



ST. EDWARD
HIGH SCHOOL

SPONSORED BY THE BROTHERS OF HOLY CROSS

2013-2014

COURSE CATALOG

ST. EDWARD HIGH SCHOOL

MISSION STATEMENT

St. Edward High School, a Catholic school in the Holy Cross tradition, educates the minds and hearts of young men to have the competence to see and the courage to act as men of faith.

We believe in:

- **FAITH:** Formation of young men in a Faith-based tradition that is God-centered and emphasizes the acceptance of each person
- **EXCELLENCE:** An ongoing commitment to excellence in academics, as well as co-curricular programs
- **RELATIONSHIPS:** A welcoming, family-oriented school community
- **SERVANT LEADERSHIP:** Servant Leadership as a way of life for all our community members

EXECUTIVE VICE PRESIDENT

Dr. Gregg Good

DEAN OF ACADEMICS

Dr. Frank O'Linn

ASSOCIATE DEAN OF ACADEMICS/IB COORDINATOR

Mr. Stergios Lazos

COORDINATOR OF COUNSELING

Mrs. Lauren Beaudry

SCHOOL COUNSELORS

Mrs. Lauren Beaudry

Mr. Thomas Carey

Mr. Grant Wanner

COLLEGE ADVISORS

Mr. Michael Homza

Mr. Geoff Morton

Mr. Thomas Splawski

Counseling Center: 216 221-4230

COURSE SELECTION INTRODUCTION

Registration will be conducted during the months of February and March. Students and parents are encouraged to read this catalog thoroughly. Students should select their courses based on the information contained in this catalog, coupled with input from faculty and school counselors. Students and parents also need to recognize that course selections are final. All St. Edward High School students have been assigned a school counselor. Students have an opportunity to meet with their respective counselors during the course selection process. Counselors will use this meeting time to assist each student in choosing courses that will best enable him to meet the graduation requirements, while also affording him educational opportunities that will best match his academic abilities and future plans.

ACADEMIC NOTES

1. **ACADEMIC COURSE LOAD:** All students are required to carry at least six classes each term. All freshmen carry at least seven per term or an average of seven.
2. **GRADUATION:** Requirements are listed on page 4. All students must complete all required courses and earn a minimum of 24 credits to be eligible to graduate.
3. **COURSE CHANGES:** Before registering for courses for the year, students should first read this course catalog thoroughly and choose their courses carefully. Alternate choices are required for all elective courses. Once registration is completed, courses will be changed for the following conditions:
 - There is an error in the original schedule.
 - The student is academically misplaced.
 - There is a scheduling conflict among chosen courses.

Note: A \$25.00 fee is assessed for any changes in a student's schedule that do not meet the above conditions.

4. **COURSE CANCELLATION:** Individual elective courses may be cancelled due to insufficient enrollment.

QUALITY POINT SCALES

<u>Grade</u>	<u>Regular</u>	<u>Honors</u>	<u>AP or weighted IB</u>
A+.....	4.0.....	4.5.....	5.0
A.....	4.0.....	4.5.....	5.0
A-.....	3.7.....	4.2.....	4.7
B+.....	3.0.....	3.8.....	4.3
B.....	3.0.....	3.5.....	4.0
B-.....	2.7.....	3.2.....	3.5
C+.....	2.3.....	2.8.....	3.3
C.....	2.0.....	2.5.....	3.0
C-.....	1.7.....	2.2.....	2.7
D+.....	1.3.....	1.3.....	1.3
D.....	1.0.....	1.0.....	1.0
D-.....	0.7.....	0.7.....	0.7
F.....	0.0.....	0.0.....	0.0

GRADUATION REQUIREMENTS

Total of 24 Credits Required

- Religious Education – *4 credits*
- English – *4 credits*
- Mathematics – *4 credits*
- Science – *3 credits (must include 3 lab sciences of Biology, Chemistry and Physics, or any 4 credits for participants in the IB Diploma Programme)*
- Social Studies – *3 credits***
- Foreign Language – *completion of 2 levels**
- Computer – *Intro. to Computer*
- Fine Arts – *1 credit****
- Health – *½ credit*
- Physical Education – *½ credit or exemption*
- Completion of Community Service Program
- Completion of Senior A.C.E. Program

* Foreign Language – a minimum of two sequential years of the same language in high school.

**Ohio requires at least one elective that includes financial literacy. Eligible courses are Economics, AP U.S. Government & Politics, AP Comparative Government & Politics, or Business and Entrepreneurship

***St. Edward requires that ½ credit be taken during high school. Ohio permits ½ credit of this requirement to be met by courses from grades 7 and 8, even if they were not for high school credit.

POLICY ON POST-SECONDARY EDUCATIONAL OPTIONS PROGRAM

St. Edward High School recognizes the value of student participation in appropriate Post-Secondary Educational Options Program (PSEOP). The school further recognizes these are educational opportunities that should supplement, not replace, the St. Edward High School educational program. With this in mind, St. Edward High School has established the following provisions regarding student participation in the PSEOP

- The student needs approval from his School Counselor before enrolling in an approved PSEOP.
- The course taken as a PSEOP must not currently be a component of the St. Edward High School curriculum and as such not available for the student to take at St. Edward.
- Since the course must not be available at St. Edward High School it may only serve as a supplement to our current academic program in the context of an elective being taken for individual enrichment.
- No specific Graduation Requirement may be fulfilled through the use of a PSEOP unless extraordinary circumstances preclude a student from completing his graduation requirements at St. Edward High School.
- Students are eligible to take a PSEOP class if the daily St. Edward schedule accommodates the desired PSEOP.
- If a student were enrolled in an approved PSEOP class, his course load at St. Edward High School would be reduced to accommodate his attendance at the PSEOP.
- A reduced class load at St. Edward High School, to accommodate attendance in an approved PSEOP that fits into the St. Edward daily schedule, would not translate into any reduction in tuition at St. Edward.
- St. Edward High School assumes no financial responsibility for the costs associated with the PSEOP. The student and/or his family are responsible for coordinating all activities associated with the cost of the PSEOP (including contact and discussions with the appropriate local and/or state parties associated with the program's funding.)
- The student's St. Edward High School Transcript will reflect the student's participation in the PSEOP.
- While the student's grade in a PSEOP class will appear on his St. Edward Transcript, the grade will not be calculated into the student's Grade Point Average.

ENGLISH DEPARTMENT

English 1

Grade 9, 1 credit, full year

Course #011

In this course, students gain basic skills in composition, grammar, literature, and vocabulary. Instruction in composition includes formulating a thesis statement and mastering the five-paragraph essay. An introduction to research methods and MLA format is also included. Opportunities for writing include expository essays, persuasive essays, descriptive essays, narratives, and creative writing. The proper use of grammar is emphasized as a component of composition instruction. Instruction in literature includes basic elements such as theme, plot, character, and setting, as well as literary techniques and styles. Short stories, plays, novels, and poetry are analyzed, as literature and composition are blended throughout the course. Regular vocabulary and spelling lessons are administered.

Honors English 1

Grade 9, 1 honors credit, full year

Course #010

In this course, students gain advanced skills in composition, grammar, literature, and vocabulary. Instruction in composition includes formulating and supporting an original thesis statement. Mastery of the five-paragraph essay is the focus of writing instruction, and an introduction to research methods and MLA format is also included. Opportunities for writing include expository essays, persuasive essays, descriptive essays, narratives, and creative writing. The proper use of grammar is emphasized as a component of composition instruction. Instruction in literature includes basic elements such as theme, plot, character, and setting, as well as literary techniques and styles. Short stories, plays, novels, and poetry are analyzed, as literature and composition are blended throughout the course. Critique and analysis are advanced at this level. Regular vocabulary and spelling lessons are administered. This is an advanced course and is recommended for highly motivated students with strong study skills.

English 2

Grade 10, 1 credit, full year

Course #021

This course builds upon the composition, grammar, literature, and vocabulary skills acquired in the freshman year. A variety of compositions, including both expository and persuasive essays, will be written. Composition instruction emphasizes the writing process, and includes a major research project, with an emphasis on research methods and skills. The proper use of grammar is emphasized through formal lessons and as a component of composition instruction. Instruction in literature includes a variety of works and genres. Vocabulary is studied throughout the year.

Honors English 2

Grade 10, 1 honors credit, full year

Course #020

Application and department approval required.

This course builds upon the composition, grammar, literature, and vocabulary skills acquired in the freshman year. In addition to reading and analyzing a variety of literary works and genres, students will study schools of literary criticism. Presuming mastery of the five-paragraph

essay, instruction in composition includes experimentation with form and style in order to increase effectiveness. A variety of compositions are assigned, including literary analysis and a major research paper. The expectations in terms of analytical thinking, interpretive skills, and writing ability are high at this level. The proper use of grammar is emphasized through formal lessons and as a component of composition instruction. The amount of reading, writing, and vocabulary in this course is significantly greater than in non-honors English. This course is advanced, and is recommended for highly motivated students with strong study skills.

English 3

Grade 11, 1 credit, full year

Course #035

The main focus of this course is the reading and analysis of our American literary heritage from its beginnings to the present, emphasizing outstanding figures and works of recognized quality for analysis and enrichment. A formal review of selected grammar and usage topics is conducted periodically throughout each term. Composition work includes exposition, argumentation, literary analysis, and the personal essay. Research methods and skills are reinforced. In addition, a unit of study within the course is devoted to developing test-taking strategies designed to maximize the students' scores on the verbal section of the SAT through the implementation of components including intense practice and drill work. Vocabulary is studied throughout the year.

Advanced Placement English Language and Composition

Grade 11, 1 AP credit, full year

Course #032

Application and department approval required.

The main focus of this course is the reading and analysis of our American literary heritage from its beginnings to the present, emphasizing outstanding figures and works of recognized quality for analysis and enrichment. Composition work includes exposition, argumentation, literary analysis, and the personal essay. Research methods and skills are reinforced. Fulfillment of writing assignments in this course requires significantly more work than in English 035, with a greater emphasis placed on style and depth. In addition, a unit of study within the course is devoted to developing test-taking strategies designed to maximize the students' scores on the verbal section of the SAT and the AP Language and Composition exam. This course is advanced, and is recommended for highly motivated students with strong study skills. Students in this course are required to take the AP Language and Composition exam in May.

English 4

Grade 12, 1 credit, full year

Course #045

The main focus of this course is the reading and analysis of British and world literature from its beginnings to the present, emphasizing outstanding figures and works of recognized quality for analysis and enrichment. Composition work includes exposition, argumentation, literary analysis, and the personal essay. Research methods and skills are reinforced, and all students are required to write at least two research papers. Public speaking skills are also reinforced through both formal and extemporaneous student presentations and speeches.

Advanced Placement English Literature and Composition

Grade 12, 1 AP credit, full year

Course #040

Application and department approval required.

The main focus of this course is the reading and analysis of both classic and contemporary literature, emphasizing outstanding authors and major works in all genres. Research methods and skills are reinforced, and all students are required to write two major research papers. Classes are conducted seminar-style, and active class participation on a consistent basis is expected. This course is advanced, and is recommended for highly motivated students with strong study skills. Students in this course are required to take the AP exam in May.

Reading Development

Grade 9, 1 credit, full year, taken in lieu of freshman foreign language

Course #091

This course is designed to improve the student's reading and comprehension skills. Areas stressed are comprehension, vocabulary, study skills, flexibility of reading rate, critical reading skills and independent reading. In addition, skills in objective and essay test taking and the organization and implementation of a plan of study for the student's various classes are emphasized.

Creative Writing

Grades 10-12, ½ credit, 1 semester

Course #070

This course focuses on the fundamentals of composition and storytelling while maintaining a flexible understanding of what a text is or can be. It is designed to enable students to become better poets, dramatists, songwriters, and/or writers of short fiction. Regardless of whether the student aims to become a poet who is able to deftly handle metaphors and concrete imagery, a comic book artist who wishes to develop a more acute sense of how to marry graphics to text, or a raconteur who can move an audience through his characters and stories, this course will provide the student with the skills to communicate and express himself with greater passion and focus.

