practices and modes of inquiry associated with computer science and the Common Core

INTRODUCTION TO PROGRAMMING 7228

0.50 Credit Level: H **Learning Expectations:** 4, 6

Objectives:

1. To provide a firm understanding of the components that make up a computer system and what each component contributes to the overall operation of such a system
2. To teach students how to operate and program a computer
3. To teach students how to develop procedures and functions through the use of algorithms
4. To enforce programming techniques including documentation
5. To expose students to what computers can and cannot do

Content: Students are required to solve problems through the development of an algorithm and the restructuring of that algorithm using a computer language.

AP COMPUTER SCIENCE A 7275 Satisfies PLTW Engineering Innovation Pathway

1.00 Credit Level: AP **Learning Expectations:** 4, 6

Prerequisites: Passing grade in Algebra 2 and Introduction to Programming

Requirements of the course: Summer work must be completed before the course begins. **STUDENTS ARE REQUIRED TO TAKE THE AP EXAM**

Objectives:

1. To provide students with the appropriate curriculum required for AP credit
2. To enable students to acquire a working understanding and knowledge of programming

Content:

1. Design, implement and analyze solutions to problems
2. Use and implement commonly used algorithms
3. Use standard data structures
4. Develop and select appropriate algorithms and data structures to solve new problems
5. Write solutions fluently in an object-oriented paradigm
6. Write, run, test and debug solutions, utilizing standard library classes and interfaces from the AP subset.6
7. Read and understand programs consisting of several classes and interacting objects
8. Read and understand a description of the design and development process leading to such a program
9. Understand the ethical and social implications of computer use

AP COMPUTER SCIENCE PRINCIPLES 7276A Satisfies PLTW Engineering Innovation Pathway

1.00 Credit Level: AP **Learning Expectations:** 4, 6

Prerequisites: Passing grade in Algebra 1

Requirements of the course: STUDENTS ARE REQUIRED TO TAKE THE AP EXAM

Objectives:

1. To provide students with the appropriate curriculum required for AP credit
2. To provide the fundamentals of computing, including problem solving, working with data, understanding the Internet, cybersecurity and programming.

Content:

1. The course will introduce students to the creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cybersecurity concerns and computing impacts.
2. Provides students the opportunity to use current technologies to create computational artifacts for both self-expression and problem solving.
3. Broadens participation in computer science.
4. Students will develop computational thinking skills vital for success across all disciplines, such as using computational tools to analyze and study data and working with large data sets to analyze, visualize and draw conclusions from trends.
5. The course engages students in the creative aspects of the field by allowing them to develop computational artifacts based on their interests.
6. Students will also develop effective communication and collaboration skills by working individually and collaboratively to solve problems and will discuss and write about the impacts these solutions could have on their community, society and the world.

SCIENCE

Grades	College Prep (CP)	Honors (H)	Advanced Placement (AP)
9	7392 Environmental Science	7321 Biology* 7351 Prin. of Biomedical Science	X
10	7322 Biology 7332 Chemistry Applied 7392 Environmental Science ???? Intro to Physics	7321 Biology 7331 Chemistry Theory 7391 Environmental Science 7355 Human Body Systems	7395 AP Environmental 7335 AP Biology
11-12	7392 Environmental Science 7368 General Astronomy Intro to Physics	7367 Intro to Astrophysics 7381 Marine Science Environmental Sustainability Intro to Physics Prin. of Physics 1 (0.5) Prin. of Physics 2 (0.5) 7386 Medical Interventions 7387 Biomedical Innovations (0.5)	7366A AP Phys C: Mechanics 7366B AP Phys C: Elec/Magn 7365 AP Physics 1 7345 AP Chemistry 7335 AP Biology 7395 AP Environmental

**Freshmen in Algebra 2 Accelerated will go directly into Biology (H)*

Grades	Unleveled	College Prep (CP)	Honors (H)
10, 11, 12	Women's Health	X	7397 Zoology
11,12	X	X	7371 Forensics

GRADE 9

BIOLOGY 7321

1.00 Credit Level: H **Learning Expectations:** 4, 6

Prerequisites: None

Objectives:

1. To develop an understanding of biology as a process of inquiry devoted to attacking problems presented by the natural world
2. To develop critical thinking, not just memorization
3. To develop the scientific attitude of open-mindedness, judgment, cause and effect
4. The introduction of basic biological functions and phenomena so that the students may relate these ideas to their own existence
5. To create a more complete concept of life and its complexities

Content: Course includes a survey of plants, animals and microorganisms in relationship to their structure and function. Special emphasis will be placed on cell structure and functions, genetics, systems biology, and ecological concepts, and evolution.

Upon completion of the course students will:

1. Have met all of the requirements for the MA Curriculum Frameworks
2. Developed laboratory and problem-solving skills through various laboratory activities
3. Developed skills in mastering problems relative to MCAS testing programs

ENVIRONMENTAL SCIENCE 7391, 7392

1.00 Credit Level: CP **Learning Expectations:** 4, 6

Prerequisites: None

Content: This course emphasizes the various types of environments found on our planet and the factors that influence and affect these environments including human impact. Special emphasis will be given to ecological interactions, biomes, ecosystems, energy resources, resources in the biosphere and managing human impact. The difference between honors (H) & college prep (CP) will be the speed, depth and mathematical analysis in the two programs. The possibility also exists of working with local, state and federal agencies on environmental issues.

Upon completion of the courses, students will be familiar with:

1. How the elements carbon, hydrogen, and oxygen (along with numerous elements in lesser quantities) combine to form the molecules of living organisms
2. How organisms may cooperate or compete in ecosystems
3. How local effects of an environment may affect the global system

PLTW PRINCIPLES OF BIOMEDICAL SCIENCE 7351 Satisfies PLTW Biomedical Science Pathway

1.00 Credit Level: H **Learning Expectations:** 4, 6

Prerequisites: Passing grade in Biology or currently enrolled in Biology

Content: In the introductory course of the Project Lead the Way (PLTW) Biomedical Science program, students explore concepts of biology and medicine to determine 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.

Objective: To practice problem solving with structured activities and progress to open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills.

GRADE 10

BIOLOGY 7322

1.00 Credit Level: H, CP **Learning Expectations:** 4, 6

Prerequisites: None

Objectives:

1. To familiarize students with various methods used by biologists to study life
2. To give experience in working with the tools of a biologist
3. To help create a realization that our natural resources must not be abused and that all species of plant and wildlife should be preserved through control

Content: Cell function, cell division, chromosome structure and function, inheritance, natural selection, evolution, population growth, cooperation and competition, animal maintenance, plant ecology and systems biology.

Term Assignments Required: Research reports

Upon completion of the course students are:

1. To meet all the requirements of the MA curriculum frameworks
2. To develop skills in mastering problems relative to the MCAS testing programs
3. To be able to understand the theories and models that scientists use to explain observations of nature

CHEMISTRY THEORY 7331

1.00 Credit Level: H **Learning Expectations:** 4, 6

Prerequisites: The student must have passed Biology (H) and Algebra 1 with a grade of B or better, or passing grade in Algebra 2.

Objectives: The objective of this course is to meet the requirements of Massachusetts Science Framework but will also prepare the student for other chemistry and chemistry related courses required by most places of higher education.

Description: Chemistry Theory introduces the student to the basic principles of general chemistry. The major topics of discussion are scientific measurement, matter, the mole, atomic structure, periodic law, bonding, chemical formulas and reactions, gases, solutions and acids and bases.

Upon completion of this course the student will be able to:

1. Solve problems
2. Think critically
3. Make formal statements of principles in chemistry and understand their implications

CHEMISTRY APPLIED 7332

1.00 Credit Level: CP **Learning Expectations:** 4, 6

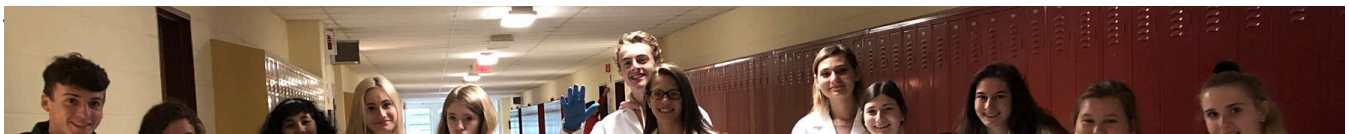
Prerequisites: Passing grade in Biology

Objectives: The objective of this course is to meet the requirements outlined in the Massachusetts Science and Technology/Engineering Curriculum Framework. This course will meet the needs of those students not planning further formal education, and those wishing to attend a two-year college.

Description: Chemistry Applied Theory introduces the student to the basic principles of general chemistry. The major topics of discussion are scientific measurement, matter, the mole, atomic structure, periodic law, bonding, chemical formulas and reactions, gases, solutions and acids and bases.

Upon completion of this course the student will be able to:

1. Identify and work with the current atomic model/theories
2. Read Periodic Table of the Elements
3. Understand chemical reaction



AP BIOLOGY 7335 Satisfies PLTW Biomedical Science Pathway

1.50 Credit Level: AP **Learning Expectations:** 4, 6

Prerequisites: Passing grade in Biology

Requirements of the course: Summer work must be completed before the course begins. **STUDENTS ARE REQUIRED TO TAKE THE AP EXAM**

Objectives: To help students develop a conceptual framework for modern Biology, and to help students gain an appreciation of Biology as a process. Students are required to grasp Biology as a process by using personal experience in scientific inquiry; by recognizing unifying themes; and by applying biological knowledge and critical thinking to environmental and social concerns. This course will conform to the standards for Advanced Placement Biology as given by the College Board

Content: This course will focus on the following four big ideas that will allow the student to appreciate the delicately balanced interdependency of life:

1. Evolution
2. Energy Dynamics
3. Genetics
4. Interactions

Upon the conclusion of this course: the student will be able to successfully complete the Advanced Placement Biology Exam developed by the College Board

Term Assignment Required: Students will be required to successfully complete summer assignments and turn these in on the first day of school.

AP ENVIRONMENTAL SCIENCE 7395

1.50 Credits Level: AP **Learning Expectations:** 1, 4, 6

Prerequisites: Passing grade in Biology

Requirements of the course: Summer work must be completed before the course begins. **STUDENTS ARE REQUIRED TO TAKE THE AP EXAM**

Objectives:

1. To develop an understanding of the importance of ecosystems and their interactions
2. To develop understanding of human impact on the environment and subsequent impact on humanity in return
3. To develop an understanding of problems associated with resource depletion and potential solutions to these local, regional, and international problems

Content: Topics include: Ecology, Population, Food & Agriculture, Water Resources & Pollution, Air Pollution, Climate Change, and Energy Sources

ENVIRONMENTAL SCIENCE 7391, 7392

1.00 Credit Level: H, CP **Learning Expectations:** 4, 6

Prerequisites: Passing grade in Biology

Content: This course emphasizes the various types of environments found on our planet and the factors that influence and affect these environments including human impact. Special emphasis will be given to ecological interactions, biomes, ecosystems, energy resources, resources in the biosphere and managing human impact. The difference between honors (H) & college prep (CP) will be the speed, depth and mathematical analysis in the two programs. The possibility also exist of working with local, state and federal agencies on environmental issues.

