Whitefish Bay High School

Academic/Career Planning and Course Guide

2017-2018
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<td>Music</td>
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<tr>
<td>World Language</td>
<td>82</td>
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</tbody>
</table>
Focus Plan

Our Vision

The School District of Whitefish Bay, in partnership with families and community, is student-centered with a tradition of educational excellence. We will build upon this tradition by:

- Empowering students with the knowledge, skills, and character necessary to thrive in a changing, global society.
- Respecting the diversity of our students and engaging them as individual learners in an innovative learning community.
- Addressing the needs of the whole child in a caring, inclusive environment.

Our Goals & Key Strategies

Academic Achievement and Engaging 21st Century Learning

Every student will meet or exceed comprehensive learning standards to promote future success within our global society.

1. Develop exemplary, standards-based curriculum and assessment.
2. Develop and implement data-driven, differentiated instruction across all grade levels and subject areas.
3. Develop and implement timely, comprehensive support systems to ensure success for every student.
4. Ensure access to reliable, secure and sufficiently robust technology infrastructure that facilitates transformational educational practice.

Supportive Environment & Whole Child Development

Every student will experience a caring, inclusive learning environment that supports the development of the whole-child with balanced attention to physical, social, emotional, and intellectual well-being.

1. Conduct strengths and needs analysis, including the development of a student feedback process to inform the continuous improvement of a caring, inclusive and culturally responsive environment.
2. Provide professional development for all staff members about nurturing the whole child.
INTRODUCTION
The Whitefish Bay High School Career Planning and Course Guide describes the policies and guidelines which aid students, parents, and counselors in creating academic and career plans to fulfill graduation requirements and prepare students for life after Whitefish Bay High School.

PUBLIC NOTIFICATION OF NONDISCRIMINATION POLICY
It is the policy of the School District of Whitefish Bay that no person shall, on the basis of sex, race, religion, color, national origin, ancestry, creed, pregnancy, marital or parental status, sexual orientation, medical condition or disease, or physical, mental, emotional, or learning disability, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any educational program, including Career and Technical Education courses, activity, or employment. This policy also prohibits discrimination as defined by Title IX of the Education Amendments of 1972, Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1972, and Title II of the Americans with Disabilities Act.

The district encourages informal resolution of complaints under this policy. Absent such resolution, any complaint regarding the interpretation or application of the district's nondiscrimination policy shall be processed in accordance with the following grievance procedures:

1. Any student, parent/guardian, resident, or employee of the School District complaining of discrimination on the basis of sex, race, color, national origin, ancestry, creed, religion, pregnancy, marital or parental status, sexual orientation, or physical, mental, emotional, or learning disability or handicap in school programs or activities shall report the complaint, in writing, to the Director of Special Education & Pupil Services. The contact information for the Director of Special Education & Pupil Services is Dr. Stacy Gahan, School District of Whitefish Bay, 1200 E. Fairmount Ave, Whitefish Bay, WI 53217, 414-963-3871, stacy.gahan@wfbschools.com.
   a. Discrimination complaints relating to the identification, evaluation, educational placement or the provision of a free appropriate public education of a child with exceptional educational needs shall be processed in accordance with established special education appeal procedures. (Chapter 115, Subchapter V, Wis. Stats.)
   b. Discrimination complaints relating to programs specifically governed by federal law or regulation shall be referred directly to the State Superintendent.

2. The Director of Special Education & Pupil Services will provide a written acknowledgment within twenty (20) days of the receipt of the written complaint. The Director of Special Education & Pupil Services will investigate with the building principal, or other appropriate persons, the facts comprising the alleged discrimination and prepare a written report of the facts. Within fifty (50) days after receiving the complaint, the Director of Special Education & Pupil Services shall decide the merits of the case, determine the action to be taken, if any, and report in writing the findings and the resolution of the case to the grievant.

3. If the grievant is dissatisfied with the decision of the Director of Special Education & Pupil Services, he/she may, within five (5) business days of such decision, appeal the decision in writing to the School Board. The School Board shall hear the appeal at its next regular business meeting, or a special meeting may be called for the purpose of hearing the appeal. The school board shall make its decision in writing within ninety (90) days after the School District's receipt of the complaint, unless the parties agree to an extension of time. Copies of the written decision shall be mailed or delivered to the grievant and the Director of Special Education & Pupil Services.
4. If the grievant is dissatisfied with the School Board's decision, he/she may within thirty (30) days appeal the decision in writing to the State Superintendent.

5. Complainants are reminded that appeals may also be made to the Regional Director of the Office of Civil Rights for federal discrimination law violations. Any questions concerning this policy should be directed to the Director of Special Education and Pupil Services, School District of Whitefish Bay, 1200 E. Fairmount Ave., Whitefish Bay, WI 53217.

EDUCATIONAL PLANNING
Educational program planning is a joint task shared by students, parents, and school personnel. The high school counselors work closely with students and parents to plan each year's schedule of courses as well as a multi-year organization of prospective courses. Planning takes place through student/parent/counselor and student/counselor conferences. Parents should feel free to contact their student's counselor regarding questions relative to course content, scheduling, and graduation requirements. Counselors may be reached via e-mail or by calling 414-963-3990.

GRADUATION REQUIREMENTS

CRITERION 1: Base Requirements

A. Credit Requirement

All students wishing to obtain a diploma from Whitefish Bay High School are required to earn forty semester credits. One credit equals one semester. Credits must be completed as follows:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Grade</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>English - 8 credits</td>
<td></td>
<td>Health/Physical Education - 4 credits</td>
</tr>
<tr>
<td>Social Studies - 6 credits</td>
<td></td>
<td>Computer Science - 1 credit</td>
</tr>
<tr>
<td>Mathematics - 6 credits</td>
<td></td>
<td>Fine/Applied Arts - 1 credit</td>
</tr>
<tr>
<td>Science - 6 credits</td>
<td></td>
<td>Electives - 8 credits</td>
</tr>
</tbody>
</table>

COURSE REQUIREMENTS

<table>
<thead>
<tr>
<th>Subject</th>
<th>Grade</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>9</td>
<td>English 1 and English 2</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>English 3 and English 4</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>Advanced Composition and one semester literature course</td>
</tr>
<tr>
<td>Course</td>
<td>Credits</td>
<td>Requirement</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>---------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Two semester-long literature courses</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Social Studies</td>
<td>9</td>
<td>Global Studies (year-long)</td>
</tr>
<tr>
<td>10 United States History 1 (one semester)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 United States History 2-3 (year-long)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 American Government (one semester)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Education</td>
<td>9</td>
<td>Physical Education 9 and Health 9</td>
</tr>
<tr>
<td>10 Physical Education course (one semester)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Physical Education course (one semester)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>9-12</td>
<td>Six credits</td>
</tr>
<tr>
<td>Science</td>
<td>9-12</td>
<td>Biology and four credits of an additional science</td>
</tr>
<tr>
<td>Computer Science</td>
<td>10-12</td>
<td>One credit (Computer Concepts or Computer Science)</td>
</tr>
<tr>
<td>Fine/Applied Arts</td>
<td>9-12</td>
<td>One credit in one of the following areas: Art, Business, Engineering &amp; Design, Acting, Stagecraft, or Music</td>
</tr>
</tbody>
</table>

**B. Enrollment Requirement**

Students wishing to obtain a diploma from Whitefish Bay High School also must have been enrolled in a class or participated in an activity approved by the administration during each class period of each day during high school.

**CRITERION 2: Academic Performance**

Students may demonstrate acceptable academic performance by obtaining a cumulative grade point average of C- (1.667) or higher at the conclusion of their high school career. Students who meet Criterion 1 and Criterion 2 will earn a diploma. Students who meet Criterion 1, but not Criterion 2, must meet Criterion 3 to earn a diploma.
**CRITERION 3: Graduation Plan Criterion**

Collaboration and communication among the school, student and parent/guardian of a student in danger of not graduating are important elements of Criterion 3. Students who have not met Criterion 2 may be eligible to graduate by meeting basic criteria for academic performance, attendance, citizenship, and effort as defined by a Graduation Plan developed in conjunction with a high school administrator, school counselor, the student and the student’s parents and/or guardians.

Following a student's junior year, a student whose records indicate that he or she may be in jeopardy of not graduating shall be sent written notification to that effect.

This team shall convene no later than two weeks after first semester senior grades have been posted for failure to meet Criterion 2. At this time, a contract will be drafted that outlines basic expectations for academic performance, attendance, citizenship and effort. The contract will be signed by the student, parent/guardian, and members of the meeting. Prior to graduation, the team will convene once again to determine if the terms of the student's contract have been sufficiently met. If so, Criterion 3 has been met.

Note: (1) Students enrolled in a Board approved alternative education program shall demonstrate completion of Criterion 3 by meeting the graduation-related requirements set forth by that program. (2) Students who have an Individualized Education Plan who need to meet Criterion 3 shall do so by meeting the graduation-related goals set forth therein, and may have curriculum modified to accommodate disabilities.

Students who meet Criterion 1 and 3 will earn a diploma. Students who meet Criterion 1, but not Criterion 3, may appeal to the building principal for a final determination of graduation.

Alternative plans for meeting graduation requirements may be established for non-graduating seniors.

Students who do not meet graduation criteria with their graduating class may be eligible to complete credits on a limited basis in accordance with the Board graduation policy to receive a Whitefish Bay High School diploma. Outstanding credits must be completed by age 21.
# WFBHS Graduation Requirements (40 Credits min.)

## Course Planning Sheet

### English-8 Credits

<table>
<thead>
<tr>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 1</td>
<td>English 3</td>
<td>Advanced Composition</td>
<td>Literature</td>
</tr>
<tr>
<td>English 2</td>
<td>English 4</td>
<td>Literature</td>
<td>Literature</td>
</tr>
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</table>

### Math-6 Credits

<p>| | | | |</p>
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</tbody>
</table>

### Science-6 Credits

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>Physical Science</td>
<td>Physical Science</td>
<td></td>
</tr>
<tr>
<td>Biology</td>
<td>Physical Science</td>
<td>Physical Science</td>
<td></td>
</tr>
</tbody>
</table>

### Social Studies-6 Credits

<p>| | | | |</p>
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<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Studies</td>
<td>US 1</td>
<td>US 2</td>
<td>American Government</td>
</tr>
<tr>
<td>Global Studies</td>
<td></td>
<td>US 3</td>
<td></td>
</tr>
</tbody>
</table>

### PE-4 Credits

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>Elective PE</td>
<td>Elective PE</td>
</tr>
<tr>
<td>PE 9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Computers-1 Credit**


**Fine/Applied Art-1 credit**


**Electives-8 Credits (minimum)**


**AWARDING CREDIT & GRADES ON A TRANSCRIPT**

High school credits and grade point average earned at another U.S. public or private/parochial high school will be accepted and treated in a manner similar to credits and grade point average earned at Whitefish Bay High School. All grades will be put onto the transcript with the appropriate course name, credit value and weight (for comparable coursework at WFBHS) associated with each grade.  
*Note: High school courses completed in middle school will be noted on a high school transcript but will not receive grades or credits toward graduation. If a student transfers from an international high school, full credit will be awarded and Ps will be assigned as grades.*

If a student takes an **AP/Honors class from another high school** that we do not offer, no weight is given from that class on our transcript. When sending to colleges, a transcript from the previous school may need to be sent. It is the student’s responsibility to check college requirements and contact the previous school if needed.

Courses taken by students in home-based private educational programs (i.e. **home-schooled**) will be recorded on the student’s transcript. Credit will only be recorded that is in compliance with mandates of curriculum requirements for home-based private educational programs under state law or are deemed by the High School Principal to meet the criteria of an elective in the current WFBHS Career Planning and Course Guide. Home-based instruction will be recorded as credit only and given Ps to indicate the earned grade. Home-based grades will not be recorded on the admitting high school transcript. Grades and grade point averages from home-based private educational programs shall not be used in class standing.
All grades from an alternative educational setting will receive a grade of P (pass) and credit will be given toward graduation.

**Course Enrollment for Credit Recovery/Enrichment Purposes (including summer school)** - Students wishing to complete courses outside of WFBHS with the intention of transferring credit to WFBHS will need to consult with their counselor. If a student failed a class at WFBHS and earns a final mark of at least a C- or 70% in an approved course alternative to the standard WFBHS curriculum, the student will be awarded a P (pass) and receive credit toward graduation. There is no grade replacement option. If a student enrolls in a course for enrichment purposes, the student will need to obtain approval prior to enrolling in the course. Enrichment credit does not replace WFBHS coursework. Students are strongly encouraged to save transcripts or reports to submit with their college application materials.

Summer education programs for high school students are offered locally, at neighboring schools, and through Milwaukee Public Schools. Whitefish Bay High School does offer a computerized credit recovery program for a limited number of students. Nationwide, various college-based summer education programs are available to high school students. Information and registration materials pertaining to summer school options are available through the Counseling Office.

**Failing Grade Replacement** – If a student repeats a failed course at WFBHS and earns a passing grade in the same course, the original failing grade is replaced with an NG (no grade). If only one semester of a year-long course is failed and the entire course is repeated, the original passing semester grade is also replaced with an NG provided the corresponding repeat grade is passing.

**Passing Grade Replacement** – If a student earns a D+ or less in a course, the same course may be repeated. The original grade is replaced with an NG (no grade).

**Concordia Language Villages Credit Policy** - Students who attend the four (4) week Concordia language experience are awarded 1.0 credit for 180 hours of instructions as verified by the Concordia Language Village transcript. The grade for this course will be transferred as pass/fail. *Note: Students who wish to skip a level of language because they have participated in the four week session must receive pre-approval from the World Language Department and take the final exam of the level they wish to skip and be able to demonstrate proficiency.

**Foreign Exchange Program** - The Board of Education recognizes the educational value of student foreign exchange programs. Parents/guardians, students, and school counselor must meet prior to a district student’s participation in a foreign exchange program to review plans and verify graduation requirements. All courses taken by a district student as part of a foreign exchange program will be noted on the transcript. Credits received for foreign exchange classes are shown without a grade, using pass/fail, and not included in the student’s cumulative grade point average. Thus, the student returns from an exchange program with the same GPA as when they left. The credits, however, are counted towards meeting the 40 minimum graduation requirement.
OTHER EDUCATIONAL OPTIONS -

Youth Options - This program provides an opportunity for students in grades 11 and 12 to enroll in and complete courses through post-secondary institutions (colleges, universities, and technical schools) for high school credit. Interested students must apply for this program, and participation is subject to School Board approval. Application for Youth Options enrollment must be made by March 1 for the fall semester and October 1 for the spring semester. Application forms and further information are available through the district website, under Teaching & Learning, Educational Options. Aside from Youth Options, students wishing to pursue alternative educational programming outside of Whitefish Bay High School should consult with their counselor and then receive district approval. Courses are graded on a pass/fail basis.

Course Options - This allows a student enrolled in a public school district to take up to two courses at any time from an education institution. Please visit the Wisconsin Department of Public Instruction website to learn more about this option, or visit the website of our Director of Teaching and Learning under Educational Options. Courses are graded on a pass/fail basis.

Work-Study Experience - Juniors and seniors may participate in a work experience program for high school elective credit. Students interested in this program should consult with their school counselor. The counselor will assist in the guidelines and establishment of the work experience.

Independent Study - Students wishing to pursue study beyond established curricular offerings may apply for permission to engage in Independent Study for elective credit. The process involves completion of the Independent Study Plan form, and requires parent, supervising teacher, counselor, department chair, and principal approval. Planning for an Independent Study should take place prior to the start of the semester in which the Independent Study will occur. It is expected that the Independent Study will be completed by the end of the semester. Independent Study courses are graded on a pass/fail basis and have no bearing on a student's grade point average. *Note: This does not count towards an exam exemption.

Teacher/Resource Aide position - There are times when teachers in the building need and appreciate assistance from upperclassmen (juniors and seniors) in prepping for lessons, laboratories, and/or helping peers one on one. Some examples of aide positions include working with various departments such as: Art, Biology, English, Special Education, and World Language. Aide positions need to be discussed with and approved by the teacher. The student will then work with their counselor to put it in their schedule. Aide positions are graded on a pass/fail basis and awarded one credit per semester. *Note: This does not count towards an exam exemption.

EARLY GRADUATION PROCEDURES
Students who have met the graduation requirements may wish to graduate from high school before the end of the traditional eight semesters of attendance. After discussing alternative plans with his or her counselor, a student planning to graduate early must submit a written request for early graduation, including parent signature, to the high school principal prior to the start of the semester the student
wishes to graduate. Given principal approval, the student and counselor may then plan accordingly. 

NOTE: Students who graduate early are not eligible to participate in extra-curricular activities beyond their early graduation date.

**Students who plan to graduate at the end of six semesters:** To be considered a senior, a student must be in the fourth year of attendance; therefore, early graduates will be ranked with other members of the junior class according to their cumulative semester grade point average. They will be eligible for junior awards and honors. However, they are not eligible for senior scholarships or the Academic Excellence scholarship. They qualify for senior final examination exemptions, and are urged to take part in commencement exercises.

**Students who plan to graduate at the end of seven semesters:** Since senior honors are based on seven semesters of high school performance, these students are eligible for senior honors and awards. They are eligible for senior final exam exemption privileges at mid-year, in accordance with the school’s final examination policy. Those students who wish to attend college during the second semester should be aware that college calendars do not always correspond to the high school's calendar. Special arrangements may have to be made to complete the semester's work before the end of the high school semester. Seventh semester graduates are urged to take part in commencement exercises.

**COURSE SCHEDULE CHANGE PROCEDURE**

Once established, students' schedules may be changed with staff approval only. Student, parent, counselor, teacher and administrator input may be taken into consideration in responding to schedule change requests. Schedules may change due to class size and balancing purposes. Unless initiated by school personnel, students are not permitted to drop a class past the 15th day of a semester. Students may only add a class within the first ten days of a semester.

**ADVANCED PLACEMENT COURSES**

The Advanced Placement (AP) Program is a cooperative educational endeavor between secondary schools and colleges and universities. It allows high school students to undertake college-level academic learning in AP courses and gives them the opportunity to show mastery of advanced material by taking AP Exams. Passing grades earned in Advanced Placement (AP) courses receive an additional grade point. For instance, a student receiving an A in an AP course receives five rather than four grade points (see below for grade point information).

WFBHS offers Advanced Placement courses in:

- Biology
- Calculus AB/BC
- Calculus III/Physics C - Electricity & Magnetism
- Chemistry
- Computer Science Principles
- Computer Science A - Java
- Economics (Microeconomics/Macroeconomics)
English Language and Composition
English Literature and Composition
Environmental Science
French
German
Music Theory
Physics C: Mechanics
Psychology
Spanish
Statistics
Studio Art
U.S. Government & Politics
U.S. History

AP courses, sponsored by The College Board, combine challenging college-level curricula and potential college dollar savings. They are becoming more popular throughout the state and the nation, as more and more high school students receive college credit or advanced standing upon successful completion of national Advanced Placement exams in May. A student may sign up for an AP exam without taking a AP course, although it is clear that students who have prepared for the exam in an Advanced Placement class achieve at a much higher level.

GRADING
Grades are issued every quarter, but only semester grades appear on a student's transcript. If a student has not finished his/her required work by the time that grades are due but, in the opinion of the teacher, deserves more time in which to complete the work, a letter grade of I (for incomplete) will be issued.

At the start of each semester, teachers will clearly communicate course grading policies to students. Students and parents should check with teachers if they are unsure of the basis for grading, such as the grade value of quizzes, tests, projects, papers, discussion, or homework. In order to receive credit for a course, a student must not only earn a passing grade, but must also complete all required work.

Students withdrawing from Whitefish Bay High School before the end of a semester will receive no credit for course work carried during the incomplete semester. When a student withdraws during the first or third quarter, no marks for the semester courses will be recorded on the student transcript. When a student withdraws during the second or fourth quarter, a notation of withdraw/passing or withdraw/failing for each course will be made on the student transcript. Current grades earned, however, will be communicated to the school in which the student is next to be enrolled.

GRADE POINT INFORMATION
Grade points are assigned to grades earned as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.000</td>
</tr>
<tr>
<td>A-</td>
<td>3.667</td>
</tr>
<tr>
<td>B+</td>
<td>3.333</td>
</tr>
<tr>
<td>B</td>
<td>3.000</td>
</tr>
<tr>
<td>B-</td>
<td>2.667</td>
</tr>
<tr>
<td>C+</td>
<td>2.333</td>
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<tr>
<td>C</td>
<td>2.000</td>
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<td>D</td>
<td>1.000</td>
</tr>
<tr>
<td>D-</td>
<td>0.667</td>
</tr>
<tr>
<td>F</td>
<td>0.000</td>
</tr>
</tbody>
</table>
Passing grades earned in Advanced Placement (AP) courses receive an additional grade point. For instance, a student receiving a B in an AP course receives four rather than three grade points. This weighted grading is limited to Whitefish Bay High School AP courses, AP courses completed at a prior high school that are offered at Whitefish Bay High School, and AP courses taken at another high school as a result of students not being able to take the corresponding courses at Whitefish Bay High School.