Speech

Grades 9-12, ½ credit, 1 semester

Course #071

In this introductory course, students have an opportunity to gain skill, self-confidence, and fluency in public speaking. Students develop an understanding of both basic communication principles and public speaking strategies by presenting speeches that both inform and persuade. Delivery techniques and impromptu theories of public address are introduced and practiced through a series of extemporaneous exercises.

Standardized Test Preparation

Grades 10-12, ½ credit, 1 semester

Course #072

The purpose of Standardized Test Preparation is to help students of all levels of academic achievement improve their test-taking potential to maximize test results. Students will learn

strategies, expectations and content information about the PSAT and SAT exams as well as the ACT. The Ohio Graduation Exam will not be addressed specifically in this course. Though listed in the English department, the course will cover the math and science components of these exams equally with reading and writing.

Studies in Tolkien

Grades 10-12, ½ credit, 1 semester

Course #053

Sophomore admission is subject to teacher approval.

This elective course examines the role of fantasy literature in the 20th century through the works of J.R.R. Tolkien. Major works to be examined include Tolkien's *Lord of the Rings* trilogy and *The Silmarillion*. Short works to be examined include a variety of Tolkien's prose, poetry, essays, and samples of his whimsical yet formative approach to linguistic studies. The course examines Tolkien's influence on literary theory, language studies, theology, and the epic fantasy. In addition, the course acts as an introduction to literature and theory pertaining to the genre of fantasy literature; thus, previous interest in and knowledge of fantasy literature is not required. Assessment for the course is based on Socratic seminar and composition with a research project and essay due at the end of the semester.

Writing for Publication

Grade 10-12, ½ credit

Course #060

Approval of newspaper, yearbook, or literary arts magazine adviser required.

This course is designed to prepare students in written communication, journalism, and graphic design required for publication. This course includes both theory and practice in identifying, researching, and writing articles; editing materials for publication; and designing graphic layouts. Students must actively engage in the preparation of one of the school's student publications: *The Edsman* (newspaper), *Edwardian* (yearbook), or *Flight* (literary arts magazine). Specific roles may vary; faculty advisers will determine the specific duties and requirements for earning credit.

Technical Writing

Grades 10-12, ½ credit, 1 semester

Course #073

In a world increasingly dominated by technology, the ability to write effectively about technical subjects is increasingly important. This course seeks to increase the student's skill and confidence as a technical writer. Whether one is writing a description, formulating step-by-step instructions, or composing a technical report, the ability to communicate through text and illustrations in ways that are clear to audiences ranging from technical specialists to everyday consumers in a world marketplace is an essential skill necessary for success in any technical field.

Introduction to Humanities I: From the Ancient World to the Renaissance

Grades 11-12, ½ credit, 1 semester

Course #074

This course provides an introduction to the arts and humanities through study of significant works of Western culture from the ancient world to the Renaissance. Areas of study include

philosophy, literature, painting, sculpture, architecture, and music. Instruction will follow the Socratic example of generating discussion through dialectical inquiry.

Introduction to Humanities II: From the Early Modern Period to the 20th Century

Grades 11-12, ½ credit, 1 semester

Prerequisite: Introduction to Humanities I

Course #075

This course provides an introduction to the arts and humanities through study of significant works of Western culture from the early modern period to the 20th century. Areas of study include philosophy, literature, painting, sculpture, photography, film, architecture, and music. Instruction will follow the Socratic example of generating discussion through dialectical inquiry.

SOCIAL STUDIES DEPARTMENT

World History

Grade 9, 1 credit, full year

Required of all freshmen not taking Honors International Studies

Course #112

World History is a year-long course that examines the development of human populations from early organizational units to the development of modern day nations. In this course, students will trace the evolution of social, economic, religious, and political systems, with an emphasis on the role of the environment in determining and affecting the progression of cultures. This course will also examine topics such as innovation and technological change and their impact on cultural development. The course will conclude in the early 20th century on the eve of World War I. Using both primary and secondary sources, students will be expected to demonstrate their knowledge of these themes through writing activities and project based learning.

Honors International Studies

Grade 9, 1 honors credit, full year,

Required of all intended IB students

Enrollment will be limited to students in the class of 2017 who have interviewed for and intend to enter the International Baccalaureate Diploma Programme.

Course #115

This is a survey course that focuses on identification and evaluation of the patterns in World History that continue to influence present world society. Emphasis will be placed on analyzing and understanding historical themes such as poverty, classism, militarism, self-determination, trade, and political, social and industrial development. Using both primary and secondary sources, students will be expected to demonstrate their knowledge of these themes and their current impact using both oral and written assignments. Students will also be required to participate in a Model United Nations simulation in the fall of the year.

Honors United States History and Government

Grade 10, 1 honors credit, full year, required of all intended IB students.

Enrollment will be limited to students in the class of 2016 who have interviewed for and intend to enter the International Baccalaureate Diploma Programme.

Course #125

This course focuses on both the history and the government of the United States during the 18th and 19th centuries. Students will continue to enhance their skills of gathering, sorting and evaluating historical and political evidence. Through written and oral expression, students must demonstrate their ability to recognize, organize, analyze and appreciate selected historical events and their political, economic and social consequences.

Twentieth Century World History

Grade 10-12, ½ credit, 1 semester

Course #124

Twentieth Century World History is a semester long course that will continue to thematically examine the development of humans and their systems from World War I to present day. The course will analyze the increasing complexity of social, economic, religious and political

systems along with an emphasis on the role of the environment. This course will also highlight the importance of globalization and the impact it has had on increasing technological advancements and cultural diffusion. Students will engage in the reading and analysis of both primary and secondary sources, writing activities and project based learning.

Early American History

Grade 10-12, ½ credit, 1 semester

Course #133

This course will examine aspects of U.S. history from settlement to Reconstruction. This course is designed to inform students about who they are as citizens of the United States and how past events have shaped the world we live in today. The course will introduce students to the development of political, economic, and social systems as well as intellectual movements that helped to define this period of American history. Students will engage in the reading and analysis of both primary and secondary sources, writing activities and project based learning.

United States History

Grade 11, 1 credit, full year, required of all juniors not enrolled in AP US History or IB History of the Americas

Course #132

The purpose of this course is to introduce the major phases of the political, economic, social, geographical, and historical development of the United States from post-Reconstruction through World War II. Students will be required to demonstrate comprehension of the knowledge gained and to apply content through the utilization of higher order thinking skills. The course will also cover events from the Cold War through the aftermath of 9/11, examining the social, political, economic, geographical, and historical factors that have shaped this country. Students will read and analyze a number of primary source documents as well as write several essays.

Advanced Placement United States History

Grade 11, 1 AP credit, full year

Course #130

Application and department approval required.

This course is designed to provide students with the analytical skills and factual knowledge necessary to deal critically with the materials and problems of United States history. The course seeks to develop students' capacity to assess historical materials and to weigh the evidence and interpretations presented in historical scholarship. To that end, the course is both reading and writing intensive, and draws from a number of supplementary documents, essays, and works of interpretive history. Students are required to take the AP exam in May.

American Government

Grade 12, ½ credit, 1 semester

Required of all seniors who are not enrolled in AP U.S. Government and Politics.

Course #121

This one-semester course is a survey of the events, issues, and individuals that have shaped American government. It includes a survey of the historical underpinnings of our government, as well as a detailed analysis of the Constitution and the evolution of party politics, executive power, popular democracy, and our system of checks and balances. All three branches of the

government will be studied in depth. This course fulfills government education requirement required by the state of Ohio.

Advanced Placement U.S. Government & Politics

Grade 12, 1 AP credit, full year

Course #140

Application and department approval required.

Meets economic/financial literacy graduation requirement. Students must take at least one qualifying economic/financial literacy course.

This college-level survey course covers the constitutional underpinnings of the United States government, the institutions of national government, and the formation of public policy. Students will be required to take the AP US Government & Politics examinations in May.

Advanced Placement Comparative Government and Politics

Grade 12, ½ AP credit, 1 semester

Course #150

Department approval is required.

Meets economic/financial literacy graduation requirement. Students must take at least one qualifying economic/financial literacy course.

Students will analyze the political and economic systems of six countries: China, Great Britain, Iran, Mexico, Nigeria and Russia. Students will be required to take the Advanced Placement Comparative Government examination in May (NOTE: this class does not replace the government requirement of all students not enrolled in AP U.S. Government and Politics.)

Economics

Grade 11-12, ½ credit, 1 semester

Meets economic/financial literacy graduation requirement. Students must take at least one qualifying economic/financial literacy course.

Course #141

This introductory survey course provides the student with exposure to numerous economic principles. The course begins with a general overview of economics as the science of cost, benefit, and choice. Microeconomic concepts are subsequently introduced in the context of how individual choices affect supply and demand and the organization and development of individual enterprises and markets. The course also explains macroeconomics through the examination of Gross Domestic Product, unemployment, inflation, recession and depression, banking, and monetary and fiscal policy. It also includes a unit on personal finance.

Business and Entrepreneurship

Grade 10-12, ½ credit, 1 semester

Course #155

Meets economic/financial literacy graduation requirement. Students must take at least one qualifying economic/financial literacy course.

Business drives the economic pulse of the world, and this course is a comprehensive introduction for students to its key operations. It will give students an overview and foundational understanding of topics such as marketing, business writing, sales, advertising, and manufacturing, as well as a general introduction to financial planning. The course will include general strategies and practices that businesses implement to stay ahead in a competitive world. The knowledge that students attain from this course will give them a

base foundation to understand business and the ability to excel in more focused and concentrated business studies.

Advanced Business and Entrepreneurship

Grade 11-12, ½ credit, 1 Semester

Prerequisite: Business and Entrepreneurship

Course #156

Meets economic/financial literacy graduation requirement. Students must take at least one qualifying economic/financial literacy course.

Upon completion of Business and Entrepreneurship students will be immersed into a deeper level of business operations. Topics will include the history of business and entrepreneurship in America, business concepts, market planning, financial planning and cost accounting, an introduction to international business, and starting their own personal business. These business models will prove to be a valuable resource for students who plan to study business in college or to start their own businesses.

Law

Grades 11-12, ½ credit, 1 semester

Course #178

This course introduces students to the inner workings of the American justice system. Using a case-study approach, students will gain an understanding of legal procedure, as well as develop a greater understanding and appreciation for the law, court procedures, and the judicial system. This course will also survey the evolution of the civil rights and personal liberties embodied in the first ten amendments of the Constitution. Using a case study approach, students will examine actual Supreme Court cases in order to gain an understanding of the origins, meanings, and applications of the Bill of Rights.

Psychology

Grades 11-12, ½ credit, 1 semester

Course #161

This survey course studies human behavior and will examine the six contemporary psychological perspectives: biological, cognitive, humanistic, psychoanalytic, learning, and socio-cultural. Major areas covered are learning, memory, growth and development, emotions, personality, mental illness, psychotherapy, intelligence, sensation and perception.

Student Leadership

Grades 10-12, ½ credit, full year, meets M, W, F during lunch and self-directed periods

Course #186

Students will explore, develop, and exercise their own abilities and skills as servant leaders with structure provided by the Charisms and Spirituality of the Congregation of Holy Cross. This is a project-based course which will focus on goal setting and event planning for all-school assemblies, school spirit events, and other St. Edward High School activities. Students will be trained in community development, including conflict resolution, facilitation of teamwork and group dynamics, and anti-bullying techniques. Students may take this course more than once.