Upon completion of the courses, students will be familiar with:

4. How the elements carbon, hydrogen, and oxygen (along with numerous elements in lesser quantities) combine to form the molecules of living organisms
5. How organisms may cooperate or compete in ecosystems
6. How local effects of an environment may affect the global system

WOMEN'S HEALTH

0.50 Credit Level: Unleveled

Prerequisites: Passing grade in a freshman science course. Preference will be given to juniors and seniors.

Course Description: This course is designed to thoroughly and transparently teach women's anatomy and physiology, minimize and/or eliminate fear and misinformation surrounding women's health, and provide valuable resources that can be used throughout their lives. Although most topics specifically relate anatomically and physiologically to females, some topics, such as Early Development, Anatomy and Physiology, and Puberty, will also address male anatomy and physiology.

ZOOLOGY 7397

0.50 Credit Level: H **Learning Expectations:** 4, 6

Prerequisites: Passing grade in Biology (H) or minimum grade of B+ in Biology (CP)

Objectives: To expose students to Zoology, the study that deals with the study of animal life. This course will focus on the unique physiological adaptations of each of the major animal phyla. Each phylum will be explored through the dissection of a representative specimen. Students will learn to link the anatomical differences in these specimens to the evolution of animal diversity.

Content:

1. Introduction—Science, Chemical Basis of Life and Cell Biology
2. Anatomy and Physiology
3. Evolution
4. Classification and Kingdoms
5. Phyla Porifera, Cnidaria, Platyhelminthes, Nematoda, Mollusca, Annelida, Arthropoda, Echinodermata, Chordata

PLTW HUMAN BODY SYSTEMS 7355 Satisfies PLTW Biomedical Science Pathway

1.00 Credit Level: H **Learning Expectations:** 4, 6

Prerequisites: Passing grade in Biology (H)

Objectives: To practice problem solving with structured activities and progress to open-ended projects and problems that require them to develop planning, documentation, communication and other professional skills.

Content: Students examine the interactions of human body systems as they explore identity, power, movement, protection and homeostasis in the body. 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.

GRADE 11-12

GENERAL ASTRONOMY 7368

1.00 Credit Level: CP **Learning Expectations:** 4, 6

Prerequisites: Passing grade in Algebra 1 and Geometry

Objectives: This course is designed for students who are interested in studying space exploration and learning more about their solar system, stars, and the universe. This course will help improve student's problem-solving and critical thinking skills through the process of scientific inquiry.

Content: astronomical measurement, constellations, history of astronomy, telescope technology, inner and outer planets, the sun, star formation & death, life in the universe.

Learning Outcomes: Upon completion of this course students will be able to:

1. Use informational text to explain that the life span of the Sun over approximately 10 billion years is a function of nuclear fusion in its core.
2. Communicate that stars, through nuclear fusion over their life cycle, produce elements from helium to iron and release energy that eventually reaches Earth in the form of radiation.
3. Use Kepler's laws to predict the motion of orbiting objects in the solar system.
4. Describe how orbits may change due to the gravitational effects from, or collisions with, other objects in the solar system.
    a. Clarification Statements:
        i. Kepler's laws apply to human-made satellites as well

INTRODUCTION TO ASTROPHYSICS 7367

1.00 Credit Level: H **Learning Expectations:** 4, 6

Prerequisites: Grade of B or better in Algebra 1 and Geometry (H)

Objectives: This course is designed for students looking for an applied physics course in the field of astronomy. This course will focus on the governing physics and chemistry of the solar system and will therefore be math-intensive.

Content: Newton's Laws, Kepler's Laws, Celestial Mechanics, Luminosity, Thermodynamics, Physics of Stars, Black Holes, and other deep-sky objects. Cosmology, the Big Bang, and Life in the Universe will also be discussed.
Learning Outcomes: Upon completion of this course students will be able to:

1. Describe and calculate planetary motion, escape velocities, and movement of solar system objects.
2. Understand and calculate luminosity, magnitude, temperature, and energy throughout the Specific stages of the life of a star
3. Understand the details of the many different nucleosynthesis pathways for stars of differing masses
4. Understand and calculate optical principles involved in the use of telescopes

FORENSICS 7371

0.50 Credit Level: H **Learning Expectations**: 4, 6
Grades: 11, 12
Prerequisites: Passing grade in Biology
Objectives: (1) To develop critical thinking, basic skills, and abilities necessary to understand aspects of all major sciences in addition to aspects found in Sociology and Psychology. (2) Meet the individual needs of students to prepare for two-year college or technical school programs, especially in the areas of biology and health related careers that stress lab skills.
Content: Forensic science will provide an opportunity for cooperative learning, mimicking the team aspect of real-life and teams of TV crime-solvers. This is a lab based course that allows students to work together to expand their knowledge while allowing the individual to showcase their own natural strengths. Biotechnology will be incorporated into the class.
Term Assignments Required: Term paper and or/End of year project.

PLTW MEDICAL INTERVENTIONS 7386 Satisfies PLTW Biomedical Science Pathway

1.00 Credit Level: H **Learning Expectations:** 4, 6

Prerequisites: Passing grade in Biology and Human Body Systems or a passing grade in AP Biology or AP Chemistry.
Objectives: To practice problem solving with structured activities and progress to open-ended projects and problems that require students to develop planning, documentation, communication and other professional skills.
Content: Medical Interventions (MI) allows students to investigate the variety of interventions involved in the prevention, diagnosis and treatment of disease as they follow the lives of a fictitious family. A "How-To" manual for maintaining overall health and homeostasis in the body, the course will explore how to prevent and fight infection, how to screen and evaluate the code in our DNA, how to prevent, diagnose and treat cancer, and how to prevail when the organs of the body begin to fail. Through these scenarios students will be exposed to the wide range of interventions related to immunology, surgery, genetics, pharmacology, medical devices and diagnostics.

PLTW BIOMEDICAL INNOVATIONS 7387 Satisfies PLTW Biomedical Science Pathway

0.50 Credit Level: H **Learning Expectations:** 1,4 & 6
Prerequisites: Passing grade in Principles of Biomedical Science, Human Body Systems, and Medical Interventions or participation in a certificate program requiring a capstone.
Objectives: To practice problem solving with structured activities and progress to open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills. To complete a capstone project.
Content: In the final course of the PLTW Biomedical Science sequence, students build on the knowledge and skills gained from previous courses to design innovative solutions for the most pressing health challenges of the 21st century. Students address topics ranging from public health and biomedical engineering to clinical medicine and physiology. They have the opportunity to work on an independent project with a mentor or advisor from a university, medical facility, or research institution

PLTW ENVIRONMENTAL SUSTAINABILITY Satisfies PLTW Biomedical Science Pathway

0.50 Credit Level: H **Learning Expectations**: 4, 6
Grades: 11, 12
Prerequisites: Passing grade in Principles of Engineering or passing grade in AP Environmental Science
Objectives: Environmental Sustainability (ES) is a high school-level specialization course in PLTW Engineering. In ES, students investigate and design solutions to solve real-world challenges related to clean drinking water, a stable food supply, and renewable energy. Students are introduced to environmental issues and use the engineering design process to research and design potential solutions. Utilizing the activity-, project-, problem-based (APB) teaching and learning pedagogy, students transition from completing structured activities to

solving open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills

Content:

Unit 1 Environmental Sustainability for a Better Tomorrow
Unit 2 Ensuring Safe and Abundant Water
Unit 3 Food Security
Unit 4 Renewable Fuels

MARINE SCIENCE 7381

1.00 Credit **Level: H** **Learning Expectations**: 4, 6

Prerequisites: A passing grade in Biology (H). **Note**: Preference will be given to seniors.

Objectives: This course is designed for students that are interested in learning more about the oceans of the world and the organisms that live in them. Participation in the course will provide a better understanding of the ocean world through the study of physical, chemical and biological processes.

Content: The course will focus on two main areas. First, after a brief introduction to the history of ocean discovery, students will become familiar with the range of organisms found in the oceans. This unit on Marine Biology will explore the kingdoms of life found in the oceans and the different environments those organisms live in. Oceanography will be covered in the second unit. This topic deals with the physical aspects of the ocean. Within this unit, topics ranging from ocean floor features to waves will be discussed. By the end of the course students should be able to understand the important connections between the living and non-living parts of the ocean and why the ocean is critical to life on Earth.

INTRO TO PHYSICS

1.0 Credit **Level: Honors**

Prerequisites: Passing grades in Biology, Algebra 1, and Geometry

Objectives: This course covers the fundamental concepts of physics through scientific principles and laboratory work, with an emphasis on applying algebra-based mathematics to core physics topics.

Content:

1. Waves
2. Electricity & Magnetism
3. Heat & Heat Transfer
4. Work & Energy
5. Forces
6. Motion
7. Momentum

PRINCIPLES OF PHYSICS I

0.50 Credit **Level:** Honors Accelerated

Prerequisites: B- or better in Algebra 1, Geometry, Concurrent Algebra 2

Objectives: This accelerated course covers the fundamental physics concepts in mechanics through scientific principles and laboratory work, emphasizing the application of algebra-based mathematics to core physics topics. The curriculum is designed to move at a fast pace, requiring strong math and problem-solving skills.

Content:

1. Kinematics
2. Dynamics
3. Energy
4. Momentum

PRINCIPLES OF PHYSICS II

0.50 Credit **Level:** Honors Accelerated

Prerequisites: B- or better in Algebra 1, Geometry, Concurrent Algebra 2

Objectives: This accelerated course explores fundamental physics concepts beyond mechanics, focusing on scientific principles and laboratory work. It emphasizes the application of algebra-based mathematics to essential physics topics. The curriculum is designed to move at a fast pace, requiring strong math and problem-solving skills.

Content:

1. Electricity
2. Magnetism
3. Waves (Sound & Optics)
4. Fluids

PROJECT PHYSICS 7342

1.00 Credit Level: CP **Learning Expectations:** 1, 4, 6

Prerequisites: Passing grade in Biology, Algebra 1 and Geometry

Objectives: To present the fundamental concepts of physics and astronomy in a scientific, social, and historical context, by applying physics concepts with a minimum of mathematics.