Honor Roll: 3.0-3.666/High Honor Roll: 3.667 and higher.

**FINAL EXAMINATIONS**
Students are required to complete final exams for each of their classes during the last week of each semester. Teachers will inform students of the time and place exams are to be held. Examination periods run a minimum of 90 minutes, but teachers may allow students to work beyond this time. Students confronted with circumstances that conflict with the established exam schedule should consult with the principal to determine alternative arrangements that may be made.

**PROGRESS REPORTS**
Whitefish Bay High School is committed to keeping students and parents well abreast of students' academic progress. Accordingly, grade book related information, updated at least every three weeks, is available to all students and parents online via Family Access.

**ACADEMIC SUPPORT**
The high school offers several opportunities for academic support. These services include the Individualized Student Help Period (ISHP) that runs daily from 11:25-11:51 AM. During this time, teachers are available to provide extra help to students. Students may also arrange to get extra help from their teachers during mutually agreeable times such as before or after school.

Students may also receive extra help geared specifically for written composition through the Writing Lab, located in Room 334, where an English teacher is available every period of the day to assist students with their papers. In order to access this service, students need to schedule an appointment in advance.

The Library Media Center is also available each period of the day, as well as during ISHP/Lunch and before and after school. With the assistance of our Library Media Center Specialist, students may use this facility to study, access information both in print and electronic format, and use available computer resources.

The Learning Center provides alternative credit earning options, tutoring, study skill instruction and organizational assistance to students at risk of failure. Access to this service is contingent on both counselor and Learning Center teacher approval. Any student may also access the Learning Center on a walk-in basis and during ISHP/lunch.
The Homework Club is open to all students in need of assistance with any school related work Monday through Thursday from 3:05-4:00 PM in the Learning Center (Room 336).

Advisory/Homeroom takes place on a monthly basis. The purpose of Advisory/Homeroom is to address important topics such as personal/social well-being, course planning, safety, and school spirit to name a few.

COUNSELING SERVICES
Counseling at Whitefish Bay High School is a comprehensive, developmental program that includes orientation, academic advising, testing, career/interest exploration, assessment, program planning, social/emotional counseling, and post-high school planning. The counseling process begins while students are in eighth grade and continues through their senior year, with each year involving a specific counseling emphasis. Each student is assigned to a counselor who is available for consultation throughout the school year. Counselors collaborate with parents, teachers, administrators and support personnel on student achievement and emotional well-being. When necessary or helpful, the counselors arrange parent conferences, staffings with teachers and/or administrators, referrals, or other services to assist students in need.

Scheduled and unscheduled individual student conferences with the counselors provide opportunities for students to recognize and work through personal and/or educational questions and concerns. Student group conferences are scheduled throughout the school year to provide assistance with future educational and vocational planning and to provide assistance with decision-making skills. Group conferences may also be arranged to assist students in dealing with personal issues and behavior affecting school performance.

The Counseling Department administers a broad and comprehensive standardized testing program designed to assist students to better understand their own strengths and weaknesses and to assist the school in working with students. Counselors also use a program called Naviance throughout a student’s entire career at WFBHS. See below for details.

The Counseling Department hosts several evening meetings throughout the school year. Topics include the eighth grade transition, sophomore year planning, junior year planning and college admissions, and financial aid.

ADDITIONAL PUPIL SERVICES
The services of a School Psychologist are available to all students. The most common reasons for referral are social/emotional issues, learning difficulties and/or related problems. The school psychologist is the contact person for any evaluation referrals and/or questions.
NAVIANCE/FAMILY CONNECTION

Naviance is a powerful, comprehensive online program that is used to help students plan and make decisions about college and careers. There are a lot of features that can help guide students through their career and/or post-secondary research. It is a great tool for everything--from personality and career exploration to college searches. Additionally, students can begin to organize for their college applications.

With Naviance you can:

-Personalize the process:
  - Keep personal notes on colleges you are considering
  - Keep track of application deadlines
  - Track your transcript requests

-Research colleges:
  - Use the college search feature to create a list of colleges that match your criteria
  - View scattergrams comparing your grade point average and standardized test scores to past Whitefish Bay applicants to particular schools
  - Find detailed college data such as size, admissions criteria, deadlines, costs, majors, and activities
  - see the list of college/university representatives coming to visit WFB High School

-Take a personality inventory

-Complete surveys/questionnaires

-Learn about your personality based on the “Do What You Are” inventory

-Learn about your career interests through the Career Interest Profiler and Cluster Finder surveys

-View a list of careers that match your personality type

-Search for scholarships
COLLEGE ADMISSION CONSIDERATIONS
Given that over ninety percent of Whitefish Bay High School graduates plan to go on to college, it is very important that students and parents consider early on the general requirements for college admission. One cannot state that a particular pattern of preparation will invariably meet admission requirements at any one college, but it can be assumed that a four-year, comprehensive program in the core academic subject areas (see below) will meet most college admission requirements. Students should check with their counselors for admission requirements of specific colleges and universities.

- 4 years of English
- 3 to 4 years of math
- 3 to 4 years of science
- 3 to 4 years of social Studies

To keep career options open, and because colleges value a breadth of educational experience, students are encouraged to take advantage of elective course offerings in the areas of Art, Business, Computer Science, Engineering/Design, Music, Theater and World Language. In addition, students are encouraged to become involved in some aspect of the school’s extra-curricular program. Many colleges view depth of commitment to these experiences as an important factor in arriving at a decision on college admission.

Factors considered in the admission process are grades earned, the degree of rigor associated with high school courses taken, performance on college entrance tests, student essays, community service, and special talents in areas such as art, music, drama or athletics. In many instances, colleges give additional consideration to letters of recommendation and high school reputation.

COLLEGE ENTRANCE TESTS
College entrance tests are given by two testing agencies. The College Board administers the PSAT/NMSQT (Pre-Scholastic Aptitude Test/National Merit Scholarship Qualifying Test), SAT, SAT Subject Tests, and Advanced Placement Exams. The ACT Program administers the Aspire, ACT with Writing, and WorkKeys. Detailed information concerning these tests is provided to students as part of the college counseling program.

STANDARDIZED TESTS

1. ASPIRE 9 test: First pre-test in the ACT series – taken spring of 9th grade
2. ASPIRE 10 test: Second pre-test in the ACT series – taken spring of 10th grade
3. WI Forward Social Studies Assessment Grade 10 – taken spring of 10th grade
4. ACT with Writing & ACT WorkKeys – Final tests in the ACT series Grade 11 – taken late Feb./March of 11th grade (state required and college reportable scores)
5. PSAT/NMSQT (National Merit Scholarship Qualifying Test): Pre-test for the SAT (Grade 11) – optional (taken in the fall)
6. SAT: Grades 11 or 12 Dates vary: September-June
7. ACT: Grades 11 or 12 Dates vary: September-June
8. Advanced Placement Exams (AP): Grades 10, 11, or 12 – administered in the first 2 weeks of May
9. Civics Exam – Graduation requirement (during American Government senior year)

FINANCIAL AID
Financial aid for higher education, based on financial need, is available to students who qualify. Usually this aid comes to qualified students through government loans and grants and college financial aid funds. Information for financial aid is available through the Counseling Office.

SCHOLARSHIPS
Scholarship opportunities for higher education are available through various sources for qualified students. Scholarships are usually based on exceptional academic achievement or exceptional achievement in specialty areas such as art, athletics, music, and drama. Information about scholarship opportunities is provided to students via the daily announcements, emails sent home, and/or directly to students by counselors via Naviance.
FOUR YEAR ACADEMIC COLLEGE AND CAREER PLANNING GUIDE

The Whitefish Bay High School counselors have developed a four year plan to empower students to discover their own personal values and goals. With the integration of Naviance into the core curriculum of the college and career program, students have the opportunity to do an abundance of exploration and research.

Eighth Grade (Incoming Freshmen)

The high school counselors meet with the eighth grade students and their parents/guardians in spring before their freshman year of high school. The purpose of the meeting is for the counselor to meet their incoming student, discuss their courses for freshman year, and get to know them on a personal level.

Freshman Year: Self Exploration

All freshman students spend one period with the counselors in the computer lab. This is arranged through their global studies classes. The focus of the unit is self-exploration. Students will be asked to complete a Myers-Briggs Type Personality Assessment called Do What You Are. Students reflect on their strengths and how that might relate to a potential career. Counselors reiterate the array of options beyond high school (two/four year and technical colleges and universities, military, world of work, gap year, etc.).

Other agenda items for completion:
- 4 year academic/course plan
- Set one academic goal and one personal goal using My Planner

Sophomore Year: Career Exploration

In the spring, all sophomores spend a period in the computer lab completing the Career Interest Profiler—a career interest survey about interest in types of work activities. The results will be used to explore suggested occupations, examine the education, training, and skills required (and where to obtain them) as well as wages typical for these occupations. Students are exposed to the 16 national career clusters.

Other agenda items for completion:
- Update 4 year plan/personal goals
- Begin creating resume
- Complete Part 1 of Game Plan Survey

Junior Year: Post-Secondary Options Exploration

In the fall, juniors and their parents are invited to attend Junior Parent Information Night where they receive information related to courses, colleges, careers, and a demonstration of Naviance. In October, all juniors come to the computer lab through their history classes. Students follow along as the counselors show them how to do an advanced college search activities on Naviance. They are then instructed to complete the Cluster Finder for their career activity and Game Plan survey. Between
November and March, juniors are invited to attend the junior conference which is an hour long meeting with their counselor. In this meeting, we review the student’s transcript, standardized test scores, college and career goals/plans, perspective college choices, the Cluster Finder and Game Plan. Students are strongly encouraged to continue researching post-secondary options and possibilities throughout the school year and over the summer.

Other agenda items for completion:
Update 4 year plan/personal goals
Explore careers and clusters (use information from favorite careers and clusters and Career Interest Profiler)
Complete More About Me survey

Senior Year: On the Road to Post-Secondary Options
In early September, the counselors meet with all of the seniors during their study periods or ISHP/lunch time. Seniors receive follow up information regarding their Naviance account, how to request letters of recommendation, timeline and process of college applications, sign up for visits with college representatives, standardized testing, and college essays. Counselors encourage students to bring in their completed applications to be reviewed for submission. During the fall semester, a financial aid workshop is offered for seniors and their parents in the North Shore area. In January, seniors work with counselors on mid-year reports, as needed. Counselors are available to guide students on each phase of the college application process and their transition to college.

Towards the end of May, the Counseling Department hosts a student forum called Beyond the Bay: A Student Forum on the College Application Process. A panel of current Bay seniors will be on hand to answer questions from underclassmen and talk about their experiences applying to college. The panelists will be attending a diverse array of schools, from small liberal arts colleges to large state universities. Each student’s advice and perspective will hopefully create a fuller picture of the process, dispelling myths as well as providing insight. All grade levels are invited.

In addition, the Counseling Department hosts an alumni forum called Beyond the Bay: Perspectives from Alumni (also towards the end of May). The panel is comprised of former WFBHS alumni that are currently in college to discuss their journeys. Topics will include but are not limited to: tips/advice on college selection, deciding on courses and majors, financial planning, study abroad opportunities, dorm life, friends, culture, decision-making, time management, study skills, etc. All grade levels are invited.

Other agenda items for completion:
Post-secondary applications
Scholarships
Complete Graduation Exit survey

* Students are encouraged to set up individual meetings with their counselor for further help and advising as needed with the college search process and post-high school planning.
GLOBAL EDUCATION ACHIEVEMENT CERTIFICATE PROGRAM

The Global Education Academic Certificate program, authorized through Wisconsin’s Department of Public Instruction, is open to graduating high school students who want to learn more about cultures within our global community. Students who received the certificate have demonstrated a strong interest in global citizenship by successfully completing a global education curriculum and engaging in co-curricular activities and experiences that foster the development of global competencies. Whitefish Bay High School students who wish to obtain their Global Education Achievement Certificate and be recognized as a *Global Scholar* must fulfill the following four graduation requirements:

**Part 1: Course Work**

- Students must complete at least 4 years in a single world language (French, German, or Spanish).
- Students must complete at least 4 credits of coursework with a global focus, which may include:

<table>
<thead>
<tr>
<th>International Economics and/or Business</th>
<th>Introduction to Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Geography/Cultures</td>
<td>World Cultures, Contemporary Issues</td>
</tr>
<tr>
<td>Social Studies</td>
<td>Global Studies</td>
</tr>
<tr>
<td>Literature</td>
<td>World Literature, British Literature, Contemporary Authors, AP Literature and Composition</td>
</tr>
<tr>
<td>Music, Drama, and Visual Arts</td>
<td>World Drumming</td>
</tr>
</tbody>
</table>

**Part 2: Cultural Literacy**

Each student seeking this certificate shall complete independent reviews/reflection on at least eight (8) works of international/cultural media, including at least four books (fiction and non-fiction). Other international/cultural media may include films, music, and art exhibitions. Students may elect to read books from a recommended reading list or other works (including newly released works) with prior approval at the district level.

The counseling and administration team will serve to determine the criteria for reviews and reflections and how student works will be evaluated.

**Part 3: Co-Curricular and Other School-Sponsored Activities**

Each student seeking this certificate shall demonstrate interest in global citizenship through active participation and leadership in at least four (4) co-curricular and other school-sponsored or endorsed activities in grades 9-12. These may include participating in:

- International exchange program as an exchange student and/or host.
- Travel abroad program, mission trips.
- Regular, direct engagement with individuals from other countries/cultures (e.g. pen pals, Skype)
- Clubs and activities such as Model UN, AFS Club.
- Lectures on international topics and/or speakers in the community and/or college/university.
- Ask your counselor if you have any other ideas.
Part 4: Community Service

Each student shall complete a global/cross-cultural public service project, involving at least twenty (20) hours of work, connected to a global community (different from his/her own) or to a global issue. This project may include raising awareness about a global issue, fundraising for an international nonprofit service agency/organization, working on an international project with Returned Peace Corps Volunteers, Rotary, or other Service Club, tutoring a child who is an English language learner, or volunteering with a cultural/linguistic group in the community. Each student shall present a project proposal to the Global Scholars Coordinator, create a Google Slideshow of the project, and submit a summary report detailing the successful completion of the project.
Courses of Study/Career Pathways and Career Clusters

Whitelash Bay High School offers advising and course opportunities to develop awareness of skills for future careers. The following pages explain Career Clusters and the pathways one can take within each cluster. They are designed to help students develop a coherent sequence of preparation for college and careers. Utilizing the 16 Career Clusters, students can identify pathways from high school to two- and four-year colleges, graduate school or directly into the workforce. You can find more information about the Career Clusters and their pathways at: [http://www.wicareerpathways.org/](http://www.wicareerpathways.org/). On the following pages, you will find courses recommended for each cluster. Many courses require prerequisites - please see the course description guide to help determine the proper sequencing. The courses are recommendations only and are not intended to direct students away from areas of interest including art, music, theater/drama, engineering/tech ed, etc. These recommendations are broad in order to match each career cluster, but not all courses are required for each occupation in that cluster. For more information about career choices and relevant courses, see your counselor. *REQUIRED COURSES ARE NOT LISTED ON THE CAREER PATHWAYS PAGES BECAUSE ALL STUDENTS WILL NEED TO TAKE THEM TO FULFILL GRADUATION REQUIREMENTS.* (Source: Wisconsin Career Pathways. The Sixteen Career Clusters. www.wicareerpathways.org)

<table>
<thead>
<tr>
<th>Career Cluster</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Food &amp; Natural Resources</td>
<td>The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.</td>
</tr>
<tr>
<td>Architecture &amp; Construction</td>
<td>Careers in designing, planning, managing, building and maintaining the built environment.</td>
</tr>
<tr>
<td>Arts, A/V Technology &amp; Communications</td>
<td>Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.</td>
</tr>
<tr>
<td>Business, Management &amp; Administration</td>
<td>Business Management and Administration careers encompass planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Business Management and Administration career opportunities are available in every sector of the economy.</td>
</tr>
<tr>
<td>Education &amp; Training</td>
<td>Planning, managing and providing education and training services, and related learning support services.</td>
</tr>
<tr>
<td>Finance</td>
<td>Planning, services for financial and investment planning, banking, insurance, and business financial management.</td>
</tr>
<tr>
<td>Government &amp; Public Administration</td>
<td>Executing governmental functions to include Governance, National Security, Foreign Service, Planning, Revenue and Taxation, Regulation, and Management and Administration at the local, state, and federal levels.</td>
</tr>
<tr>
<td>Health Science</td>
<td>Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.</td>
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<tr>
<td>Hospitality &amp; Tourism</td>
<td>Hospitality &amp; Tourism encompasses the management, marketing and operations of restaurants and other foodservices, lodging, attractions, recreation events and travel related services.</td>
</tr>
<tr>
<td>Human Services</td>
<td>Preparing individuals for employment in career pathways that relate to families and human needs.</td>
</tr>
<tr>
<td>Law, Public Safety, Corrections &amp; Security</td>
<td>Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services.</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>Planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.</td>
</tr>
<tr>
<td>Marketing, Sales &amp; Service</td>
<td>Planning, managing, and performing marketing activities to reach organizational objectives.</td>
</tr>
<tr>
<td>Science, Technology, Engineering &amp; Mathematics</td>
<td>Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.</td>
</tr>
<tr>
<td>Transportation, Distribution &amp; Logistics</td>
<td>Planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.</td>
</tr>
</tbody>
</table>
Agriculture in Wisconsin includes science, marketing, service, production, supply, processing, and preservation of the food supply, plants, animals and natural resources. This area employs over 12 percent of Wisconsin’s workforce.

INTERESTS AND ABILITIES

Animals
- Working with sick or injured animals
- Working with companion animals like dogs and cats
- Working with unique species such as fish for food
- A medical field
- Marine biology

Plants
- Caring for plants in your home or yard
- Designing landscapes for homes or businesses
- Developing new plants or modifying existing ones
- What plants need to grow successfully

Natural Resources
- Native fish and their aquatic habits
- Forest ecosystems
- Preservation of endangered species
- Wolves and whitetails in Wisconsin

Foods
- What makes bread rise and soda fizz
- Being a food scientist
- Designing new food and flavors
- How science is used to process your food

PATHWAYS IN THIS CLUSTER
- Food Products and Processing Systems
- Plant Systems
- Animal Systems
- Power, Structural & Technical Systems
- Natural Resource Systems
- Environmental Service Systems
- Agribusiness Systems

Recommended Courses for this Cluster:

- Accounting
- Anatomy and Physiology
- AP Biology
- AP Calculus AB/BC
- AP Chemistry
- AP Economics
- AP Environmental Science
- AP Statistics
- Business Law
- Chemistry
- Engineering
- Environmental Science
- Physics
- Statistics
- World Languages
Career Options

FROM HIGH SCHOOL
On-the-job training and/or minimal experience

- Bee Keeper
- Crop Sprayer
- Farm Worker
- Fisherman
- Landscape Laborer
- Logger
- Nursery Worker
- Pet Groomer
- Pet Shop Worker
- Stable Worker
- Vet Hospital Worker

CAREERS WITH CERTIFICATION/ASSOCIATE DEGREE
Community college, technical college, apprenticeship, experience

- Animal Control Officer
- Animal Nutritionist
- Arborist
- Bio-Tech Lab Technician
- Cheese Maker
- Crop &/or Animal Farmer
- Environmental Technician
- Ferrier
- Fish & Game Officer
- Forestry Technician
- Genetic Technologist
- Golf Course Manager
- Greenhouse Manager
- Horticulturist
- Landscape Designer
- Quality Food Control Specialist
- Turf Manager
- Veterinary Technician
- Waste Water Technician

BACHELORS, PRE-PROFESSIONAL or HIGHER DEGREE
Colleges/Universities

- Agriculture Banker
- Agricultural Commodities Broker
- Agricultural Economist
- Agricultural Educator
- Agricultural Engineer
- Agri. Sales & Communications
- Animal Psychologist
- Animal Scientist
- Biochemist
- Botanist
- Entomologist
- Food Scientist
- Forester
- Game Warden
- Geneticist
- Greenhouse Operator
- Landscape Architect
- Marine Biologist
- Plant Pathologist
- Soil Geologist
- Soil Scientist
- Toxicologist
- USDA Inspector
- Veterinarian
- Wild Life Biologist
- Zoologist

Related Co-Curricular, Student Organizations & Activities:

- Athletics
- Bay Gives Back
- Robotics
- E.A.R.T.H (Environmental Action Requiring Teen Hands)
- SMART Team
- Teton Science School
INTERESTS & ABILITIES

Activities that describe what I like to do:
- Read and follow blueprints and/or instructions.
- Picture a finished product in my mind.