MATHEMATICS DEPARTMENT

General Information: All students follow a sequential mathematics program. All students entering 9th grade are required to complete four full years of mathematics to graduate from high school. The flow chart below details the typical sequence and level of each track. Juniors and seniors in the International Baccalaureate Diploma Programme will take IB mathematics classes junior and senior year in lieu of the offerings listed.

<u>Freshmen</u>	<u>Sophomores</u>	<u>Juniors</u>	<u>Seniors</u>
Honors Algebra 2	Honors Geom./Stats.	Hon. Vector Pre-Calc.	AP Calc. w/ DE
Honors Algebra 1	Honors Algebra 2	Honors Pre-Calculus	AP Calc. (AB)
Geometry	Algebra 2	Pre-Calculus	AP Calculus AB
Algebra 1	Geometry/Stats.	Algebra 2	Pre-Calculus
Pre-Algebra	Algebra 1	Geometry	Algebra 2

Algebra 1

Grade 9, 1 credit, full year

Course #211

Presents the basic structure of our number system through the use of modern mathematical terminology and methods. The basic topics included are the real number system, operations with real numbers, using variables, solving equations, inequalities, graphing linear functions, exponents, polynomials, rational expressions, radicals, and quadratic functions. Stress is placed upon the understanding of concepts, and solving practical problems from everyday life and science. A graphing calculator is required. (TI-83/84 Plus is the school's standard calculator.)

Algebra 1

Grades 9-10, 1 credit, full year

Course #212

This course covers the same material as Algebra 1 (Course #211), but at a slower pace and with less rigor. A more traditional approach is used, with minimal stress given to proof.

Honors Algebra 1 and Accelerated Geometry

Grade 9, 1 honors credit, full year

Course #211H

This is a full year of intensive development of algebraic and geometric skills. It is designed for students who have a high aptitude in math but have not completed a rigorous course in Algebra 1. The first semester will be an intensive study of Algebra 1. The second semester will be an intensive study of Geometry with emphasis on problem solving for college entrance exams. Upon completion of this course, students are expected to take the Honors Algebra 2 course in their sophomore year. A graphing calculator (the TI-83/84 is the math department's choice) is required for the course. A placement exam is required. Summer work may be required to be placed in this course.

Note: Students are expected to achieve at a level of B- (80%) or higher in the first semester to move on to Accelerated Geometry in the second semester. Those not achieving at B- or higher will be moved to Algebra I (Course #211) for the second semester to achieve mastery of Algebra.

Honors Algebra 2

Grade 9, 1 honors credit, full year

Course #210

Designed for the incoming freshman with a strong math aptitude who has completed a full year course in Algebra 1, this course is a rigorous development of Algebra 2, with a strong emphasis on proof and logic. Areas covered include solving equations and inequalities; solving systems; factoring polynomials; simplifying rational expressions; working with radicals and quadratic, polynomial, exponential, and logarithmic functions; complex numbers, and conic sections. A graphing calculator is required. (TI-83/84 Plus is the school's standard calculator.) A placement exam is required. Summer school tutoring is available for students in need of additional help with specific Algebra topics.

Pre-Algebra

Grade 9, 1 credit, full year

Course #214

Thoroughly develops basic math concepts that are the foundation for Algebra 1 in preparation for Algebra I in the sophomore year. Review and practice reinforce the essential math skills.

Geometry/Statistics

Grades 9-10, 1 credit, full year

Course #221

Geometry is a college preparatory course which covers the fundamentals of Euclidian Geometry. Topics include linear and angle relations, triangle relationships, the Pythagorean Theorem, right triangle trigonometry, polygons, circular relations, and solid geometry. There will be special emphasis on review for College Board mathematics as part of this course. The course also includes an introduction to statistics that includes probability, probability distributions, and hypothesis testing. A variety of mathematical analyses will be explored. A graphing calculator (TI-83/84 Plus suggested) will be required.

Geometry

Grades 10-11, 1 credit, full year

Course #222

This basic course covers the fundamentals of Euclidian Geometry. Topics include linear and angle relations, triangle relationships, the Pythagorean Theorem, right triangle trigonometry, polygons, circular relations, and solid geometry. There will be special emphasis on review for OGT mathematics as part of this course. Students are encouraged to have a graphing calculator for this course.

Honors Geometry

Grade 10, 1 honors credit, full year

Course #220

Requirement: B average or better in course #210 and department approval

Honors Geometry develops reasoning concepts with emphasis on analytical thought using both deductive and inductive proofs, as well as proof by contradiction. Included in the course are extended topics in the study of probability and statistics. This course prepares the student for IB standard level. A TI-83/84 Plus calculator is required.

Honors Geometry with Statistics and Vectors

Grade 10, 1 honors credit, full year

Course #226 Requirement: B average or better in course #210 and department approval

Honors Geo/Stats/Vectors develops reasoning concepts with emphasis on analytical thought using both deductive and inductive proofs as well as proof by contradiction. Included in the course are extended topics in the study of probability and statistics along with vector analysis in both two and three space. This course prepares the student for either IB Standard Level or IB High Level mathematics and is a prerequisite for IB High Level. A TI-83/84Plus calculator is required.

Algebra 2

Grades 10-12, 1 credit, full year

Course #231 Requirement: B average or better in course #221 and/or department approval

A rigorous development of algebra with a strong emphasis on proof and logic. Areas covered include working with variables, solving equations and inequalities, solving systems of sentences, factoring polynomials, finding roots of polynomial functions, simplifying rational expressions, working with radicals and quadratic functions, complex numbers, and conic sections. A TI-83/84Plus calculator is required.

Algebra 2

Grades 11-12, 1 credit, full year

Course #232

This basic course contains the topics of a conventional Algebra 2 course including equations and inequalities, linear relations and functions, systems of equations and inequalities, polynomials, working with quadratic equations, quadratic relations and functions, and conic sections. A TI-83/84Plus calculator is required.

Pre-Calculus

Grades 11-12, 1 credit, full year

Course #241 Requirement: B average or better in course #231 and department approval

The study of the translation of functions, families of functions including odd and even functions, polynomial, rational, exponential, and logarithmic functions, inverses, circular trigonometric functions, trig identities and proofs, polar coordinates, and complex number theory. The end of the course starts a study of limits, which leads the student into the appreciation of the derivative in calculus. A TI-83/84Plus calculator is required.

Pre-Calculus

Grade 12, 1 credit, full year

Course #244

This course covers the same material as the conventional Pre-Calculus course, but at a slower pace and with less rigor. A more traditional approach is used, with minimal stress given to proof. A TI-83/84Plus calculator is required.

Honors Pre-Calculus

Grade 11, 1 honors credit, full year

Course #230 Requirement: B average or better in course #220 and department approval

Topics include the development of algebraic and transcendental functions, analytic geometry, vectors, trigonometry, and limits as a strong preparation for the study of calculus. The theory of mathematics is discussed in great detail, and students are expected to begin some development of mathematical creativity and thought, as well as maintain accuracy in computation and application. Course includes the mechanics of differentiation. A TI-83/84Plus calculator is required.

Honors Vector Pre-Calculus

Grade 11, 1 AP/IB credit, full year

Course #233 Prerequisite: B average or better in course #226 and department approval

Honors Vector Pre-Calculus consists of eight core topics, including Algebra, Functions and Equations, Circular Functions and Trigonometry along with Vector Geometry, Matrices, Probability and Statistics and Differential Calculus.

AP Calculus BC with Differential Equations and Math Modeling

Grade 12, 1 AP/IB credit, full year

Course #246 Prerequisite: B average or better in course #233 and department approval

This course includes all topics normally taught in the Advanced Placement BC Calculus course through polar, parametric, and infinite series with an added emphasis on techniques of writing and solving differential equations. Students are required to take the Advanced Placement BC Calculus test in May.

Advanced Placement Calculus AB

Grade 12, 1 AP credit, full year

Course #240

Department approval required

This initial course in Calculus thoroughly covers both the techniques and applications of both differential and integral calculus. All topics from the College Board's suggested content guide for Calculus AB are covered. Students are required to take the AP exam in May.

Advanced Placement Statistics

Grade 11-12, 1 AP credit, full year

Course #252

Department approval required

The purpose of AP Statistics is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data in preparation for the AP Statistics Exam in May. The course is organized around four major themes: exploring data, sampling and experimentation, anticipating patterns, and statistical inference. Pre-Calculus (#241) is a co-requisite to this course.

Business Mathematics

Grade 12, 1 credit, full year

Course #245

The study of business mathematics is a practical approach to applications of mathematics. Students will learn basic skills that will be used throughout their lives. Problem solving, analyzing and interpreting data, and mathematically based decision-making skills will be reinforced and strengthened. Students will also have the opportunity to learn about current business trends. A major part of the course will be the use of spreadsheets (Excel) for computations and creating formulas, graphs and charts. The course will provide a foundation

for education beyond high school and employment in today's ever-changing job market. Pre-Calculus is a co-requisite to this course.

SCIENCE DEPARTMENT

Graduation Requirement: All students who are not enrolled in the IB Diploma Programme must complete three lab science courses to graduate, one from each of the following categories: biology, chemistry, and physics. IB diploma candidates must complete four years of lab science coursework.

Biology

Grade 9, 1 laboratory credit, full year

Course # 311

This course explores the physical and chemical conditions that sustain and affect all living things. The course also investigates the way living things are structured and how they operate in their environment. Classroom discussion, lectures, and laboratory investigations complement each other in creating a strong science background.

Honors Biology

Grade 9, 1 honors laboratory credit, full year

Course #310

This course explores the unity of structure and function found in the great diversity of living things. Emphasis is on the cell, genetics, biotechnology and evolution. Students are expected to participate individually and collaboratively in labs, class-work, and research.

Chemistry

Grades 10-11, 1 laboratory credit, full year

Prerequisite: Biology/Honors Biology

Course #331

Approval of department is required.

Chemistry is the study of matter, its structure, properties and behavior. Quantitative and qualitative labs support the course material. Topics in this college preparatory course include classifications of matter, nomenclature, reactions, stoichiometry, periodic table organization, atomic theory, and equilibrium. Use of the scientific method and problem solving are stressed.

Chemistry

Grades 10-11, 1 laboratory credit, full year

Course #332

Approval of department is required.

This is a conceptual Chemistry course that will help students view nature more perceptively by helping them visualize the behavior of atoms and molecules and showing them how this applies to the macroscopic world. Topics in this course include classifications of matter, nomenclature, reactions, stoichiometry, periodic table organization, atomic theory. Classroom and laboratory activities will place an emphasis on the particle model in order to develop analytical and synthesis skills. Students will use algebra in this course and be expected to solve problems to succeed in this course.

Honors Chemistry

Grade 10, 1 honors laboratory credit, full year

Prerequisite: Honors Algebra 2/ Algebra 2 is required or must be taken concurrently

Course #320

Application and department approval are required.

An in-depth study of chemistry for the science-oriented, math-proficient student. Theories are discussed and quantitatively supported in the lab. Topics include atomic theory, stoichiometry, bonding, gas laws, equilibria, acid/base theory, and oxidation/reduction. This course stresses observation, interpretation and problem-solving, including determination of unknown in the lab.

Physics

Grades 10-12, 1 laboratory credit, full year

Requirement: Algebra 2 or higher is required or must be taken concurrently.

Course #341

Approval of department is required.

Physics is the study of the physical world, and in particular, the interactions of matter and energy. This course is designed for the serious student who desires a college-prep level study of mechanics and energy. Emphasis will be on lab and graphical analysis. Students will be expected to use algebra and trigonometry to solve problems in the course. Distinctive completion of the course with a 3.5 average or better, math grades of 3.5 or better, and acceptance into pre-calculus or higher level mathematics, satisfies the prerequisite for AP Physics (Year 2).

Physics

Grades 10-12, 1 laboratory credit, full year

Course #342

Approval of department is required.