Content: The emphasis will be on the conceptual development of ideas by "doing" physics through inquiry-based projects, labs, hands-on activities, and demonstrations within the following topics:

1. Mechanics
2. Gravitation, Planetary Motion & Astronomy
3. Conservation of Energy and Momentum
4. States of Matter
5. Heat & Heat Transfer
6. Waves
7. Electricity & Magnetism

AP CHEMISTRY 7345 Satisfies PLTW Biomedical Science Pathway

1.50 Credit Level: AP **Learning Expectations:** 4, 6

Prerequisites: Passing grades in Biology & Chemistry. Concurrently taking or have previously taken Algebra 2 (H)

Requirements of the course: Summer work must be completed before the course begins.

STUDENTS ARE REQUIRED TO TAKE THE AP EXAM

Objectives: To give the second year Chemistry student a college level course. The course is designed to give a depth of understanding of fundamentals and a reasonable competence in dealing with chemical problems. The course will contribute to the development of the students' abilities to think clearly and to express their ideas, orally and in writing, with clarity and logic. This course differs from the first year Chemistry course with respect to the kind of textbook used, the topics covered, the emphasis on chemical calculations and the mathematical formulation of principles, and the kind of laboratory work done by students. Quantitative differences appear in the number of topics treated, time spent on the course by students, and the nature and variety of experiments done in the laboratory. This course will conform to the standards for Advanced Placement Chemistry as given by The College Board.

Content: This course will stress principles and concepts and their relations to the descriptive chemistry on which they are based through various methods of instruction including laboratory work (structure of matter, states of matter, reactions, and descriptive chemistry).

Upon completion of this course: the student should be able to successfully complete the AP Chemistry exam developed by The College Board.

Term Assignment Required: Summer work must be completed before the course begins.

AP PHYSICS C: MECHANICS Satisfies PLTW Engineering Innovation Pathway

1.0 Credit Level: AP **Learning Expectations:** 1, 4 & 6

Prerequisites: This course will be open to 11th (and 12th) grade students who have successfully completed Biology, Geometry & Algebra 2 (or currently enrolled in Algebra 2).

Requirements of the course: Summer work must be completed before the course begins.

STUDENTS ARE REQUIRED TO TAKE THE AP EXAM.

Objectives: Students in this course will cover all AP Physics C: Mechanics objectives as described by the College Board. The course focuses on concepts within the following 7 content areas as outlined below. 1**. Kinematics:** *Students will learn about motion and the quantities associated with the motion of an object: position, velocity, acceleration, and time.* 2**. Newton's Laws of Motion:** *Students will learn about Newton's laws of motion, which describe the relationship among moving objects and the forces acting on them.* 3. **Work, Energy, and Power:** *Students will learn about work, energy, and power and become familiar with the principle of conservation as a foundational model of physics.* 4. **Systems of Particles and Linear Momentum**: *Students will learn about the concepts of center of mass, impulse and momentum, and the conservation of linear momentum.* **5. Rotation**: *Students will learn about rotational motion by investigating torque and rotational statics, kinematics, and dynamics.* 6. **Oscillations:** *Students will learn about the forces that cause objects to repeat their motions with a regular pattern.* 7. **Gravitation:** *Students will learn about gravitational forces and the relationships shared between planets, satellites, and their orbits.*

AP PHYSICS C: ELECTRICITY & MAGNETISM Satisfies PLTW Engineering Innovation Pathway

1.00 Credit Level: AP

Prerequisites: This course will be open to 12th grade students who have successfully completed AP Physics C: Mechanics AND are concurrently taking a course in calculus.

Requirements of the course: Summer work must be completed before the course begins.

STUDENTS ARE REQUIRED TO TAKE THE AP EXAM.

Objectives: Students in this course will cover all AP Physics C: Electricity & Magnetism objectives as described by the College Board. The course focuses on concepts within the following 5 content areas as outlined below. 1. **Electrostatics**: *Students learn about electric charges, electric force and electric fields.* 2. **Conductors, Capacitors, Dielectrics**: *Students will learn how electric charge can move through an object and the factors that affect the way charge moves.* 3. **Electric Circuits**: *Students will learn about electrical components and investigate the nature of electric circuits to explore current, resistance, and power.* 4**. Magnetic Fields**: *Students will learn about magnetism by learning how magnetic fields are generated, how they behave, and how they relate to electricity.* 5. **Electromagnetism**: *Students will build on their knowledge of charges, currents, and electric and magnetic fields to explore electromagnetic forces and their properties.*

AP PHYSICS 1 7355 Satisfies PLTW Engineering Innovation Pathway

1.50 Credit Level: AP **Learning Expectations**: 1, 4, 6

Prerequisites: Passing grade in Geometry & Algebra 2 (or currently enrolled in Algebra 2)

Requirements of the Course: Summer work must be completed before the course begins.

STUDENTS ARE REQUIRED TO TAKE THE AP EXAM.

Objectives: To provide students with a college level physics course. This course will develop the students' skills in reading, understanding, and interpreting physical information presented verbally, mathematically, and graphically. It will develop the students' abilities in asking physical questions and discovering solutions to physical questions through the use of qualitative and quantitative reasoning and experimental investigation. Students will also develop an understanding of the connections of physics to other disciplines and in societal issues.

Content: This course will conform to the standards for Advanced Placement Physics 1 as delineated by the College Board. It will provide an understanding of foundational physics principles through an inquiry-based instructional approach that will prepare students for success in future course work in the sciences. The course will include a hands-on laboratory component. AP Physics 1 content will focus on concepts within the following content areas:

1. Newtonian Mechanics
2. Mechanical Waves and Sound
3. Work, Energy and Power
4. Intro to Electric Circuits

Upon completion of this course: Students should be able to successfully complete the AP Physics 1 exam developed by The College Board

Term Assignment Required: Summer work must be completed before the course begins.

SOCIAL STUDIES

Grades	College Prep (CP)	Honors (H)	Advanced Placement (AP)
9	7112 World History	7111 World History	X
10	7122 US History 1	7121 US History 1 7124 US History 1 Accelerated	X
11	7132 US History 2	7131 US History 2	7136 AP US History

ELECTIVES		
Grades	**Unleveled**	**Honors (H) & AP**
11-12	7128 American History through Music 7172 Cradles of Civilization 7192 Life in America During the Cold War 7152 The History Behind the Sport	7136 AP European History 7160 Psychology 7161 Sociology

GRADE 9

WORLD HISTORY 7111, 7112

1.00 Credit Level: H, CP **Learning Expectations:** 1, 2

Required of all Grade 9 Students

Objectives: This Freshman course covers world history events from the rise of the nation in Europe (1500-1800) to the present. World history is a year-long course that includes, but is not limited to, the following topics: the origins and consequences of the Industrial Revolution; 19th century political reform in Western Europe; imperialism in Africa, Asia, and South America; the causes and consequences of the great military and economic events of the past century; the rise of nationalism and the continuing persistence of political, ethnic, and religious conflicts in many parts of today's world.

GRADE 10

U.S. HISTORY 1 (ACCELERATED) 7124

1.00 Credit Level: HA **Learning Expectations**: 1, 2

Will satisfy history requirement for grade 10 students

Prerequisites: All of the following need to be met to be considered for enrollment:

1. (A-) minimum average in grade 9 World History at conclusion of 1st semester
2. (A-) minimum score on the standardized World History midterm exam
3. "4" rating (school-wide writing rubric) on a required, standardized writing assignment completed in grade 9 World History
4. 9th grade teacher recommendation (work ethic and motivation considerations)

Objectives: Want to dive deep into the dramatic events that shaped our country? In Accelerated U.S. History, you'll explore everything from the American Revolution to World War I, learning how the ideas behind our government and democracy came to life. You'll tackle exciting, thought-provoking topics like the birth of political parties, the fight for individual rights, and the consequences of westward expansion. This isn't your average history class — you'll read original documents, think critically, and challenge yourself to understand the big ideas that still impact us today. Additional topics include westward expansion, the Age of Reform, the Civil War, Reconstruction, and Industrialization, and World War I. If you're ready to take on a fast-paced, intellectually rewarding challenge, this course is for you! Students should be prepared for substantial independent and collaborative work throughout the year.

U.S. HISTORY 1 7121, 7122

1.00 Credit Level: H, CP **Learning Expectations:** 1, 2

Required of all grade 10 students.

Prerequisites: Passing grade in World History

Objectives: Students will examine the historical and intellectual origins of the United States during the Revolutionary and Constitutional eras. They will learn about the important political and economic factors that

contributed to the outbreak of the Revolution as well as the consequences of the Revolution, including the writing and key ideas of the U.S. Constitution. Students will also study the basic framework of American Democracy and government, including topics such as popular sovereignty, federalism, separation of powers, and individual rights. Additional topics will include westward expansion, the establishment of political parties, and economic and social change. Finally, students will learn about the growth of sectional conflict and how this conflict led to the Civil War. The consequences of the war, including Reconstruction will complete the study.

AP EUROPEAN HISTORY 7136

1.00 Credit Level AP **Learning Expectations:** 1, 2

Open to grades: 10-12

Prerequisites: There are no pre-requisites except for a recommendation from a previous history teacher. To prepare students for the course, it is required that each student complete a summer assignment. This assignment not only presents students with the type of learning that is representative of the course, but its completion will indicate a level of student commitment required to complete the course successfully.

Objectives:

In AP European History, students investigate significant events, individuals, developments, and processes from approximately 1450 to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical connections; and utilizing reasoning about comparison, causation, and continuity and change over time.

Content: The course provides seven themes that students explore throughout the course in order to make connections among historical developments in different times and places: interaction of Europe and the world, economic and commercial development, cultural and intellectual development, states and other institutions of power, social organization and development, national and European identity, and technological and scientific innovations. The instruction approach will be thematic through the study of nonfiction texts, primary and secondary sources, and a textbook. The time period covered will range from 1450 to the present.

GRADE 11

U.S. HISTORY 2 7131, 7132

1.00 Credit Level: H, CP **Learning Expectations:** 1, 2

Prerequisites: World History and U.S. History I. The United States History Course is required for graduation. AP U.S. History may be substituted and still fulfill the requirement.

Objectives:

1. To understand the principles of democracy and the workings of government in the United States
2. To understand the social and cultural forces that have shaped this country and its people
3. To understand the role of the United States in the world political, economic, social and cultural spheres
4. To develop research and critical thinking skills while studying the concepts of US history
5. To understand the history of the country so that students will be better-informed citizens

Content: The United States History course will mainly cover the period from the Civil War to the present. Prior to the Civil War, the course will study the Revolution and the Constitution. In addition, it will look at the rise of industry and the causes of the Civil War with emphasis on slavery. After the Civil War, the course will cover the major aspects of the development of the country, lives of its people, and the drive to the present in all facets of life, politics, economics, and foreign affairs.

Term Assignments Required: Fully documented research papers and/or projects will be required. In addition, position papers and additional readings and research will be assigned.

AP U.S. HISTORY 7135

1.00 Credit Level: AP **Learning Expectations:** 1, 2

Prerequisites: The AP United States History class will be open to juniors taking the United States History requirement. It will also be open to seniors who wish to take the advanced course. Recommendations from United States History I teachers will be part of the selection process.