Work with my hands:
- Perform work that requires precise results.
- Solve technical problems.
- Visit and learn from beautiful, historic, or interesting buildings.
- Follow logical, step-by-step procedures.

Personal qualities that describe me:
- Curious
- Good at following directions
- Pay attention to detail
- Good at visualizing possibilities
- Patient and persistent

School subjects that I like:
- Math
- Drafting
- Physical Sciences
- Construction Trades
- Electrical Trades
- Technology Education

PATHWAYS IN THIS CLUSTER
- Design/Pre-Construction
- Construction
- Maintenance/Operations

Recommended Courses for this Cluster:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP Calculus AB/BC</td>
<td>Engineering</td>
</tr>
<tr>
<td>AP Economics</td>
<td>Pre-Calculus</td>
</tr>
<tr>
<td>AP Environmental Science</td>
<td>Statistics</td>
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<tr>
<td>AP Physics</td>
<td>World Languages</td>
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<tr>
<td>AP Statistics</td>
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<tr>
<td>Business Law</td>
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<tr>
<td>Chemistry</td>
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<tr>
<td>Environmental Science</td>
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</tr>
</tbody>
</table>
Career Options

FROM HIGH SCHOOL
On-the-job training and/or minimal experience

- Construction Laborer
- Construction Worker Helper
- Fence Builder
- Highway Maintenance Worker

CAREERS WITH CERTIFICATION/ASSOCIATE DEGREE
Community college, technical college, apprenticeship, experience

- Air Conditioning Technician
- Architectural Drafter
- Bricklayer
- Carpenter
- Cement Mason
- Drywall Installer
- Electrician
- Glazier
- Pipe Fitter
- Plasterer
- Plumber
- Tile Setter

BACHELORS, PRE-PROFESSIONAL or HIGHER DEGREE
Colleges/Universities

- Architect
- Building Contractor
- C.A.D. Designer
- Civil Engineer
- Cost Estimator
- Electrical Engineer
- Grounds Supervisor
- Interior Design
- Landscape Architect

Related Co-Curricular, Student Organizations & Activities:

- Bay Gives Back
- Math Team
- Stage Crew
- Robotics
**INTERESTS & ABILITIES**

**Activities that describe what I like to do:**
- Use my imagination to communicate new information to others.
- Perform in front of others.
- Read and write.
- Play a musical instrument.
- Perform creative, artistic activities.
- Use video and recording technology.
- Design brochures and posters.

**Personal qualities that describe me:**
- Creative and imaginative
- Good communicator/good vocabulary
- Curious about new technology
- Relate well to feelings and thoughts of others
- Determined/tenacious

**School subjects that I like:**
- Art/Graphic design
- Music
- Speech and Drama
- Journalism/Literature
- Audiovisual Technologies

**PATHWAYS IN THIS CLUSTER**
- Audio and Video Technology and Film
- Printing Technology
- Visual Arts
- Performing Arts
- Journalism and Broadcasting
- Telecommunications

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**Recommended Courses for this Cluster:**

<table>
<thead>
<tr>
<th>AP Computer Science</th>
<th>Computer Science</th>
<th>World Languages</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP Language &amp; Comp.</td>
<td>Choir</td>
<td></td>
</tr>
<tr>
<td>AP Literature &amp; Comp.</td>
<td>Video Production</td>
<td></td>
</tr>
<tr>
<td>AP Music Theory</td>
<td>Drawing/Painting</td>
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<tr>
<td>AP Studio Art</td>
<td>Digital Art w/Photoshop</td>
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<tr>
<td>Band</td>
<td>Digital Photography</td>
<td></td>
</tr>
<tr>
<td>Orchestra</td>
<td>Exploration of Theater Production</td>
<td></td>
</tr>
</tbody>
</table>
Career Options

FROM HIGH SCHOOL
On-the-job training and/or minimal experience

Floral Designer  Musician  Proofreader
Food Stylist  Photographer  Sign Designer/Painter
Mural Painter  Pre-Press  Stained Glass

CAREERS WITH CERTIFICATION/ASSOCIATE DEGREE
Community college, technical college, apprenticeship, experience

Animator  Potter  Potter Technician
Bookbinder  Prepress Technician
Broadcast Technician  Printing Press Operator
Caption Writer  Public Relations Manager
Communications Line Maintainers  Recording Technician
Craft Artist  Sign Painter
Graphic Designer  Taxidermist

BACHELORS, PRE-PROFESSIONAL or HIGHER DEGREE
Colleges/Universities

Architect  Copy Editor  Journalist
Artist/Musician  Dancer  Photographer
Art Professor  Graphic Designer  Potter
Art Teacher  Illustrator  Reporter
Art Therapist  Interior Decorator  Set Designers
Cinematographer  Jeweler  Videographer
Composer

Related Co-Curricular, Student Organizations & Activities:

Anime Club  Debate Team  Tower Times Newspaper
Band  Fall/Spring Play  Tower Times Yearbook
Cheerleading  Forensics  Out of the Blue (literary magazine)
Choir  Jazz Band
Stage Crew  Musical
Dance Team  Student Council
Business Management and Administration careers encompass planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Business Management and Administration career opportunities are available in every sector of the economy.

INTERESTS & ABILITIES

Activities that describe what I like to do:
- Perform routine, organized activities but can be flexible.
- Work with numbers and detailed information.
- Be the leader in a group.
- Make business contact with people.
- Work with computer programs.
- Create reports and communicate ideas.
- Plan my work and follow instructions without close supervision.

Personal qualities that describe me:
- Organized
- Practical and logical
- Patient
- Tactful
- Responsible

School subjects that I like:
- Computer Applications/Business and Information Technology
- Accounting
- Math
- English
- Economics

PATHWAYS IN THIS CLUSTER
- General Management
- Business Information Management
- Human Resources
- Operations Management
- Administration Services

Recommended Courses for this Cluster:
Accounting
AP Calculus AB/BC
AP Computer Science
AP Economics
AP Statistics
Algebra 2 and/or Advanced Algebra 2/Trigonometry
Business Law
Marketing

Pre-Calculus
Psychology
Statistics
World Languages
Career Options

FROM HIGH SCHOOL
On-the-job training and/or minimal experience

- Bank Teller
- Caterer
- File Clerk
- Mail Clerk
- Meter Reader
- Receptionist
- Sales Clerk
- Telephone Operator
- Typist

CAREERS WITH CERTIFICATION/ASSOCIATE DEGREE
Community college, technical college, apprenticeship, experience

- Accountant
- Administrative Assistant
- Computer Operator
- Court Reporter
- Kennel Operator
- Small Business Owner
- Stenographer
- Tax Preparer

BACHELORS, PRE-PROFESSIONAL or HIGHER DEGREE
Colleges/Universities

- Advertising Manager
- Art Director
- Business and Industry Consultant
- Health Care Administrator
- Human Resource Manager
- Marketing Manager
- Sales Representative
- Theater Manager
- Travel Agency Manager

Related Co-Curricular, Student Organizations & Activities:
- Business Club
- Debate Team
- Forensics
- Gender/Sexuality Alliance (GSA)
- HOSA
- Student Council
- World Language clubs
**INTERESTS & ABILITIES**

**Planning, managing, and providing education and training services, and related learning support services**

*Students interested in secondary education should take as many relevant courses in the area in which they wish to teach. For example, if you are interested in teaching history, take a wide variety of social studies courses/ art teacher—take all art courses.*

*Education majors should consider volunteering at the elementary/middle school level in the 11th/12th grade year.*

**Activities that describe what I like to do:**
- Communicate with different types of people.
- Help others with their homework or to learn new things.
- Go to school.
- Direct and plan activities for others.
- Handle several responsibilities at once.
- Acquire new information.
- Help people overcome their challenges.

**Personal qualities that describe me:**
- Friendly
- Decision maker
- Helpful
- Innovative/Inquisitive
- Good listener

**School subjects that I like:**
- Language Arts
- Social Studies
- Math
- Science
- Psychology

**PATHWAYS IN THIS CLUSTER**
- Administration & Administrative Support
- Professional Support Services
- Teaching/Training

**Recommended Courses for this Cluster:**
- Any of the offered AP courses
- Statistics
- Leadership for Social Justice
- Pre-calculus
- Psychology
- World Cultures
- World Languages
Career Options

FROM HIGH SCHOOL
On-the-job training and/or minimal experience

Aerobics Instructor
Child Care Assistant
Dance Teacher
Library Assistant
Self-Enrichment Teacher

CAREERS WITH CERTIFICATION/ASSOCIATE DEGREE
Community college, technical college, apprenticeship, experience

Preschool Teacher
Teacher Assistant
Sign Language Interpreter

BACHELORS, PRE-PROFESSIONAL or HIGHER DEGREE
Colleges/Universities

Agri-Science Instructor
Apprenticeship Consultant
Bilingual Educator
Educational Administrator
Elementary School Teacher
Instructional Coordinator
Kindergarten Teacher
School Psychologist
Secondary School Teacher
Teacher of the Blind
University Researcher
Vocational Education Teacher

Related Co-Curricular, Student Organizations & Activities:
Bay Gives Back World Language clubs
Best Buddies Yearbook
Dance Team
Student Council
REDgen
INTERESTS & ABILITIES

Activities that describe what I like to do:
□ Work with numbers.
□ Work to meet a deadline.
□ Make predictions based on existing facts.
□ Have a framework of rules by which to operate.
□ Analyze financial information and interpret it to others.
□ Handle money with accuracy and reliability.
□ Take pride in the way I dress and look.

Personal qualities that describe me:
□ Trustworthy
□ Orderly
□ Self-confident
□ Logical
□ Methodical or efficient

School subjects that I like:
□ Accounting
□ Math
□ Economics
□ Banking/Financial Services
□ Business Law

PATHWAYS IN THIS CLUSTER
● Securities & Investments
● Business Finance
● Banking Services
● Accounting
● Insurance

Recommended Courses for this Cluster:

<table>
<thead>
<tr>
<th>Accounting</th>
<th>Personal Finance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algebra 2/Advanced Algebra 2/Trigonometry</td>
<td>Psychology/AP Psychology</td>
</tr>
<tr>
<td>Business Law</td>
<td>Statistics</td>
</tr>
<tr>
<td>Introduction to Business</td>
<td>Economics/AP Economics</td>
</tr>
<tr>
<td>Marketing</td>
<td>World Languages</td>
</tr>
</tbody>
</table>
# Career Options

FROM HIGH SCHOOL
*On-the-job training and/or minimal experience*

- Bill & Account Collector
- Brokerage Clerk
- Cashier

## CAREERS WITH CERTIFICATION/ASSOCIATE DEGREE

*Community college, technical college, apprenticeship, experience*

<table>
<thead>
<tr>
<th>Accountant</th>
<th>Brokerage Clerk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claim Adjuster</td>
<td>Financial Institution Manager</td>
</tr>
<tr>
<td>Insurance Agent</td>
<td>Investigator &amp; Adjustor</td>
</tr>
<tr>
<td>Loan Officer</td>
<td>Personal Property Appraiser</td>
</tr>
</tbody>
</table>

## BACHELORS, PRE-PROFESSIONAL or HIGHER DEGREE

*Colleges/Universities*

<table>
<thead>
<tr>
<th>Accountant</th>
<th>Actuary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditor</td>
<td>Brokerage Clerk</td>
</tr>
<tr>
<td>Business &amp; Industry Consultant</td>
<td>Controller</td>
</tr>
<tr>
<td>Credit Analyst</td>
<td>Credit Card Operations Manager</td>
</tr>
<tr>
<td>Insurance Underwriter</td>
<td>Investment Advisor</td>
</tr>
</tbody>
</table>

## Related Co-Curricular, Student Organizations & Activities:

- Business Club
- Forensics
- Investment Club
- Student Council
Executing governmental functions to include governance: national security; foreign service; planning; revenue and taxation; regulation; and management and administration at the local, state, and federal levels.

INTERESTS & ABILITIES

Activities that describe what I like to do:
- Be involved in politics.
- Negotiate, defend, and debate ideas and topics.
- Plan activities and work cooperatively with others.
- Work with details.
- Perform a variety of duties that may change often.
- Analyze information and interpret it to others.
- Travel and see things that are new to me.

Personal qualities that describe me:
- Good communicator
- Competitive
- Service minded
- Well organized
- Problem solver

School subjects that I like:
- Government
- Language Arts
- History
- Math
- Foreign Language

PATHWAYS IN THIS CLUSTER
- Governance
- National Security
- Foreign Service
- Planning
- Revenue and Taxation
- Regulation
- Public Management & Administration

Recommended Courses for this Cluster:
- Accounting
- AP Economics
- AP Statistics
- AP U.S. Government
- Algebra 2/Advanced Algebra 2/Trigonometry
- Business Law
- Marketing
- Psychology
- Statistics
- World Languages
Career Options

FROM HIGH SCHOOL
On-the-job training and/or minimal experience

- Infantry Forces
- Mail Carrier
- Postal Clerk/Drivers
- License Clerks
- Mail Handling Machine
- Special Forces
- License Examiner
- Operator
- CAREERS WITH CERTIFICATION/ASSOCIATE DEGREE
Community college, technical college, apprenticeship, experience

- Accountant
- Coroner
- Title Examiner
- Association Executive
- Inspector
- Translator/Interpreter
- Building Inspector
- Postmaster
- Transportation
- City Planning Aid
- BACHELORS, PRE-PROFESSIONAL or HIGHER DEGREE
Colleges/Universities

- Accountant
- Equal Opportunity
- Legislator
- Apprenticeship
- Emergency Management
- Political Scientist
- Aviation Security Specialist
- Infantry Officer
- Special Operations Officer
- City Manager
- Lawyer
- Urban Planner
- Consultant

Related Co-Curricular, Student Organizations & Activities:

- Best Buddies
- Mock Trial
- World Language clubs
- Business Club
- Model UN
- Debate Team
- Non-Partisan Forum
- Forensics
- Republican Club
- Gender/Sexuality Alliance (GSA)
- Student Council
Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.

**INTERESTS & ABILITIES**

**Activities that describe what I like to do:**
- Work under pressure.
- Help sick people and animals.
- Make decisions based on logic and information.
- Participate in health and science classes.
- Respond quickly and calmly in emergencies.
- Work as a member of a team.
- Follow guidelines precisely and meet strict standards of accuracy.

**Personal qualities that describe me:**
- Compassionate and caring
- Good at following directions
- Conscientious and careful
- Patient
- Good listener

**School subjects that I like:**
- Biological Sciences
- Chemistry
- Math
- Occupational Health classes
- Language Arts

**PATHWAYS IN THIS CLUSTER**
- Therapeutic Services
- Diagnostic Services
- Health Informatics
- Support Services
- Biotechnology Research & Development

**Recommended Courses for this Cluster:**
- Anatomy/physiology
- Biomedical Science
- AP Biology
- PLTW: Medical Interventions
- AP Calculus AB/BC
- Statistics
- AP Chemistry
- AP Psychology
- AP Physics
- AP Statistics
- Any of the Phy Ed. Courses
Career Options

FROM HIGH SCHOOL

On-the-job training and/or minimal experience

Certified Nursing Assistant
Clerk

Food Service Worker
Hospital Admitting

CAREERS WITH CERTIFICATION/ASSOCIATE DEGREE

Community college, technical college, apprenticeship, experience

Emergency Medical Technician
Home Health Aide
Massage Therapist

Physical Therapy Aide
Radiology Technologist
Registered Nurse

Surgical Technician
Translator & Interpreter
Ultrasound Technician

BACHELORS, PRE-PROFESSIONAL or HIGHER DEGREE

Colleges/Universities

Athletic Trainer
Chiropractor
Dentist
Dietician
Laboratory Scientist

Nurse Practitioner
Occupational Therapist
Pharmacist
Physical Therapist

Primary Care Physician
Psychiatrist
Radiation Therapist
Surgeon

Related Co-Curricular, Student Organizations & Activities:

Bay Gives Back
Best Buddies
Forensics
HOSA
World Language clubs
Hospitality and Tourism encompasses the management, marketing and operations of restaurants and other food service, lodging, attractions, and recreation events and travel-related services.

INTERESTS & ABILITIES

Activities that describe what I like to do:
- Investigate new places and activities.
- Work with all ages and types of people.
- Organize activities in which other people enjoy themselves.
- Have a flexible schedule.
- Help people make up their minds.
- Communicate easily, tactfully, and courteously.
- Learn about other cultures.

Personal qualities that describe me:
- Tactful
- Self-motivated
- Works well with others
- Outgoing
- Slow to anger

School subjects that I like:
- Language Arts/Speech
- Foreign Language
- Social Sciences
- Marketing
- Food Services

PATHWAYS IN THIS CLUSTER
- Restaurant & Food/Beverage Services
- Lodging
- Travel & Tourism
- Recreation, Amusements & Attractions

Recommended Courses for this Cluster:

| Algebra 2/Advanced Algebra 2/Trigonometry | Sports/Entertainment Marketing |
| AP Economics | Digital Photography |
| AP U.S. History | Digital Art w/Photoshop |
| Business Law | Psychology |
| Economics | World Languages |
| Marketing |  |
Career Options

FROM HIGH SCHOOL

*On-the-job training and/or minimal experience*

<table>
<thead>
<tr>
<th>Position</th>
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<tbody>
<tr>
<td>Baggage Porter &amp; Bellhop</td>
</tr>
<tr>
<td>Booth Cashier</td>
</tr>
<tr>
<td>Cake Decorator</td>
</tr>
<tr>
<td>Concierge Usher</td>
</tr>
<tr>
<td>Day Worker</td>
</tr>
<tr>
<td>Food Attendant</td>
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<tr>
<td>Furniture Refinisher</td>
</tr>
<tr>
<td>Wardrobe &amp; Dressing</td>
</tr>
<tr>
<td>Gaming Change Person</td>
</tr>
<tr>
<td>Guide</td>
</tr>
<tr>
<td>Room Attendant</td>
</tr>
</tbody>
</table>

CAREERS WITH CERTIFICATION/ASSOCIATE DEGREE

*Community college, technical college, apprenticeship, experience*

<table>
<thead>
<tr>
<th>Position</th>
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</thead>
<tbody>
<tr>
<td>Club Manager</td>
</tr>
<tr>
<td>Conference Planner</td>
</tr>
<tr>
<td>Food Service Supervisor</td>
</tr>
<tr>
<td>Household Manager</td>
</tr>
<tr>
<td>Motel &amp; Hotel Manager</td>
</tr>
<tr>
<td>Recreation Director</td>
</tr>
<tr>
<td>Restaurant Manager</td>
</tr>
<tr>
<td>Taxidermist</td>
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<tr>
<td>Translator (Interpreter)</td>
</tr>
</tbody>
</table>

BACHELORS, PRE-PROFESSIONAL or HIGHER DEGREE

*Colleges/Universities*

<table>
<thead>
<tr>
<th>Position</th>
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</thead>
<tbody>
<tr>
<td>Archivist</td>
</tr>
<tr>
<td>Coaches</td>
</tr>
<tr>
<td>Conservation Technician</td>
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<tr>
<td>Curator</td>
</tr>
<tr>
<td>Historian</td>
</tr>
<tr>
<td>Hotel Manager</td>
</tr>
<tr>
<td>Park Ranger</td>
</tr>
<tr>
<td>Recreation Director</td>
</tr>
<tr>
<td>Theatre Manager</td>
</tr>
<tr>
<td>Translator/Interpreter</td>
</tr>
<tr>
<td>Zookeeper</td>
</tr>
</tbody>
</table>

Related Co-Curricular, Student Organizations & Activities:

Bay Gives Back
Best Buddies
Business Club
Musical - crew
Student Council
World Language clubs
Yearbook
Preparing individuals for employment in career pathways that relate to families and human needs

INTERESTS & ABILITIES

Activities that describe what I like to do:
- Care about people, their needs, and their problems.
- Participate in community services and/or volunteering.
- Listen to other people’s viewpoints.
- Help people be at their best.
- Work with people from preschool age to old age.
- Think of new ways to do things.
- Make friends with different kinds of people.