This conceptual Physics course is a general survey presenting the fundamental concepts of mechanics, energy, and wave principles. Laboratory experiments and demonstrations will be used to develop the topics explored. In this course, students will be expected to learn and use data analysis skills and to use algebra to solve problems. Also, students will be introduced to some skills of introductory right triangle trigonometry. Activities will place an emphasis on the practical application of Physics concepts to daily life experience. Improvement of critical thinking skills will be emphasized throughout the course.

Honors Physics

Grade 10-11, 1 Honors laboratory credit, full year

Prerequisites/Requirements: Overall average of at least 3.5 in science and math courses. Must be enrolled concurrently in Honors Algebra 2 or higher level math course; cumulative GPA of at least 3.5.

Course #330

Application and department approval are required.

This honors level physics course will be an in-depth study of the fundamentals of all areas of mechanics, energy, electricity and magnetism. It is designed for students who expect to take AP Physics C (Mechanics and Electricity & Magnetism) in the senior year and intend to pursue a science-oriented career. The course emphasizes a laboratory based, self-discovery approach, leading to an understanding of the process of scientific deduction. Algebra and geometry/trigonometry skills are expected to be well above average and will be used rigorously in this course. Students are expected to study and read extensively outside of the class assigned time and must complete a summer assignment before the course begins. Successful completion of the course with a 3.5 average or better, math grades of 3.5 or better, and

acceptance into pre-calculus or higher level mathematics, satisfies the prerequisite for the advanced level course: AP Physics C (Mechanics and Electricity & Magnetism). The science department makes decisions regarding placement level for honors level physics. Your time and presence outside the school day (before or after the school day) will be required for this class.

Advanced Placement Physics C: Electricity & Magnetism

This course is open only to seniors who have completed a full year of Physics (341 or higher Physics level).

Grade 12, 1 AP laboratory credit, full year

Course #350

Prerequisites/Requirements: Grade of A- or higher in Honors Physics, IB Physics, or Physics 341; overall average of at least 3.5 in all math courses. Must be enrolled in Pre-Calculus or higher level math course; cumulative GPA of at least 3.5.

Interview with Ms McTernan and science department approval are both required. See Ms McTernan to schedule the interview.

This college level second year physics course will be an in-depth study of the fundamentals of electricity and magnetism. It is designed to give necessary pre-college background for students who wish to succeed in a physics or engineering-oriented career. The course emphasizes a laboratory based, self-discovery approach, continuing the student's development in the process of scientific deduction. A thorough previous knowledge of algebra, trigonometry, and graphical analysis is required. Concepts of calculus will be used where appropriate. Students will be expected to be competent in calculus or to complete a summer assignment and attend tutoring sessions to become competent in some specific areas of calculus. Students are required to take the AP Physics C E&M exam in May. Students are expected to study outside of the class assigned time for this class. Additional topics in physics beyond the E&M curriculum will be part of the course. These will include any topics not previously covered in a year-one physics course and will likely include fluids, thermodynamics, and topics in modern atomic physics.

Advanced Placement Chemistry

Grades 11-12, 1 AP laboratory credit, full year

Prerequisite: Honors Chemistry

Course #349

Application and department approval are required.

This course is designed as the equivalent of a college general chemistry course, and has an approved syllabus as demanded by the College Board. Concepts and material that are expected to be on the College Board AP Chemistry Exam will be covered in-depth. Exam taking strategy will also be employed throughout the course, as well as the reinforcement of concept through laboratory investigation. Students taking AP Chemistry are expected to take the exam in May. Your time and presence outside school day (before or after the school day) will be required for this class. There is summer work that must be completed before this class starts.

Advanced Placement Biology

Grade 12, 1 AP laboratory credit, full year

Prerequisites: Honors Biology/Biology and Honors Chemistry/Chemistry with at least a B average in each; completion of, or concurrent study of, Physics/AP Physics; cumulative GPA of at least 3.5.

Course #348

Application and department approval are required.

This course is designed as the equivalent of a college introductory biology course and follows the AP Course Description recommended by the College Board. In addition to lectures, required additional material must be covered on an independent basis. Written papers and oral presentations will be assigned. All students are required to take the AP exam in May. First year biology and introductory chemistry topics are included on the exam, and these topics are to be known and reviewed by the individual student. Your time and presence outside school day (before or after the school day) will be required for this class. There is summer work that must be completed before this class starts.

DEPARTMENT OF CLASSICAL AND MODERN LANGUAGES

Latin 1

Grades 9-12, 1 credit, full year

Course #411

This course is an introduction to classical Latin including its pronunciation, vocabulary, and grammar. The reading of Latin will be emphasized, as will the English derivation of words from Latin. Students will study basic classical mythology and Roman culture as well.

Latin 2

Grades 10-12, 1 credit, full year

Course #412

This course is a review and continuation of Latin 1. More complex grammatical concepts, including gerund constructions, subjunctive phrases, and conditional sentences will be studied. Selections from *Fabulae Faciles* (Easy Stories) and Caesar's *Gallic Wars* will be read.

Honors Latin 2

Grades 10-12, 1 honors credit, full year

Course #412H

Department approval is required.

This course is a review and continuation of Latin 1. Complex grammatical concepts, including conditional sentences, gerundive clauses, and subjunctive phrases, will be studied at an accelerated rate. In the second half of the year, selections from Caesar, Livy and Ovid will be read.

Latin 3

Grades 11-12, 1 credit, full year

Course #413

Department approval is required.

This course begins the in-depth study of various Roman authors. The focus will be the prose works of Caesar and Cicero and the poetry of Catullus and Horace. Students will also begin to write analytical papers based upon their translations.

Honors Latin 3

Grades 11-12, 1 honors credit, full year

Course #413H

Department approval is required.

This course includes an introduction to Latin literature and extensive readings from the prose works of such authors as Cicero and Pliny and the poetry of such authors as Catullus and Vergil. This class is also designed to begin to prepare students for the AP Test in their final year.

Advanced Placement Latin 4

Grades 11-12, 1 AP credit, full year

Course #415

Department approval is required.

Students will study the background, content, and structure of Vergil's *Aeneid*, and Julius Caesar's *Gallic Wars*. Assignments will include translation of original texts from Latin to

English, outside readings in English on classical Greek and Roman themes, and essays in English on topics related to poetry, mythology, culture, history and art. Students are required to take the AP Latin exam in May.

Spanish 1

Grades 9-12, 1 credit, full year

Course #421

Spanish One is an introductory course designed for students with no background in the language. It is the foundation for the students' Spanish studies. This course presents a structured, proficiency-based approach to mastering the speaking and listening skills of a second language. Students will learn all forms of the present tense through thematic vocabulary units about describing self and others, talking about likes and dislikes, school and leisure time activities and sports. Students will gain the confidence to express themselves in real-life situations.

Spanish 2

Grades 9-12, 1 credit, full year

Course #422

This course utilizes the base students gained in Spanish 1, to further students' ability to read, write and interpret the Present, Preterit, and Imperfect Tenses. Other grammatical concepts, including commands, object pronouns and reflexive pronouns will be studied. Thematic vocabulary centers on family relationships, describing your community, physical fitness and daily routines.

Spanish 2

Grades 10-11, 1 credit, full year

Course #422A

This course is a continuation of Spanish 1A, with a focus on the connection between the Spanish and English languages. Grammar, word derivation, and vocabulary work will be emphasized, as will individualized skills and different styles of learning to read, write and speak Spanish.

Honors Spanish 2

Grades 9-12, 1 honors credit, full year

Course #422H

Application and department approval required.

This course is a continuation of Spanish 1 in which students will learn to read, write, and interpret verb tenses, including the Preterit and Imperfect. These concepts will be covered at an accelerated rate. This course will also introduce creative writing and focuses on the students' ability to communicate in the target language.

Spanish 3

Grades 10-12, 1 credit, full year

Course #423

Department approval required.

This course focuses on more advanced studies of grammar, writing, conversation, reading, and oral comprehension. Students are engaged in various activities and projects that will

enhance their ability to understand and communicate in the target language. In addition, through the use of authentic resources, students will be exposed to elements of history and culture of the Spanish-speaking world.

Honors Spanish 3

Grades 10-12, 1 honors credit, full year

Course #423H

Application and department approval required.

This honors-level course bridges the gap between the study of advanced grammar and a development of fluency in Spanish. It focuses on the fine points of grammar, an explosive increase in vocabulary, creative writing and reading of a more challenging nature, including the original Spanish and Latin American literature. In addition, through readings, films, and other materials, students will be exposed to elements of history and culture of the Spanish-speaking world. English is only spoken for clarification purposes.

Spanish 4

Grades 11-12, 1 credit, full year

Course #424

Department approval required.

Spanish 4 refines the four basic skills of reading, writing, speaking and listening by reading Spanish short stories, viewing Spanish film, and continuing to study more advanced grammar. Students are expected to strive for a level of communication whereby they would be able to function effectively in a Spanish-speaking community and be able to discuss current events in Spanish.

Advanced Placement Spanish 4

Grades 11-12, 1 AP credit, full year

Course #425

Application and department approval required.

AP Spanish 4 refines the four basic skills of reading, writing, speaking and listening. Extensive writing and the reading and analysis of authentic Spanish Language Literature will encourage students to strive for a level of communication whereby they will be able to function effectively in a Spanish-speaking community. A battery of simulated AP tests is given throughout the year to prepare students for the exam. Students are required to take the AP exam in May.

French 1

Grades 9-12, 1 credit, full year

Course #431

French 1 is a class for students with no experience in the language. Basic conversation, reading, listening and writing skills are taught. Students learn regular verbs and irregular present and past tenses, basic negations, questions, adjective usage; conversation topics included for semester 1: introduction, talking about food, family, telling time, and different actions in the present and past tenses. Semester 2 grammar core includes: future, subjunctive and more past tenses are introduced as well as grammar items such as question formation and pronoun usage. Main conversation topics for semester 2 include: talking about television, hobbies, and cultural aspects of the French speaking world.

French 2

Grades 9-12, 1 credit, full year

Course #432

French 2 is a continuation of the French I. Together with continued exploration of the civilization, culture, and customs of French-speaking people, students will further refine grammatical structures and communicative skills with a balanced emphasis on speaking, listening, reading and writing and vocabulary. The program will help you acquire the language skills necessary to engage with those cultures both in the classroom and in the real world, to reflect on characteristics of your own culture, compare it to the cultures studied, and thus increase your understanding of the nature of culture.

Honors French 2

Grades 9-12, 1 honors credit, full year

Course #432H

Honors French 2 is a more intensive continuation of the French I. Together with continued exploration of the civilization, culture, and customs of French-speaking people, students will further refine grammatical structures and communicative skills with a balanced emphasis on speaking, listening, reading and writing and vocabulary. The program will help you acquire the language skills necessary to engage with those cultures both in the classroom and in the real world, to reflect on characteristics of your own culture, compare it to the cultures studied, and thus increase your understanding of the nature of culture.

French 3

Grades 9-12, 1 credit, full year

Course #433

French 3 is foremost a review of the basic grammar items covered in a French 2 with an emphasis on exceptions to rules and new vocabulary items to improve conversation skills. Speaking, reading and writing skills are taught in order for students to improve their knowledge and usage of the language. Regular verbs and some of the irregular verbs, adjectives, articles, basic question patterns, and numbers form also the core of the review and improvement taught in the class. Entering a French 3 level requires a good understanding of spoken French as well as the ability to write and express oneself in the language. French 3 reviews and improves the use of subjunctive, conditional and future tenses; complex sentences, questions and prepositions use are also part of the curriculum. Additionally, French 3 includes various aspects of French literature, culture, and civilization through the study of the geography, history, language, literature, art, music and cooking of France. Class discussions will be conducted in French.