Objectives: This course is designed to provide students with analytic skills and factual knowledge necessary to deal critically with the problems and materials in U.S. History. The program prepares students for intermediate and advanced college courses by making demands upon them equivalent to those made by full year introductory college courses. Students should learn to assess historical materials—their relevance to a given interpretive problem, reliability and importance—and to weigh the evidence and interpretations presented in historical scholarship. An AP History course should then develop the skill necessary to arrive at conclusions on the basis of an informed judgement and to present reasons and evidence clearly and persuasively in essay format.

SOCIAL STUDIES ELECTIVES

PSYCHOLOGY 7160

0.50 Credit Level: H **Learning Expectations:** 1, 2
Open to grades: 11-12
Objectives:

1. To develop the student's awareness, self-understanding and an understanding of others
2. To learn to recognize and cope with problems they face for the first time as they approach adulthood
3. To use the theories of personality psychologists use as a guide in shaping their lives
4. To help answer the question: Who am I?

Content: An introduction to the scientific study of human behavior designed to assist the student in obtaining a better understanding of themself in a complex world. Topics include the history and development of mental health practices, neuropsychology, personality theory, sleep and dreams, abnormal psychology, counseling therapy, motivation, memory, and intelligence.

SOCIOLOGY 7161

0.50 Credit Level: H **Learning Expectations:** 1, 2
Open to grades: 11-12
Objectives:

1. To enable students to recognize cultural perspectives and points of view in themselves and others
2. To encourage students to be critical thinkers
3. To help students recognize the patterns in human behavior, to see “the forest through the trees”
4. To enable students to see their place in today’s society and in tomorrow’s world

Content: Topics covered include the sociological perspective, culture, social structure, socialization, stratification, social interaction, deviances, groups and organizations, gender, the family, education, the media, genocide, the future, race and ethnicity.
Term Assignments Required: Homework, film critiques and participation. Notebooks are required. A final exam is also administered.

TERRORISM

0.50 Credit Level: H **Learning Expectations:** 1, 2
Open to grades: 11-12, grade 10 teacher recommendation
Objectives:
1. Students will develop a comprehensive understanding of terrorism concepts by analyzing real-world examples of terrorism and the factors contributing to violent extremism.
2. Students will develop the ability to critically evaluate counterterrorism strategies employed by governments and international organizations.
3. Students will cultivate media literacy skills to critically analyze how terrorism is portrayed.
4. Students will explore proactive approaches to preventing radicalization and violent extremism, including community-based initiatives, education programs, and outreach efforts.

Content: Terrorism has been one of the defining factors of our age, appearing regularly in headlines and media, and impacting every government, society, and person alive today. In many parts of the world, it has become one of the most important threats to peace, security, and stability. This course will introduce students to the fundamental concepts, theories, principles, and practices of terrorism and terrorist events both domestically and internationally. We will explore the essence of terrorism and develop an understanding of its causes, nature, and consequences. In our study, we will understand the culture of fear created by terrorism, and analyze the success of counterterrorism policies to limit and manage the impact of terror on society. Topics like the legacy of 9/11, the Boston Marathon Bombing, the rise of groups like ISIS in Syria and Iraq, and the emergence of radical groups in the West will help us to make sense of the violence and politics of major terrorist groups throughout the world

CRADLES OF CIVILIZATION 7171

0.50 Credit Level: None **Learning Expectations**: 1, 2
Open to grades: 10-12
Objectives:

1. To enable students to construct and interpret timelines of events and civilizations studied
2. To provide students the skills necessary to distinguish between primary and secondary sources and describe how each kind of source is used in interpreting history
3. To help students recognize and identify multiple causes and effects when explaining historical events
4. To enable students to explain the importance of invention and agriculture in the development of civilization

Content: Students will study the origins of the River Valley Civilizations and those societies that flourished in and around the Mediterranean area. They will examine the religions, governments, trade patterns, philosophies, and art forms of these civilizations. The course will culminate in the understanding of the powerful ideas that arose in the ancient world and profoundly shaped the course of western civilization. Ultimately, students will grasp the successes and failures of these early societies, and interpret the modern world in light of these forces.
Term Assignments Required: Homework and participation are expected. A variety of projects, including research and presentation assignments, will be completed. Notebooks are required. A final exam will be administered.

THE HISTORY BEHIND THE SPORT 7151, 7152

0.50 Credit Level: None **Learning Expectation:** 1, 2
Open to grades: 10-12
Objectives:

1. Students will gain historical knowledge about the origins and development of various sports in the US and the world
2. Students will gain knowledge of major political, social, cultural, economic and intellectual concepts throughout the chronological history of sport
3. Students will understand why and how sports have become a popular cultural phenomenon. Students will gain a greater appreciation for the issues that have affected sports such as gender discrimination, race bias, and class economics
4. Students will recognize the influence that commercialization has within the sports world

Content: Olympic games; America's Pastime: The Game of Baseball; The Lure of Football (College & Professional); The Hardwood (Professional and College Basketball); Sport & Discrimination; Sports during the war years; Commercialization of Sports; Defining the impact and role of sport in America.

BUSINESS EDUCATION

Grades	Unleveled	College Prep (CP)	Honors (H)
9-10		7542 Business Applications	7511 Business Dynamics
10-12		X	7521 Accounting 1
11,12	7548 Entrepreneurship 7541 Career & Consumer Topics	X	7522 Accounting 2 7503 Business Law 7546 Economics 7547 Principles of Marketing 7523 Accounting 3 7549 Investments 7543 Effective Presentations

ACCOUNTING 1 7521

0.50 Credit Level: H **Learning Expectations:** 6, 4

Open to grades: 10-12

Prerequisite: Good figure aptitude

Objectives:

1. To present the introductory fundamentals of accounting as developed for personal and business purposes
2. To explore the scope of accounting and job opportunities in this field
3. To teach the basic principles of keeping records for a small business
4. To solve problems and keep accurate records
5. To introduce the student to automated data processing
6. To acquire a foundation for further study in accounting
7. To acquire the ability to analyze financial statements and process decisions
8. To broaden skills for more advanced level transactions

Content:

1. The accounting cycle including journal entries and ledger postings
2. Transactions containing petty cash sales, purchases, and payroll and its effects on the business operation
3. Federal and state tax requirements and reporting and payroll and its effect on personal and business returns
4. Introduction to automated and computer data processing
5. Completion of both manual and automated practice set projects
6. Spreadsheet applications

Term Assignments Required: Projects are assigned and required throughout the course

1. The accounting cycle including journal entries and ledger postings
2. Transactions containing petty cash sales, purchases, and payroll and its effects on the business operation
3. Federal and state tax requirements and reporting and payroll and its effect on personal and business returns
4. Introduction to automated and computer data processing

Term Assignments Required: Projects are assigned and required throughout the course.

ACCOUNTING 2 7522

0.50 Credit Level: H **Learning Expectations:** 6, 4

Open to grades: 11-12

Prerequisite: Passing grade in Accounting 1.

Objective: This course will take students through the steps of the accounting cycle for a corporation

Content: Review of basic accounting theory, Merchandising vs. services and the accounting cycle, Corporate accounting, Financial Statements, Accounts Receivables and Notes Receivables, Intangible Assets, Current Liabilities and Current Assets, Generally Accepted Accounting Principles, Depreciation and Amortization, Inventory Methods, Sales and Purchasing transitions, Long-term liabilities, Closing entries, Ratios, and Automated accounting

Term Assignments Required: Projects are assigned and required throughout the course.

ACCOUNTING 3 7523

0.50 Credit Level: H **Learning Expectations:** 6, 4

Open to grade: 11-12

Prerequisite: Successful completion of Accounting I and II

Objectives:

1. To understand both basic and advanced accounting concepts and principles that provide the theoretical basis for all accounting systems
2. To understand workflow and the necessity for financial controls in a modern business
3. To analyze accounting data for management's use
4. To use accounting data in making management decisions and developing the sound reasoning ability needed to formulate business decisions at various levels
5. To expand knowledge of business data processing procedures and practices, and relate this knowledge to realistic business applications
6. To understand practical applications using electronic spreadsheets and databases
7. To understand economic events in the business climate

Content:

1. Review of automated accounting for general ledger set-up
2. Account payable transactions and reports
3. Accounts receivable transactions and reports
4. Advanced accounts payable and receivable
5. Payroll transactions and reports
6. Management information systems
7. Managerial accounting
8. Cost accounting
9. Financial accounting
10. Economics and marketing concepts

Term Assignments Required: Automated simulation projects.

BUSINESS DYNAMICS 7511

0.50 Credit Level: H **Learning Expectations:** 6, 4

Open to grades: 9-10

Objectives:

1. To introduce the different career options in business
2. To learn how to compete in the world labor market
3. To learn about different advertising strategies
4. To understand the importance of marketing management
5. To learn about different management styles and motivating employees
6. To understand global business concepts, problems, and opportunities
7. To introduce the world of banking and finance to students

Content: This course will introduce students to the many different areas of study that make up the business world. Foundations in advertising, marketing, finance, banking, management, human resources, economics, and International Business will be the focus. Different career alternatives within the business world will be explored as well. Job-hunting skills, resume writing, and interviewing skills will also be addressed.

BUSINESS APPLICATIONS 7542

0.50 Credit Level: CP **Learning Expectations:** 6, 4

Open to grades: 9-10

Prerequisites: None

Objective: Business Applications is a one semester course designed to introduce freshman and sophomore students to the fundamental business practices.

Content:

1. Proper Typing Techniques
2. Proofreading skills
3. Formatting skills; including paragraphs, simple reports and letters
4. Introduction to Microsoft Word and Excel
5. Virtual Business Retail and Personal Finance; an application practice where students will learn about profits, budgeting and proper money management skills

BUSINESS LAW 7503

0.50 Credit Level: H Learning Expectations: 6, 4
Open to grades: 11-12
Objectives:

1. To provide an understanding of our legal rights, privileges, and responsibilities
2. To give the student a knowledge of the origin and development of our legal system
3. To develop the ability to recognize legal problems in everyday living situations
4. To provide an understanding of one's rights and obligations in common business transactions
5. To develop an understanding and use of common legal words, terms and phrases

Content:

1. Understanding the Law: Law and Society, Citizen, Minor Consumers
2. Enforcing the Law: Crimes, Torts, Law Enforcement and the Courts
3. Making Contracts: How Contracts are Made, Form of Agreement, Void and Voidable Agreements, Legal Agreements, Consideration, and Capacity

CAREER & CONSUMER TOPICS 7541

0.50 Credit **Learning Expectations:** 6, 4
Open to grade: 11-12
Prerequisites: None
Objectives: Consumer Topics is a one-semester course. The course has been developed to increase the financial literacy and money management skills of the student. By providing information and tools it enables students to improve their ability to make educated decisions when managing their personal finances in the areas of goal setting, budgeting, savings, and the costs relating to credit. Course curriculum features include legal issues relating to consumer rights and responsibilities, personal ethics, attitudes and critical thinking skills.
Content: Budgeting, Payroll Taxes and Social Security Services, Consumer Credit, Renting an Apartment, Buying vs. Leasing an automobile, Insurance, and Banking Services.
Term Assignments Required: Projects are assigned and required throughout the course.