Personal qualities that describe me:
- Good communicator/good listener
- Caring
- Non-materialistic
- Uses intuition and logic
- Non-judgmental

School subjects that I like:
- Language Arts
- Psychology/Sociology
- Family and Consumer Sciences
- Finance
- World Language

PATHWAYS IN THIS CLUSTER
- Early Childhood Development & Services
- Counseling & Mental Health Services
- Family & Community Services
- Personal Care Services
- Consumer Services

Recommended Courses for this Cluster:

Accounting  Chemistry
Anatomy/physiology  Leadership for Social Justice
AP Biology  Personal Finance
AP Chemistry  Psychology
AP Statistics  World Cultures
Business Law  World Languages
Career Options

FROM HIGH SCHOOL
On-the-job training and/or minimal experience

Aerobics Instructor  Crossing Guard
Household Cook       Nanny

CAREERS WITH CERTIFICATION/ASSOCIATE DEGREE
Community college, technical college, apprenticeship, experience

Community Organization Worker  Nail Technician
Cosmetologist                  Preschool Teacher
Funeral Director               Skin Care Specialist
Institutional Cook             Shoe Repairer

BACHELORS, PRE-PROFESSIONAL or HIGHER DEGREE
Colleges/Universities

Athletic Trainer              Psychiatrist
Dietician                     Psychologist
Investment Advisor            School Counselor
Personal Trainer              Social Worker
Placement Counselor           Sociologist
Vocational Rehab Counselor

Related Co-Curricular, Student Organizations & Activities:
Bay Gives Back                HOSA
Best Buddies                   Humanitarian Club
Big Buddy/Little Buddy         Key Club
D-Group (diversity group)      REDgen
Gender/Sexuality Alliance (GSA) Student Council
Building linkages in IT occupations framework for entry level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia, and systems integration services

INTERESTS & ABILITIES

Activities that describe what I like to do:
- Work with computers.
- Reason clearly and logically to solve complex problems.
- Use machines, techniques, and processes.
- Read technical materials and diagrams and solve technical problems.
- Adapt to change.
- Play video games and figure out how they work.
- Concentrate for long periods without being distracted.

Personal qualities that describe me:
- Logical/analytical thinker
- See details in the big picture
- Persistent
- Good concentration skills
- Precise and accurate

School subjects that I like:
- Math
- Science
- Computer Tech/Applications
- Communications
- Graphic Design

PATHWAYS IN THIS CLUSTER
- Network Systems
- Information Support & Services
- Programming and Software Development
- Web & Digital Communications

Recommended Courses for this Cluster:
- AP Computer Science
- AP Physics
- AP Statistics
- Animation
- Business Law
- PLTW: Intro. to Engineering
- Computer Science Principles
- Marketing
- Digital Art w/Photoshop
- Digital Photography
- Physics
Career Options

FROM HIGH SCHOOL
*On-the-job training and/or minimal experience*

Careers in this field require more than minimal experience or on-the-job training

CAREERS WITH CERTIFICATION/ASSOCIATE DEGREE
*Community college, technical college, apprenticeship, experience*

- Computer Programmer
- Computer Support Specialist
- Data Communications Analyst
- Computer Systems Analyst
- Tool Programmer
- Webmaster

BACHELORS, PRE-PROFESSIONAL or HIGHER DEGREE
*Colleges/Universities*

- Animator
- Computer Engineer
- Computer Network Coordinator
- Database Administrator
- Illustrator
- Scientific & Engineering Programmer
- Software Engineer
- Webmaster

**Related Co-Curricular, Student Organizations & Activities:**

- Bay Girls’ Coding Club
- Robotics
- Yearbook
Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services

INTERESTS & ABILITIES

Activities that describe what I like to do:
- Work under pressure or in the face of danger.
- Make decisions based on my own observations.
- Interact with other people.
- Be in positions of authority.
- Respect rules and regulations.
- Debate and win arguments.
- Observe and analyze people’s behavior.

Personal qualities that describe me:
- Adventurous
- Dependable
- Community-minded
- Decisive
- Optimistic

School subjects that I like:
- Language Arts
- Psychology/Sociology
- Government/History
- Law Enforcement
- First Aid/First Responder

PATHWAYS IN THIS CLUSTER
- Correction Services
- Emergency & Fire Management Services
- Security & Protective Services
- Law Enforcement Services
- Legal Services

Recommended Courses for this Cluster:

<table>
<thead>
<tr>
<th>Anatomy &amp; Physiology</th>
<th>Chemistry</th>
<th>Physics</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP Biology</td>
<td>Health</td>
<td>AP Physics</td>
</tr>
<tr>
<td>AP Chemistry</td>
<td>Leadership for Social Justice</td>
<td>Statistics</td>
</tr>
<tr>
<td>AP U.S. History</td>
<td>PLTW: Biomedical Science</td>
<td>World Languages</td>
</tr>
<tr>
<td>AP U.S. Government</td>
<td>Phy Ed. Classes</td>
<td></td>
</tr>
<tr>
<td>AP Physics</td>
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<td></td>
</tr>
</tbody>
</table>
Career Options
FROM HIGH SCHOOL
*On-the-job training and/or minimal experience*

- Correctional Officer
- Crossing Guard
- Dispatcher
- Parking Enforcement Officer
- Security Guard

CAREERS WITH CERTIFICATION/ASSOCIATE DEGREE
*Community college, technical college, apprenticeship, experience*

- Bailiff
- Court Reporter
- Firefighter
- Legal Secretary
- Emergency Medical Technician
- Paralegal Assistant
- Park Ranger
- Police Officer
- Private Detective

BACHELORS, PRE-PROFESSIONAL or HIGHER DEGREE
*Colleges/Universities*

- Adjudicator
- Arbitrator
- FBI Agent
- Forensic Science
- Judge
- Judicial Law Clerk
- Lawyer
- Probation and Parole Officer
- Technical

Related Co-Curricular, Student Organizations & Activities:

- Best Buddies
- Mock Trial
- Debate Team
- Student Council
- Forensics
- Teton Science School
- Gender/Sexuality Alliance

45
Planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance, and manufacturing/process engineering.

INTERESTS & ABILITIES

Activities that describe what I like to do:
- Work with my hands and learn that way.
- Put things together.
- Do routine, organized and accurate work.
- Perform activities that produce tangible results.
- Apply math to work out solutions.
- Use hand and power tools and operate equipment/machinery.
- Visualize objects in three dimensions from flat drawings.

Personal qualities that describe me:
- Practical
- Observant
- Physically active
- Step-by-step thinker
- Coordinated

School subjects that I like:
- Math-Geometry
- Chemistry
- Trade and Industry courses
- Physics
- Language Arts

PATHWAYS IN THIS CLUSTER
- Production
- Manufacturing Production Process Development
- Maintenance, Installation & Repair
- Quality Assurance
- Logistics & Inventory Control
- Health, Safety & Environmental Assurance

Recommended Courses for this Cluster:
- AP Calculus AB/BC
- AP Chemistry
- AP Computer Science
- AP Economics
- AP Environmental Science
- AP Physics
- AP Statistics
- Chemistry
- Environmental Science
- Engineering courses (any)
- Physics
- Statistics
- Woodworking
- World Languages
Career Options

FROM HIGH SCHOOL
*On-the-job training and/or minimal experience*

- Apparel & Home Furnishings
- Brush Painter
- Dyer
- Engraver
- Hand Worker
- Oil Well Driller
- Order Filler
- Production and Planning Clerk
- Production Assembler
- Tire Builder

CAREERS WITH CERTIFICATION/ASSOCIATE DEGREE
*Community college, technical college, apprenticeship, experience*

- Apparel Pattern Maker
- Combination Welder
- Computer Technician
- Electric Appliance Repair
- Electrical Motor Technician
- Locksmith
- Musical Instrument Repairer
- Quality Control Technician
- Tool and Die Maker

BACHELORS, PRE-PROFESSIONAL or HIGHER DEGREE
*Colleges/Universities*

- Communications Operations
- Electrical Engineer
- Engineering Manager
- Environmental Engineer
- Mechanical Engineer
- Industrial Engineer
- Inspector
- Occupational Health & Safety
- Production Manager
- Supervisor

Related Co-Curricular, Student Organizations & Activities:

- Robotics
- Math Team
- SMART Team
**INTERESTS & ABILITIES**

Activities that describe what I like to do:
- Shop and go to the mall.
- Be in charge.
- Make displays and promote ideas.
- Give presentations and enjoy public speaking.
- Persuade people to buy products or to participate in activities.
- Communicate my ideas to other people.
- Take advantage of opportunities to make extra money.

Personal qualities that describe me:
- Enthusiastic
- Competitive
- Creative
- Self-motivated
- Persuasive

School subjects that I like:
- Language Arts
- Math
- Business Education/Marketing
- Economics
- Computer Applications

**PATHWAYS IN THIS CLUSTER**
- Professional Selling
- Merchandising
- Marketing Communications
- Marketing Management
- Marketing Research

**Recommended Courses for this Cluster:**
- Accounting
- AP Computer Science
- AP Economics
- AP Statistics
- AP U.S. Government
- Digital Photography
- Marketing
- Sports/Entertainment Marketing
- Statistics
- World Languages
Career Options

FROM HIGH SCHOOL
On-the-job training and/or minimal experience

Antique/Collectible Dealer
Cashier
Classified Ad Clerk
Counter Clerk
Customer Service Representative

News Vendor
Street Vendor
Telemarketer
Wedding Planner

CAREERS WITH CERTIFICATION/ASSOCIATE DEGREE
Community college, technical college, apprenticeship, experience

Advertising Layout Designer
Advertising Sales Representative
Auctioneer
Auto Salesperson

Buyer
Purchasing Manager
Real Estate Agent

BACHELORS, PRE-PROFESSIONAL or HIGHER DEGREE
Colleges/Universities

Advertising Account Executive
Advertising Manager
Business Agent
Marketing Manager

Public Relations Manager
Purchasing Agent
Research Analyst

Related Co-Curricular, Student Organizations & Activities:

Business Club
Debate Team
Forensics
Yearbook
Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering), including laboratory and testing services, and research and development services

**INTERESTS & ABILITIES**

**Activities that describe what I like to do:**
- Interpret formulas.
- Find answers to questions.
- Work in a laboratory.
- Figure out how things work and investigate new things.
- Explore new technology.
- Experiment to find the best way to do something.
- Pay attention to details and help things be precise.

**Personal qualities that describe me:**
- Detail oriented
- Inquisitive
- Objective
- Methodical
- Mechanically inclined

**School subjects that I like:**
- Math
- Science
- Drafting/Computer Aided Drafting
- Electronics/Computer Networking
- Technical Classes/Technology Education

**PATHWAYS IN THIS CLUSTER**
- Engineering & Technology
- Science & Math

**Recommended Courses for this Cluster:**
- AP Biology
- AP Calculus AB/BC
- AP Chemistry
- AP Computer Science
- AP Environmental Science
- AP Physics
- AP Statistics
- Chemistry
- Environmental Science
- PLTW (engineering) courses (all)
- Physics
- Statistics
- World Languages
Career Options

FROM HIGH SCHOOL
*On-the-job training and/or minimal experience*

Statistical Clerk

CAREERS WITH CERTIFICATION/ASSOCIATE DEGREE
*Community college, technical college, apprenticeship, experience*

Biological Technician
Chemical Technician
Civil Engineering Technician
Environmental Technician
Mathematical Technician

BACHELORS, PRE-PROFESSIONAL or HIGHER DEGREE
*Colleges/Universities*

<table>
<thead>
<tr>
<th>Aerospace Engineer</th>
<th>Computer Engineer</th>
<th>Metallurgist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropologist</td>
<td>Electrical Engineer</td>
<td>Mining Engineer</td>
</tr>
<tr>
<td>Archaeologist</td>
<td>Geologist</td>
<td>Nuclear Engineer</td>
</tr>
<tr>
<td>Astronomer</td>
<td>Industrial Engineer</td>
<td>Physicist</td>
</tr>
<tr>
<td>Biomedical Engineer</td>
<td>Mathematician</td>
<td>Solar Engineer</td>
</tr>
<tr>
<td>Chemical Engineer</td>
<td>Mechanical Engineer</td>
<td>Statistician</td>
</tr>
<tr>
<td>Civil Engineer</td>
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</tr>
</tbody>
</table>

Related Co-Curricular, Student Organizations & Activities:

<table>
<thead>
<tr>
<th>Bay Girls’ Coding Club</th>
<th>Science Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOSA</td>
<td>Teton Science School</td>
</tr>
<tr>
<td>Math Team</td>
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</tr>
<tr>
<td>SMART Team</td>
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</tbody>
</table>
Planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment, and facility maintenance.

**INTERESTS & ABILITIES**

**Activities that describe what I like to do:**
- Travel.
- See well and have quick reflexes.
- Solve mechanical problems.
- Design efficient processes.
- Anticipate needs and prepare to meet them.
- Drive or ride.
- Move things from one place to another.

**Personal qualities that describe me:**
- Realistic
- Mechanical
- Coordinated
- Observant
- Planner

**School subjects that I like:**
- Math
- Trade and Industry courses
- Physical Sciences
- Economics
- Foreign Language

**PATHWAYS IN THIS CLUSTER**
- Transportation Operations
- Logistics Planning & Management Services
- Warehousing & Distribution Center Operations
- Facility & Mobile Equipment Maintenance
- Transportation Systems/Infrastructure Planning, Management & Regulation
- Health, Safety & Environmental Management
- Sales & Service

**Recommended Courses for this Cluster:**
- AP Biology
- AP Calculus AB/BC
- AP Chemistry
- AP Economics
- AP Environmental Science
- AP Physics
- PLTW: Introduction to Engineering
- Physics
- Statistics
- World Languages

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# Career Options

## FROM HIGH SCHOOL

*On-the-job training and/or minimal experience*

<table>
<thead>
<tr>
<th>Role</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus Driver</td>
<td>Reservation and Ticket Clerk</td>
</tr>
<tr>
<td>Deckhand</td>
<td>Service Station Attendant</td>
</tr>
<tr>
<td>Delivery Driver</td>
<td>Shipping and Receiving Clerk</td>
</tr>
<tr>
<td>Highway Maintenance Worker</td>
<td>Traffic Clerk</td>
</tr>
</tbody>
</table>

## CAREERS WITH CERTIFICATION/ASSOCIATE DEGREE

*Community college, technical college, apprenticeship, experience*

<table>
<thead>
<tr>
<th>Role</th>
<th>Role</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft Mechanic</td>
<td>Cartographic Technician</td>
<td>Railroad Conductor</td>
</tr>
<tr>
<td>Auto Body Technician</td>
<td>Flight Attendant</td>
<td>Security Consultant</td>
</tr>
<tr>
<td>Automobile Painter</td>
<td>Motorcycle Technician</td>
<td>Travel Agent</td>
</tr>
<tr>
<td>Diesel Technician</td>
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</tbody>
</table>

## BACHELORS, PRE-PROFESSIONAL or HIGHER DEGREE

*Colleges/Universities*

<table>
<thead>
<tr>
<th>Role</th>
<th>Role</th>
<th>Role</th>
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</thead>
<tbody>
<tr>
<td>Airline Pilot</td>
<td>Locomotive Engineer</td>
<td>Public Health Sanitarian</td>
</tr>
<tr>
<td>Air Traffic Controller</td>
<td>Mechanical Engineer</td>
<td>Travel Agency Manager</td>
</tr>
<tr>
<td>Astronaut</td>
<td>Mining Manager</td>
<td></td>
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<tr>
<td>Environmentalist</td>
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</tbody>
</table>

## Related Co-Curricular, Student Organizations & Activities:

Robotics
Art Fundamentals
Grades 9-12
Prerequisites: None
Semester 1 or 2, One credit
Lab/Supply Fee – $25.00

Art Fundamentals provides introductory experiences in each of the following areas: drawing, painting, color, ceramics, sculpture, printmaking, and design. This is an appropriate course for students who are uncertain of their art skills but have a genuine interest in exploring art as a form of creative expression. (It is recommended that students with stronger art backgrounds begin with Drawing). Students will gain an understanding of the Elements and Principles used in the art and design world and throughout the history of art.

Drawing
Grades 9-12
Prerequisites: None
Semester 1 or 2, One credit
Lab/Supply Fee – $25.00

In Drawing, we will explore the unique process of drawing from observation, building skills with a series of drawing exercises that will help students "see as the artist sees" in a variety of drawing media. These new skills and self expression are then applied to explore a variety of themes and topics as the basis for the creation of drawings from observation and the imagination. Students are exposed to a variety of traditional and contemporary art styles and processes.

Ceramics
Grades 9-12
Prerequisites: None
Semester 1 or 2, One credit
Lab/Supply Fee – $50.00

Ceramics explores the creative possibilities of clay as an artistic medium. Students will gain experience in hand-building techniques as well as learning to work on the potter’s wheel. Glazing and firing techniques are introduced as well as a basic understanding of the kiln and firing process. Students will gain an understanding of the development and design of ceramics, focusing on form and function in both traditional and contemporary processes.

Digital Art with Photoshop
Grades 9-12
Prerequisites: None
Semester 1 or 2, One credit
Lab/Supply Fee – $30.00

Digital Art with Photoshop is an introductory course in digital design using Adobe Creative Suite (Photoshop). Students will explore computer-based processes for creating and manipulating shape, form, texture, and color. Emphasis will be on the integration of drawing, scanned images, image processing, and 2-D paint graphics into high resolution images. Self-portraits, abstract images, advertising and graphic design will be some of the subjects explored. Techniques, principles, and processes from traditional art and design are used in tandem with the software-based tools.

Sculpture
Grades 9-12
Prerequisites: None
Semester 1 or 2, One credit
Lab/Supply Fee – $50.00

Sculpture explores art and design principles in a three dimensional format. A wide variety of techniques are used in order to build, carve, and assemble three dimensional works from glass, clay, metal and other media. This course develops critical thinking and problem solving skills through hands on projects. Students will gain an understanding of physical and visual balance and the qualities of traditional and contemporary sculpture processes.

Mixed Media
Grades: 10-12
Prerequisites: None
Semester 1 or 2, One Credit
Lab Fee/Supply Fee: $40.00

In Mixed Media, the focus will be on the layering of imagery through collage and printmaking techniques, incorporating drawing, painting and digital imagery in new and experimental ways. The focus of this course is self expression and innovation with contemporary materials. The course introduces students to traditional and contemporary artists and techniques, building skills with collage and mixed media in an exploratory and choice based learning environment.
**Painting**  
*Grades 10-12*  
*Prerequisites: None*  
*Semester 1 or 2, One credit*  
*Lab/Supply Fee – $40.00*

In Painting students will gain basic knowledge and confidence in the use of color, painting tools and painting surfaces. They will discover the possibilities and limitations of watercolor, acrylic and oil paint. Experience and knowledge come first through a series of studies and later through the creation of original paintings from life and imagination. Students are exposed to a variety of styles and approaches used through the history of art to today.

**Intermediate Digital Art**  
*Grades 10-12*  
*Prerequisites: Digital Art with Photoshop OR Digital Photography*  
*Semester 1 or 2, One credit*  
*Lab/Supply Fee – $30.00*

Intermediate Digital Art is an advanced level course in imaging and design. This course is intended for students who have taken Digital Art with Photoshop or Digital Photography and desire to push their skills and ideas further using Adobe Creative Suite. Students will further explore computer-based processes for creating and manipulating shape, form, texture, and color through the use of Adobe Photoshop and Adobe Illustrator. Emphasis will be on the integration of drawing, scanned images, image processing, and 2-D paint graphics into high-resolution images. Techniques, principles, and processes from traditional art and design are incorporated by utilizing software-based media for art and communication.

**Intermediate Ceramics**  
*Grades 10-12*  
*Prerequisites: Ceramics*  
*Semester 1 or 2, One credit*  
*Lab/Supply Fee – $50.00*

In Intermediate Ceramics, students will use clay as their medium. The student will complete complex hand building assignments and will throw for an extended period of time over the course of the semester. Glaze technology will continue to be investigated, and students will have parallel instruction in learning when and how to apply each skill and technique specific to their work. Each project will be evaluated in terms design preparation, the application of advanced ceramic processes, and demonstrated craftsmanship. Students will see their own style emerge through this course as they experience a greater amount of freedom.

**Animation**  
*Grades: 10-12*  
*Prerequisites: Drawing*  
*Semester: 1 or 2, One Credit*  
*Lab/Supply Fee: $35*

Animation is an introductory course using traditional and digital techniques to create images in motion. Students will be introduced to several animation techniques such as hand drawn, computer generated, stop motion, and rotoscoping. Emphasis will be on the use of storyboarding to create well-crafted and complete animation sequences that explore movement and the principles of animation. Through hands on projects, students will learn about the history of animation and then explore how animation is used throughout modern media.

**Intermediate Sculpture**  
*Grades 10-12*  
*Prerequisites: Sculpture*  
*Semester 1 or 2, One credit*  
*Lab/Supply Fee – $50.00*

In Intermediate Sculpture, the students will increase their knowledge of 3D materials and sculpting techniques by completing large and small freestanding pieces over the course of the semester using a variety of 3D materials (glass, plaster, clay, etc.) Students will have parallel instruction in learning when and how to apply each skill and technique specific to their work. Each project will be evaluated in terms design preparation, the application of advanced sculpture processes, and demonstrated craftsmanship. Students will see their own style emerge through this course as they experience a greater amount of freedom.

**Digital Photography**  
*Grades 11-12*  
*Prerequisites: None*  
*Semester 1 or 2, One credit*  
*Lab/Supply Fee – $35.00*

Digital Photography is an introductory course in the art of composition and light. Students will explore the basic concepts of photography using DSLR cameras. Emphasis will be on the production of Fine Art images, edited for quality in Photoshop, while developing an understanding of the elements of art and the principles of design. Students will learn from the work of many photographers, exploring traditional and contemporary themes and techniques.
**Video Production**  
*Grades 10-12*  
**Prerequisites:** One prior high school art course  
**Semester 1 or 2, one credit**  
**Lab/Supply Fee:** None

In Video Production, students will explore the art of storytelling and communication through video and film. Students will be introduced to collaboratively creating scripts, organizing video shoots, operating cameras and and using editing software with the goal of communicating and storytelling through quality videos and creative short films. Students will look to classic films and “viral” videos for inspiration and will learn the art of filmmaking from camera angles to audio components. Student films will be shared in class, with opportunities to grow through peer critique and hands on projects.

**Intensive Art**  
*Grades 11-12*  
**Prerequisites:** Art Department approval or 4 Art Classes  
**Semester 1 and 2, Two credits**  
**Lab/Supply Fee – $80 (covers both semesters)**

Intensive Art is a course that allows for great self-expression and freedom of choice. It is intended for students who are very committed to their art work and are looking for a rigorous art experience but not at the same level of time and personal commitment that AP Art requires. Students who may want to pursue AP Art in their senior year are highly encouraged to take Intensive Art their junior year. Students are guided individually as they prepare works that fall into a possible concentration strand, 3-D, 2-D, or Painting and Drawing. Students will also be required to focus on quality of work during class time. Students should be aware that Intensive Art involves significantly more work than is expected in intermediate level art classes and that the program is not for the casually interested. Keeping a sketchbook and outside class work are required for this class. Students are exposed to a variety of styles and approaches used through the history of art to today.

**AP Art (may be repeated for credit if submitting new portfolio from a different media)**  
*Grades 11-12*  
**Prerequisites:** Art Department approval and completion of assigned pre-course summer work  
**Semester 1 and 2, Two credits**  
**Lab/Supply Fee – $80 (covers both semesters)**

The AP Program in Studio Art is intended for highly motivated students who are seriously interested in the study of art. Students pursue college-level art while in high school as they work to put together a personal portfolio of works to be submitted to the College Board for possible college credit upon completion of the AP Program. Students are guided individually as they prepare works that fall into three distinct categories: Quality, Concentration, and Breadth. Students should be aware that AP work involves significantly more time than Intermediate or Intensive Art courses and that the program is not for the casually interested. Time outside of class is required for success. Students are exposed to a variety of styles and approaches used through the history of art to today. Reading as well as independent research, visits to art venues, and journal keeping are required. Students in AP will gain skills in promoting their work and sharing their work beyond the art classroom setting.
**Accounting**
Grades 10-12  
Semester 1 or 2, One credit  
Prerequisite: None

Accounting is the language of business, knowledge of accounting enhances career opportunities regardless of the individual’s chosen field. This class provides an excellent foundation for college level courses involving multiple aspects of business. Sample topics include recording daily transactions, preparing an income statement and balance sheet, projecting future production costs, calculating ROI and inventory management, among other. This course is highly recommended for those students planning to pursue a career or college degree in business.

**Business Law**
Grades 10-12  
Semester 1 or 2, One credit  
Prerequisite: None

Knowledge of law is crucial to long-term success in many professional fields. Legal principles impact organizational form, product design, contracts, hiring and firing practices, and daily business operations. Students will refine their research, analytical and communication skills for college as they explore fundamental concepts of business law. This class requires students to perform limited research and then communicate their findings to the class. Business Law uses mock trial performances to allow each student to apply their legal content knowledge while refining their analytical and communication skills. This class benefits from presentations made by attorneys in practice who share their legal expertise and career experiences with the class.

**Introduction to Business**
Grades 9-10  
Semester 1 or 2, One credit  
Prerequisite: None

This semester long, orientation course is designed to provide students of all interests the ability to explore the many areas within the field of business. Areas of study include, but are not limited to: Management and Leadership, International Business, Entrepreneurship, Marketing, Business Law, and an introduction to Accounting and Financial concepts. With business majors consistently being one of the most popular majors in college this course provides an excellent opportunity for career exploration within that field.

**Keyboarding**
Grades 9-12  
Semester 1 or 2, One credit  
Prerequisite: None

Keyboarding is an essential skill for effective use of a computer. If the student cannot type at least 40 words per minute with very few errors, he or she should consider this one semester course. Students are encouraged to take Keyboarding as early in high school as possible so that they can apply their skills in other courses. Keyboarding improves the speed and accuracy of keyboard input and helps the student master common formats for electronic mail, formal letters, memos, school reports and research papers. The class also helps students to detect and correct spelling errors and inappropriate grammar in their documents. Successful completion of Keyboarding will offer significant benefits in future high school and college classes. This class can help balance a difficult and busy student schedule with a class that is wholly contained within the school hour while offering significant long term benefits to the student.

**Marketing Principles**
Grades 10-12  
Semester 1 or 2, One credit  
Prerequisite: None

This semester course will cover the principles and practices of marketing and will prepare students for post-secondary studies and careers in the area of marketing or business. Areas of study will include the functions of marketing, market segmentation, market research, product development, pricing, channels of distribution, promotion and advertising and managing the marketing mix. The class utilizes case studies, videos, several hands-on activities and outside speakers to assist the student in applying their creative and critical thinking skills to help solve real world business and marketing issues.
Personal Finance
Grades 10-12
Semester 1 or 2, One credit
Prerequisite: None

Personal Finance helps build the student's financial literacy for lifetime decision-making. All students benefit from training in personal finance prior to entry into college or the workforce. Students will be exposed to the most current, up-to-date information on the following areas of study: consumer decision making, taxes, credit cards, services banks offer, buying a car and home, insurance, investing, the stock market, retirement planning and career exploration. This class might be considered an elective but is a required course for students to gain financial literacy, regardless of their career path.

Sports and Entertainment Marketing
Grades 10-12
Semester 1 or 2, One Credit
Prerequisite: One previous business course or concurrent enrollment in second business course

Sports and Entertainment Marketing helps students to understand marketing concepts that apply to the Sports and Entertainment industries. Students will apply key business and marketing concepts to projects and daily work that emphasize economic and business foundations, branding, licensing, naming rights, concessions, on-site merchandising, promotion, safety and security and human relations. The course will utilize outside speakers and class trips to connect the class instruction to the exciting world of Sports and Entertainment Marketing.
Computer Concepts
Grades 10-12 (Grade 10 Recommended)
Prerequisites: Algebra 1
Semester 1 or 2, One credit

This course fulfills the one semester computer science requirement. The main objective of this course is to assist students in acquiring the knowledge and ability to use technology in academic, personal and professional settings. The first part of the course introduces students to the Microsoft Office Suite teaching how to effectively integrate the software in their daily lives in order to create professional documents, spreadsheets and presentations more effectively and efficiently. The second part of the course focuses on emerging technology and the 21st Century skills needed to be successful in today's economy. This portion of the course is ever-changing in order to keep up with current technology trends. A sample of current topics studied in the unit include, but are not limited to: Google Docs, web 2.0 programs, digital citizenship, video editing, database searching and buying a computer.

Essentials of Computer Concepts
Grades 11-12
Prerequisites: Teacher/Counselor Recommendation
Semester 1 or 2, One credit

Essentials of Computer Concepts is similar to Computer Concepts, but covers topics at a more manageable pace and in less depth. This affords recommended students an opportunity for meeting Whitefish Bay High School's one credit computer science graduation requirement. Only students recommended by teachers or counselors may take this course.

Computer Science Principles 1
Grades 9-12
Prerequisites: B or better in Algebra 1
Semester 1, One credit

This first course in our computer science sequence is designed to introduce students to computing and computer science. The course will introduce students to programming, and will also give them an understanding of the fundamental concepts of computing, its breadth of application, and its potential for transforming the world. Students will engage in computational thinking through programing and non-programming activities.

The course will cover 7 Core Principles:

1. Creativity: Computing is a creative activity
2. Abstraction: Reduces detail to focus on relevant concepts
3. Data: Data facilitates creation of knowledge
4. Algorithms: Express solutions
5. Programming: Enables problem solving, expression, and creation
6. Internet: Pervades Modern Computing
7. Impact: Computing has global impacts

This course will provide students going into business, computer science, engineering, mathematics, and sciences with most of the computer programming skills that they will be expected to have when they get to college as well as introduce them to a variety of computer science related fields. This course meets the one semester computer science graduation requirement.

Computer Science Principles 2
Grades 9-12
Prerequisites: Computer Science Principles 1
Semester 2, One credit

This is the second course in our computer science sequence and it builds on the work in Computer Science Principles 1. The course is taught using the same philosophy and guiding principles. Students will learn and apply more complex programming techniques.

Advanced Placement Computer Science Principles (offered odd numbered fall years)
Grades 10-12
Prerequisites: Algebra 1
Semester 1 and 2, Two credits

AP Computer Science Principles introduces students to the foundational concepts of Computer Science and challenges them to explore how computing and technology can impact the world. With a unique focus on creative problem solving and real-world applications, AP Computer Science Principles prepares students for college and career. In addition to programming, abstraction and algorithms; AP Computer Science Principles teaches the creative nature of computing, use of computers to analyze data, and how computation has changed the way people live and work. This AP exam will include a portfolio submission similar to AP studio art as well as a multiple choice assessment. Students will earn college credit for successful completion of the AP exam.
Advanced Placement Computer Science (Java)  
(offer even numbered fall years)  
Grades 10-12  
Prerequisites: Another Computer Science Course or consent of instructor  
Semester 1 and 2, Two credits

AP Computer Science is designed for students who are interested in learning programming. This course is recommended for anyone interested in pursuing additional coursework in any STEM field (Science, Technology, Engineering or Mathematics). In this course, students will learn all of the standard aspects of the Java programming language using an object-oriented programming (OOP) perspective. OOP is a different way of thinking about programming. Java is a powerful language that is used to develop programs in many areas. AP Computer Science closely matches the content of the College Board’s AP Program in computer science, and students will be prepared to take the Advanced Placement examination offered in May. Students will work in the lab during class approximately 2 hours per week and will be expected to work outside of class for an additional two to three hours.
**Introduction to Engineering Design**

*Grades 9-12*

**Prerequisites:** Completion of or concurrent enrollment in Algebra 1  
**Semester 1 and 2, Two credits**  
**Lab/Supply Fee - $15 for engineering notebook and other supplies**

Introduction to Engineering Design is a foundational course in the Project Lead the Way series. It entails using computer modeling software that allows students to learn the process of product design. Students will solve design problems as they develop, create, and analyze product models. An emphasis in this course is to apply problem-solving skills to a variety of real world problems and to use statistical analysis to measure their effectiveness. Students who successfully complete this course and score high enough on the end of year exam can apply for college credit from several PLTW affiliate universities.

**Principles of Engineering**

*Grades 10-12*

**Prerequisites:** Algebra 1  
**Semester 1 and 2 - (Transcript as either two “Engineering” credits or two “Science - Elective” credits)**  
If you would prefer science credit, please see your counselor.  
**Lab/Supply Fee - $15 for engineering notebook and other supplies**

Principals of Engineering is a foundational course in the Project Lead The Way series that helps students understand the field of engineering, exploring what engineering is and engineers do. Through the exploration of various technology systems and manufacturing processes, students will learn how engineers use math, science and technology to solve real world problems. The course covers four main units: Energy and Power, Control Systems, Materials, and Statics and Dynamics. Students will have the opportunity to use a variety of software and building materials to solve complex problems. Students will also work with robotics kits as well as learn the fundamentals of robot/machine programming. Students who successfully complete this course and score high enough on the end of year exam can apply for college credit from several PLTW affiliate universities.

**Engineering Design and Development**

*Grades 10-12*

**Prerequisites:** Completion of at least one PLTW course or department approval  
**Semester 1 and 2, Two credits**  
**Lab/Supply Fee - $15 for engineering notebook and other supplies**

This is the “capstone” course for Project Lead the Way. Engineering Design and Development is an engineering research course in which students work in teams to research, design and construct a solution to an open-ended, real world engineering problem. Students will apply principles developed in previous Project Lead the Way courses to a project of their own choosing. Students will be guided by a mentor on the project and will:

- Brainstorm and define problem statements for unique innovations or inventions.  
- Create market research to investigate and determine the merit of their solution.  
- Create a detailed set of instructions for producing a testable prototype.  
- Build a working prototype that can be tested.  
- Create a detailed set of instructions for testing the prototype that will be valid, repeatable, and reliable.  
- Evaluate and explain the effectiveness of their design.  
- Orally present and defend an effective technical presentation of their design project to an outside panel of reviewers.

Students who successfully complete this course and score high enough on the end of year exam can apply for college credit from several PLTW affiliate universities.

**Principles of Biomedical Sciences**

*Grades 9-12*

**Prerequisites:** Completion of or concurrent enrollment in Biology  
**Semester 1 and 2 - (Transcript as either two “Engineering” credits or two “Science - Elective” credits)**  
**Lab/Supply Fee - $25 for notebook and other supplies**

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, medical history, and explore medical treatments that might have prolonged the person’s life. These activities and projects introduce students to human physiology, basic biology, medicine, and research processes while allowing students to design their own experiments to solve problems.
Medical Interventions
Grades 10-12
Prerequisites: Completion of Biology
Semester 1 and 2 (Transcript as either two "Engineering" credits or two "Science - Elective" credit)
Lab/Supply Fee: $25 for lab notebooks, binder, and other lab supplies

In this Project Lead the Way Biomedical Science course, students follow the life of a fictitious family as they investigate how to prevent, diagnose, and treat disease. Students explore how to detect and fight infection; screen and evaluate the code in human DNA; evaluate cancer treatment options; and prevail when the organs of the body begin to fail. Through real-world cases, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics. Students who successfully complete this course and score high enough on the end of year exam may apply for college credit from several PLTW affiliate universities.

Civil Engineering and Architecture (To Be Offered 2018-19 School Year)
Grades 10-12
Prerequisites: Algebra 1
Semester 1 and 2, Two credits
Lab/Supply Fee - $15 for engineering notebook and other organizational supplies

Civil Engineering and Architecture is a specialization course in the Project Lead The Way series. Students collaborate on the development of residential and commercial building projects, including conceptual design and project presentation. The course provides an overview of civil engineering and architecture, emphasizing how these two fields are related and interdependent, and covers topics such as project planning, site planning, building design, and project documentation. Students use state-of-the-art software to solve real-world problems and communicate solutions following from hands-on projects and activities. Students who successfully complete this course and score high enough on the end of year exam may apply for college credit from several PLTW affiliate universities.

Woodworking 1
Grades 9-12
Prerequisites: None
Semester 1 or 2, one credit
Lab/Supply Fee - Base Fee: $45.00 (Students may incur additional material costs depending upon custom project choice/ design)

In Woodworking 1, students will complete basic woodworking projects beginning with a folding, portable chair and a small folding table. Students will also learn more complex woodworking skills and joinery techniques and will have the opportunity to design & create a custom project or projects. Shop safety will be stressed as well as proper tool usage for various woodworking machines and tools. Project planning, multiview drawing, material cost calculations, project timeline projections and construction step sequencing will also be emphasized.

Woodworking 2
Grades 9-12
Prerequisites: Woodworking 1
Semester 1 or 2, one credit
Lab/Supply Fee - Base Fee: $45.00 (Students may incur additional material costs depending upon custom project choice/ design)

In Woodworking 2, students further develop their woodworking skills by designing, planning and creating more complex woodworking projects of their choice while learning and applying advanced joinery and design techniques. Students are expected to apply the skills learned in Woodworking 1 and be able to work semi-independently in the shop.

Woodworking 3
Grades 10-12
Prerequisites: Woodworking 1 & 2
Semester 1 or 2, one credit
Lab/Supply Fee - Base Fee: $45.00 (Students may incur additional material costs depending upon custom project choice/ design)

In Woodworking 3, students will apply the skills learned in Woodworking 1 & 2 to complete well-designed projects with advanced woodworking techniques. Students will develop challenging projects, learn new techniques and produce high quality pieces while working as independently as possible.
This first semester freshman course will focus on identification and analysis of archetypes along with the quest theme in literature. Writing will emphasize literary analysis and also include summary, various grammar and vocabulary concepts.

This second semester freshman course will concentrate on a loss of innocence theme in the literature and focus on research skills and a continuation of the grammar and vocabulary skills from first semester.

This year long, team-taught course is designed to help students focus on writing and reading strategies. The skills taught will be the same as the standard freshman English courses with pacing adapted.

This required sophomore course introduces students to the practice and study of public communication. Students present eight prepared speeches including a final examination speech, as well as classroom improvisations and body and voice exercises. Textbook work focuses on research techniques, outlining interpersonal communication skills, and group dynamics. Students are encouraged to explore a variety of cultures in their choices of speech topics.

This course introduces students to the application of literary theory to classic and contemporary works. Literary works include *Hamlet*, *The Great Gatsby*, *Slaughterhouse Five*, and an additional student choice between several novels. Students will also continue to work on their composition skills through written analyses of literature.

The following courses fulfill English graduation requirements for the grades indicated.

**Advanced Composition and Critical Thinking**
Grade 11
Prerequisites: English 1-4
Semester 1 or 2, One credit
Advanced Composition and Critical Thinking is intended to give students a wide variety of writing experiences in preparation for the demands of college. The Prentice Hall Reader will guide students through various modes of writing including narrative, descriptive, research, cause/effect, definition and argument. In addition, students will study vocabulary in context and practice and apply sophisticated grammatical structures in their writing.

**American Literature**
Grades 11-12
Prerequisites: English 1-4
Semester 1 or 2, One credit
Key historical events and revolutionary ideas will be studied as they relate to the development of our American literary voice and cultural identity. Units will include: Native American, Puritan and Colonial Literature; Romanticism, Transcendentalism and Dark Romantics; Realism and Modernism; Contemporary Literature. Emphasis is given to developing analytical skills through close reading of the texts and articulating how history shapes our country’s literature.

**British Literature**
Grades 11-12
Prerequisites: English 1-4
Semester 1 or 2, One credit
British Literature provides exposure to the classic works which form the foundation of our English heritage. Course content focuses on representational literature from each of the major literary periods, and includes Seamus Heaney's translation of Beowulf, an excerpt from Geoffrey Chaucer's *Canterbury Tales*, Arthurian myths, William Shakespeare's tragedy *Macbeth*, Mary Shelley's nineteenth century novel *Frankenstein*, and an outside reading novel. Emphasis is given to developing analytical...
skills through close reading of the texts, and tying ideas and themes to contemporary concerns.

**World Literature**  
**Grades 11-12**  
**Prerequisites: English 1-4**  
**Semester 1 or 2, One credit**

World Literature explores the evolution of human consciousness, literature and culture by examining ancient and contemporary literature from several world cultures. The view is historical, anthropological, and philosophical; the intent is to provide a literary and cultural background for exploring a variety of cultures while also noting universal similarities among humans. Students will explore several world cultures including the middle east’s Islam, India’s Hinduism and Buddhism, and China’s Taoism and Confucianism. Readings include ancient works such as the Qur’an, the Ramayana, Taoist and Confucian literature as well as contemporary novels.

**Modern Thought in Literature**  
**Grades 11-12**  
**Prerequisites: English 1-4**  
**Semester 1 or 2, One credit**

The course deals with literature as a reflection of the rapid changes occurring from the beginning of the 20th century through the present, creating the unique Modern and Postmodern themes and philosophies that define the art and literature of the age. Students will encounter oppressed, misunderstood characters, rebels monitored by their governments, and individuals living in absurdity, exploring life’s meaning or lack thereof, how to cope with an ever changing reality, and the challenge of true connection and communication within a pluralistic society. The course reading will include both established and recently acclaimed authors, including Huxley, Orwell, Atwood, Stoppard, Gardner, Foer and others.

**Contemporary Authors**  
**Grades 11-12**  
**Prerequisites: English 1-4**  
**Semester 1 or 2, One credit**

In this class, students will engage in an in-depth study of literary works from the late 20th into the 21st century, playing a major role in class by leading discussions, engaging in critical analyses, and completing a variety of standard and creative assessments. Students will focus on identifying the unique characteristics of literature from this period and how vast changes in technology have affected cultural trends, moral and ethical perspectives and personal identity. Authors may include such people as Saramago, McCarthy, The Tectonic Theater, and Adiga. Parents and students should be aware of the mature nature of many readings in this course. Sensitive material will be read and analyzed in an academic context.

**Journalistic Composition & Literature**  
**Grades 11-12**  
**Prerequisites: English 1-4**  
**Semester 1 or 2, One credit**

Journalistic Composition is a writing-based course, focusing on several aspects within the field of journalism. Students will be expected to research, observe, interview, write, edit, and publish material throughout the semester. Students may also be asked to manage a staff or serve as an editor. The class will post content online weekly and prepare written pieces for the school’s online newspaper. Students will learn journalism law and ethics, providing a strong foundation for proper journalism practice. Recent articles will serve as exemplars and while this is a writing course, students will be expected to read nonfiction pieces the evoke discussion of current events and also serve as professional writing models for style. This is a student-run publication; your writing will set the conversation around the school! Parents and students should be aware of the mature nature of many readings in this course. Sensitive material will be read and analyzed in an academic context.

**General Junior/Senior English**  
**Grade 11-12**  
**Prerequisites: Teacher Recommendation**  
**Semester 1-2, One credit per semester**

This course is designed to give the student an introduction to important American, English and World literature. Students will be expected to read stories, novels, essays and poetry and will be asked to participate in discussion of these materials. Students will write essays pertaining to the literature. Students will be given instruction in the research process, college essays and personal writing. Teachers and counselors will determine placement.

**AP English Language and Composition**  
**Grade 11**  
**Prerequisites: Semester grade of B or better in English 1 and 2 as well as English 3 and 4 or English Department approval and completion of assigned pre-course summer work**  
**Semester 1 and 2, Two credits**

AP Language and Composition students will become skilled communicators who write for many different purposes and utilize multiple rhetorical modes including expository, analytical, and argumentative compositions. Students will also engage in critical reading and analysis of narrative style non-fiction in order to improve their own composition skills. To fully develop these skills, this course requires students to actively participate in the process of writing and revising many different drafts of their work. Additionally, active research and citation, will learn how to use various grammatical structures in order to improve their writing and will take part in a rigorous vocabulary study which focuses on vocabulary in context of non-fiction and fiction pieces.
Because AP English is designed as a year-long course, students who wish to drop at mid-year can do so only with the consent of their counselor and course teacher. Students who are approved to drop AP Language and Composition must take Advanced Composition as a replacement.

AP English Literature and Composition
Grade 12
Semesters 1 and 2, Two credits
Prerequisites: Semester grade of B or better in Advanced Composition and junior year literature course or English Department approval, and completion of assigned pre-course summer work

AP English engages students in the careful reading and critical analysis of literary fiction and nonfiction from Ancient Greece through the 21st Century, including poetry, short stories, drama, and novels. Through the close reading of texts, students deepen their understanding of how writers use language to create both meaning and pleasure. As they read, students consider a work's structure, style, themes as well as such smaller-scale elements as the use of figurative language, imagery, symbolism, and tone. Students will engage in impromptu essay writing, timed writing activities, and research-based literary analysis. Students will write alone and in collaboration with others. All testing will be in essay form, including final examinations. Students will be responsible for leading class discussions as well as giving oral presentations based on knowledge of core texts, literary criticism, and academic research. Regardless of the assignment, students must develop and organize ideas with concise language, persuasion, and sophisticated style. The course prepares students to demonstrate strong writing and analytical skills on the AP English Literature and Composition exam. Because AP English is designed as a year-long course, students who wish to drop at mid-year can do so only with the consent of their counselor and course teacher.

The following courses are elective options for the grades indicated.

Acting (meets Fine Arts graduation requirement)
Grades 9-12
Prerequisites: None
Have you ever wanted to perform? Acting provides fundamental tools in improvisation, character work, and scene development in order to interpret and perform improvised and scripted theatre. Have fun developing creative works individually and as a team.

Stagecraft (meets Fine Arts graduation requirement)
Grades 9-12
Prerequisites: None
Semester 1 or 2, One credit
Design and create theatrical pieces! Students are introduced to a variety of technical theater skills such as operating or building and designing scenery, props, sound, costumes, makeup, and more. If you enjoy stagecrew, take stagecraft in order to learn a variety of skills and have the opportunity to design for the theatre.

Advanced Acting (meets Fine Arts graduation requirement)
Grades 10-12
Prerequisites: Acting or approval of instructor
Semester 1 or 2, One credit
Advanced Acting builds upon foundational acting techniques to develop deeper understandings of theatre, characters, performance, and theatre's connection to the world. Where Acting 1 focused on improvisation and basic acting technique, this course will provide further performing opportunities by utilizing different genres such as Comedy, Drama, One Acts, Musicals, and acting for film. Studies have shown that employees want exactly what Theatre Arts teach us: collaboration, communication, problem solving, and teamwork.

Exploration of Theatre Production (meets Fine Arts graduation requirement)
Grades 9-12
Prerequisites: None
Semester 1 or 2, One credit
This semester-long class will introduce students to every aspect of making and putting on a play. Students will utilize improvisation and writing to create scenes and ultimately a class written and produced theatre piece. Students will explore all aspects of theatre such as acting, improvisation, design, stage management, directing, storytelling, playwriting, and more. The class is geared to what students interests are. While students will learn about all parts of producing a play, acting is not a requirement and previous experience is not necessary. Choose a focus or do it all; there is something for everyone!
MATHEMATICS

The department encourages all students to take four years of math. Studies have shown that students do significantly better in post-secondary mathematics courses if they have taken a math class every year of their secondary education.

Pre-Algebra
Grades 9-12
Prerequisites: None
Semester 1-2, One credit per semester

This course is designed to prepare students for Algebra 1. Pre-Algebra is a foundational methods course where students will develop solid skills in basic algebra, reasoning and number sense. Students will have opportunities to use mathematics to model a variety of real-world situations and will learn to approach problems numerically, graphically, algebraically, and verbally. In general, the Pre-Algebra topics are aligned with our Algebra 1 course and include problem solving, integers, solving equations and inequalities, percent, fractions, decimals, proportions, linear equations, exponents, polynomials and factoring, square roots, and quadratics. Non-algebra topics include measurement, perimeter, area, right triangles and statistics. A scientific calculator is required. This course does not meet algebra requirements for college.

General Pre-Algebra
Grades 9-12
Prerequisites: None
Semester 1-2, One credit per semester

This course reviews and extends the study of variables, constants, expressions, and equations in preparation for General Algebra 1. Students will learn to approach problems numerically, graphically, algebraically and verbally, and use mathematics to model a variety of real-world situations. Topics covered include solving equations, simplifying expressions, understanding order of operations, working with positive and negative numbers, factoring, and graphing. Teachers and counselors will determine placement.

Algebra 1
Grades 9-12
Prerequisites: Grade 9 - Teacher recommendation, Grades 10-12 - Pre-Algebra
Semester 1-2, One credit per semester

Algebra 1 is the first course in abstract mathematics and the initial step in the regular sequence of high school mathematics. It provides the student with fundamental tools to explore mathematical concepts, search for patterns, and solve problems. Topics include the study of linear, exponential, quadratic and rational functions. Students will be encouraged to comprehend algebraic concepts, to make conjectures while persevering through challenging problems, and to develop a conceptual understanding of mathematics. Major concepts are balanced with procedural skill knowledge (simplifying expressions, solving equations and inequalities, translating mathematical sentences, graphing, and solving systems of equations) A graphing calculator is required for this course, which allows students to more thoroughly investigate the mathematics being learned. Preferred model: TI-84+

Algebra 1 Block
Grade 9-10
Prerequisites: Teacher Recommendation
Semester 1-2, Two course credits per semester – one math credit per semester

Research shows that doubling up on Algebra instruction has a positive and substantial impact on college entrance exams and enrollment rates. With this research in mind, Algebra 1 Block is designed for students who have the potential to be successful in Algebra 1 given a second period of math instruction. Algebra 1 Block offers two periods of Algebra, designed specifically for a double period, (versus 51 minutes of regular Algebra and another period of support). Students in this course will be held to the same learning standards as Algebra 1 with additional instructional opportunities for conceptual learning, discussion, etc. Teachers and counselors will determine placement.

General Algebra 1
Grades 9-12
Prerequisites: General Pre-Algebra
Semester 1-2, One credit per semester

General Algebra 1 continues the study of variables, constants, expressions and equations. This course will provide students with fundamental tools to explore mathematical concepts, search for patterns, and solve problems. Topics covered include solving equations and inequalities, translating mathematical sentences, graphing, solving systems of equations, and investigating the relationship between various quantities. Teachers and counselors will determine placement.
Geometry
Grades: 10-12
Prerequisites: Algebra 1 and Teacher
Recommendation
Semester 1-2, One credit per semester

Geometry provides students with the essentials of geometry along with the reinforcement of algebraic concepts. Emphasis will be placed on discovering the principles of geometry, logical thinking, and visualization of 2 and 3 dimensional objects. Topics include parallel and perpendicular lines, congruent triangles, relationships within triangles, quadrilaterals, similarity, right triangles and trigonometry, area, surface area, volume, and circles. Instruction is guided with hands-on explorations and real-world problems which make concepts more meaningful for students.

Advanced Geometry
Grades 9-12
Prerequisites: Algebra 1 and Teacher
Recommendation
Semester 1-2, One credit per semester

Advanced Geometry provides students an opportunity to formulate conjectures using inductive reasoning and construct proofs using deductive reasoning. Students will study the properties of points, lines, planes, congruent triangles, similarity, transformations, polygons, circles, and triangle inequalities with an emphasis on logical arguments and algebraic reasoning. Symbolic logic and coordinate proofs are also studied. This course provides extensive work in both two-dimensional and three-dimensional space. The course also covers the topics of area, volume, and linear measure of standard geometric figures. Conic sections are introduced towards the end of the course. Students will be able to manipulate figures and discover geometric properties using the Geometer's Sketchpad. Throughout the course, students will be encouraged to persevere through challenging problems while developing a conceptual understanding of geometry.

General Geometry
Grades: 10-12
Prerequisites: General Algebra 1
Semester 1-2, One credit per semester

General Geometry provides the students with the essentials of geometry along with reinforcement of algebraic concepts. Emphasis will be placed on discovery of the principles of geometry, logical thinking, and visualization of 2 and 3 dimensional objects. The course is a blend of arithmetic, algebra, and geometry. Each chapter ends with a review of not only the current chapter, but also every chapter from the beginning of the book. Teachers and counselors will determine placement.

Algebra 2
Grades 11-12
Prerequisites: Algebra 1 and Teacher
Recommendation
Semester 1-2, One credit per semester

This course is designed for students intending to satisfy a third year math requirement for colleges, but who will not be taking Pre-calculus. Together with Functions and Trigonometry, it provides a sound foundation in advanced algebra concepts with less rigorous pace than Advanced Algebra 2 and Trigonometry. A review of Algebra 1 is included along with new topics such as arithmetic and geometric sequences and series, a study of function families and their graphs, graphical transformations of function graphs, introduction to trigonometry, exponential functions, logarithms, polynomials, systems of equations, and probability and statistics. Triangle trigonometry will be emphasized with an introduction to circular trigonometric functions. A strong emphasis will be placed on using real-world data and hands-on explorations to investigate the topics mentioned above. A graphing calculator is required for this course, which allows students to more thoroughly investigate the mathematics being learned.

Advanced Algebra 2 and Trigonometry
Grades 10-12
Prerequisites: Algebra 1 and Teacher
Recommendation
Semester 1-2, One credit per semester

Advanced Algebra 2 and Trigonometry is a transitional course between elementary studies in mathematics and more analytical and graphical reasoning. Throughout the course, topics build on the foundational concepts that students have mastered in Algebra 1. New topics that are introduced include parent functions, complex numbers, exponential and logarithmic functions, rational and inverse functions, trigonometric and circular functions, and probability. Graphing functional relationships will be emphasized and problem solving based on real-world applications of these functional relationships is a central part of the course. Students will be encouraged to comprehend abstract algebraic concepts, to make conjectures while persevering through challenging problems, and to develop a deeper understanding of mathematics. Throughout this course, students will be asked to solve problems numerically, algebraically, graphically and verbally. A graphing calculator is required, which allows students to more thoroughly investigate the mathematics being learned. Preferred: TI-84+
Functions and Trigonometry
Grade 11-12
Prerequisites: Algebra 2 or Advanced Algebra 2 and Trigonometry and Teacher Recommendation
Semester 1, One credit

This is a one semester course that provides those students not taking Pre-calculus an opportunity to extend their mathematical skills and prepare for college level math. The characteristics of functions to model real life is examined while the deep understanding of algebraic structure is emphasized. The study of trigonometry is continued, with an emphasis on circular trigonometric functions and their graphs. A graphing calculator is required for this course, which allows students to more thoroughly investigate the mathematics being learned. This course is generally paired with Statistics to provide students a full year of mathematics.

Statistics
Grades 11-12
Prerequisites: Algebra 2 or Advanced Algebra 2 and Trigonometry and Teacher Recommendation
Semester 2, One credit

This is a one semester course that provides those students not taking Pre-calculus an opportunity to extend their mathematical skills and prepare for college level math. This introductory course helps students understand and appreciate the statistics around them, as well as succeed in a college statistics class. Unlike AP Statistics, however, it does not lead to advanced placement credit. It is an introduction to the study of statistics only. Crime, drug use, disease, pollution controls, real estate, extinction rates, survival rates, production, quality control, spending, earning, dieting, drinking, traveling – there isn’t an issue relevant in our world today that doesn’t have statistical data associated with it. In this course, students will explore the use of statistics in daily life, and will learn how to analyze data that appears in real-life situations. The validity of statistical reasoning and the basic ideas of statistical inference will be examined. We will discuss probability, discrete and continuous probability distributions and the central limit theorem. Students will understand frequency distributions and their graphs and measures of central tendency and variability. A graphing calculator is required for this course, which allows students to more thoroughly investigate the statistics being studied. This course is generally paired with Functions and Trigonometry to provide students a full year of mathematics.

AP Statistics
Grades 11-12
Prerequisites: Advanced Algebra 2 and Trigonometry
Semester 1-2, One credit per semester

This is a year-long course in statistics that will culminate in an AP test and advanced placement credit at many colleges and universities. (See counseling department for list and qualifying score.) In an ever-more technical world, it has become increasingly important for students to develop a serious understanding of the basics of statistics. This includes data collection and presentation, the planning of a statistical study, the use of probability models and simulation to predict occurrences of events, and statistical inferences via confidence intervals and hypothesis testing. This course will prepare students that will have college/university majors in social sciences, health sciences, education, or business for further studies in their field. Writing and problem solving skills are essential qualities for students that take this course. A graphing calculator is required for this course, which allows students to more thoroughly investigate the mathematics being learned.

Pre-calculus
Grades 11-12
Prerequisites: Advanced Algebra 2 and Trigonometry
Semester 1-2, One credit per semester

Pre-calculus is the study of functions, their graphs, and their applications. Students will learn how to approach problems numerically, graphically, algebraically, and verbally. Topics include function families, rates of change, transformations, composition, inverse functions, logic, trigonometry, vectors, polar graphs, parametric equations, optimization, and limits. Students will be encouraged to comprehend abstract concepts, to make conjectures while persevering through challenging problems, and to develop a deeper understanding of pre-calculus topics. Students will routinely use graphing calculators to investigate graphs, discuss real-world problems, and explore concepts which lay the foundation for calculus or other advanced mathematics courses. A graphing calculator is required for this course, which allows students to more thoroughly investigate the mathematics being learned. Preferred: TI-84+

Advanced Pre-calculus
Grades 11-12
Prerequisites: A- or better in Advanced Algebra 2 and Trigonometry and Teacher Recommendation
Semester 1-2, One credit per semester

The intent of this course is to prepare students for taking AP Calculus BC the following year. The course is an in-depth and rigorous treatment of Pre-calculus and Trigonometry topics including challenging units in exponential functions, logarithms, sinusoidal functions, transformations of functions, polar equations, complex numbers, sequences and series, logistic functions, parametric equations, and symbolic logic. Initial topics in Calculus are introduced and considerable work is done with limits. Like the regular Pre-calculus course, students learn how to approach problems numerically, graphically, algebraically, and verbally. In this advanced course there will be very little review of previously-taught concepts. New topics will be covered at a faster pace and in greater
theoretical depth. The Advanced Pre-calculus curriculum is problem centered and inquiry based. Students should expect to be challenged through exploring, conjecturing, predicting, analyzing, and verifying mathematical ideas. A graphing calculator is required for this course, which allows students to more thoroughly investigate the mathematics being learned.

AP Calculus AB
Grade 12
Prerequisites: Pre-calculus or Advanced Pre-calculus
Semester 1-2
One credit per semester

Through intuitive, analytic, numerical, and graphical thinking, students will explore the fundamental concepts of Calculus. Topics include limit theory, continuity, the derivative, the definite integral, techniques of integration, applications of the derivative and definite integral, and differential equations. The use of technology and applications will be discussed throughout the course. Upon successful completion of the course, students will take the College Board Calculus AB Advanced Placement Exam. Students with qualifying scores on this exam will receive equivalent credit for one semester of calculus at many colleges and universities. (See counseling department for list and qualifying score.) A graphing calculator is required for this course, which allows students to more thoroughly investigate the mathematics being learned.

AP Calculus BC
Grade 12
Prerequisites: Pre-calculus or Advanced Pre-calculus
Semester 1-2, One credit per semester

This course covers all of the topics in Calculus AB, but includes additional topics that prepare students to take the College Board Calculus BC Advanced Placement Exam. Additional topics include limit theory, techniques of integration, logistic functions, series, additional theory of calculus, derivatives of parametric and polar functions, and possibly systems of differential equations, partial derivatives, multiple integrals and vector calculus. Student with qualifying scores on this exam will receive equivalent credit for two semesters of calculus at many colleges and universities. Students will also receive an AB subscore. (See counseling department for list and qualifying score.) A graphing calculator is required for this course, which allows students to more thoroughly investigate the mathematics being learned.

Please refer to the Computer Science Section for information on Computer Science Principles 1 and 2 and AP Computer Science.
The band program at Whitefish Bay High School offers instrumental musicians a variety of performance experiences based on the traditional concert band program. Students learn and use the fundamentals of wind and percussion performance skills and participate in concert settings. Additional performance experiences are offered through volunteer and audition ensembles such as Pit Orchestra, Solo/Ensemble Festival, and Spirit Band. The fundamental purpose of the Whitefish Bay High School Band program is to train young musicians to be able to perform successfully on the instrument of their choice. The students are trained with the purpose of becoming life-long musicians and being equipped to perform comfortably in traditional concert band and small ensemble settings. In the Whitefish Bay High School Band Program the relationship of the musician to the audience is critical and we strive to perform music and entertainment that is both rewarding for the performer and listener. The bands may travel on concert tours as part of this philosophy. Evaluation in all curricular bands is made through accumulated playing assessments and concert performances.

### BAY BANDS

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<th><strong>Concert Band</strong></th>
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<tr>
<td><strong>Grade:</strong> 9-12</td>
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<tr>
<td><strong>Prerequisites:</strong> Wind and percussion students with previous middle or high school band experience</td>
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<td><strong>Semester:</strong> 1-2, One credit per semester</td>
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The Concert Band is the CORE WFBHS wind band. This group is the primary performing ensemble focusing on fundamental performance concepts which lay the foundation for competency in instrumental music performance. Emphasis is placed on building ensemble skills such as balance, tuning, and non-verbal communication, as well as teaching music literacy through performance in band. Musicians who desire a relaxed pace while enjoying the rewarding aspects of making music should register for the Concert Band. Although no audition is required, previous experience in middle or high school band is expected. Attendance at performances such as home Football games, a few basketball games as well as major concerts is required. The Concert Band shares performances with the Wind Ensemble and will often combine with them on many musical selections.

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<th><strong>Wind Ensemble</strong></th>
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<td><strong>Grade:</strong> 9-12</td>
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<tr>
<td><strong>Prerequisites:</strong> Wind and percussion students by audition only</td>
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<tr>
<td><strong>Semester:</strong> 1-2, One credit per semester</td>
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The Wind Ensemble is the advanced WFBHS wind band where the emphasis is placed on playing complex wind ensemble repertoire. Wind Ensemble is open to selected wind and percussion students by audition only. Musicians who are self-motivated, independent, and challenge-driven should consider the Wind Ensemble. This course is typically preceded by the Concert Band. Wind Ensemble students should possess developed technique on their instruments and display proper rehearsal etiquette. Participation in the WSMA Solo/Ensemble Festival and enrollment in private lessons are additional considerations. Emphasis will be placed on reading a large amount of literature as students continue to maintain their individual fundamentals on their own. Instrumentation of the Wind Ensemble is limited and regular practice outside of class is expected. Attendance at performances such as home Football games, a few basketball games as well as major concerts is required. The Wind Ensemble performs more advanced literature independently and joins with Concert Band in performances as well.