French 4

Grades 11-12, 1 credit, full year

Course #434

French IV is offered to students in classes 11 and 12. This course is designed to interest and challenge capable students who wish to develop a greater degree of proficiency in the French language. The basic elements of grammar are reviewed, refined, and practiced as students examine the Francophone world of today and yesterday. Students expand their vocabulary and continue to participate in activities to enrich their francophone knowledge. French IV aims to develop more fluency in French through class discussion of current events, history and

literature. The literature and history studied in this course relate principally to France from prehistoric times through the Renaissance. Some literature from the 20th century and poems from other Francophone countries are also analyzed. Compositions, research papers, and oral reports are assigned to develop mastery of the grammar and vocabulary studied. Literary and artistic masterpieces are analyzed within their historical, social, and political contexts.

Mandarin Chinese 1

Grades 9-12, 1 credit, full year

Course #441

Chinese 1 is an introductory course in Mandarin Chinese designed for the students who have no previous knowledge of the language. This course focuses on the four language skills: listening, speaking, reading, and writing using both Pinyin phonetic system and simplified Chinese characters. The course will systematically introduce vocabulary words, basic sentence structures, and grammar points to help students build real-life communicative skills as they discuss everyday topics. Students will be introduced Chinese festivals, calligraphy, songs, and food as well in order to gain basic knowledge, awareness and appreciation of Chinese culture.

Mandarin Chinese 2

Grades 9-12, 1 credit, full year

Course #442

This course continues to build the language skills of first-year Chinese. All four language skills (listening, speaking, reading, and writing) will be emphasized and learned in communicative contexts. Daily life topics, such as colors, clothing, weather, hobbies/leisure activities, and school life, will continue to be the focus of this course. Students are expected to actively participate in class by engaging in interactive activities and reading and writing practices. Language study is enriched with China's history and culture through audio, visual, and on-line sources.

Mandarin Chinese 3

Grades 9-12, 1 credit, full year

Course #443

Prerequisite: Successful completion of Chinese 2 with B or better, placement based on assessment and previous study, or department approval.

This course continues to build the language skills of second-year Chinese. The course continues to focus on building oral and written proficiency on daily topics with student-centered activities. Students enlarge their inventory of words and phrases while also developing a deeper understanding of the essential features of Chinese grammar. Texts, supplementary readings, audio and video materials are used to provide a rich and complete learning experience.

Intensive Introduction to Italian

Grades 11-12, 1 credit, full year

Prerequisite: Language requirement has been fulfilled satisfactorily. Priority will be given to rising seniors who have completed the third year of a language.

Course #450

Application and department approval required.

This course provides exposure to the Italian language for absolute beginners. Attention is devoted to the four skills of speaking, understanding, reading, and writing with a progression from greater emphasis on listening and speaking to a balance of all skills as the year progresses. Aspects of Italian history, culture, and contemporary life are also introduced through readings, listening materials, videos and films and through the use of language technologies. The general objectives are to provide students with basic tools for oral and written communication in Italian, but also to offer them the opportunity to learn about Italian culture and life and to reflect about intercultural differences and similarities. PSEO credit is available for students who qualify.

TECHNOLOGY DEPARTMENT

Introduction to Computers

Grade 9, ¼ credit, 1 quarter

Required of all freshmen

Course #520

In this course, students will gain competency in three areas of computer technology: office applications, (students rise well above being novice users in both Microsoft Office products and Google Apps), technical literacy (a survey of the technological world includes a more in-depth understanding of the Internet, copyright issues, and common computer problems such as viruses and firewall issues), and keyboarding (manipulative skill development).

Computer Programming

Grades 10-12, ½ credit, 1 semester

Course #574

In this course, students experience computer programming from the perspective of a novice gaining an understanding of programming using the Python language, Racket (a dialect of Lisp), and the Scratch programming environment. Programming constructs taught include the fundamentals present in all programming languages such as variables, assignments, conditionals, loops and subroutines. Also covered are programming methodology, the process of debugging and testing, algorithmic thinking, revision control, project management and the open-source movement.

Advanced Placement Computer Science A (Computer Programming)

Grades 11-12, 1 AP credit, full year

Course #577

Requirement: Grade of B or better in Computer

Programming; instructor approval

This course is designed to teach programming language for the Advanced Placement exam. Course content includes print, set, if/then, for/next, input, graphics and advanced data structure.

PRE-ENGINEERING DEPARTMENT

Introduction to Robotics

Grades 9-11. ½ credit, 1 semester

Supply fee: \$8.00

Course #611

This is a projects-based course. You will learn the purpose of the major components on a robot and how they function and put your knowledge to work to build robots. You will also learn how humans interact with the robot using code and write some simple commands. No prior experience is necessary. Participation in one field trip experience is required.

Pre-Engineering: Statics and Structures

Grades 10-12, ½ credit, 1 semester

Supply fee: \$10.00

Course #601 Prerequisite: Algebra 1 or higher. Approval of current math teacher required.

This course is a project-based introduction to engineering. Course units include architecture, engineering design with Pro-Engineer CAD software, strength of materials and structures, bridge design and DC circuits. A formal presentation is required at the completion of a major group project. Assessment emphasizes successful completion of projects.

Competition Robotics

Grades 10-12, ½ credit, 1 semester

Supply fee: \$12.00

Course #612 Pre-requisites: Intro. to Robotics or prior participation on SEHS robotics team

This is a projects-based course. You will work in small teams to design and build robotic systems which are used on the F.I.R.S.T. competition robots. You will learn how to assemble drive trains, electrical boards, lifting mechanisms and other components. Two days of attendance at a F.I.R.S.T. robotics competition is required.

Logic and Controls of Mechanical Systems

Grades 10,11-12, ½ credit, 1 semester

Supply fee: \$45.00

Course #615

Prerequisite: either #601 Pre-Engineering: Statics & Structures or #574 Programming.

This course emphasizes engineering logic and programming for robotics and electronics. Course topics include digital electronics theory, binary mathematics, ladder logic and PLCs, gate logic, and electronics prototyping.

Honors Engineering: Circuits

Grades 11-12, ½ honors credit, 1 semester

Supply fee: \$8.00

Course #621

Application Required

Prerequisites: Pre-Engineering: Statics & Structures; Logic and Controls of Mechanical Systems.

This course consists of three interrelated modules: DC Circuits; Pneumatic Circuits; and Electro-pneumatic Circuits. The DC Circuits module will consist of an indepth analysis of electrical components and as analysis of electrical circuits. The Pneumatic Circuits module consists of an indepth study of pneumatic components and the principles of design of pneumatic circuits. The Electro-pneumatic Circuits module will serve as the bridge between electrical and pneumatic circuits. Students will discuss the design and construction of

pneumatic circuits controlled by electro-pneumatic components, which are powered by a DC circuit. This course requires multiple laboratory sessions.

Principles of Design

Grades 11-12, ½ credit, 1 semester

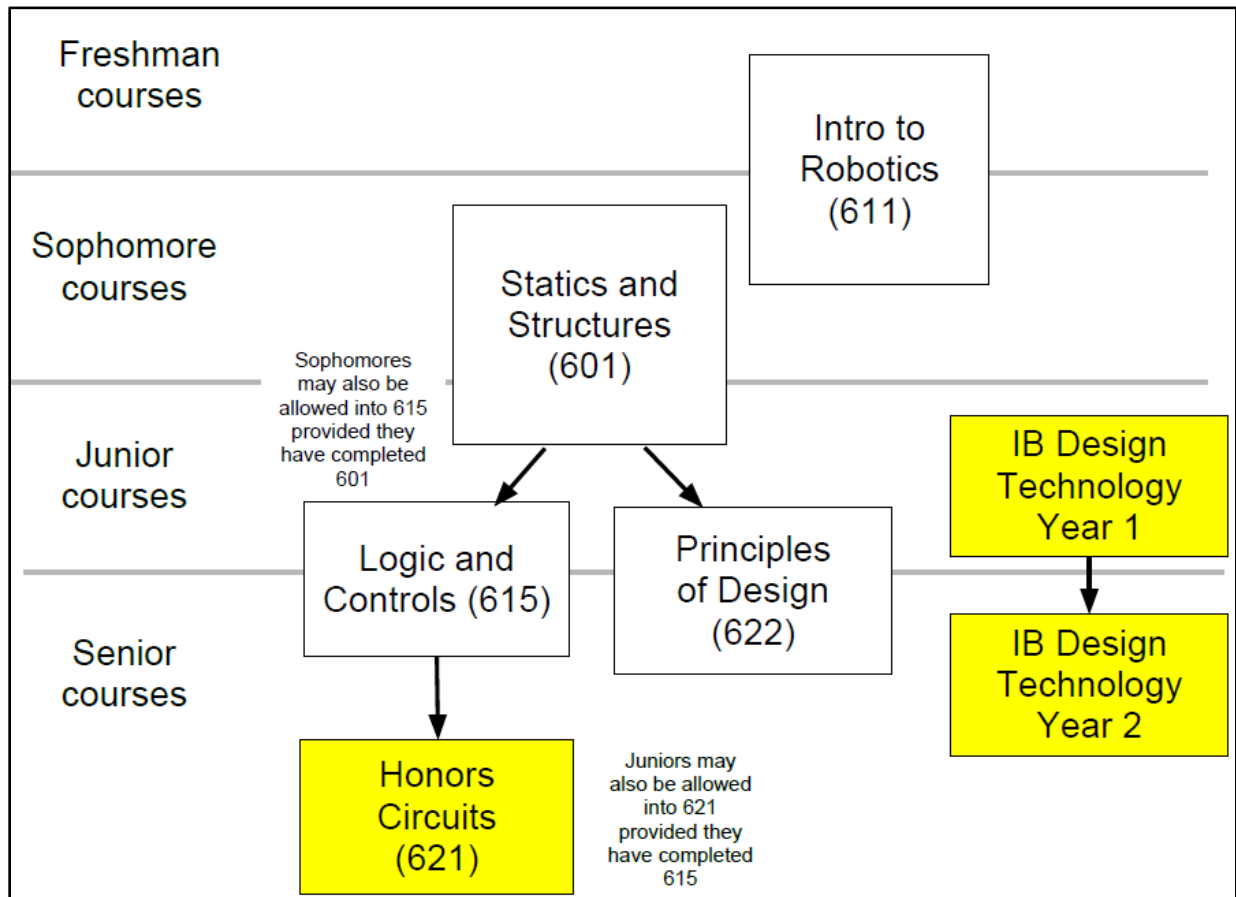
Supply fee: \$8.00

Course #623

Prerequisite: Pre-Engineering 1

This course will focus on the aspects that define proper elements of engineering design and will include topics such as individual work vs. teamwork; collaboration; documentation; the importance of design schedules, and project reviews of defined project milestones. The course will also cover advanced topics in ProEngineer solid modeling. In addition, this course will introduce the students to MATLAB, a software package used in most colleges and universities to aid in the solution of complex problems. This is a fast-paced course structured around projects such as airplane design optimization. Basic knowledge of blue print reading and interpretation for design purposes will be covered. This course requires minor summer or winter break homework in preparation for the course. A meeting with the instructor is **required** prior to the end of the school year preceding the year in which the student will take this course.

Pre-Engineering Course Options Flow Chart



RELIGIOUS EDUCATION DEPARTMENT

Enrollment in Religion class is required each semester.

Jesus in Scripture

Grade 9, ½ credit, 1 semester, required

Course #713

The purpose of this course is to give students a general knowledge and appreciation of the Sacred Scriptures. Through their study of the Bible they will come to encounter the living Word of God, Jesus Christ. In the course they will learn about the Bible, authored by God through Inspiration, and its value to people throughout the world. If they have not been taught this earlier, they will learn how to read the Bible and will become familiar with the major sections of the Bible and the books included in each section. The students will pay particular attention to the Gospels, where they may grow to know and love Jesus Christ more personally.

Who is Jesus Christ?

Grade 9, ½ credit, 1 semester, required

Course #714

The purpose of this course is to introduce students to the mystery of Jesus Christ, the living Word of God, the Second Person of the Blessed Trinity. In this course students will understand that Jesus Christ is the ultimate Revelation to us from God. In learning about who he is, the students will also learn who he calls them to be.