ECONOMICS 7546

0.50 Credit Level: H **Learning Expectations:** 6, 4
Open to grades: 11-12
Objectives: This course is designed to present the fundamentals of economics for personal, business and academic purposes. Economics is not a set of facts to be memorized, but rather a set of analytical techniques that can be used to solve problems. Accordingly, hands on projects will provide you with numerous opportunities to apply what you are learning. Upon completion of this course, you will be better prepared to succeed in college and/or the work force, and you will have a greater understanding of the problems that our nation currently faces.
Content: Economics Defined and Careers in Economics, Different Types of Economic Systems, Macroeconomics-Studying the Health of Our Nation's Economy (The Big Picture), Microeconomics - Focuses on Businesses and Individuals (The Smaller Picture), and Trends in Global Interdependence.
Term Assignments Required: Students are expected to complete individual and group research projects and develop their own individual Economics Portfolios.

ENTREPRENEURSHIP 7548

0.50 Credit Level: None **Learning Expectations:** 6, 4
Open to grades: 11-12
Objectives:

1. To discuss the skills and qualities necessary to be an entrepreneur
2. To learn how to prepare a successful business plan
3. To learn practical decision-making skills for a small business environment
4. To discuss different types of business ownership
5. To discuss the legal requirements involved in starting a business
6. To learn the different methods of financing a business
7. To discuss social and ethical responsibilities in owning a business

Content: Entrepreneurs are people who organize and start their own businesses. This course will study how entrepreneurs have played a major role in shaping the history of America, discuss what it takes to be an entrepreneur, and highlight areas of entrepreneurial opportunity in various career fields. Students will research a particular type of business and prepare a business plan.

INVESTMENTS 7549

0.50 Credit Level: H **Learning Expectations:** 6, 4
Open to grade: 11-12
Objectives:

1. To present introductory fundamentals of investing
2. To read and understand financial quotes
3. To understand the factors that can affect investment values
4. To analyze the financial condition of companies and their investment potential
5. To utilize technology for research and financial management
6. To study the history of the stock market and the lessons that can be applied
7. To discuss current events in the investment world
8. To develop individual investment plans

Content: Learning how to invest can be like learning a new language. To understand the marketplace and knowledgeably pursue investment goals, it's important to start with the basic terms and concepts. With this foundation in place, students will learn the skills necessary to make investment decisions and manage a portfolio of stocks, bonds, and funds using Excel. This course introduces the major investment vehicles - cash and cash equivalents, bonds and stocks, mutual funds, certificate of deposits - and some of the main concepts, such as risk and reward, diversification, and market volatility.

PRINCIPLES OF MARKETING 7547

0.50 Credit Level: H **Learning Expectations:** 6, 4
Open to grades: 11-12
Objectives: Students are exposed to the four P's of Marketing (Price, Placement, Product and Promotion)
Content: Cross-Functional Cases, Internet Activities, Analysis of Current Marketing Strategies, Marketing Careers, Global Marketing, Business Ethics, Analyzing print ads, Designing advertising campaigns, Company case studies, Discussion and Writing, Packaging considerations, Promotional strategies, Pricing techniques, Target Markets, Marketing Research, SWOT analysis, Branding, Product Life Cycle.
Term Assignments Required: Projects are assigned and required throughout the course.

EFFECTIVE PRESENTATIONS 7543

0.50 Credit Level: H **Learning Expectations:** 3
Open to grades: 11-12
Objectives: Discover the keys to present with impact and confidence. This course provides a professionally developed system to build exceptional presentation skills that will pay rich dividends in high school, college and beyond!
Content:

1. Top ten deadly mistakes of presenting
2. Avoiding death by Power Point
3. The seven laws of persuasion and how to use them
4. The outside-in approach to veiling nerves
5. Emulating confidence
6. Inside-out approach to tranquility
7. Power openers and closers
8. Hardball questions
9. Thirteen postures

TECHNOLOGY AND ENGINEERING

Grades	College Prep (CP)	Honors (H)	Non Leveled
9-10	X	7611 PLTW Introduction to Engineering Design	X
9-11	X	X	7650 Intro to Tech Ed
10-12	7651 Graphic Communications 1	7641 Robotics 1 7643 Robotics 2 7612 PLTW Principles of Engineering	7653 Web Page Construction 7657 MD/CAD 1 7658 MD/CAD 2 7655 Electricity and Electronics
11,12	7660 Woodworking Technology 7659 Wood Construction & Design		7659A Architectural Drawing

ENGINEERING THE FUTURE 7611

0.50 Credit Level: 1 **Learning Expectations:** 6, 4

Open to grades: 9-10

Prerequisites: None

Objectives:

1. Students will learn what technology is
2. Students will learn what engineers do
3. Students will be able to translate plans, diagrams and working drawings in the construction of a prototype
4. Students will learn about science to create or improve technology
5. Students will learn the implications of new technologies

Content: Creating the world of the 21st Century is a full-year course. Engineering the future is a laboratory course in which students will be expected to design, build and test prototypes. Students can fabricate their inventions in the laboratory or shop with a variety of materials and conduct experiments involving water and electricity. Through this course's practical real-world connections, students have an opportunity to see how science and mathematics are part of their everyday world, and why it is important for every citizen to be technologically and scientifically literate. This course is meant to help students- whether they eventually choose to enter a university, another tertiary education institution, or the world of work-better understand the designed world and the wide variety of career paths that a person might take in designing, manufacturing, maintaining, or use technologies. This course is intended to provide opportunity for students to practice and integrate learning in the subjects of math and science, and to stimulate further interest in learning more about science and math in the future.

Probable Projects: Project 1 Design and build a tower crane; Project 2 Design and build retrievable rocket

ROBOTICS 1 7641

0.50 Credit Level: H **Learning Expectation:** 4, 6

Prerequisites: None

Objectives:

1. To provide students with a robotics program for applied science, technology, engineering and mathematics
2. To enable students to use educational robots as tools for exploratory learning

Content: Students will walk through the design and build a mobile robot. During this process they will learn key STEM principles and robotics concepts. This modular and project-based curriculum teaches the design process in an engaging, hands-on manner to challenge, motivate, and inspire students. By moving students through an actual engineering project, students quickly understand the relevance of what they are learning. No prior robotics experience is required; beginners are able to advance sequentially through the units to gradually increase their knowledge and skill level. At the culmination of this class, students will compete head-to-head against their peers in the classroom, or on the world stage in the VEX Robotics Competition, the largest and fastest growing international robotics competition for middle and high school students.

ROBOTICS 2 7643

0.50 Credit Level: H **Learning Expectation:** 4, 6

Prerequisites: Robotics 1

Objectives:

1. Students will be able to demonstrate the basic concepts of manipulators and accumulators.
2. Students will be able to design examples of manipulators and accumulators.
3. Students will be able to demonstrate how mechanical power transmission systems are very important in the design and construction of competition robots.
4. Students will be able to vary the gear ratio (and the mechanical advantage) in a system to give them the versatility necessary to accomplish whatever work needs to be done.
5. Students will be able to determine gear inputs & outputs by calculating the difference between them and determine their gear ratio accordingly.

Content: This course covers the following specific topics:

- Physics/Physical Science Application—Scientific method, Distance, Length, Speed, Acceleration, Forces, Torque, Simple Machines (levers, gears, mechanical advantage)
- Programming Application—Program Compilation & Execution, Variables, Inputs & Outputs, Assignment Statements, Boolean Conditions, If-Statements, Loops, Functions, Algorithms
- Engineering Application—Chassis, Arms, Sensors, Gears, Motors

MD/CAD 1 7657

0.50 Credit Level: None Learning Expectations: 6, 4

Open to Grades: 10-12

Prerequisites: None but basic mechanical drawing skills useful.

Objectives:

1. Students will develop the ability to think in a deductive manner
2. Students will develop a sense of neatness and accuracy
3. Students will understand how to manipulate computer software to create mechanical drawing
4. Students will be able to use CAD (computer-aided-drawing) to design products

Content: Students will be introduced to the basic concepts of computer-aided drafting, as well as different types of CAD software available. Students will be required to use various drawing techniques of a computer-aided drawing system, along with modifying, dimensioning, and creating text for drawing using the computer.

Term Assignments Required: Term paper or project. Completion of all laboratory activities required.

MD/CAD 2 7658

0.50 Credit Level: None **Learning Expectations:** 6, 4

Open to Grades: 10-12

Prerequisites: CAD I

Objectives:

1. Students will understand the process and developments of multi-view drawings
2. Students will better comprehend true shapes and sizes of inclined surfaces

Content: A continuation of CAD I, but much more sophisticated.

Term Assignments Required: Term paper or project. Completion of all laboratory activities required.

ARCHITECTURAL DRAWING 7659A

0.50 Credit Level: None **Learning Expectations:** 6, 4

Open to Grades: 11-12

Prerequisites: CAD II

Objectives:

1. Students will gain the knowledge of material and frame construction
2. Students will know the design consideration in house construction
3. Students will gain knowledge to make decisions about future home design

Content: Architectural Drawing explores the principles of architectural design and details of frame construction. The course consists of planning, designing, and drafting a structure of their choice. The drawings include: floor plan, elevations, longitudinal and side sections, detail sheet, foundation plan, door and window schedule, plot plans and a one point perspective of any room. The final exam is a two-point perspective of the house designed by each student.

Term Assignments Required: Set of the above listed plans.

PLTW INTRO TO ENGINEERING DESIGN 7611A Satisfies PLTW Engineering Innovation Pathway

0.50 Credit Level: H **Learning Expectations:** 6, 4
Prerequisites: None
Objectives:
1. Students will learn what technology is
2. Students will learn what engineers do
3. Students will be able to translate plans, diagrams and working drawings in the construction of a prototype
4. Students will learn about science to create or improve technology
5. Students will learn the implications of new technologies

Content: Students dig deep into the engineering design process, applying math, science and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3D modeling software and use an engineering notebook to document their work.