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<tr>
<th><strong>STICKS Drumming</strong></th>
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<tr>
<td><strong>Grade:</strong> 9-12</td>
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<tr>
<td><strong>Prerequisites:</strong> Highly self-motivated, no previous experience required</td>
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<tr>
<td><strong>Semester:</strong> 1-2, One credit per semester</td>
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Student musicians who are interested in playing traditional and non-traditional percussion instruments (snare drum, bass drum, xylophone, marimba, steel pans, buckets, hand-clapping, common household items, etc.) should register for STICKS. The class is geared towards percussion students who learn music both by rote and written notation. The instruction of basic and intermediate rhythmic and pitch notation is incorporated throughout. Of note is the incorporation of Steel Pan or Steel Drum instruments and learning Jamaican/calypso style music. Advanced percussion students who enjoy reading music, a higher level of performance difficulty and have an interest in learning all percussion instruments, including mallets are welcome to enroll.
**Jazz Ensemble (a school day offering NOT zero hour)**

**Grade 9-12**

**Prerequisites:** Highly self-motivated wind and percussion students.

**Semester 1-2, One credit per semester**

The Jazz Ensemble is the WFBHS band where the emphasis is placed on playing jazz, rock, pop and fusion ensemble repertoire. Jazz Ensemble is open to highly motivated wind and percussion students (since the musical complexity can be higher than some Concert Band repertoire interested 9th graders should obtain HS director’s approval). Musicians who are self-motivated, independent, challenge-driven and prefer jazz/rock more than concert band literature should consider jazz ensemble. This course provides instruction in jazz-related rhythm, tone, style, and improvisation. The ultimate goal of this ensemble is to give interested students an opportunity to study and perform jazz ensemble literature and to learn about the various styles of jazz. Jazz Ensemble students will join with Concert Band/Wind Ensemble students for home football concerts, a few basketball games, major concerts as well as football independently. This course is typically preceded by performance in Concert Band. General Instrumentation: Alto Sax, Tenor Sax, Bari Sax, Trumpets, Trombones, Bass, El.

Guitar, Drum Set, auxiliary percussion. Auditions may be required for certain instruments or instrument groups.

**Band 101**

**Grade 9-12**

**Prerequisites:** Self-motivated students

**Semester 1-2, One credit per semester**

Band 101, A class for students who never played in band and want to begin playing a wind/percussion instrument and become part of our WFB HS Band program; A class for the student who may have started band in a primary grade but stopped and would like a refresher course before joining concert band/wind ensemble; And, an opportunity for the extra motivated student to learn a second instrument. Students would be included in Band performances as soon as possible. Students enrolled would be mentored by a current Concert Band/Wind Ensemble member and join Concert Band as soon as possible (1-2 semesters).

**Extra-Curricular**

Chamber Ensembles and Solo pieces are formed from volunteer musicians for concert and recital performances as appropriate.

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**BAY CHOIRS**

The choir program at Whitefish Bay High School offers students the opportunity to study and perform masterpieces of choral music. The repertoire used for the curriculum includes secular and sacred music of great Western classical composers as well as a wide variety of multicultural, folk, pop, acappella, patriotic, and spirituals. Concepts about music and musical skills are taught throughout the rehearsals, which include singing, listening, and analysis. Course requirements include performing in five annual public concerts. Singing assessments in an individual and group environment provide the cumulative data for the quarter and semester grades. Singing is the major focus of the musical experience, producing the foundation for a life-long relationship with music. Courses may be repeated or taken concurrently. Additional opportunities include participating in the annual weekend Choir Retreat, January Pops Concert production, all-school musical production, WSMA Solo and Ensemble Music Festivals, and the Choir tour for select choirs.

**Art Nouveau**

**Grades 9-12**

**Prerequisites:** None

**Semester 1-2, One credit per semester**

Art Nouveau (“new art”) is a mixed choir designed for first- and second-year choir students from any grade. This course focuses on the development of basic skills, vocal technique, music reading, and musicianship. Students may participate in the course regardless of prior experience and may register without an audition.

**Capriccio**

**Grades 10-12**

**Prerequisites:** Audition and consent of instructor

**Semester 1-2, One credit per semester**

Capriccio (“whim, fancy; whimsical, capricious”) is a choir of treble voices designed for the intermediate choir student. The required spring auditions measure music reading ability, tone quality, hearing ability, and previous choral experience. This course focuses on more challenging repertoire for treble voices and seeks to enhance vocal and musical skills at a higher level.
Bel Canto
Grades 10-12
Prerequisites: Audition and consent of instructor
Semester 1-2, One credit per semester

Bel Canto ("beautiful singing") is a balanced mixed choir designed for the advanced choir student. The required spring auditions measure music reading ability, tone quality, hearing ability, and previous choral experience. This course requires strong skills and commitment and focuses on a vast, difficult, and comprehensive repertoire for performance at both school and community events.

Extra-Curricular Choirs
Extra-curricular choirs are open to the entire student body, regardless of prior experience or ability. Tower Singers (for bass voices), and That Group (for treble voices), meet outside of class periods at either lunches or evenings. These groups include many students from the curricular choirs, but they also include other students who are not enrolled in choir for credit. Cantorei is a select chamber ensemble of 12-24 mixed voices chosen by audition each spring. Cantorei provides more experienced singers with further opportunities to explore unique and challenging repertoire. Cantorei performs frequently at school and community events.

Bay Orchestras

String Orchestra is for students who wish to advance in ability to play an orchestral instrument (violin, viola, cello or double bass). Students are required to perform in several public concerts each year. A varied and challenging repertoire is studied for the development of technical skills and advanced musicianship, with selected band students incorporated for the purpose of full symphonic literature. Periodic playing tests, written exams and clinics are given with an emphasis on musical growth and personal expression. Individual practice at home is expected and required. The String Orchestra participates in domestic and European tours on a regular basis. Orchestra members are also called upon to play in the pit orchestra for the annual high school musical. Special supplies are required, including the purchase of specified performance attire and an orchestra instrument, some of which may be rented from the school.

Advanced Orchestra
Grade 9-12
Prerequisites: Attainment of beginning level skills and director's permission
Semester 1-2, One credit per semester

This course offers instruction in the development of intermediate and advanced performing skills, including individual playing and ensemble techniques and disciplinary skills needed for performance. After school rehearsals and performances are required of all students as a part of the course.

Chamber Orchestra
Grades 10-12
Prerequisites: Successful audition and director's permission
Semester 1-2, One credit per semester

This course is designed to provide the advanced string musician the opportunity develop and refine technical, musical, and ensemble skills necessary for advanced rehearsals and performances in and out of school. After school rehearsals and performances are required of all students as part of the course.

General Music Non-Performance Based Courses

World Drumming
Grades 10-12
Prerequisites: None
Semester 1 or 2, One Credit

In this one semester course, students learn how to play drumming and other percussion and melody instruments taught in the "oral tradition" with the expectation that each individual and each percussion pattern is treated with equal respect and expectation. The phrase "right now is the most important time" is the mantra of this every day is a new day musical experience. Composition and the creative process are also taught. The geographic focus centers primarily in West Africa and Latin America, with students learning, creating and performing oral tradition music from Ghana and Cuba. The heart of this course is based on a cooperative environment created by the students present on any given day. Consequently, regular, daily, active participation is vital to success.
Digital Music  
Grades 10-12  
Prerequisites: None  
Semester 1 or 2, One credit

In Digital Music, students learn to produce, mix, edit, engineer, and add special effects to music projects. The projects include personal compositions, mastering of prerecorded performances and sound mixing of live performances. As a result of this course, students develop creative and critical thinking skills, along with overall musicianship including basic music theory, composition, vocabulary and listening skills. Through this course, students also have the opportunity to work with professional studio musicians on and off campus.

Intermediate Digital Music  
Grades: 10-12  
Prerequisites: Successful completion of Digital Music or teacher approval  
Semester 1 or 2, One Credit

In Intermediate Digital Music students will further their abilities to produce, mix, edit, engineer, and add special effects to a variety of digital recording projects. The projects include personal compositions, mastering of prerecorded performances, capturing, re-mixing, and mastering of live performances. Topics covered will include: Sampling, Live audio production, MIDI production, art of mixing and mastering, creating music for movies, working with musicians, and recording studio basics.

Music Theory  
Grades: 9-12  
Prerequisites: Background or experience in music  
Semester 1 or 2, One Credit

Music Theory is a one semester course that is designed to provide students the opportunity to build and expand upon their knowledge of music and its theoretical elements. Students will develop musical skills that will lead to a greater understanding of music composition and music theory. Through this course of study, students will learn to analyze, synthesize and create music with an understanding of the various techniques used in western music. Topics covered will include the fundamental elements of music (scales, tonality, intervals, chords) and the structural elements of music (cadences, harmony, melody, tonality, form).

AP Music Theory  
Grades: 9-12  
Prerequisites: Ability to read and write musical notation, or consent of instructor  
Semester 1-2, One Credit per semester

This college preparatory music theory curriculum introduces the student to musicianship, theory, musical materials, and procedures. The course will integrate aspects of melody, harmony, texture, rhythm, form, musical analysis, elementary composition, and, to some extent, history and style. Musicianship skills such as dictation and other listening skills, sight-singing, and keyboard harmony are important parts of the theory course. The student’s ability to read and write musical notation is fundamental to such a course. It is also assumed that the student has acquired at least basic performance skills in voice or an instrument.

Furthermore, students will complete additional ear-training exercises on music lab computers. These ear training exercises vary in difficulty and length. They are designed to sharpen the students’ aural perception and further prepare AP theory students to take the College Board AP Theory Exam.

MUSIC PARENTS ASSOCIATION WEBSITE:  
http://wfbmusicparents.wordpress.com/
Students are required by state law to complete three semesters of physical education in a sequence of three years. In exceptional medical cases or special circumstances, the sequence may be extended into senior year in order to fulfill these requirements. The student must pass the course requirements in order to pass the course. In addition, all students are swim tested each year and must pass the swim requirement before they graduate. All courses are coeducational, meet daily, are one credit and are included in the student's GPA.

Physical education at Whitefish Bay High School is a "fitness-based" program. Students will experience a variety of fitness activities, lifetime activities and team sports, all aimed at developing present and lifetime fitness. Heart rate monitors will be used in every class as assessment and educational tools.

"0" Hour classes are conducted from 6:48-7:41 a.m. Due to limited enrollment, priorities will be given to juniors taking the class for a required credit followed by students who are taking a "0" hour class as an elective.

**Health 9**
Grades: 9
Prerequisites: None

The purpose of this course is to enable each student to acquire the knowledge and skills to make healthful decisions for mental, physical, and social well-being. Units include mental health, violence prevention, substance abuse, CPR/First Aid, AED's, Human Growth and Development, environmental health and nutrition. Emphasis is placed on developing "health literate" students with the will and ability to practice health-enhancing behaviors and reduce health risks.

**Physical Education 9**
Grades: 9
Prerequisites: Pass swim test

The main goal of this class is to provide a foundation of skill development in various activities along with the understanding of the fitness components and concepts.

**Physical Education 9 - Swim**
Grades: 9
Prerequisites: Did not pass swim test

This course is designed for students who do not show evidence of being a proficient swimmer. Students receive swimming lessons until the required swimming proficient skills test is achieved. Once all students have passed the swimming test, the class then switches over to the PE 9 curriculum.

**THE FOLLOWING COURSES FULFILL PE GRADUATION REQUIREMENTS FOR THE GRADES INDICATED**

**Individual Challenge**
Grades: 10-11
Prerequisites: PE 9

This course appeals to those students who enjoy individualized activities that may be competitive or non-competitive. Activities may include badminton, tennis, golf, Frisbee golf, pickle ball, track & field, gymnastics, bowling, skating, orienteering, snorkeling, diving, surfing, scuba diving, kayaking, etc.

**Team Challenge**
Grades: 10-11
Prerequisites: PE 9

This course appeals to those students who desire competitive settings and engaging in team sport activities. Students will utilize previously learned skills and concepts while engaging in game play activities. This course may include football, soccer, lacrosse, hockey, cricket, rugby, basketball, volleyball, water polo, team handball, speedball, eclipse ball, etc.

**Lifetime Activities**
Grades: 10-11
Prerequisites: PE 9

This course appeals to those students who desire taking part in physical activity in a non-competitive setting. Students explore areas including fitness walking/jogging, weight training, yoga, Pilates, Zumba, dance, circuit training, Tae-Bo, core training, etc. At the end of the course, students will get the opportunity to design and implement a personalized fitness plan.
Zero Hour PE  
Grades: 11  
Prerequisites: PE 9

This class is for those who desire more scheduling flexibility and are self-motivated to perform well. Some of the unit offerings in this unique course include: outdoor education, floor hockey, dance, basketball, badminton, weight training, yoga, stress management, ultimate Frisbee, aerobic training, European team handball, speedball, and volleyball.

Personal Training  
Grades: 11  
Prerequisites: PE 9

This course is for students who prefer a more individualized setting for fitness and training. In this course, students will be creating their own fitness plan collaborating with various professionals, coaches, etc. to design a program that best meets their personal fitness goals or athletic training needs. Students will then implement their individualized fitness plans throughout the duration of the semester. Students will be setting goals and performing self-reflections on their progress towards meeting those goals.

THE FOLLOWING COURSES ARE ELECTIVE OPTIONS FOR THE GRADES INDICATED

Everyday Yoga  
Grades: 9-12  
Prerequisites: None

Yoga means to “unite” – the breath with the body. It famously has a style for EVERYONE’S needs – from the powerful/strength building, relaxing, building balance, flexibility, to just finding inner calm, concentration, and peace. It’s also great for self-discipline! Yoga is a class that is perfectly designed for diversity. Everyday Yoga will offer an opportunity for a diverse experience of many styles of yoga to meet the needs of the physically, mentally, or emotionally challenged, high level athletes, inflexible, injured, or stressed out. Perhaps you just don’t have the time or money to join an evening class! Ms. Burden is an RYT (Registered Yoga Teacher) and practicing enthusiast who will, joyfully, teach the class and bring in fellow teachers as occasional guests.

Individual Challenge  
Grades: 10-12  
Prerequisites: PE 9

This course appeals to those students who enjoy individualized activates that may be competitive or non-competitive. Activities may include badminton, tennis, golf, Frisbee golf, pickle ball, track & field, gymnastics, bowling, skating, orienteering, snorkeling, diving, surfing, scuba diving, kayaking, etc.

Team Challenge  
Grades: 10-11  
Prerequisites: PE 9

This course appeals to those students who desire competitive settings and engaging in team sport activities. Students will utilize previously learned skills and concepts while engaging in game play activities. This course may include football, soccer, lacrosse, hockey, cricket, rugby, basketball, volleyball, water polo, team handball, speedball, eclipse ball, etc.

Lifetime Activities  
Grades: 10-12  
Prerequisites: PE 9

This course appeals to those students who desire taking part in physical activity in a non-competitive setting. Students explore areas including fitness walking/jogging, weight training, yoga, Pilates, Zumba, dance, circuit training, Tae-Bo, core training, etc. At the end of the course, students will get the opportunity to design and implement a personalized fitness plan.

Personal Training  
Grades: 11-12  
Prerequisites: PE 9

This course is for students who prefer a more individualized setting for fitness and training. In this course, students will be creating their own fitness plan collaborating with various professionals, coaches, etc. to design a program that best meets their personal fitness goals or athletic training needs. Students will then implement their individualized fitness plans throughout the duration of the semester. Students will be setting goals and performing self-reflections on their progress towards meeting those goals.

Senior Team Challenge  
Grades: 12  
Prerequisites: None

This course appeals to seniors who desire to continue their participation in team sports and competitive activities. The course will follow a similar format as Team Challenge.
Graduation requirements are one year of Biology, one year of a physical science (Chemistry in the Community, Chemistry, Physics Concepts & Applications, or Physics), and a third year of science that may include Biomedical, Medical Interventions or Principles of Engineering. The Whitefish Bay High School science staff strongly believes all students should develop a broad understanding of biology, chemistry and physics by completing coursework in each of these areas prior to graduation. Note: Eighth graders who successfully complete Biology at WFBHS must complete three additional years of science in grades 9-12 that include at least one year of physical science and one semester of life science (Environmental Science, Anatomy & Physiology, AP Environmental Science, or AP Biology).

**Biology**
Grades 9-12
Prerequisites: Grade 9
Semester 1-2, One credit per semester

Biology is a laboratory science course required for graduation. It provides students with a general overview of biological subject matter, including major characteristics of life, cell biology, genetics, ecology, physiology/anatomy, and taxonomy.

**Chemistry in the Community (ChemComm) A**
Grades 11-12
Prerequisites: Biology
Semester 1-2, One credit per semester

ChemComm involves the study of water quality, chemical resource conservation, petroleum resources, foods, and atmospheric chemistry. Emphasis is placed upon practical applications of chemistry and the relationship between chemistry, personal health, and life in the community. ChemComm includes quantitative calculations but with less emphasis on theoretical and mathematical applications than in Chemistry. Although ChemComm satisfies one year of laboratory science for most college entrance requirements, it is not recommended for students planning careers in a science-related field. Furthermore, ChemComm is not an acceptable prerequisite for any Advanced Placement Science course.

**Chemistry in the Community (ChemComm) B**
Grades 11-12
Prerequisites: Biology and Teacher Recommendation
Semester 1-2, One credit per semester

Chemistry in the Community (ChemComm) B is similar to Chemistry in the Community (ChemComm) A, but covers topics at a more manageable pace and in less depth. Emphasis is placed upon practical applications of chemistry and the relationship between chemistry, personal health, and life in the community. Only students recommended by teachers or counselors may take this course.

**Chemistry**
Grades 10-12
Prerequisites: Biology and Algebra 1
Semester 1-2, One credit per semester

Chemistry is a high school chemistry course which involves scientific measurement, problem solving, classifying matter, studying atomic structure, using the periodic table, understanding the types of chemical bonds, molecular geometry, writing chemical formulas and balancing equations, stoichiometry, kinetic molecular theory, states of matter, solutions, thermochemistry, and redox reactions. Through lecture and discussion, textbook reading, lab demonstrations and laboratory experiments, Chemistry emphasizes real world applications, problem solving and critical thinking skills that will prepare students for their future. This course is essential for students planning to pursue a science-related career.

**Physics Concepts and Applications**
Grades 11-12
Prerequisites: Completion or concurrent enrollment in a second year Algebra course
Semester 1-2, One credit per semester

Students in this course will explore the major topics of Physics through the use of hands-on laboratory explorations, teacher demonstrations, and projects. Students will learn proper laboratory and analysis techniques that will be used throughout the course to learn the main concepts of such topics as fluids, thermodynamics (heat), electricity, waves, energy, dynamics, and kinematics. Students will demonstrate their knowledge on these topics through a series of hands-on projects that have strong connections to our everyday lives. Although Physics Concepts and Applications satisfies one year of laboratory science for most college entrance requirements, it is not
recommended for students planning careers in a science-related field.

**Physics**  
**Grades 11-12**  
**Prerequisites:** Completion or concurrent enrollment in Advanced Algebra 2 / Trigonometry  
**Semester 1-2, one credit per semester**

Physics is the study of energy, space, and time at the most fundamental level. Physics principles provide the foundation for engineering, technology, and other scientific disciplines. Students will use empirical evidence to formulate and describe the relationships between physical quantities. These formulations are constituents to theories or models that provide a predictive and testable framework for describing the behavior of matter/energy in the universe. Physics is a college preparatory science course with emphasis on problem solving, laboratory techniques, and data analysis. Students will learn topics in both classical and modern physics that include kinematics, dynamics, gravitation, rotation, energy, momentum, mechanical waves, EM waves, and Relativity. Physics is highly recommended for college preparation and is a must for students planning on careers in science and technology.

**Students may also elect from the following science course offerings. The science staff recommends that these courses be selected upon completion of, or in addition to - not in place of - biology, chemistry and physics coursework.**

**Environmental Science**  
**Grades 11-12**  
**Prerequisites:** Successful completion of Biology, and ChemComm or Chemistry  
**Semester 1-2, One Credit per semester**

Environmental Science is designed to provide students with the scientific principles and methodologies required to understand the interrelationships of the natural world and to apply that understanding to environmental problems and issues. Topics will include ecology and botany as well as economics, sociology, and government. Students will directly assess environmental quality through outdoor observation, water quality testing, soil and air analysis, and research in our botanical greenhouse. This course is designed to use scientific methodologies to understand ecosystems and assess human impact as well as evaluating solutions to environmental problems in the context of our culture.

**Anatomy and Physiology**  
**Grades 11-12**  
**Prerequisites:** Successful completion of Biology, and ChemComm or Chemistry  
**Semester 1-2, One Credit per semester**

Students in Anatomy and Physiology will investigate the structure and function of the human body under normal and disease conditions. Body systems covered will include muscular-skeletal, digestive, cardiovascular, immune, nervous and reproductive. Emphasis will be placed on the application of these topics to health, exercise, medical careers, and the use of technology to understand body systems and diagnose disease.

**AP Biology**  
**Grades 11-12**  
**Prerequisites:** B or better in both semesters of Biology and Chemistry or teacher permission  
**Semester 1-2, One credit per semester**  
**Lab/Supply Fee - $25.00 additional supplies**

AP Biology will satisfy a year of science toward Whitefish Bay High School graduation and will provide one year (two semesters) of laboratory science for college entrance requirements.

The AP Biology course is the equivalent of a yearlong introductory biology course taken at the college level by students intending to major in biology or fields related to biology. AP Biology covers the general areas of molecules and cells, genetics and evolution, organisms and populations. AP Biology has a strong laboratory emphasis and provides students with the conceptual framework, factual knowledge and analytical skills required to pass the College Board AP Examination given each May. Students passing the AP exam may earn college credit and may avail themselves of advanced placement opportunities at many colleges and universities. Students enrolled in AP Biology will be required to complete a summer assignment prior to the beginning of the AP course. After the AP Biology exam in quarter 4, students will perform a cat dissection in the laboratory. This dissection is a required part of the course expectations and will count significantly toward the fourth quarter grade.
AP Chemistry
Grades 11-12
Prerequisites: B or better in both semesters of Chemistry or teacher permission
Semester 1-2, One credit per semester
Lab/Supply Fee - $20.00 additional supplies

AP Chemistry is a course designed for students interested in science-related majors and careers. Students who complete this course have the possibility of receiving college credit and/or advanced placement in science programs at many colleges and universities. There are ten major units of study based on the AP Chemistry Curriculum Framework, including atomic theory, reaction types and stoichiometry, chemical bonding, states of matter, kinetics, thermodynamics, equilibrium, acids/bases, solution chemistry (buffers, titrations, solubility), and electrochemistry. College preparatory skills are developed through advanced problem solving, guided inquiry labs, and use of technology. Students enrolled in AP Chemistry will be required to complete a summer assignment prior to the beginning of the AP course.

AP Environmental Science (APES)
Grades 11-12
Prerequisites: B- or better in both semesters of Biology and Chemistry
Semester 1-2, One credit per semester

AP Environmental Science is designed to provide students with the scientific principles and methodologies required to understand the interrelationships of the natural world and to apply that understanding to environmental problems and issues. Lectures, discussions, laboratory investigations, and field data collection and analysis will be used to identify and investigate environmental problems. Students will also evaluate the risks associated with these problems and examine potential solutions. The course is an application of biology, chemistry, and physics and integrates elements of history, politics, and economics into quantitative and qualitative assessment of the environment. The course is intended as preparation for the College Board Advanced Placement Exam given in May of each year. Because of this intent, APES is significantly more difficult and will require larger time commitment than the regular Environmental Science course.

AP Physics C - Mechanic
Grades 11-12
Prerequisites: Physics or completion of Calculus AB or BC
* Students that are juniors may take Mechanics concurrently with Calculus AB or BC with consent of instructor.
Semester 1-2, one credit per semester
Lab/Supply Fee - $20.00 for additional supplies

AP Physics C is a calculus based physics course with emphasis on classical mechanics, data analysis, and project engineering. This is “Rocket Science!” Students will explore the dynamics of model rocketry through the use of computer aided design, flight modeling, model construction, and flight testing. AP Physics C is equivalent to a one semester college physics course in mechanics that is required for science and engineering majors. Topics include kinematics, dynamics, energy, momentum, rotation, oscillations, and orbital mechanics.

Calculus III / AP Physics C EM
Grades 11-12
Prerequisite: Calculus AB or BC
Semester 1-2, one credit per semester (see instructor for math/science credit options)
Lab/Supply Fee - $20.00 for additional supplies

Calculus III/AP Physics C EM is an advanced integrated course in mathematics, science, and technology. Calculus III concepts are introduced and applied to both physics and engineering applications related to Electromagnetic Theory which describes the behavior of the fundamental mechanisms of the universe. This course breaks out of the traditional mode of teaching advanced mathematics independent of rigorous science and technological applications. Core physics principles of kinematics, dynamics, and energy are covered in great depth along with advanced mathematical content such as vector products, partial derivatives, and line, surface, and volume integrals. The lab component of the course covers the statistical treatment of data and includes the use of measurement hardware and data analysis software. Students will learn the integrated language of advanced mathematics and science so that they are able to express their ideas and understanding of applications through collaborative problem solving groups, projects, and presentations.
The following courses are also options for students to fulfill their 3 years of science. These courses can be taken for either science credit OR general electives towards graduation. The science staff recommends that these courses be selected upon completion of, or in addition to - not in place of - biology, chemistry and physics coursework.

**Principles of Engineering**  
Grades 10-12  
Prerequisites: Algebra 1  
Semester 1-2, (Transcript as either two "Engineering" credits or two "Science - Elective" credit)  
Lab/Supply Fee - $15 for engineering notebook and other supplies

Principals of Engineering is a foundational course in the Project Lead The Way series that helps students understand the field of engineering, exploring what engineering is and engineers do. Through the exploration of various technology systems and manufacturing processes, students will learn how engineers use math, science and technology to solve real world problems. The course covers four main units: Energy and Power, Control Systems, Materials, and Statics and Dynamics. Students will have the opportunity to use a variety of software and building materials to solve complex problems. Students will also work with robotics kits as well as learn the fundamentals of robot/machine programming. Students who successfully complete this course and score high enough on the end of year exam can apply for college credit from several PLTW affiliate universities.

**Medical Interventions**  
Grades 10-12  
Prerequisites: Completion of Biology Semesters 1 and 2, (Transcript as either two "Engineering" credits or two "Science - Elective" credit)  
Lab/Supply Fee: $25 for lab notebook, binder and other lab supplies

In this Project Lead the Way Biomedical Science course, students follow the life of a fictitious family as they investigate how to prevent, diagnose, and treat disease. Students explore how to detect and fight infection; screen and evaluate the code in human DNA; evaluate cancer treatment options; and prevail when the organs of the body begin to fail. Through real-world cases, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics. Students who successfully complete this course and score high enough on the end of year exam may apply for college credit from several PLTW affiliate universities.

**Principles of Biomedical Sciences**  
Grades 9-12  
Prerequisites: Completion of or concurrent enrollment in Biology  
Semester 1 and 2 - (Transcript as either two "Engineering" credits or two "Science - Elective" credit)  
Lab/Supply Fee - $25 for notebook and other supplies

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, medical history, and explore medical treatments that might have prolonged the person’s life. These activities and projects introduce students to human physiology, basic biology, medicine, and research processes while allowing students to design their own experiments to solve problems.
SOCIAL STUDIES

Global Studies: Past & Present
Grade 9
Prerequisites: None
Semester 1-2, One Credit per Semester

Global Studies builds upon the World History segment begun in grades 6 and 7. It is an introductory level survey course of world events from 1800 to the present. The end goal of this course is to equip students with the skills, tools, and analytical thinking abilities to fully participate as a productive citizen in a changing world through analysis and understanding of past historical events and the relationship of those past events to today. This yearlong course is structured in 10 chronological units: A Review Bridge Unit (reviewing the building blocks of modern societies taken from the Renaissance, the Scientific Revolution, the Enlightenment, the English Civil War and finishing with the French Revolution), Industrial Revolution, Imperialism (Africa & SE Asia), Imperialism (China & Japan), World War I and the Russian Revolution, Between the Wars and the Rise of the Dictators, World War II, The Cold War, Emerging Nations and Struggles for Democracy, and Global Interdependence and Unresolved Problems in the Modern World.

United States History 1
Grade 10
Prerequisites: Global Studies
Semester 1 or 2, One credit per semester

This is a survey course based on the history of America from 1850 to 1900. It takes into account the buildup of sectionalism in America leading to the Civil War. Reconstruction, the American West and the industrialization of America are also major topics covered this semester. Emphasis is placed on major trends, biography, significant documents and relationships to present day events within the context of aiding students in the art of critical thinking.

United States History 2-3
Grade 11
Prerequisites: United States History 1
Semester 1-2, One credit per semester

This is a survey course based on the history of America from 1900 to the present. The first semester focuses on America from 1900 through World War II. Second semester the content emphasizes post war America to the present. Emphasis is placed on major trends, biography, significant documents and relationships to present day events within the context of aiding students in the art of critical thinking.

AP United States History
Grade 11
Prerequisites: Semester grades of B or better in freshman and sophomore English and Social Studies courses
Semester 1-2, One Credit per Semester

AP United States History is a challenging course that is meant to be the equivalent of a freshman college course and can earn students college credit. It is a two-semester survey of American history from the age of exploration and discovery to the present, with political, social, economic, intellectual, diplomatic, and cultural approaches. Solid reading and writing skills, along with a willingness to devote considerable time to homework and study, are necessary to succeed. Emphasis is placed on critical and evaluative thinking skills, essay and research writing, interpretation of original documents and literature, and historiography, or the "history of history".

AP United States Government and Politics
Grade 12
Prerequisites: Semester grades of B or better in freshman, sophomore, and junior English and Social Studies courses
Semester 1-2, One Credit per Semester

Advanced Placement United States Government and Politics is a full year course designed to give students an analytical perspective on government and politics in the United States. This course includes both the study of general concepts used to interpret the United States government and politics and the analysis of specific examples. It also requires familiarity with the various institutions, groups, beliefs, and ideas that constitute US government and politics. Upon completion of the course, students will take the spring AP exam.
**American Government**  
*Grade 12  
Prerequisites: Junior year United States History  
Semester 1 or 2, One credit*

This course focuses on the principles and ideas behind our form of government and how it functions. The major topics of study include the Federal system, the US Constitution, state government, local government, the individual and the law, and the participating citizen.

**Leadership for Social Justice**  
*Grade 10-12  
Prerequisites: None  
Semester 1 or 2, One credit per semester*

This social studies elective course will consist of three main units. First, students will explore their own leadership strengths and areas of weakness, along with various leadership styles and their levels of effectiveness. Then, students will research and present on topics related to inequity, such as issues associated with gender, race, or sexual orientation. Finally, students will identify specific inequities they see in their school and community and, using a service learning format, will create an action plan including communication, networking and collaboration efforts to influence positive change.

**Contemporary Issues**  
*Grades 10-12  
Prerequisites: None  
Semester 1 or 2, One credit*

In this course some current problems of society are studied. These problems may be international, national, state, or local. Through a study of current problems, the students discover ways in which the citizen can become better informed and actively involved in the democratic process. Student discussion is emphasized in this course. This semester long course may only be taken once.

**World Cultures**  
*Grades 10-12  
Prerequisites: None  
Semester 1 or 2, One credit*

World Cultures is a course designed for those interested in studying the incredible diversity of our world by providing a tour of the history, cultures, and environments of our planet. Through the use of multiple sources, video, music, photography, literature, food and a whole host of experiences, students will discuss and explore topics that include life, death, religion, cultural traditions, family, the meaning of life, and stereotypes and prejudices. World Cultures provides a platform for students to learn about other cultures without traveling.

**Economics**  
*Grades 11-12  
Prerequisites: United States History 1  
Semester 1 or 2, One credit*

This course is designed to introduce students to the economic realities of the modern world. It is a myth that economics only involves the use of money. Economics focuses on the choices that people make every day as consumers, the choices made by business, and the choices made by government. Economics explores the reasons why society makes the choices it does and how those decisions may affect both the individual and the group. Economics is, in reality, a study of human behavior within the confines of various economic systems and laws. This course will introduce the concept that every decision made by our society, from consumer to business to government, has an economic cost and/or consequence. The process should allow the students to choose what for them or society in general would be the best combination of costs and benefits.

**Psychology**  
*Grades 11-12  
Prerequisites: United States History 1  
Semester 1 or 2, One Credit*

This survey course introduces students to the study of human development. Using basic methods of psychological research, students will learn about the various factors influencing human behavior. Topics of study will include sensory processes and perception, learning and memory, motivation, emotion, intelligence, the structure of personality, abnormal psychology, therapy, and the biological basis of behavior. In-class experiments and demonstrations are frequently used to illustrate and clarify major concepts. An emphasis is placed upon students relating the course content to their own lives.

**AP Economics**  
*Grade 12  
Prerequisites: Semester grades of B or better in Social Studies and upper-level Math courses  
Semester 1-2, One credit per semester*

This course is actually two separate courses, with two separate AP Exams in the spring. The study of economics is divided into two main parts: macroeconomics and microeconomics. Using the university system as a base, the high school will offer a year-long microeconomics and macroeconomics survey. Microeconomics comes from the Greek work for "small".
It is concerned less with the small elements in an economy that it is with the individual elements. It is the study of how the choices of individual decision-making units and the function of individual markets determine how society's scarce resources are allocated and how income is distributed among its members. Macroeconomics comes from the Greek word for "large". It is concerned less with the large elements in an economy than it is with the collective or aggregated elements, regardless of size. It is the study of how many and aggregate expenditure or investment behavior determines the levels of output, employment and prices within an entire economic system. Students will need to commit additional independent time and effort second semester for their preparation to take both the AP Macroeconomics Exam and the AP Microeconomics Exam in May.

**AP Psychology**  
Grade 12  
Prerequisites: Cumulative GPA of 3.0 or higher  
Semester 1-2, One credit per semester

Through the use of a systematic and scientific method of study, this AP course in Psychology will introduce students to the behavior and mental processes of human beings and other animals. Students will be exposed to the psychological facts, principles and theories associated with each of the major subfields of psychology - biological bases of behavior, sensation and perception, states of consciousness, learning, cognition, motivation and emotion, developmental psychology, personality, testing and individual differences, abnormal psychology, treatment of psychological disorders and social psychology. Students will also learn about and use methods of study employed by psychologists. This class is designed to be comparable to an introductory college course in psychology. In addition all students are expected to take the AP exam given in the spring.
**WORLD LANGUAGE**

- Students must earn a C- or better to advance to the next world language level unless granted teacher exception.
- Students may not repeat a World Language course without teacher approval.

### French Level 1
**Grades 9-12**  
**Prerequisites:** None  
**Semester 1-2, One credit per semester**

This beginning course aims at developing the basic skills of understanding, speaking, reading, and writing French within the limits of the vocabulary, grammar, structure, and cultural concepts of first level material. Students practice all skills, working from oral, written, and visual stimuli. The cultural emphases are daily life in French-speaking countries throughout the world and the geography of France. This course may have additional workbook fees.

### French Level 2
**Grades 9-12**  
**Prerequisites:** C- or better in French Level 1  
**Semester 1-2, One credit per semester**

This course seeks to increase the student's ability to understand, speak, read and write French. Listening and speaking activities become more intense, and reading and writing practice continues on a more advanced level. The cultural emphasis is Paris. This course may have additional workbook fees.

### French Level 3
**Grades 10-12**  
**Prerequisites:** C- or better in French Level 2  
**Semester 1-2, One credit per semester**

The goal of this third year French is to further develop the ability to understand and communicate orally and in writing. It includes a comprehensive review of levels 1 and 2 grammar, intensive vocabulary building, and reading short stories and plays. The cultural emphasis is French history. This course may have additional workbook fees.

### French Level 4
**Grades 11-12**  
**Prerequisites:** C- or better in French Level 3  
**Semester 1-2, One credit per semester**

This course seeks to develop the student's ability to read unabridged French literature of moderate difficulty for both content and critical evaluation as well as to develop the student's ability to speak, understand, read, write, and make contemporary cultural references on a mature level. A grammar review is part of the course work. This course requires the purchase of a textbook.

### AP French
**Grade 12**  
**Prerequisites:** C- or better in French Level 4  
**Semester 1-2, One credit per semester**

This is a college level course specifically designed to prepare students for the College Board AP Exam in French Language. Satisfactory achievement on this exam carries college credit and advanced course placement at many colleges and universities. Beyond AP Exam preparation, students will find this course very useful in sharpening their facility in speaking, writing, and reading. The course concentrates on refining language skills, with particular emphasis on speaking and writing. Some degree of independent study will be part of the course, and a wide variety of French literature is offered. This course requires the purchase of a textbook of approx. $50.00

### German Level 1
**Grades 9-12**  
**Prerequisites:** None  
**Semester 1-2, One credit per semester**

The primary goal of the first year course is to begin developing proficiency in the four basic skills: listening, speaking, reading, and writing German. The emphasis is on communication within the limits of the vocabulary, grammar, and structure of the first year text and supplementary materials. A secondary goal is to increase students' knowledge and appreciation of the diverse cultures of the countries whose language they are learning. This course may have additional workbook fees.

### German Level 2
**Grades 9-12**  
**Prerequisites:** C- or better in German Level 1  
**Semester 1-2, One credit per semester**

This course continues to develop proficiency in the four basic skills: speaking, listening, writing and reading. Cultural awareness is fostered through exposure to written and spoken language, video, audio and film. This
course has additional workbook fees in the amount of $20.00.

**German Level 3**
Grades 10-12
Prerequisites: C- or better in German Level 2
Semester 1-2, One credit per semester

The goal of the third level class is to further develop students' abilities in the four basic skills as well as expand students' understanding of the role of the German-speaking countries within a broader European context. Readings, discussions and film are used to survey German cultural history from the fall of Rome through the 19th century, including the Vikings, the Middle Ages and the Reformation.

**German Level 4**
Grade 11-12
Prerequisites: C- or better in German Level 3
Semester 1-2, One credit per semester

Students expand their abilities to read, discuss and understand German. Longer works are covered, including short stories and plays. Significant developments in the German-speaking countries in the twentieth-century are explored through readings, discussions, presentations and film.

**AP German**
Grade 12
Prerequisites: C- or better in German Level 4
Semester 1-2, One credit per semester

This course is designed to follow a college level curriculum and to prepare students for the College Board German AP examination. Success on the examination carries college credit and advanced placement status in college. Students' language skills are honed through a survey of the social and cultural developments in the German-speaking countries since the end of the Second World War. Readings, discussions, presentations and film are the primary means of achieving competence in the language. This course may have additional workbook fees.

**Spanish Level 1**
Grades 9-12
Prerequisites: None
Semester 1-2, One credit per semester

In this course, students are introduced to the fundamentals of understanding, speaking, reading, and writing Spanish. The culture of Spanish speaking countries is also a part of the course work. Practice in all skills is provided through written, oral, listening and reading exercises. This course may have additional workbook fees in the amount of $15-20.00.

**Spanish Level 2**
Grades 9-12
Prerequisites: C- or better in Spanish Level 1
Semester 1-2, One credit per semester

This course provides a continuing opportunity for students to develop their ability to read, speak, write; and understand Spanish. Regular practice in the use of vocabulary is stressed with increasing emphasis placed on the structure of the language in writing and speaking exercises. Spanish culture is studied and reading skills are further developed. This course may have additional workbook fees in the amount of $15-20.00.

**Spanish Level 3**
Grade 10-12
Prerequisites: C- or better in Spanish Level 2
Semester 1-2, One credit per semester

Students develop the ability to communicate and understand conversation of average tempo. Students reading and listening skills are further developed through the use of native sources pertaining to certain cultural aspects. Emphasis is on communication. A review of previous grammar learned and an extension into advanced grammar is part of the course. This course may have additional workbook fees in the amount of $15-20.00.

**Spanish Level 4**
Grades 11-12
Prerequisites: C- or better in Spanish Level 3
Semester 1-2, One credit per semester

Students continue to develop the ability to read Spanish literature of average difficulty and to understand conversation of average tempo and to communicate successfully in the language.

**Hispanic Literature**
Grade 12
Prerequisites: Concurrent enrollment or C- or better in Spanish Level 4
Semester 1-2, One credit per semester

Advanced class that may serve as an alternative to AP Spanish or taken concurrently with it that bridges the gap between high school and college level expectations. Introduces modern Hispanic, Spanish and Latin American literary texts and their historical, cultural, and theoretical contexts. Emphasizes critical reading and oral and written analysis of the literary works. Grammar is taught and used in context with the readings. Advanced work challenges students to be more analytical and
creative through expanded assignments, real-world applications and enrichment opportunities.

AP Spanish
Grade 12
Prerequisites: C- or better Spanish Level 4
Semester 1-2, One credit per semester

This is a college level course designed to prepare students to take the College Board AP Spanish Language Exam. Satisfactory achievement on this exam carries college credit and advanced course placement in college. Emphasis is on building the skills of speaking, listening, reading, and writing. This course requires the purchase of textbooks in the amount of approx. $100.00