The Paschal Mystery

Grade 10, ½ credit, 1 semester, required

Course #724

The purpose of this course is to help students understand all that God has done for us through his Son, Jesus Christ. Through this course of study, students will learn that for all eternity, God has planned for us to share eternal happiness with him, which is accomplished through the redemption Christ won for us. Students will learn that they share in this redemption only in and through Jesus Christ. They will also be introduced to what it means to be a disciple of Christ and what life as a disciple entails.

Christ's Mission in the Church

Grade 10, ½ credit, 1 semester, required

Course #725

The purpose of this course is to help the students understand that in and through the Church they encounter the living Jesus Christ. They will be introduced to the fact that the Church was founded by Christ through the Apostles and is sustained by him through the Holy Spirit. The students will come to know that the Church is the living Body of Christ today. This Body has both divine and human elements. In this course, students will learn not so much about events in the life of the Church but about the sacred nature of the Church.

Sacraments

Grade 11, ½ credit, 1 semester, required

Course #732

The purpose of this course is to help students understand that they can encounter Christ today in a full and real way in and through the sacraments, and especially through the Eucharist. Students will examine each of the sacraments in detail so as to learn how they may encounter Christ throughout life.

Morality

Grade 11, ½ credit, 1 semester, required

Course #733

The purpose of this course is to help students learn the moral concepts and precepts that govern the lives of Christ's disciples.

World Religions

Grade 12, ½ credit, 1 semester, required

Course #743

The purpose of this course is to help students understand the manner in which the Catholic Church relates to non-Catholic Christians as well as to other non-Christian religions of the world. Students will understand how the Catholic Church proclaims Jesus Christ "the way, the truth, and the life (John 14:6)" and at the same time teaches that the Church rejects nothing that is true and holy in other religions. The course is intended to help students recognize the ways in which important spiritual truths can also be found in non-Catholic Christian and non-Christian communities, and to show them how Catholics relate to members of different faiths respectfully while continuing to live and profess their faith confidently.

Catholic Social Teaching (Social Issues)

Grade 12, ½ credit, 1 semester, required

Course #742

The purpose of this course is to introduce students to the Church's social teaching. In this course, students are to learn how Christ's concern for others, especially the poor and needy, is present today in the Church's social teaching and mission.

Leadership in Prayer and Worship

Grades 10-12, ¼ credit, 1 semester

Course #742

This course will study the details of prayer and worship in a liturgical context and beyond. This projects-based course will explore the elements necessary to write prayers, plan prayer services and liturgies for the St. Edward community and develop a deeper understanding of the liturgical tradition of the Catholic Church. This class will offer instruction on the history and development of the rich liturgical tradition of the Catholic Church. Students will have the opportunity to learn, plan and lead a variety of prayer services for their peers and the entire St. Edward community. This class will meet every other day during its assigned period, alternating with a study hall. Students may enroll in this course more than once.

FINE ARTS DEPARTMENT

VISUAL ARTS

Studio Art Survey

Grade 9, ½ credit, 1 semester

Course #859

This course is designed to introduce students to both 2D and 3D studio art. Foundational skills will be introduced, including drawing, painting, pottery and sculpture. No prior art experience is necessary. Students will spend approximately half of the semester working in the 2D media of drawing and painting and another half working in the 3D media of pottery and sculpture in either order.

Pottery and Sculpture

Grades 10-12, ½ credit, 1 semester

Supply fee: \$40.00

Course #864

Students will learn basic hand-building techniques. The students will make projects using coil, slab, and solid construction. Different finishing/glazing procedures will be taught.

Advanced Pottery and Sculpture

Grades 10-12, ½ credit, 1 semester

Supply fee: \$40.00

Prerequisite: Pottery and Sculpture (#864) or approval of instructor.

Course #868

This course enables experienced students to pursue pottery and/or sculpture in greater depth. With instructor approval, this course may be repeated by advanced students wishing to produce portfolio-grade works. Pottery skills will include beginning wheel: the basics of how to throw bowls using a potters' wheel. Surface decoration will be taught as well as glazing. Students will also learn how to make basic one-piece molds out of plaster and use them to decorate functional handcrafted pottery. Students use both the slab and coil techniques to construct their pieces. Students will continue to learn to throw on the potters' wheel, and throwing cylinders will be introduced in this course. Sculpture skills will include the basics of mold making and how to use molds in sculpture. They will continue developing their coiling skills to make non-symmetrical sculptures and a drum. Students will begin to construct large sculptural forms using hollow building techniques and will learn to use an armature.

Drawing

Grades 10-12, ½ credit, 1 semester

Supply fee: \$40.00

Course #860

An introductory drawing class with an emphasis on mastering materials and techniques. Students will draw from imagination and life, using pencil, charcoal, and conte crayon. Students who have taken the one quarter drawing class in the past may enroll in this full semester course.

Painting

Grades 10-12, ½ credit, 1 semester

Supply fee: \$40.00

Prerequisite: Drawing or Sports Art or approval of instructor

Course #861

Students will be working with acrylic paints. Color theory, the principles of design, and painting techniques will be introduced. Students will be encouraged to begin to develop their own style as they continue to explore the possibilities of acrylic paint. Experimentation with non-traditional painting surfaces will be attempted, breaking away from the limitations of two-dimensional planes.

Advanced Painting

Grades 11-12, ½ credit, 1 semester

Supply fee: \$40.00

Prerequisite: Painting or approval of instructor

Course #870

Students will develop and refine their painting skills using gels and various texturing methods and will be challenged to produce portfolio quality paintings. With instructor approval, this course may be repeated by advanced students wishing to produce portfolio-grade works.

Advertising and Design

Grades 10-12, ½ credit, 1 semester

Supply fee: \$40.00

Course #853

Students will be exposed to styles and principles of designing advertising and products and will create advertisements, logos, and product labels. This course will include the use of computer graphic programs for design and free hand drawing software applications. Images will be compiled into a portfolio and stored digitally for college credit or publishing in the future.

Sports Art

Grades 10-12, ½ credit, 1 semester

Supply fee: \$40.00

Course #874

Students will study principles in sports art, such as motion and the human figure. Student projects will be both 2-dimensional and 3-dimensional.

Portfolio Preparation

Grades 11-12, ½ credit, 1 semester

Supply fee: \$40.00

Course #878

Students will learn to develop, select, categorize and document their artworks for review in college applications for art school.

PERFORMING ARTS

Music Theory

Grades 9-12, ½ credit, 1 semester

Course #880

Designed for serious music students who wish to study music notation and structure with an emphasis on ear training and notational skills necessary to prepare them for advanced study of music in college or IB Music Perspectives.

Introduction to Music Technology

Grades 9-12, ½ credit, 1 semester

Course #889

In this project oriented course, students will use digital audio workstation (DAW) software to record, manipulate and compose music. Included will be a survey of recording equipment, sampling methods, music synthesis, sequencing and recording techniques.

Independent Study in Music

Grades 10-12, ½ credit, 1 semester

Course #890

Prerequisite: Approval of instructor

Advanced study in music for the student who wishes to pursue music in college. Emphasis may be placed in audition preparation, theory, music technology, composition or music history/literature. Students may sign up for the course more than once.

String Orchestra

Grades 9-12, ½ credit, meets every other day, alternating with a study hall

Course #898

Students learn techniques for playing orchestral string instruments (violin, viola, cello, and bass) and to perform varied orchestral literature. The orchestra, combined performs at several concerts, both as a string ensemble as well as combined with winds and percussion, forming a full orchestra. Concert attendance (3 Sundays out of the year) is mandatory. Emphasis is placed on ensemble performance techniques. This course may be taken for pass/fail credit.

Choir

Grades 9-12, 1 credit, meets daily all year

Course #893

This vocal music ensemble studies liturgical, concert and popular literature and performs for liturgical services, holiday programs, concerts, and special events. Students learn individual and ensemble singing techniques. This course may be taken for pass/fail credit.

Jazz Ensemble

Grades 9-12, 1 credit, meets daily all year

Course #895

Approval of director required

This instrumental music ensemble studies jazz styles for students who play saxophone, trumpet, trombone, piano, bass, guitar or drums. Jazz improvisation and styles are studied. The Jazz Ensemble performs in concert and at special events. This course may be taken for pass/fail credit.

Jazz Ensemble

Grades 9-12, ½ credit, after school Tuesdays, Wednesdays and Fridays

Course #895

Approval of director required

This instrumental music ensemble studies jazz styles for students who play saxophone, trumpet, trombone, piano, bass, guitar or drums. Jazz improvisation and styles are studied. The Jazz Ensemble performs in concert and at special events. This course may be taken for pass/fail credit.

Concert Band

Grades 9-12, ½ credit, after school

Course #892

Approval of director is required

This afterschool class meets from the second through the fourth quarters on Tuesdays, Wednesdays, and Fridays from 3:45 pm until 5:15 pm. This instrumental music ensemble studies concert literature and performs in concert during third and fourth quarters. A student may sign up for the course more than once. This course may be taken for pass/fail credit.

Marching Band

Grades 9-12, ¼ credit, after school

Course #899

Approval of director is required

Combines musical performance and visual movement. The Marching Band performs at all home and away football games, several parades, and band competitions throughout the summer and fall. During late June through August rehearsals will be on Tuesdays, Wednesdays, and Fridays from 6:30 pm until 9:00 pm. During the football season, full band rehearsals are held on a regular basis on Tuesday through Friday afternoons from 3:45 pm until 5:45 pm. One rehearsal per week (usually Tuesday) will be from 6:30 until 9:00 pm. The dates and times of rehearsals and performances are published on a calendar to be distributed at the start of the course. Open to students of Catholic girls' high schools with the additional approval of the school principal, music director, and parent. This course may be taken for pass/fail credit.

Technical Theatre

Grades 10-12, ¼ credit, after school

Course #886

Approval of instructor is required

Open to sophomores, juniors and seniors with leadership roles in stage or technical crews. (Participation in at least 2 previous shows is required.) Students will explore details of set design and construction, lighting, sound and directing a show. Course is taken in conjunction with the fall and spring theatrical productions. A student may sign up for the course more than once. This course may be taken for pass/fail credit.

Theatrical Performance

Grades 9-12, ¼ credit, after school

Course #887

Approval of instructor is required

Open to students in grades 9 through 12 with principal roles in stage productions. Acting, stage movement, singing, and dancing will be explored as part of a collaborative stage presentation. This course is taken in conjunction with the fall and spring theatrical productions. A student may sign up for the course more than once. This course may be taken for pass/fail credit.

CINEMATIC ARTS

Introduction to Film Analysis and Production

Grades 10-12, 1 credit, full year

Course #831

In light of the ever-growing significance of video communication in the 21st century, we are proud to pilot our first-ever Film Analysis & Production course. This exciting new elective aims to provide students with the following: (1) a brief history of film's development from the early 20th century into today, (2) the ability to critically analyze and appreciate culturally significant films, and (3) the skills necessary to thoughtfully produce original films. Students accepted into the Film Production course will hone their creations in the forthcoming Film Lab, which features an all-iMac layout, as well as industry standard cameras, lighting kits, etc.--all of which will be used with the expectation that students are committed to producing professional-grade short films. Major assessments include but are not limited to the following: one (1) research essay regarding a cinematic technique or genre, one (1) original, short film and trailer related to said film, quarter exams regarding cinematic techniques and film analysis/filming techniques.

Film Studies

Grade 11-12, ½ credit, 1 semester

Course #052

Movies cast a spell over us by transporting us to an imaginary world. This elective course will screen a representative series of films. Students will be asked to respond to these films by composing a series of short papers and a final long paper.