PLTW PRINCIPLES OF ENGINEERING 7612 Satisfies PLTW Engineering Innovation Pathway

0.50 Credit Level: H **Learning Expectations:** 4, 6
Prerequisites: PLTW Introduction to Engineering Design
Objectives:
1. To provide students with an engineering program for applied science, technology, and mathematics.
2. To expose students to some of the major concepts that they will encounter in a post-secondary engineering course of study

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

PLTW COMPUTER INTEGRATED MANUFACTURING 7662A

1.00 Credit Level: H **Learning Expectations:** 6, 4
Open to Grades: 11-12
Prerequisites: None

Content: Manufactured items are part of everyday life, yet most students have not been introduced to the high-tech, innovative nature of modern manufacturing. This course illuminates the opportunities related to understanding manufacturing. At the same time, it teaches students about manufacturing processes, product design, robotics, and automation. Students can earn a virtual manufacturing badge recognized by the National Manufacturing Badge system.

GRAPHIC COMMUNICATIONS 1 7651

0.50 Credit Level: CP **Learning Expectations:** 6, 4
Open to Grades: 10-12
Objectives: Student will gain knowledge of the field of Graphics Communications

Course Description: This course is an introduction to Graphic Communications and will cover the history of Graphic Communications, the major printing processes, the printing industry and the safe use of equipment. Units will be offered in the following areas: hand composition, proof press, bindery operation, block cuts, screen printings, printer's measure, paste-up, desktop publishing, and process camera. Throughout the course a number of practice job sheets along with projects will be used to develop skills in the various processes introduced above.
Term Assignments Required: Completion of all laboratory activities.

INTRO TO TECHNOLOGY EDUCATION 7650

0.50 Credit Level: None **Learning Expectations:** 6, 4
Open to Grades: 9-11
Objectives:
1. Student will be provided tasks that will be solved by using various types and levels of technology so they better understand the role of technology in today's society
2. Students will have a better understanding of the role of an engineer in today's technology society
3. Student will be made aware of the relationship of math and science and the technologies of today

Content: This course will retain a strong hands-on /minds-on approach common to the technology education methodology and problem solving.
Term Assignments Required: Completion of all laboratory activities

WORLD OF CONSTRUCTION 7661

0.50 Credit Level: None **Learning Expectations:** 6, 4

Open to Grades: 11-12

Prerequisites: None

Objectives:

1. Students will learn the past and present techniques used in home construction.
2. Students will develop an awareness of energy conservation methods in house construction.

Content: Students will work on laboratory activities that deal with the construction industry. Energy-saving concepts dealing with construction shall be explored, including weatherization checks of their own homes or apartments. Students will be involved in the construction of scaled house structures and/or school construction projects.

WOODWORKING TECHNOLOGY 7660

0.50 Credit Level: None **Learning Expectations:** 6, 4

Open to Grades: 10-12

Prerequisites: None

Objectives:

1. Students will understand the proper use of hand tools
2. Students will develop good organizational and work habits

Content: Woodworking Technology will provide knowledge of the wood industry, the tools/process and the skills used in working with wood materials. It is intended that students will discover and develop their interest and abilities that may be used for personal reasons or to prepare for further study, as well as gain knowledge of job opportunities, working conditions and requirements and products of the wood industry. Students complete units on shop orientation, wood technology, shop planning and drawing, hand processes, power hand tools and mass production.

Term Assignments Required: Projects or equivalent. Term project or paper

WOOD CONSTRUCTION AND DESIGN 7659

0.50 Credit Level: None **Learning Expectations:** 6, 4

Open to Grades: 11, 12

Prerequisites: General Woodworking / Woodworking Technology

Objectives:

1. Students will develop an appreciation of well-constructed and designed furniture
2. Students will develop skills in proper and safe utilization of power equipment

Content: Wood Construction and Design will build upon the information and woodworking techniques developed in General Woodworking/Woodworking Technology. All major power tools will be accessible to students. Furniture and structure construction techniques will be stressed.

Term Assignments Required:

1. One or more acceptable projects, depending on its size and complexity
2. Term projects or paper

FAMILY AND CONSUMER SCIENCE

INTRODUCTORY FOODS/NUTRITION/WELLNESS 7904

0.50 Credit Level: None **Learning Expectations:** 5, 6
Open to Grades: 11-12
Objectives:
1: To understand the basic principles of nutrition
2: To understand the link between diet and disease
3: To identify functions and sources of major nutrients
4: To demonstrate basic food preparation skills and understand the effects on the nutritional value of food
5: To understand the information on nutrition labels
6: To identify common food-borne illnesses
7: To understand the benefits of personal wellness with healthy decision-making skills

Content:
This course provides students with a basic understanding of nutrition with a hands-on study of the culinary arts. Food preparation techniques, food safety, kitchen safety, knife skills, meal planning, kitchen mathematics, mealtime etiquette, recipe analysis, serving food, shopping for food, care of culinary equipment, analyzing recipes, professionalism, and nutritional needs are topics that will be covered. Food labs will allow students to develop basic skills and practice healthy cooking techniques. Basic food selection will emphasize meal planning and snacks for optimal health. Current topics will be discussed to develop healthy decision-making skills that can be used throughout their life.

Term Assignments: Written Assignments, Attendance, Food Lab Assignments, Oral Presentations, and Class Participation

SENIOR TRANSITION 7908

0.50 Credit Level: None **Learning Expectations:** 5, 6, 9
Open to Grades: 12
Objectives:
1. To learn a variety of skills which could be beneficial in completing daily tasks while living independently
2. To enhance social interaction
3. To increase problem solving and critical thinking skills that will allow for success in meeting the demands of everyday “real world” situations as students begin life after high school

Content: This course is designed to highlight skills that are important for young people to know as they begin to navigate through life living more independently. Units of study will include: cooking/nutrition, laundry/clothing repairs, automotive knowledge, financial knowledge, career consideration, general home repairs and more. Lessons will be taught through lecture, hands-on experiences and guest speakers.
Term Assignments: Quizzes, class and home assignments, final exam, projects

LifeSkills

PHYSICAL EDUCATION / HEALTH

In order for an opportunity to receive academic credit for a physical education course, a student who is medically excused must be present and able to physically perform in 48 classes for the semester.

HEALTH 1 7901
0.50 Credit Level: None **Learning Expectations:** 5, 6, 9
Open to Grades: 9-12
Objectives:
1. To increase student health knowledge
2. To develop skills in order to attain healthier lifestyles
3. To engage in discussions regarding contemporary health issues

Content: This course will help to develop skills necessary to assist the adolescent in making healthy decisions. Subject matter will follow the teenage health and teaching modules. Topics included are: relationships, mental/emotional/social health, human growth and development, drugs and alcohol and more.
Term Assignments: Quizzes, class and home assignments, final exam, projects

PHYSICAL EDUCATION 9 7903
0.50 Credit Level: None **Learning Expectations:** 5, 6, 9
Open to Grade: 9
Objectives:
1. To learn skills and behaviors that will contribute to a healthful lifestyle
2. To establish an appreciation for the value of physical activity
3. To enhance social interaction
4. To create an understanding of one's personal wellness

Content: A program of activities with emphasis on cooperative games, individual/team sports, and personal fitness. The sequence of experiences is deigned to fulfill the physical growth, social development and behavioral needs of each student.
Term Assignments: Unit quizzes, physical fitness testing, final exam

TEAM SPORTS 7900
0.50 Credit Level: None **Learning Expectations:** 5, 6, 9
Open to Grades: 9-12
Objectives:
1. To learn skills and behaviors that will contribute to a healthful lifestyle
2. To maintain an appropriate level of physical fitness through team activities
3. To enhance social interaction
4. To crease an understanding of one's personal wellness

Content: Students will be involved in a variety of team sports to develop a working knowledge of each sport, to gain cardiac fitness, coordination, spatial awareness, social skills and tactical skills. Students will participate in activities that include touch football, soccer, ultimate Frisbee, softball, basketball, team handball, volleyball, floor hockey and more. Additionally, physical fitness components will also be covered.
Term Assignments: Unit quizzes, physical fitness testing, final exam

LIFELONG ACTIVITIES 7904
0.50 Credit Level: None **Learning Expectations:** 5, 6, 9
Open to Grades: 9-12
Objectives:
1. To learn skills and behaviors that will contribute to a healthful lifestyle
2. To establish an appreciation for the value of physical activity
3. To enhance social interaction
4. To create an understanding of one's personal wellness

Content: Students will focus on improving their skills in activities that lend themselves to lifelong participation. Fundamentals of each activity will be taught hoping that the student can develop an interest in many of the activities. Students will be expected to learn game rules and game strategies. Lifetime activities may include tennis, table tennis, badminton, pickle ball, golf, disc golf, weight room and more.

FITNESS/STRENGTH AND CONDITIONING 7905

0.50 Credit Level: None **Learning Expectations:** 5, 6, 9

Open to Grades: 9-12

Objectives:

1. To learn skills and behaviors that will contribute to a healthful lifestyle
2. To enhance social interaction
3. To create an understanding of one's personal wellness through the use of the 5 components of physical fitness

Content: Students will learn the basics on strength training, cardiovascular exercise and core training using the human body. The curriculum will include lifting skills and techniques, individualized conditioning programs and an opportunity to alleviate stress through exercise. This is an ideal class for those who want to start up or continue with their weight training and exercise programs but who have difficulty finding time to work out after school and a facility in which to train.

CHALLENGE COURSE 7906

0.50 Credit Level: None **Learning Expectations:** 5, 6, 9

Open to Grades: 9-12

Objectives:

1. To equip individuals with problem solving, decision making and team building skills through the use of a variety of activities
2. To enhance critical thinking skills
3. To enhance social interaction

Content: Students will learn how to work together as a group on problem solving, trust building and adventure risk taking. Critical thinking and listening skills will be exercised. All students are asked to set goals to challenge themselves and assist others in completing these challenges as needed. The students will get to experience being belayed from various heights, while climbing on the outdoor ropes course and indoor climbing wall. The course is designed to encourage students to try new and different activities, some of which may involve initial anxiety.

Term Assignments: Quizzes, participation log, final exam

ATHLETICS BEYOND HIGH SCHOOL 7907

0.50 Credit Level: None **Learning Expectations:** 5, 6, 9

Open to Grades: 11-12

Objectives:

1. To establish an action plan to achieve future academic and athletic goals
2. To enhance social interaction
3. To increase and maintain muscular strength and cardiovascular endurance

Content: With the growing number of students continuing their athletic careers as the college level, this course is designed as a mix of classroom and physical activities to help enhance an individual's chances of participating in college athletics. Some classroom activities include making a highlight tape, becoming familiar with NCAA Clearinghouse along with NCAA recruitment rules and regulations, contacting college coaches for visits, creating athletic player profiles and having coaches come in as guest speakers or for recruiting visits. Physical activities would include enhancing strength and conditioning in the weight room along with working on various fitness tests, which are commonly used at sporting combines and clinics for player evaluations.

Term Assignments: Athletic player profile, highlight film, quizzes, physical fitness testing, final exam

MUSIC

HISTORY OF AMERICAN POPULAR MUSIC 7810A

0.50 Credit Level: None **Learning Expectations**: 7

Prerequisites: None

Open to Grades: 9-12

Objectives:

1. To understand popular music in America within its social and cultural perspective
2. To identify aurally important musicians and styles in a variety of genres
3. To describe the differences in popular music styles based on musical techniques of each period using appropriate musical vocabulary.

Content: History of popular music will explore the different genres of American popular music, delve into the social ramifications of social and cultural issues raised by the study of popular music and major artists from each period in American music history.

Term Assignments Required: Music journal to be kept throughout the course, quizzes, exams, projects, listening.

CONCERT BAND 7800 BAND PERCUSSIONS 7814

1.00 Credit Level: None **Learning Expectations:** 7

Prerequisites: It is preferred students have some experience playing a brass, percussion or woodwind instrument; or spinning a flag/rifle and dance. However, beginners are welcome.

Open to Grades: 9-12

Objectives:

1. Students will perform marching and concert music in a format that lends itself to both the individual and the ensemble
2. Students will be exposed to band music from a variety of styles, periods, nationalities and composers
3. Students will learn practice and rehearsal skills that will help prepare them for the future
4. Students will develop and refine playing techniques on their individual instruments
5. Students will learn and develop sight-reading and score reading skills

Content: The band is a very active group. Parades, District/State Festivals, civic performances and all home football games are part of their activities.

Term Assignments Required: Students are required to attend all scheduled rehearsals and performances.

INTRODUCTION TO GUITAR / UKULELE 7811

0.50 Credit Level: None **Learning Expectations:** 7

Prerequisites: Students will be provided a guitar / ukulele for in-school use. It is suggested to have access to a guitar or ukulele for home use.

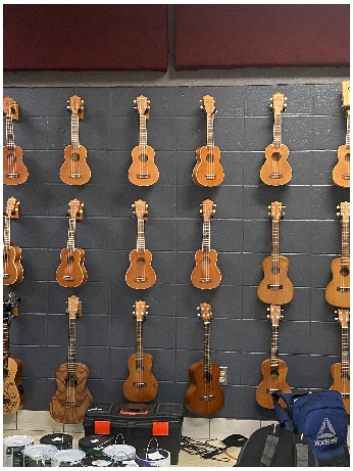
Open to Grades: 9-12

Objectives:

1. This course is designed to provide basic skills for beginning guitar / ukulele students
2. Students will learn basic chords and strum patterns
3. Students will develop music reading and study skills necessary for mastery of the instrument
4. Students will explore a variety of solo and ensemble literature
5. To encourage the habit of constant self-evaluation of one's playing

Content: Music in a variety of styles; chords; scales; riffs and patterns; technical exercises.

Term Assignments Required: Perform a minimum of five pieces written for solo and/or ensemble.



PIANO 1 7812A

0.50 Credit Level: None **Learning Expectations:** 7

Open to Grades: 9-12

Prerequisites: None

Objectives: Piano 1 is designed for the beginning piano student.

1. Using Alfred Piano Course Book 1, students will learn proper fingering, note reading and piano performance practices
2. Students will work at their own pace to complete playing assignments which will be graded daily

PIANO 2 7813A

0.50 Credit Level: None **Learning Expectations:** 7

Open to Grades: 9-12

Prerequisites: Students will have completed Piano 1 with a C or higher to continue in Piano 2

Objectives:

1. Students will begin Alfred Piano Course Book 2, continuing work on fingering, note reading and musicality.
2. Students will progress at their own pace and will be graded daily on playing assignments

AP MUSIC THEORY 7802

1.00 Credit Level: AP,H **Learning Expectations:** 7

Prerequisites: Passing grade in at least one ensemble or music course.

Open to Grades: 11-12

Requirements of the course: Summer work must be completed before the course begins. **STUDENTS ARE REQUIRED TO TAKE THE AP EXAM**

Objectives:

1. To provide an area of study for students interested in music beyond the performance level
2. Students will develop skills in the theoretical aspects of music
3. To provide a sound background for the student seriously considering further study in music
4. Students will understand the function of major and minor tonality in Western music
5. Students will understand the symbols and terminology necessary for analysis of a written score

Content: Study of scales, key signatures, chords, ear training, sight-singing, part writing, analysis.

Term Assignments Required: Final project - Harmonic analysis of an assigned work.

WORLD DRUMMING

0.50 Credit Level: None **Learning Expectations: 3, 7,8**

Prerequisites: None. However, at least one year of instrumental experience is recommended.

Open to Grades: 9-12

Objectives:

1. Students will learn drumming techniques from cultures across the world and perform selections at the end-of-semester concert.
2. Students will focus on learning a variety of rhythms, patterns, styles, notation systems, and improvisatory vocabulary.
3. Students will observe videos of music from other cultures.
4. Students will develop their interactive listening and playing skills via call-and-response cues.

Content: Drumming techniques ranging from Ghanaian, Brazilian, Latin, and European styles. Rhythm and notation reading and writing.

Term Assignments Required: Performance at the end-of-semester concert is required.

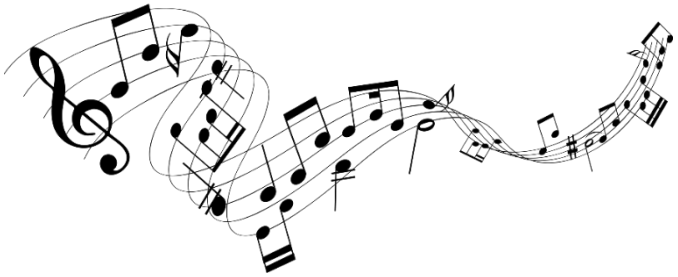
SONGWRITING

0.5 Credit Level: None

Open to Grades: 9-12

Prerequisites: None

Description: Students will learn about the anatomy of a song. This is broken into its parts, rhyming schemes, the flows, the metaphors, and the deeper meanings. There will be daily writing exercises coupled with analysis of well-constructed songs to train students in the art of digging to find unique ways to say things that have already been said a million other times. They will learn the basics of music fundamentals- chord progressions, the first steps to create melody and orchestration, the ability to read and write simple rhythms and notes so that there is some fluidity and understanding on the piano, guitar, and drums. Students will work alone, in small groups, in large groups, and as a full class to create a portfolio of songs that they can then record them on their own, perform them at a concert, or else just have as a permanent reminder of their progress in this art form.



CONCERT CHORUS 7801A

1.00 Credit Level: None **Learning Expectations:** 7
Prerequisites: None
Open to Grades: 9-12
Objectives:

1. Student will be exposed to choral music from a variety of styles, periods, nationalities, and composers
2. Students will learn ensemble skills needed to sing successfully in a choral setting
3. Students will perform music publicly, either in a group or individually
4. Students will learn fundamental vocal technique
5. Students will develop music reading and sight-singing skills

Content: Choral music of all styles, periods, nationalities, and cultures; Choral warm-ups and technical exercises; Score reading.
Term Assignments Required: Students must attend all scheduled rehearsals and performances.

PITT BAND ENSEMBLE 7803

1.00 Credit Level: None **Learning Expectations:** 7
Prerequisites: None. However, at least one year of choral experience is recommended
Open to Grades: 9-12
Objectives:

1. Students will learn fundamental vocal techniques to develop breath control, good intonation and flexibility
2. Students will explore a variety of vocal literature for solo and small ensemble
3. Students will expand their individual abilities with solo and class ensemble work
4. Students will develop their music reading and sight singing skills

Content: Music of all styles, periods, nationalities, and cultures; Warm-ups and technical exercises; Sight-singing and rhythm reading.
Term Assignments Required: Perform a minimum of five pieces written for solo and/or ensemble.

CHAMBER SINGERS 7807A

1.00 Credit Level: H **Learning Expectations:** 7
Prerequisites: One year high school choral experience
Open to Grades: 10-12 by audition and teacher recommendation only
Chamber Singers is a 4-part mixed (SATB) choir dedicated to the preparation of a cappella music suited to the small ensemble.
Objectives:

1. Student will be exposed to a cappella choral music from a variety of styles, periods, nationalities and composers
2. Students will refine solo and ensemble singing skills to meet a high standard of performance
3. Students will perform music publicly, either in a group or individually
4. Students will refine vocal technique; breathe control, vowel formation articulation, diction, phasing and musicality
5. Students will develop music reading and sight-singing skills

Content: A cappella choral music of all styles, periods, nationalities, and cultures with an emphasis on madrigal singing. Choral warm-ups and technical exercises; Score reading; “The Easy Rhythm Sight-Singing Series”, “The Renaissance Sight-Singing Series”
Term Assignments Required: Students must attend all scheduled rehearsals and performances. Considerable preparation outside of class is expected. Students must be able to prepare score parts independently. Sight singing will be assigned on a regular basis.

VISUAL ARTS

ART 1 7850

0.50 Credit Level: None **Learning Expectations:** 8, 7

Prerequisites: None

Objectives:

1. To train the student to perceive and interpret the natural world in an artistic and creative manner
2. Connections are made to periods of art and/or artists to reinforce concepts and principles
3. To explore and find art media which will lead to rewarding, meaningful and successful experiences
4. To work and create in various two and three-dimensional media and to explore the unique characteristics of these particular media and the tools associated with them

Content: The first course in the high school art program consists of experimentation with a variety of media and techniques. Emphasis is placed on the basic principles of good design and their application. A more professional approach to the preparation and presentation of art projects is taught. Neatness is stressed and the student is taught the proper care of tools and materials. Projects are presented which require the student to pursue the fine arts as well as the applied arts. In this course, there are several projects that are required in order to expose the student to various media in order to produce and accumulate knowledge in the field of art. Some of these areas may include painting, sculpture, ceramics, drawing, and graphics.

Term Assignments Required: Sketchbook, portfolio projects

ART 2 7851

0.50 Credit Level: None **Learning Expectations:** 8, 7

Prerequisites: Passing grade in Art I

Objectives:

1. To develop good work habits in the use of various media
2. To emphasize control in the execution of design, form, space and volume
3. To encourage the student's confidence in his/her own ideas, attitudes and emotions
4. To introduce new techniques in two and three-dimensional form with emphasis on the unique characteristics of particular media, materials and tools
5. To familiarize the student with more advanced painting and illustrating techniques
6. To help the student develop a holistic view of themselves through the experience of the creative process

Content: This segment of the art program concerns itself primarily with the media, techniques and design problems related to two and three-dimensional art. Students in Art II are given an opportunity to experience a variety of media in drawing, painting, graphics, etc. They will learn techniques of construction and develop a sense of design in various materials. Along with assigned projects, which are included to emphasize specific technical or design problems, time is allowed for a wide range of individual creative solutions.

Term Assignments Required: Portfolio projects

ART 3 7852

0.50 Credit Level: None **Learning Expectations:** 8, 7

Open to Grades: 11 and 12 only

Prerequisites: Grade of C or better in Art 2 or teacher recommendation

Objectives:

1. To develop new skills in two-dimensional and three-dimensional media on an advanced level
2. To encourage the student to experiment with sculptural form in terms of space, form, and composition
3. To make the student aware of the importance of presentation with regard to finished work
4. To expose the student to contemporary and historic works of art
5. To create an atmosphere for group dynamics, in which students may support one another in problem solving, communicating and growth, coupled with self and group critique
6. To alert the student to, and enable them to identify potential health hazards associated with materials, techniques and art environments, and to work safely within the studio

Content: This course is comprised of students with a greater that average interest and ability in art. Consequently, finer materials are used, more complex techniques are encouraged, and more sophisticated results expected. Large paintings are begun in Art III, and all projects are designed to promote originality and development of a more personal style. Features of this course are advanced original work in design and fabrication of artwork in both two

and three-dimensional media. Students will work more realistically as well as in an abstract manner in all media available. Students planning further education in an art field will begin their portfolios during this course.
Term Assignments Required: Portfolio projects

ADVANCED ART 7866

1.00 Credit Level: None **Learning Expectations:** 8, 7
Open to Grade: 11-12
Prerequisites: Grade of C or better in Art 3 or teacher recommendation
Objectives:

1. To enable the student to carry his/her designs and ideas from one media to another
2. To encourage the use of creative thinking by exploring a single subject through a series of work varying media and technique or an in-depth study of one medium
3. To promote the student's own ideas in developing artwork concerned with form and composition
4. To acquaint the student with all aspects of media available
5. To encourage the student to be able to evaluate his/her own work critically, as well as that of others
6. To allow the serious student the opportunity to prepare and complete a portfolio for college acceptance
7. To create artwork that demonstrates the elements and principles adherent in developing a personal style
8. To guide the students in their selection of educational selections in the field, taking into account the student's individual needs

Requirements: A portfolio of assigned and elective work.

DIGITAL PHOTOGRAPHY 7855

0.50 Credit Level: None **Learning Expectations:** 4, 8
Prerequisites: None
Objectives:

1. To train the student to perceive and interpret the natural world in an artistic and creative manner
2. To develop an understanding of balance, repetition, rhythm, scale, proportion and unity through their work
3. To learn techniques and skills necessary for successful personal photography
4. To understand basic principles of image transfer and editing techniques

Content: Digital Photography is designed to meet the needs of the student who would like to learn to use his/her digital camera for effective personal photographs. Topics covered will include the care and maintenance of digital cameras, how to choose a digital camera, techniques in photography, editing and printing.
Term Assignments Required: A portfolio of completed projects.

DIGITAL PHOTOGRAPHY 2 7856

0.50 Credit Level: None **Learning Expectations:** 4, 8
Open to Grades: 10-12
Prerequisites: Passing grade of C or better in Digital Photography 1 or teacher recommendation
Objectives:

1. To continue to expand the concepts acquired in Digital Photography 1
2. To experience various aspects of photography to include advanced techniques in print editing
3. To analyze how photography and photographers have affected our society, and investigate the various roles that they serve
4. To introduce new technology and new media as it affects the field of photography
5. To introduce occupational and vocational opportunities related to photography, and to provide areas of practical application

Requirements: A portfolio of assigned and elective photographic work.

ADVANCED DIGITAL PHOTOGRAPHY 7867

1.00 Credit Level: None **Learning Expectations:** 4, 8
Open to Grades: 12
Prerequisites: Passing grade of C or better in Digital Photography 2
Objectives: Advanced Digital Photography is offered for the serious student who has completed Digital Photo 2 and wishes to further his/her education in photography. All work will be on a highly individual level. Students planning further education in the field of photography will continue preparing their portfolios for college admission/ workforce.

DIGITAL DESIGN 7857

0.50 credit Level: None **Learning Expectations:** 4, 8
Prerequisites: None
Objectives:

1. Students will learn to use Adobe Creative Suites to create digital projects
2. Students will explore methods of visual organization, color theory, and digital color systems
3. Students will learn image creation and manipulation
4. Students will learn graphic design principles
5. Students will learn how to build and manage an electronic portfolio

Contents: Digital Design is an introductory-level Visual Arts course that provides students with a foundation in 2 dimensional-design as well as valuable, industry-standard software skills. Students use Adobe Creative Suite software to create professional quality print materials, and develop essential skills for career success in an increasingly digital world. Through a series of projects and lectures, students will gain the ability to use technology as a tool for communicating larger ideas and understanding a broad range of subjects.
Term Assignments Required: Students will be required to turn in projects and assignments from the various lessons given. A final assignment will be required which encompasses many of the tools and techniques learned during the course.

CERAMICS 1 7861

0.50 Credit Level: None **Learning Expectations:** 7
Open to Grades: 11-12
Prerequisites: None
Course Description: This class will introduce students to building with clay. Emphasis will be placed on the design elements; line, shape, texture and color. Focus will be on the hand building techniques; pinch, coil and slabs. Functional, as well as sculptural applications, will be explored. Introduction to traditional and historical ceramic arts will be incorporated into the lab experiences. Students will be introduced to the art of wheel thrown pottery. Various glaze and decoration techniques for finishing work will be introduced.
Curriculum Objectives: After successfully completing this course, the student will be able to:

1. Demonstrate the ability to perceive and describe formal qualities and expressive content in ceramic products
2. Demonstrate technical skills needed to produce products with aesthetic qualities
3. Demonstrate techniques of forming pottery
4. Use criteria for making judgements about ceramics/pottery
5. Use vocabulary related to ceramics/pottery
6. Demonstrate an awareness of the history of pottery

Term Assignments Required: Students will be required to turn in assignments and projects from the various lessons given. A sketchbook/journal will be maintained throughout the semester. A final assignment will be given which encompasses many of the tools and techniques learned during the course.

THE BIG NINE: An Introduction to the Humanities *7817*

1.00 Credit Level: H **Learning Expectations:** 7
Open to Grades: 10-12
Objectives:

1. To provide an enrichment course which broadens the student's awareness of his/her cultural heritage
2. The student will be able to recognize general features of important movements in art and will be able to date a work of art, whether painting, sculpture, architecture, or performance (music, dance and theater), reasonably accurately from stylistic features
3. The student will have a general idea of the socio-historical context from which as piece of art springs and can bring that knowledge to bear on questions of generation, meaning and style
4. The student will establish personal connections to and comprehension of art and performance from the whole span of human history

5. The student will develop intellectual grounding in 19th and 20th century conceptual frameworks, which inform modern analyses of art and literature

Content:

1. Music 2. Poetry 3. Painting 4. Sculpture 5. Dance 6. Theater 7. Architecture 8. Comics 9. Cinema

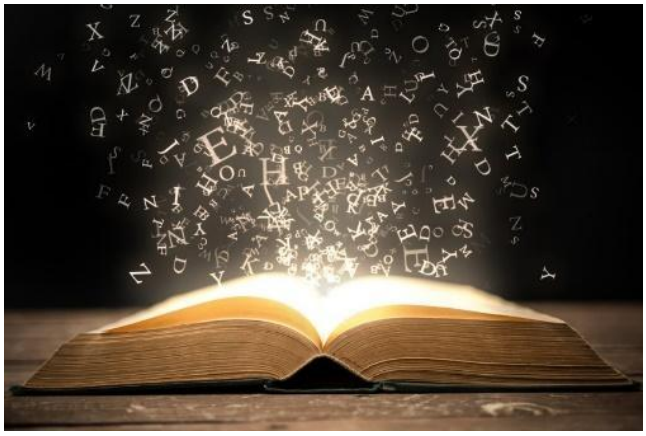
Humanities expand our knowledge of human cultures and help us understand what binds us together and what differentiates us from one another. What will you learn in a humanities program? Students explore how human knowledge has developed and grown through history by reading a variety of ancient and modern texts, listening to music, viewing artworks, watching film excerpts, and participating in discussions and experiential learning activities. What else will the student gain from a study in humanities?

Term Assignments Required: Visual and oral presentations, journal, research project.

INDEPENDENT STUDY PROGRAM

It is the intent of this program to offer students (juniors and seniors) the opportunity to study in academic areas not normally available as part of the high school program. "Independent study courses are taken in addition to a normal class load (6.00 credits) and not as a substitute for regular classes." (An exception to this rule may be granted in the rare instance when a committee consisting of the Principal or an Assistant Principal, appropriate Department Coordinator, the sponsoring teacher and counselor deem it to be in the student's best interest.) The following requirements must be met in order for a student to enroll in an independent study endeavor.

1. All independent study courses will commence at the start of the semester.
2. Conditions and requirements must be made between the student and the sponsoring teacher on a written contract basis.
3. Grade and credit conditions are the same as regular course offerings with the exception of GPA and Honor Roll calculation. Independent Study courses do not calculate into a student's GPA or Honor Roll.
4. Students may accumulate one credit per year in the program.
5. An independent study course must have a specific course title which reflects the content.
6. Parent(s), Department Coordinator, Principal and Counselor must approve enrollment in an independent study course.



Interested students who have questions concerning the program are asked to contact their counselor.

CAPSTONE

CAPSTONE/INDEPENDENT RESEARCH PROJECT

0.50 Credit Level: None

Open to Grade: 12

Students are allowed to engage in an academic, professional, and/or personal learning experience in a topic of their choosing. The student must find a faculty member to mentor them along in the process. The student will discuss the topic with the teacher and develop a proposal that must be mutually agreed upon by teacher and student. The proposal will include a student developed Essential Question which the project will investigate and address.

Upon acceptance of the proposal, the student will work to develop a Capstone/Independent Research Project Paper of MLA standards, citing sources, submitted in standard word processing format (Times New Roman 12) being 8 pages in length. The student is expected to frequently consult their mentor on their research and findings.

Upon conclusion, the student must present in front of a panel of three faculty members which may also include outside individuals in the field they researched. The project presentation may include a concrete product, visual aids such as video components, Power Point, etc. The project presentation will be 10-20 minutes in length and should answer any questions on their findings. Grading of the Capstone/IRP will be determined utilizing the grading rubric in the Capstone/Independent Research Project Handout.

The Capstone/IRP may be utilized to satisfy a component of the STEM or Global Pathways.

ENGLISH AS A SECOND LANGUAGE

ENGLISH AS A SECOND LANGUAGE I, II, III

1.00 Credit Level: None **Learning Expectations:** 1, 2, 3

Objectives:

This course is designed to develop the social and academic language of designated English learners. Skills developing proficiency in all domains: listening, speaking, reading, and writing, are practiced daily. Curriculum is content-based and aligned with WIDA standards. Differentiation of instruction by proficiency level is implemented by a licensed ESL teacher who also communicates with SEI teachers, families, and other relevant stakeholders. ACCESS testing data and other benchmarks are regularly monitored for active English learners and former ELs.