PHYSICAL EDUCATION DEPARTMENT

Health

Grade 9 ½ credit, required

Course #911

This course examines personal health hygiene, anatomy and physiology, with some emphasis placed on drug/alcohol education and sex education.

Physical Education

Grades 10-12, ¼ credit, 1 semester

Course #915

Emphasis is on the formation of a healthy lifestyle incorporating fitness and leisure time activities. Individual and dual activities are taught as equipment allows. Team sports are played with class teams engaging in round-robin tournaments. The student will also gain firsthand experience in different types of weight training, including free weights, machines, plyometrics, circuit training, rubber band resistance, and manual resistance. Great emphasis will be placed on learning proper technique and safety for free weights. The training will be primarily ground based with a strong emphasis on stabilizer muscles. Students may take this course more than once.

Physical Education for Sport Conditioning

Grades 9-12, ⅛–¼ credit, summer and/or during school year

Course #919

Designed primarily for students participating in extracurricular athletics/club sports who have not completed their physical education requirement, this option allows students engaged in rigorous conditioning programs to gain Physical Education credit under the guidance of certified staff/faculty members. The conditioning programs associated with this option do not occur during the traditional school day, but over the summer, before school or after school. Credit is given for off-season conditioning only, documentation of participation is required from the coach, and credit will not be awarded in excess of the .5 credit graduation requirement.

PHYSICAL EDUCATION EXEMPTION

Two semesters of physical education are required in order to graduate from St. Edward High School – or any high school in Ohio – but a recent change to Ohio law allows for an exemption for any student who, during high school, “has participated in interscholastic athletics, marching band or cheerleading for at least two full seasons” [O.R.C. 3313.603(L)]. Thus, a student who plays any combination of St. Edward’s 16 sports at any level—freshman, JV or varsity—or marching band or cheerleading for a total of two seasons is exempt. In the case of an exemption, the student would be excused from P.E. classes, but his total number of credits for graduation would not change, therefore he would have to replace P.E. with other academic electives or simply continue to take P.E. as an elective. The exemption would be noted on the student’s official transcript.

INTERNATIONAL BACCALAUREATE COURSES

Enrollment in the following courses is limited to students participating in the International Baccalaureate Programme.

Group 1: Studies in Language and Literature

IB Language A (English): Language and Literature SL (two years)

Grade 11-12, 2 IB credits, 2 full years

Course #: IB101SL, IB102SL

In this standard-level, two-year course, students study both literary texts, such as novels and plays, and non-literary texts, such as graphic novels and films. The study of texts is central to an active engagement with language and culture and, by extension, to how one sees and understands the world. This course encourages students to question the meaning generated by language and texts, which is rarely straightforward and unambiguous. Focusing closely on the language of the texts studied and becoming aware of the role that each text's wider context plays in shaping the text's meaning are central to this course. Some of the texts studied will be works in translation, thereby helping students gain a global perspective by promoting an insight into, and an understanding of, the different ways in which cultures influence and shape the experiences of life common to all humanity. The response to this study of texts is through oral and written communication, thus enabling students to develop and refine their command of the English language.

IB Language A (English): Literature HL (two years)

Grade 11-12, 2 IB credits, 2 full years

Course #: IB113HL, IB114HL

In this course, students study a wide range of literature. Students are encouraged to appreciate the artistry of literature and to develop an ability to reflect critically on their reading. Works are studied in their literary and cultural contexts, through close study of individual texts and passages, and by considering a range of critical approaches. Students study texts from a variety of genres, including drama, poetry, and prose nonfiction, with a special emphasis on the novel. Students will also study works in translation, which are especially important in introducing students, through literature, to other cultural perspectives. The response to this study of literature is through oral and written communication, thus enabling students to develop and refine their command of the English language. This course is part of the IB Diploma Programme.

Group 2: Language Acquisition

IB Latin SL (two years)

Grade 11-12, 2 credits, 2 full years

Course #IB211SL, IB212SL

This course meets the IB Diploma Program second language requirement. The standard level coursework will emphasize developing students' ability to read, translate, and comprehend selections of original Latin prose and poetry. Students will also explore the language, literature,

and culture of ancient Rome with the purpose of deepening their understanding of the inextricable link between culture and language and the continuing influence of ancient cultures on our modern world. Topics in the first year include Roman oratory, history, government, and architecture. These topics will be explored by translating and discussing various Roman authors such as Cicero, Catullus, Horace, Vergil, and Ovid. During the second year students will continue their study of Latin focusing on the epic poetry of Vergil, the lyric poetry of Catullus, and the odes of Horace. Satisfactory completion of Latin II (Honors) is highly recommended for this advanced language course.

IB Latin HL (two years)

Grade 11-12, 2 credits, 2 full years

Course #IB213HL, IB214HL

This course meets the IB Diploma Program second language requirement. The higher level coursework will emphasize comprehension of original Latin works of prose and poetry. Students will also explore the language, literature, and culture of ancient Rome with the purpose of deepening their understanding of the inextricable link between culture and language and the continuing influence of ancient cultures on our modern world. Topics in the first year include Roman oratory, history, government, and architecture. These topics will be explored by translating and discussing various Roman authors such as Cicero, Catullus, Horace, Vergil, and Ovid. During the second year students will continue their study of Latin focusing on the epic poetry of Vergil, the lyric poetry of Catullus, and the odes of Horace. Satisfactory completion of Latin II (Honors) is required for this advanced language course.

IB Spanish SL (two years)

Grade 11-12, 2 IB credits, 2 full years

Course #: IB221SL, IB222SL

This course meets the IB Diploma Program second language requirement. It enables the second language learner to understand straightforward written and spoken language; to communicate—orally and in writing—in a variety of styles and registers, about given topics; and to engage interactively in culturally appropriate conversations. These skills will be advanced as the students explore the themes of Human Rights, Indigenous Cultures, Immigration, and Customs and Traditions in the first year; and the Environment, Science and Technology, Communication and Media and the Arts in the second year. Satisfactory completion of Spanish II (Honors) is highly recommended for this advanced language course.

IB French SL (two years)

Grade 11, 2 IB credits, 2 full years

Course #: IB231SL, IB232SL

This course meets the IB Diploma Program second language requirement. The first year of the course involves intense language acquisition through listening, speaking, reading and writing and culture. Students are encouraged to communicate in French using vocabulary and grammar from previous levels of study. Students will perform individual and group work to build upon and improve communication skills in the target language. The second year of the course involves listening, reading, speaking, writing and culture components in French. Students work individually and in groups to analyze, debate and discuss a variety of issues and texts. Satisfactory completion of French II (Honors) is highly recommended for this advanced language course.

Group 3: Individuals and Societies

Philosophy SL (one year)

Grade 11 or 12, 1 IB credit, full year

Course #IB321HL

Philosophy deals with issues that are profound, complex, challenging and important for humanity. This course aims to be inclusive and to deal with a wide range of issues that can be approached in a philosophical way. A concern with clarity of understanding lies at the core of the philosophy course. This clarity is achieved through critical and systematic thinking, careful analysis of arguments, the study of philosophical themes, and a close reading of texts. Through this examination of themes and texts, the philosophy course allows students to explore fundamental questions that people have asked throughout human history. For example: What is it to be a human being? How do I know what is the right thing to do? Moreover, it confronts new problems arising within contemporary society, including those that result from increasing international interaction. The emphasis of the philosophy course is very much on “doing” philosophy, which requires a willingness to attempt an understanding of alternative views by applying intellectual rigor and cultivating an open and critical mind.

IB History of the Americas HL (two years)

Grade 11-12, 2 IB credits, 2 full years

Course #: IB303HL, IB304HL

This is a comprehensive two-year course at the Higher Level. Within this course students will demonstrate a historical understanding of the Americas, including the United States, Canada and Latin America, through a comparative multi regional analysis of cultural, socio-economic and political issues. Students will be required to comprehend, analyze, evaluate and integrate source material critically as historical evidence through a series of internal and external assessments. During the two-year course the students will conduct an in-depth study of the causes, practices and effects of war, the Arab Israeli Conflict, the political developments of the Cold War era, and the changing trends of foreign and domestic policies within the Americas. These courses are a part of the IB Diploma Programme.

Group 4: Experimental Sciences

IB Biology SL (two years)

Grade 11-12, 2 IB credits, 2 full years of laboratory periods (3 mods)

Course #: IB421SL, IB422SL

This is a two-year course that allows students to obtain a basic understanding of biology in the areas of chemistry of life, cells, genetics, evolution, Kingdoms, and ecology, as well as human anatomy and physiology. Students will work and communicate with each other by performing laboratory experiments, similarly to the way in which scientists work and gain knowledge. In addition, students will use the scientific method to design some of their experiments, and while

writing their laboratory reports. This course is part of the IB Diploma Programme.

IB Physics SL (two years)

Grade 11-12, 2 IB credits, 2 full years of laboratory periods (3 mods)

Course #: IB441SL, IB442SL

IB Physics SL is a comprehensive two-year pre-university course that is designed to allow students to obtain a secure knowledge of the physical models that are used to explain motion, force, energy, and the interaction of objects in the physical universe. By the end of the course, students will have a broad understanding of the various fields encompassed by physics, including topics in modern physics. Students will continue to be introduced to the way scientists work and communicate with each other by performing laboratory experiments, using the scientific method, and writing laboratory reports. Students will spend more than 40 hours (over 25% of instruction time) performing these laboratory experiments. This 2 year course is part of the IB Diploma Programme.

IB Chemistry HL (two years)

Grade 11-12, 2 IB credits, 2 full years of laboratory periods (3 mods)

Course #: IB433HL, IB434HL

IB Chemistry is a two-year project and laboratory based course of scientific study and creativity within a global context. The course also provides substantial training in analytical and critical thinking. Students will examine topics including, but not limited to, measurement and data processing, quantitative chemistry, atomic structure, periodicity, bonding, acids and bases, oxidation-reduction reactions, energetics, kinetics, equilibrium, organic chemistry, chemistry in industry and technology, and environmental chemistry. This course is part of the IB Diploma Programme.

IB Design Technology SL (one year)

Grade 11 or 12, 1 IB credit, 1 full year of laboratory periods (3 mods)

Course #: IB461SL

In this course, students will survey important factors that direct the successful design of products and processes in our world. Scientific and mathematical principles that affect design, such as strength of materials, are considered within culturally defined contexts that include considerations of cost, safety, appearance, and environmental impact, as well as availability of manufacturing technologies. Students will work individually and in teams to evaluate, refine and create models of effective designs. Algebra is a prerequisite for this course. This course is part of the IB Diploma Programme.

IB Design Technology HL (two year)

Grade 11-12, 2 IB credits, 2 full years of laboratory periods (3 mods)

Course #: IB463HL, IB464HL

HL Design Technology is a four-semester survey of engineering and technology topics, beginning with the properties of materials, machines and structures, and transitioning to the design process with an emphasis on sustainable green design with a global perspective. An overview of the design, development, and evaluation of manufactured materials and processes is included before transitioning to robotic systems and the logic of control systems and programmable interfaces. Understanding of all topics will be demonstrated in a student directed design project. Finally, students will select an option in Electronic Product Design or

CAD/CAM design. The Electronic Product Design option includes D.C. circuit theory, operational amplifiers, global standards for digital products, the smarthouse, green disposal of electronic products and converging technologies. The CAD/CAM design option includes the impact of CAD/CAM on design and manufacturing, rapid prototype manufacturing, materials selection, and social, moral, economic and environmental aspects of product design. Students will complete an internal assessment in the option that they select. This course is part of the IB Diploma Programme.

Group 5: Mathematics and Computer Science

IB Mathematical Studies SL (one year)

Grade 11 or 12, 1 IB credit, 1 full year

Course #: IB501SL

This course caters to students with varied interests, backgrounds, and abilities. It is designed to build confidence and encourage an appreciation of mathematics in students who do not anticipate a need for it in their future studies. The course concentrates on mathematics that can be applied to contexts related as far as possible to other subjects being studied, to common real-world occurrences, and to topics that relate to home, work and leisure situations. As part of the course, students must produce a project consisting of a piece of written work based on personal research, guided and supervised by the teacher. This process allows students to ask their own questions about mathematics and to take responsibility for a part of their own course of studies in mathematics. This course is part of the IB Diploma Programme.

IB Mathematics SL (one year)

Grade 11 or 12, 1 IB credit, 1 full year

Course #: IB511SL

Prerequisite: Pre-Calculus, Honors Precalculus or Honors Vector Pre-Calculus

The IB Math SL curriculum consists of eight core topics, some of which are covered in the student's Algebra II and Honors Geometry-Stats courses, both of which are prerequisites for IB Math SL. These courses are typically taken in the freshman and sophomore years respectively. The topics in IB Math SL include Algebra, Functions and Equations, Circular Functions and Trigonometry along with Vector Geometry, Probability and Statistics, and Calculus. The Calculus curriculum completed in SL Math is not aligned one-to-one with the curriculum in AP AB Calculus and does not necessarily prepare the student for the Advanced Placement AB examination. Two major papers are required for all students. This course is part of the IB Diploma Programme.

IB Mathematics HL (two years)

Grade 11-12, 2 IB credits, 2 full years

Course #: IB523HL, IB524HL

Prerequisite: Pre-Calculus, Honors Precalculus or Honors Vector Pre-Calculus

The IB Math HL curriculum consists of eight core topics, some of which are covered in the student's Algebra II and GeoStats with Vectors courses. Both of these are prerequisites for IB Math HL, and are typically taken in the freshman and sophomore years respectively. The topics in IB Math HL include Algebra, Functions and Equations, Circular Functions and

Trigonometry along with Vector Geometry, Matrices, Probability and Statistics and Calculus. The Calculus curriculum includes all topics normally taught in the Advanced Placement BC Calculus course through polar, parametric and infinite series with an added emphasis on techniques of writing and solving differential equations. Two major papers are required for all students.

Group 6: The Arts

IB Music Perspectives SL (one year)

Grade 11 or 12, 1 IB credit, 1 full year

Course #: IB611SL

This course examines the diversity of music in culture and time. The elements of music will be explored through a survey of Western Music from the Middle Ages to the present along with traditional and contemporary global music. Students will be prepared to take the Standard Level International Baccalaureate Music Exam. The course has two compulsory parts: Music Production and Musical Perception. Music Production options include Solo Performance (private instruction on voice or an instrument with recitals required), Group Performance option (active membership in a school or community performance group with concerts required), or Creating (composition/arranging). Musical Perception includes analysis of an IB Prescribed Work, analysis of musical genres and styles and creation of a Musical Investigation Multimedia Presentation. This course is part of the IB Diploma Programme.

IB Film Studies SL (one year)

Grade 11 or 12, 1 IB credit, 1 full year

Course #: IB601SL

Designed in reaction to the growing relevance of video-communication in the 21st century, the IB Film course enables students to view and create films from both a professional and critical perspective. Students will critically examine the history of filmmaking as well as a broad range of culturally significant films from around the globe. Students will also learn the skills needed to create their own films through a wide variety of film production lab exercises. Students will produce a short, original film, complete with an original score and 60 second trailer. This course is part of the IB Diploma Programme.

IB Film Studies HL (two years)

Grade 11-12, 2 IB credits, 2 full years

Course #: IB603HL, IB604HL

Designed in reaction to the growing relevance of video-communication in the 21st century, the IB Film course enables students to view and create films from both a professional and critical perspective. In the first year of this two year course, students will critically examine the history of filmmaking as well as a broad range of culturally significant films from around the globe. Students will also learn the skills needed to create their own films through a wide variety of film production lab exercises. The second year is dedicated largely to the production of a short, original film, complete with an original score and 60 second trailer. This course is part of the IB Diploma Programme.

IB Theory of Knowledge

Grade 11-12, 1 credit, 2 partial years, integrated into course schedules

Course #: IBTOK1, IBTOK2

Theory of Knowledge (TOK) is a course of at least 100 hours over the first and second years of the IB Diploma Programme that is designed to challenge students to think critically about their own knowledge claims, the knowledge claims made by others, as well as the subject of knowledge itself. Students will explore the role that reason, emotion, language, and perception play in one's ability to acquire knowledge. Students will also evaluate the similarities, and differences, of knowledge claims across different areas of knowledge; e.g. knowledge claims in ethics versus those made in the natural sciences. An essay written on a prescribed topic, as well as a group presentation, make up TOK's IB assessment. This course is part of the IB Diploma Programme.

INDEPENDENT STUDY AND CREDIT FLEXIBILITY INFORMATION AND GUIDELINES

In accordance with Ohio law, Credit Flexibility applies to any alternative coursework, assessment and/or performance that demonstrates proficiency qualified to be awarded equivalent graduation credit as applied for and approved in advance by the school. Approved credit awarded through this policy will be posted on the student's transcript and counted toward student grade point average (GPA) and as graduation credit in the related subject area or as an elective.

Application:

Any student may apply for credit to be awarded through Independent Study or Credit Flexibility. The student will submit an application on the **Application for Credit Flexibility** form. All required information must be provided. The student may be required to provide supporting documentation as determined by the School Counselor and/or Executive Vice President or designee of the Executive Vice President. Application may be made at any time. Work completed prior to the approval of an application will not be eligible to count toward credit.

Review of Application:

The application will be reviewed by the school counselor(s) and Executive Vice President or designee of the Executive Vice President. Upon approval of a completed application, the student may then proceed with the learning activity and credit will be awarded when all requirements are completed and evaluated. The Executive Vice President or designee may consult with the facilitator of the related department or others as needed to provide needed information prior to making a decision regarding the awarding or denial of credit.

Awarding credit:

A student may be eligible to receive credit upon satisfactory completion of the coursework, activity, assessment and/or performance as required by the Executive Vice President or designee. The following standards and guidelines apply to awarding credit:

- The total number of credits that may be awarded is not limited.
- The successful completion of a preapproved course may result in credit being designated as fulfilling either required or elective credit toward graduation requirements.
- All courses, as applicable, must be aligned to the Ohio Academic Content and Technical Standards to receive credit.
- Credit from other districts and educational providers, including online providers, may be accepted in accordance with the Ohio Operating Standards as determined by St. Edward High School. A student will not be granted credit if he participates in courses through outside sources without prior approval.
- The Executive Vice President or designee may award credit for custom learning activity(s) in the amount approved in advance based upon the equivalence to a 120 hour (Carnegie unit) course. In preapproved cases, partial credits may be awarded where deemed appropriate.

- The Executive Vice President or designee may award credit or partial credit for preapproved assessments, performances or work products that demonstrate mastery of content of any course offered at St. Edward High School. Elective credit for courses not offered at St. Edward High School may also be earned in this manner as preapproved.
- Honors or Advanced Placement (AP) courses may not be taken through credit flexibility. There are NO weighted grades for credits earned through credit flexibility.
- The Teacher of Record reserves the right to withdraw the student from a course (with penalty) for issues involving plagiarism and copyright violation.
- The student must complete all coursework assigned by the Teacher of Record on or before the due date or the student may be withdrawn with penalty from the course.
- The decision of the Teacher of Record regarding a withdrawal from the course may be appealed to the Executive Vice President. A letter outlining the reason(s) for the appeal must be received by the Executive Vice President within 10 calendar days following notification of withdrawal.

Determining Grades

- Grades earned through Independent Study and/or Credit Flexibility will NOT be weighted. The letter grade to be posted on the transcript and included in the student's grade point average will be awarded as determined by the Teacher of Record.
- If a student fails to make adequate progress on coursework, the approval to further pursue the proposed credit may be revoked and a failing grade will be posted to the student's transcript.
- The final grade for the course must be posted before the credit can count toward graduation.
- If a student is unable to complete the course due to illness (with provided medical documentation) or other valid reason as determined by the Executive Vice President or designee, an extension may be permitted and/or requirements revised. If the student does not intend to complete the credit and there has been an illness or other valid reason, the application may be withdrawn without penalty by the Executive Vice President or designee.
- Should a student transfer to another school, upon request of the student or parent, St. Edward High School shall forward a copy of the approved application to the new school for their consideration.

Access

This policy does not in any way prohibit access to on-line education, postsecondary options or services from another district.

APPLICATION FOR CREDIT FLEXIBILITY

*This application must originate in THE COUNSELING CENTER
with a conference between student and counselor.*

STUDENT INFORMATION

Student Name _____ Grade _____ ID # _____

STUDENT OBJECTIVE The student should briefly explain his goals and why credit flexibility is a suitable means to meet them:

COURSE INFORMATION

Core Subject Area field (e.g. Physical Science, Fine Arts, Social Studies, etc.):

Should the student be scheduled with a particular teacher or resource? _____ Yes _____ No

If yes, specify which teacher or resources and which semester(s) _____

Course duration: (1 or 2 semesters or summer) _____

Course credit attempted: _____ School Year: _____

ACTION PLAN

Description of what student will do to earn this credit (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Coursework | <input type="checkbox"/> Internet-based learning |
| <input type="checkbox"/> Field experience | <input type="checkbox"/> Summer learning activity |
| <input type="checkbox"/> Mentorship | <input type="checkbox"/> Independent study |
| <input type="checkbox"/> Internship | <input type="checkbox"/> Project-based learning |
| <input type="checkbox"/> Educational Travel | |

Name and contact information of organization and/or individual(s) to support your proposed credit earning activity (attach additional pages where necessary):

Name(s): _____
Title(s): _____
Address: _____
Phone: _____ Email: _____

A. Written instructional plan (attach separate sheets if needed)

1. Course content

2. Learning outcomes

3. Applicable course standards

4. How student will demonstrate proficiency

a. The grade will be determined by: _____
(Teacher of Record)

b. Assessment Instrument(s) or Educational Program to demonstrate proficiency:

c. Minimum threshold needed to award credit:

1. _____ % on assessment stated in (b) above **OR**
2. _____ score on rubric stated in (b) above **OR**
3. _____ % completion of performance stated in (b) above **OR**
4. _____ score on an established testing instrument stated in (b) above.
5. _____ other listed below:

I, (student signature) _____,
understand the Independent Study/Credit Flexibility Option is an intensive process designed to
allow me to work at my own pace to complete the assigned work.

The student and parent must initial each item below as indication of having read and accept
the following:

Parent Student

_____ _____ The student will hold primary responsibility for the overall success or
failure of the course.

_____ _____ The student will be expected to allocate an average of _____ hours
per week working toward the completion of this course.

_____ _____ The student will be expected to meet with teacher at least _____time(s)
per week.

_____ _____ The student will actively engage with the teacher and course activities by
_____ or the student may be withdrawn from the course.

_____ _____ The student will have until _____
to complete the course or the student may be withdrawn with penalty from
the course.

_____ _____ The student's teacher and/or other school authorities have the right to
cancel this course/credit option if: (1) the student violates any rule/policy
stated in the Student/Parent Handbook; (2) the student does not regularly
and actively engage with the teacher and course material by
_____; or (3) the student does not make steady
progress toward completion of the course.

The student and parent must initial each item below as indication of having read and accept the following:

Parent Student

_____ _____ The student must complete all online AS WELL AS offline/other work assigned by the due date stated by the teacher or the student may be withdrawn with penalty from the course.

_____ _____ The Instructor reserves the right to remove the student from the course (withdrawn with penalty) for issues involving plagiarism and copyright violation.

_____ _____ There are NO weighted grades for credits earned through independent study/credit flexibility.

SIGNATURES/ROUTING

Student _____ Date _____

Parent _____ Date _____

School Counselor _____ Date _____

Teacher of Record _____ Date _____

Exec. VP or Designee _____ Date _____

NOTES: