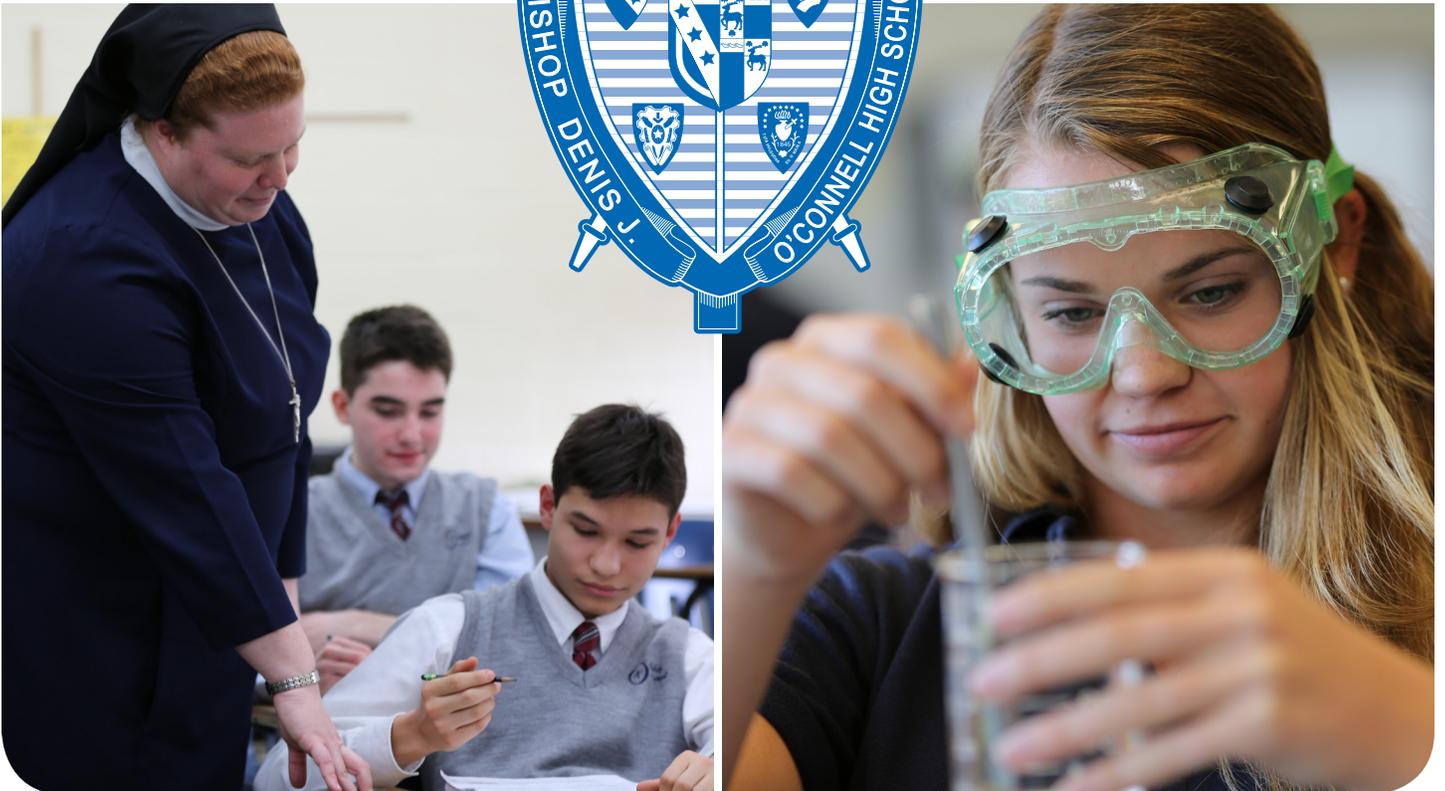


# BISHOP O'CONNELL HIGH SCHOOL

## Program of Studies • 2014-2015



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## GRADUATION REQUIREMENTS

Bishop O'Connell High School offers a curriculum that is designed to prepare students for admission to leading colleges or universities. For graduation, Bishop O'Connell High School requires a minimum of 26 credits to be distributed as follows:

Theology .....	4
English .....	4
Social Studies .....	4
Mathematics .....	3
Science .....	3
World Languages .....	2
Health/Physical Education .....	2
Fine Arts .....	½
Computer .....	½
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It is recommended that a student earn four credits in both math and science. Third and fourth year world language studies are recommended. Students must finish two years of a language at Bishop O'Connell High School or any other accredited high school (This does not include middle school credits). Student athletes are reminded of the need to meet NCAA requirements for athletic participation at the college level in planning their course of studies.

Credit earned in the eighth grade for subjects in the high school program of studies such as Spanish 1 or Algebra 1 may be counted toward fulfillment of the required courses after a qualifying test has established proficiency, but will not reduce the overall requirements of twenty-six units for graduation from O'Connell.

A student's reported GPA will include only those classes taken at Bishop O'Connell. Seniors must pass all classes to receive a diploma, including those that do not apply to graduation requirements. Students with failures will receive a diploma when credit has been earned for failed classes. Students must earn a passing grade in all courses before the start of the next school year.

## Mission Statement

Our mission is to provide students an education rooted in the life of Christ and to foster the pursuit of excellence in the whole person.

### Bishop O'Connell High School

6600 Little Falls Road • Arlington, VA 22213 • 703-237-1400

[www.bishopoconnell.org/academics](http://www.bishopoconnell.org/academics)



## REGISTERING FOR CLASSES

This guide is published to help students make responsible decisions regarding next year's academic program. It provides a brief description of the courses offered at Bishop O'Connell High School. Parents and students should examine it carefully in order to make realistic selections based on pupil ability and interests, past achievements, and future goals.

Students select seven (7) credits each year. When planning course selection, students with their parents and their counselors should carefully review prerequisites listed with each class, consider classes consistent with their ability and the requirements of the colleges and universities they plan to consider.

The school reserves the right to cancel or postpone courses for which inadequate enrollment, lack of physical facilities, or unavailability of teacher personnel necessitates such action. The Dean of Academics reserves the right to adjust selection depending on pupil ability, past performance, or teacher recommendation. Drop/Add procedures common at the college level do not apply. Students must seek the approval of their teacher and/or counselor to request a change in scheduled classes.

## MULLER PROGRAM

Students with documented learning disabilities may apply for acceptance into this program which provides a daily class period of learning support and assists in providing student accommodations.

## ADVANCED PLACEMENT

Students requesting to take any Advanced Placement (AP) course must attend a meeting with the AP instructor prior to signing up for the course. A contract must be signed by parents and students before the student is scheduled for the desired course. All students in AP courses are required to take the AP examination at the conclusion of the course.

## SAMPLE CATALOG CODES

**2300 FRENCH 3 HONORS**

**10-12 YR 1.0 cr**

*2300: course number*

*French 3 Honors: course title*

*10-12: course open to grades 10, 11, 12*

*YR: course term (YR – full year, SEM – semester)*

*1.0 cr: credit value of course*

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# THEOLOGY

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The members of the Bishop O'Connell theology department aspire to provide students with a deep knowledge of and appreciation for the tenets of the Catholic faith. They also work to help the students develop a genuine and personal relationship with Jesus Christ and comprehend religion as "faith seeking understanding." Therefore, each course encourages and develops a close relationship with God through prayer. With the dual focus of education and formation, the theology program fosters involvement in service to others and concern for the less fortunate. All four years directly correspond to the National Framework for High School Religion.

PLEASE NOTE: ALL HOUSEHOLDS SHOULD HAVE A CATHOLIC BIBLE AND CATHOLIC CATECHISM FOR HOME STUDY.

## **9150 THEOLOGY 1: WHO IS JESUS? 9 YR 1.0 cr**

Students explore the revelation of Jesus Christ in Scripture. Students also examine the Bible, how it was formed and its value to people throughout the world. Special emphasis is given to how the Old Testament lays the foundation for the coming of Jesus. The second semester emphasizes the Mystery of Jesus, the Living Word of God. In distinguishing who Jesus is, students also consider who Jesus calls them to be.

## **9220 THEOLOGY 2: THE MISSION OF JESUS CHRIST 10 YR 1.0 cr**

The purpose of this course is to help students conclude what God does for us through the words and actions of His Son, Jesus Christ, as they are analyzed in the gospels. Students are introduced to what it means to choose to be a disciple of Christ. The second semester focuses on the Church and how it has continued the redemptive mission of Jesus Christ from Pentecost to the present. Key topics include images of the Church; the four marks of the Church; the Church in the world, and the Communion of Saints. Catholic liturgy and devotions are studied in the context of discipleship and mission.

## **9320 THEOLOGY 3: SACRAMENTS/MORALITY/ETHICS 11 YR 1.0 cr**

The Sacraments part of this course strives to help students recognize the relationship between the Paschal Mystery expressed through the seven Church Sacraments and their own experiences. The Morality portion of the course centers on the Holy Spirit's activity of guiding men and women in daily decision-making. The God-given dignity of the human person, the nature and effects of sin, the call to holiness, the Virtues, the Commandments, and the formation of a sound conscience are examined. The Ethics component focuses on major issues and topics of the 21st century.

## **9470 THEOLOGY 4: CHURCH IN THE MODERN WORLD 12 YR 1.0 cr**

The purpose of this course is to identify how students can discover and articulate truth centered on the person of Jesus Christ and the central doctrines of the Creed. Love, responsibility, truth, theology of the body, and family life are key elements to this course. This course includes an in-depth focus on philosophical and theological readings and emphasis on developing critical thinking skills.

This course uses the Vatican II document Church in the Modern World as its inspiration. It explores Catholic Social Teaching and the special role of the laity in the Church's mission to

rightly relate the world to Christ. A central objective is to equip students with a mature understanding of the Catholic faith and the ability to share that vision with others. General Topics include the nature of human society, the meaning of human dignity, the doctrines of the common good, subsidiarity, solidarity, and the value of human labor.

## **9460 THEOLOGY 4: FORMING CATHOLIC LEADERS 12 YR 1.0 cr**

The purpose of this course is to identify how students can discover and articulate truth centered on the person of Jesus Christ and the central doctrines of the Creed. Love, responsibility, truth, theology of the body, family life, and social justice are key elements to this course. This course includes an in-depth focus on philosophical and theological readings and emphasis on developing critical thinking skills.

Students investigate social injustice by being in direct contact with marginalized populations and social change organizations and by discussing classical and contemporary works of philosophy and theology. The goal is to foster critical consciousness, enabling students to question conventional wisdom and learn how to work for a just society. This is accomplished by helping students make relevant connections between course material and experience with community service. The relationship between service and classroom study evokes a rich conversation.



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# ENGLISH

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The English department fosters excellence in critical thinking, analytical writing, public speaking, and engaged reading. The English department affirms the whole person through a comprehensive study of the classics of literature with added emphasis on contemporary relevance and Catholic teachings.

The English Department curriculum integrates the study of literature with a sequential writing program, instruction in grammar and usage, vocabulary study and oral presentation. The four year program includes required courses in genres of literature, world literature, American literature, and British literature. Several elective courses are also offered.

Skills learned in English classes are foundational for study in all disciplines and apply to all aspects of life. In this course of study students are provided opportunities and incentives to appreciate the power of language in expressing thoughts, feelings, and beliefs; to nurture a love of reading and improve communication skills in writing and speaking; to capably use 21st century research skills and technology; and to develop critical reading and thinking skills with a focus on logical, precise, moral and ethical reasoning.

## 1100 ENGLISH 1

9 YR 1.0 cr

The freshman course includes instruction in both language skills and literature. The literature program introduces students to the various literary genres, providing study in the epic, short story, novel, poetry, and drama. The course emphasizes critical reading and critical thinking skills. Vocabulary study is stressed and is taken from the reading, as well as from supplementary sources.

The language arts and communication program encompasses both written and oral development of language skills. Correct usage, grammar, sentence structure, intensive paragraph study, dictionary, and library skills are presented in a developmental sequence to assure achievement. Students begin learning the documentation process in the Modern Language Association (MLA) style and are introduced to the multiple-paragraph essay.

## 1150 ENGLISH 1 HONORS

9 YR 1.0 cr

*Prerequisites:* Invitation from English department based on results of the High School Placement Test and previous English grades, or appropriate score on department qualifying exam.

This course is designed for freshmen who demonstrate an above grade-level proficiency in reading and writing. The literature program introduces students to the various literary genres, providing study in the epic, short story, novel, poetry, and drama. The program examines the contributions of influential writers from ancient to modern times. The more advanced points of grammar and usage are covered, as it is expected that students have a basic understanding of the rules that govern the language. Writing and reading assignments are of greater frequency and sophistication and require the student to provide in-depth analysis in both written and discussion formats.

## 1200 ENGLISH 2

10 YR 1.0 cr

The sophomore course includes instruction in both language and literature. The literature program introduces students to works in world literature primarily, but not exclusively, those of western culture. The program examines the contributions of influential writers from ancient to modern times. Critical reading and thinking skills, as well as vocabulary study, continue to be emphasized.

The course includes both written and oral language development. The language program builds on the freshman course and includes overall review of usage and grammar. The development of a thesis in the five-paragraph format is a central aspect of this course. Experiences in creative writing are offered. Library and research skills concentrate on preparing students to write documented papers. Instruction in note taking and paraphrasing from source material, together with renewed instruction in the Modern Language Association (MLA) method of documentation, continues.

## 1250 ENGLISH 2 HONORS

10 YR 1.0 cr

*Prerequisites:* B in English 1 Honors and recommendation of English 1 Honors teacher; A in English 1 with evidence of strong writing skills, recommendation of English 1 teacher, and approval of department chairperson.

The literature program introduces students to works in world literature primarily, but not exclusively, those of western culture. The program examines the contributions of influential writers from ancient to modern times. Student writing is frequent and requires increasing sophistication in word choice, sentence structure, paragraph development, and overall impact. A research paper on a literary topic is a requirement of this course. Students are expected to actively participate in class discussions and to read and analyze a number of texts that supplement the classroom curriculum.

## 1300 ENGLISH 3

11 YR 1.0 cr

The junior course includes both composition and literature. The literature program surveys the major influences and writers in American literature from colonial times to the present. The program continues to emphasize the critical aspects of reading and thinking demonstrated through critical writing. Vocabulary study continues in preparation for the PSAT and SAT.

The composition program continues to develop skills learned in the freshman and sophomore courses and focuses on the various rhetorical forms of argument: persuasion, expanded definition, comparison/contrast, and literary analysis. Creative writing opportunities are provided. Documentation skills are developed further through the assignment of an extended research paper that develops a thesis.

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# ENGLISH

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## 5000 AMERICAN STUDIES

11 YR 2.0 cr

American Studies is an interdisciplinary course that integrates U.S. History and English 3 into a humanities based curriculum. The course is designed to unite American history and literature in order to further expand students' understanding of the origin and development of American traditions, values, and institutions. Works of literature are taught within their historical context and similarly, works of history are used to support and strengthen students' understanding of literary trends. The course also draws extensively from its related disciplines. Theme related art, music, selected readings, and writing are incorporated into daily lessons in order to enhance the study of social history and illustrate for students how individuals, communities, and social organizations and movements, have shaped, and continue to shape, the American landscape. This course meets the requirements for 1.0 credit each in U.S. History and English 3.

## 1350 ENGLISH 3 HONORS

11 YR 1.0 cr

*Prerequisites:* B in English 2 Honors and recommendation of English 2 Honors teacher; A in English 2 with evidence of strong writing skills, recommendation of English 2 teacher, and approval of department chairperson.

The junior course includes both composition and literature. The literature program surveys the major influences and writers in American literature from colonial times to the present. Students in this course will have shown a readiness to use higher level thinking skills when engaging literary texts, as evidenced by written and oral work that demonstrate an ability to read carefully, judge soundly, and synthesize logically. Students write frequently, exhibiting the reading and analytical skills necessary to conduct sound literary analysis, especially in the genre of poetry. Students must possess strong organizational skills, the ability to work independently, and the desire to read and analyze several texts in addition to the classroom curriculum. A research paper is also a requirement of this course.

## 1360 AP ENGLISH LANGUAGE AND COMPOSITION

11 YR 1.0 cr

*Prerequisites:* B+ in English 2 Honors, writing sample, and recommendation of English 2 Honors teacher.

This college level course is offered to junior students who have demonstrated a high degree of interest and proficiency in writing. The course is organized to assist students to perform well on the Advanced Placement (AP) Examination in English Language and Composition administered by the College Board in May and required of all students taking this course.

This course provides for the study and writing of various kinds of analytic or personal essays on nonliterary topics and includes instruction in rhetorical aims, modes, and techniques, and how to apply those principles in writing assignments. Although non-fiction is the focus of the AP exam in English Language and Composition, the American literature curriculum, including poetry and fiction, is thoroughly covered in this course. Non-

fiction selections are taken from a wide variety of sources. Students who take this course should plan to take AP English Literature in their senior year.

The course complements the current curriculum offered by the English department in its content and skills building. Students are asked to write literary analysis papers; in addition, students write in-class essays to practice classic argumentation and to expand upon the ideas highlighted by the texts on the syllabus.

## 1400 ENGLISH 4

12 YR 1.0 cr

The senior course includes both literature and composition components. The literature program surveys the major works, writers, and influences in the British tradition. Critical skills in reading, thinking, and writing continue to be emphasized and applied.

The composition program builds on the skills learned in the first three years and challenges students to refine writing skills in preparation for researching, developing, and documenting a thesis topic in an extended, critical paper. Creative writing opportunities are provided to give the student a forum for creative expression.

## 1420 ENGLISH 4 HONORS

12 YR 1.0 cr

*Prerequisites:* B in English 3 Honors and recommendation of English 3 Honors teacher; A in English 3, with evidence of strong writing skills, recommendation of English 3 teacher, and approval of department chairperson.

The senior course includes both literature and composition components. The literature program surveys the major works, writers, and influences in the British tradition. The senior honors course is designed for students who have demonstrated an ability to engage in clear and insightful literary analysis, to produce clear and cohesive essays, and to engage in advanced classroom discussions. Students are expected to read and analyze several texts in addition to the classroom curriculum. A research paper is also a requirement of this course.

## 1450 AP ENGLISH LITERATURE

12 YR 1.0 cr

*Prerequisites:* B in AP English Language and recommendation of AP Language teacher; B+ in English 3 Honors and recommendation of English 3 Honors teacher.

This college level course is offered to highly motivated students of English in senior year. This course is organized to assist students to perform well on the Advanced Placement Examination in English Literature administered by the College Board in May and required of all students taking this course.

This course includes both literature and composition. The literature is primarily British-based but includes readings from both European and American authors. Critical analysis, sound judgment, and logical synthesis in interpreting the readings are demonstrated in the frequent writing of critical essays. A seminar approach to oral discussions provides a forum for students to interact and to share insights in order to deepen their understanding and appreciation of the readings. Students

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# ENGLISH

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are expected to read and analyze ten to 12 full length works in addition to the classroom curriculum. A research paper is also a requirement of this course.

**1380 CRITICAL INQUIRY OF YOUNG ADULT FICTION**  
**10-12 YR 1.0 cr**

**1385 CRITICAL INQUIRY OF YOUNG ADULT FICTION**  
**10-12 SEM .5 cr**

This elective aims to develop a life-long love of the written word. Young adult fiction will be recast as the lead instead of classical literature's ugly stepsister. The class has a rigorous focus on fiction aimed at a teenage audience. Through careful study of primarily novels, students will have the opportunity to explore traditional literary devices used in this genre that includes many popular texts that are bestsellers. Additionally, the course highlights elements found within class reading that pay homage to classical literature as well as the relationship of the text to its context and to Catholic teachings. This course requires students to ask questions in an effort to hone critical thinking, engaged reading and analytical writing skills. Literary analysis and closely engaging with the text is the primary task of each class; writing and substantive discussion is the means through which that literary inquiry is accomplished. *Course 1385 is available only during first semester.*

**1390 PUBLIC SPEAKING**                      **10-12 YR 1.0 cr**

This elective course includes the basics of effective speaking and listening skills, preparation and tools for giving a speech, and the opportunity to present several types of speeches followed by evaluation by teacher and peers. This course aims to improve knowledge of effective communication skills as well as self-confidence. *This class fulfills the Fine Arts requirement for graduation.*

**1550 DEBATE 1**                                      **11-12 YR 1.0 cr**

*This elective course explores a wide variety and range of debate disciplines, including Congressional Debate, Public Forum Debate, and the basics of philosophy for Lincoln-Douglas Debate at the novice level. Additionally, students are introduced to basic researching, argumentation, questioning, and rebuttal skills. Focus includes the development of techniques in diction, articulation, enunciation and projection. Students begin to analyze pieces of literature, write arguments, and evaluate performances. Students have the opportunity to attend regional and state level debate (forensic) competitions.*

**1460 YEARBOOK PRODUCTION**    **10-12 YR 1.0 cr**

**Prerequisite:** Recommendation of current English teacher.

This elective course introduces students to the successful production of a school yearbook. Students learn about the various sections of the yearbook and how to write effective yearbook articles, captions, and headlines. They also learn how to organize and conduct student and faculty interviews, design layouts on the computer using Adobe

InDesign, and to assemble the pages of the yearbook to meet structure production deadlines. Effective editing, revision, and photography skills are developed. *This course fulfills the computer and Fine Arts requirements for graduation.*

**1510 JOURNALISM 1**                                      **10-12 YR 1.0 cr**

**Prerequisite:** B in current English class and a writing sample.

This elective course introduces students to the fundamental components of journalism. News and feature writing styles are learned once students have acquired adequate reporting, interviewing, and editing skills. As students "cover" the school community, worthy student writing is published in The Visor, the school newspaper. The curriculum explores the history of journalism in the United States, photojournalism, newspaper ethics, and television broadcasting. This course fulfills the computer and Fine Arts requirements for graduation.

**1530 CREATIVE WRITING**                                      **11-12 YR 1.0 cr**

**1535 CREATIVE WRITING**                                      **11-12 SEM .5 cr**

**Prerequisite:** Writing sample.

These elective courses offer a supportive and instructional environment for students wishing to develop their creative writing abilities. Participants work in the genres of poetry, short fiction, drama, and screenplay writing. Writing is supported by readings, classical and modern, in each of these genres. The practical aim of these courses is to generate a creative writing portfolio that students may use to further their ambitions beyond the high school level. Students are provided with opportunities to submit their writing for publication and consideration in relevant contests. *Course 1535 is available only during first semester.*

**6700 INTRO TO FILM**                                      **11-12 SEM .5 cr**

This elective course presents an in-depth treatment of film as a powerful 20th and 21st century art form. Students become familiar with film language and technique, study the history of American film, and critique numerous films using the knowledge they acquire through viewing clips from the greatest movies made, as well as from full-length presentations. The course requires discussion and critical writing. Topics to be discussed include: photography, sets/settings, movement, editing, sound, acting, drama, story, writing, ideology and theory. This course fulfills the Fine Arts requirement for graduation.

# MATHEMATICS

The mission of the math department at Bishop O'Connell High School is to prepare each student for future courses in mathematics and related disciplines, to instill students with the competence and confidence to continue their education in math related fields beyond high school and to demonstrate the value of living a life rooted in Christ.

Freshman placement is based on several factors: high school placement scores in math, math grade in eighth grade, eighth grade math teacher's recommendation, and algebra exemption exam score. Students may elevate a level in their next math course if they have an A average on major tests and quizzes, have a strong work ethic, and have the current math teacher's recommendation. Students must maintain a B average to remain in Honors courses.

Students in Algebra 1 wanting to progress to Calculus before leaving high school may schedule Geometry and Algebra 2/Trig simultaneously in tenth grade or take a summer geometry class followed by the geometry exemption exam to be placed in Algebra 2/Trig in tenth grade. Students with an A in Algebra 1/A, a strong work ethic and the current math teachers recommendation are eligible to enroll in an intensive (five hours daily) summer Geometry class.

A graphing calculator is required for all classes.

Grade 9	Grade 10	Grade 11	Grade 12
Algebra 1	Geometry Geometry/A	Algebra 2 Algebra 2/Trig	College Math Topics Pre-Calculus Statistics
Algebra 1/A	Geometry/A Geometry Geometry Honors Geom/A & Alg2/Trig	Algebra 2/Trig Algebra 2 Algebra 2/Trig Honors	Pre-Calculus College Math Topics Pre-Calculus Honors Statistics
Algebra 2/Trig	Geometry/A Geometry Honors Pre-Calculus Pre-Calculus Honors	Pre-Calculus Pre-Calculus Honors College Math Topics Calculus Honors AP Calculus AB Statistics AP Statistics	Calculus Honors AP Calculus AB AP Calculus BC Pre-Calculus Pre-Calculus Honors Statistics AP Statistics
Algebra 2/Trig Honors	Geometry Honors Geometry/A Pre-Calculus Honors Pre-Calculus	Pre-Calculus Honors Pre-Calculus AP Calculus AB Calculus Honors Statistics AP Statistics	AP Calculus AB Calculus Honors AP Calculus BC Statistics AP Statistics

## 3180 ALGEBRA 1

9 YR 1.0 cr

This course covers fundamental algebra. Topics include: the language of algebra; properties of real numbers; solving equations and inequalities in one and two variables; multiplying and factoring algebraic numbers; rational numbers and irrational numbers; solving equations involving rational and irrational numbers; solving systems of linear equations and linear inequalities and their graphs; simplifying radical terms, and solving equations by factoring. Word problems concerning distance, rate and time, percentages, interest, geometric figures, and number problems are taught as they occur in the text. Students are introduced to the graphing calculator with linear equations and solving systems of linear equations. Extensive practice problems are included to solidify concepts. Students are placed in this course by the mathematics department based on the placement exams scores and middle school math grades.

## 3110 ALGEBRA 1/A

9 YR 1.0 cr

This course covers fundamental algebra in-depth. Topics include: the language of algebra; properties of real numbers; solving equations and inequalities in one and two variables; multiplying and factoring algebraic numbers; rational numbers and irrational numbers; solving equations involving rational and irrational numbers; solving systems of linear equations and linear inequalities and their graphs; simplifying radical terms, and solving equations by factoring. Word problems concerning distance, rate and time, percentages, interest, geometric figures, and number problems are taught as they occur in the text. Students are introduced to the graphing calculator with linear equations and solving systems of linear equations. The class is paced so that students can enter an honors class in tenth grade or continue the four year college-prep mathematics program.

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# MATHEMATICS

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## **3109\*ALGEBRA 1/A**

**9 YR 1.0 cr**

This course covers fundamental algebra in-depth. Topics include: the language of algebra; properties of real numbers; solving equations and inequalities in one and two variables; multiplying and factoring algebraic numbers; rational numbers and irrational numbers; solving equations involving rational and irrational numbers; solving systems of linear equations and linear inequalities and their graphs; simplifying radical terms, and solving equations by factoring. Word problems concerning distance, rate and time, percentages, interest, geometric figures, and number problems are taught as they occur in the text. Students are introduced to the graphing calculator with linear equations and solving systems of linear equations. *This course is the equivalent to 3110 Algebra 1/A with the exception that students are placed in the course based on testing and algebra background from eighth grade.*

## **3280 GEOMETRY**

**10 YR 1.0 cr**

This course is an axiomatic approach to the basic theorems of Euclidean geometry. It uses an integrated approach to the study of plane and solid geometry, including proofs. A study of the areas and volumes of the two-dimensional and three-dimensional figures is included in the course. A thorough study of the right triangle is taught as a brief introduction to trigonometry. This is a complete course in geometry using hands-on work to discover the concepts of geometry.

## **3220 GEOMETRY/A**

**10 YR 1.0 cr**

*Prerequisites:* B in Algebra 1/A.

This course is an axiomatic approach to the basic theorems of Euclidean geometry. It uses an integrated approach to the study of plane and solid geometry, including proofs. Included in the course is a study of the areas and volumes of two-dimensional and three-dimensional figures. A thorough study of the right triangle is taught as a brief introduction to trigonometry.

## **3230 GEOMETRY HONORS**

**10 YR 1.0 cr**

*Prerequisites:* B in Algebra 2/Trig Honors or A in Algebra 1/A and teacher recommendation.

This course is an axiomatic approach to the basic theorems of Euclidean geometry. It uses an integrated approach to the study of plane and solid geometry, including proofs. Included in the course is a study of the areas and volumes of two-dimensional and three-dimensional figures. A thorough study of the right triangle is taught as a brief introduction to trigonometry. This course is taught at a rigorous pace with significant emphasis on proofs. Course content also includes construction, loci, coordinate geometry, and transformations.

## **3380 ALGEBRA 2**

**11-12 YR 1.0 cr**

*Prerequisites:* Satisfactory completion of Algebra 1 and Geometry.

This course is required for students who have completed Algebra 1 and Geometry and do not meet the prerequisites

for Algebra 2/Trig. Building upon the basic elements of first year algebra, this course develops a full range of Algebra 2 concepts. Topics include polynomials and the concept of functions, exponents, radicals, factoring, rational expressions, quadratic equations, complex numbers, conic sections, probability and an introduction to the basic elements of trigonometry. A graphing calculator is required.

## **3300 ALGEBRA 2/TRIGONOMETRY 10-11 YR 1.0 cr**

*Prerequisites:* B in Geometry/A or A in Geometry and teacher recommendation.

Beginning with a review of the basics of first-year algebra, the students are led to a more detailed study of the polynomial and the concept of functions. Topics that are presented for study include exponents, radicals, factoring, rational expressions, quadratic equations, and complex numbers. The fundamentals of trigonometry are presented in the fourth quarter.

## **3309\*ALGEBRA 2/TRIGONOMETRY 9 YR 1.0 cr**

Beginning with a review of the basics of first-year algebra, the students are led to a more detailed study of the polynomial and the concept of functions. Topics that are presented for study include exponents, radicals, factoring, rational expressions, quadratic equations, and complex numbers. The fundamentals of trigonometry are presented in the fourth quarter. *Placement in this course is based upon the results of the Diocesan Algebra Exemption Exam.*

## **3350 ALGEBRA 2/TRIGONOMETRY HONORS**

**9-11 YR 1.0 cr**

*Prerequisites:* B in Geometry Honors or A in Geometry/A and Algebra 1/A with teacher recommendation.

This course begins with a review of the basic concepts of first-year algebra followed by the topics of Algebra 2. These topics include: linear functions and relations, systems of equations and inequalities, matrices, quadratic functions, exponential and logarithmic functions, polynomial functions, rational and radical functions, statistics and conic sections. The study of trigonometry, which takes place in the fourth quarter includes radian measure, trigonometric functions and identities, and solving general triangles.

## **3400 COLLEGE MATH TOPICS**

**12 YR 1.0 cr**

*Prerequisites:* Satisfactory completion of Geometry and Algebra 2 or Algebra 2/Trig

This course is designed to introduce students to new concepts in mathematics including right triangle trigonometry, set theory, logic, number representation and probability. Students improve upon skills previously acquired in Algebra 1, Algebra II and Geometry through application to practical problems that model "real world" challenges. Students continue to develop their mathematical skills in problem solving, inductive and deductive reasoning, voting and apportionment methods, graphing, mathematical modeling, number theory, and linear

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# MATHEMATICS

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programming. This is a designated course for seniors who wish to apply their mathematical skills in science, business, financial management, statistics and surveys.

## **3410 PRE-CALCULUS** 10-12 YR 1.0 cr

*Prerequisites:* B in Algebra 2/Trig or A in Algebra 2 with summer enrichment.

This course is intended for students who wish to continue a college prep math curriculum beyond Algebra 2/Trig and subsequently take a calculus course. Topics covered are: a review of linear and quadratic functions, polynomial functions and their inverses, conic sections, exponents and logarithms and trigonometry with a concentration on radian measure, series, sequences, limits, and combinatorics.

## **3450 PRE-CALCULUS HONORS** 10-12 YR 1.0 cr

*Prerequisites:* B in Algebra 2/Trig Honors or A in Algebra 2/Trig with teacher recommendation.

This course is designed for the student who wishes to continue a college prep curriculum and subsequently take an AP or Honors Calculus course. Topics include a review of linear and quadratic functions, polynomial functions and inverses, exponents and logarithms, trigonometry, probability, series, sequences, limits and graphing techniques using transformations, and combinatorics. This course is enriched with an introduction to derivatives. Emphasis is divided between theory and problem solving.

## **3510 CALCULUS HONORS** 11-12 YR 1.0 cr

*Prerequisites:* B+ in Pre-Calculus or C+ in Pre-Calculus Honors.

This course is intended for the student who would like an introduction to calculus without the pressure of an Advanced Placement pace. The concepts are presented from the verbal, algebraic, visual and numerical points of view, as appropriate. Topics include: limits and continuity, derivatives of polynomials, trigonometric, rational, exponential and logarithmic functions as well as the chain rule and implicit differentiation. Applications of the first and second derivative consist of curve analysis, related rates, maximum and minimum problems. Fourth quarter topics include Riemann sums, the indefinite and definite integral.

## **3550 AP CALCULUS AB** 11-12 YR 1.0 cr

*Prerequisites:* B in Pre-Calculus Honors

This college level calculus course culminates with the Advanced Placement test in AB Calculus in May. The concepts of limits and continuity are developed into differential calculus, covering the derivative geometrically, numerically and analytically. Derivatives of trigonometric, exponential, logarithmic and inverse functions, the chain rule, and implicit differentiation are studied. Applications of derivatives include curve analysis, related rates, growth and decay, and velocities and accelerations. Second semester topics include: integral calculus; the computations of various Riemann sums and applications of integral calculus including topics such as area between

curves; rotations of solids and average value. In addition to the curriculum outlined by the College Board, this course is enriched with additional calculus topics. All students must take the AP Calculus AB exam in May. A graphing calculator is required for this course and for the AP exam. A summer project reviewing pre-calculus topics is required.

## **3560 AP CALCULUS BC** 11-12 YR 1.0 cr

*Prerequisites:* B in Calculus AB or B+ in Calculus Honors.

This college level calculus course culminates with the Advanced Placement test in Calculus BC in May. The concept of differential calculus is developed, including the derivatives of polynomial, trigonometric, exponential, and logarithmic functions, and their inverses are studied. Rules for differentiation and applications of derivatives are studied, including the chain rule, implicit differentiation, curve analysis, related rates, growth and decay, and kinematics. Numerical methods such as Euler's method and Newton's method are also covered. Second semester topics include: integral calculus and applications of integral calculus including topics such as area between curves; rotations of solids and average value of a function. Numerical integration methods such as Riemann sums are also presented. Additionally, the course includes multivariable calculus, vector calculus, Taylor and Maclaurin series representations of functions, and polar curves. All students must take the AP Calculus BC exam in May. A graphing calculator is required for this course and for the AP exam. A summer project reviewing pre-calculus topics is required. For any student enrolled in AP Physics C, it is highly recommended to enroll in AP Calculus BC concurrently.

## **3600 STATISTICS AND PROBABILITY**

11-12 YR 1.0 cr

*Prerequisites:* B in Algebra 2/Trig or C+ in Pre-Calculus.

An introduction to probability and statistics at a pre-calculus level, this course provides an opportunity to explore and understand the statistics encountered daily in life. Emphasis is on basic concepts including organizing and displaying data, averages and variation, probability theory, binomial probability distribution, normal and sampling distribution, estimation and hypothesis testing. Statistics involves applied mathematics with meaningful problems preparing the student for all fields of college study. *This course is available for dual credit through Marymount University.*

## **3650 AP STATISTICS** 11-12 YR 1.0 cr

*Prerequisites:* Satisfactory completion of Pre-Calculus or Pre-Calculus Honors.

This college level, pre-calculus-based statistics course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. The course culminates with the Advanced Placement Test in Statistics in May. The students interpret univariate data, explore bivariate data, and learn probability theory, the normal curve, confidence intervals, and tests of significance, adhering to the curriculum outlined by the College Board.

# — HEALTH & PHYSICAL EDUCATION —

The offerings in this department support the commitment of the school to the welfare of the whole person. Students are encouraged to adopt a life-long personal pattern of physical activity as an important aspect of a healthy lifestyle. Health classes offer students the opportunity to learn how to make sound decisions which avoid harmful behaviors and enhance their general well-being. Specific instruction in such skills as driver education and CPR are provided as part of the two-year required program.

## HEALTH & PHYSICAL EDUCATION 1

**8010 BOYS** 9 YR 1.0 cr  
**8110 GIRLS** 9 YR 1.0 cr

Health and Physical Education 1 fulfills the state requirement for all freshmen. Instruction emphasizes the development of a healthy active lifestyle. Health Education includes selected systems of the body and their related health issues; alcohol, drugs, and tobacco; infectious disease; nutrition, stress, and fitness and an updated unit on the implications of "bullying." Physical Education includes a variety of team and individual activities to meet the student's present need for fitness and physical activity as well as introducing activities that can be continued later as part of a healthy lifestyle. Additionally, there is an option to participate in strength and conditioning every quarter. Physical fitness testing is done in the fall and spring. *This course is also available during summer school for an additional fee.*

## HEALTH & PHYSICAL EDUCATION 2

**8210 BOYS** 10 YR 1.0 cr  
**8310 GIRLS** 10 YR 1.0 cr

Health and Physical Education 2 fulfills the state requirement for all sophomores. Health Education includes classroom Driver Education in the fall semester and First Aid in the spring semester. Both classroom and in-car Driver Education are required for individuals under 18 to get a driver's license. In-car Driver Education is offered on a first-come, first-served basis for an additional fee. Physical Education includes a variety of team and individual activities to meet the individual's present need for fitness and physical activity as well as introducing activities that can be continued later as part of a healthy lifestyle. Additionally, there is an option to participate in strength and conditioning every quarter. Physical fitness testing is done in the fall and spring. *This course is also available during summer school, for an additional fee.*

**8300 SPORTS MEDICINE** 10-12 SEM .5 cr

*Prerequisites:* 2.5 GPA and permission of the instructor.

This course is an introduction to the many aspects of sports medicine. Instruction on common injuries to all parts of the body composes the core of the course. Many non-injury topics are also covered such as sport nutrition, drug abuse in sports, sport psychology, medical conditions and sports participation, sports performance enhancement, and exercise in heat and cold. Careers in sports medicine and an introduction to current literature are also included.

## 8305 INTRODUCTION TO PROFESSIONAL NURSING

10-12 SEM .5 cr

Introduction to Professional Nursing is a survey course similar to the type of course required of beginning college students pursuing a bachelor's degree in the nursing discipline. The course includes the study of the nursing process, selected nursing theories, and a unit on the history of nursing. There is information given about the educational process that students must pursue in order to qualify for the licensing exam. The course incorporates aspects from other disciplines including ethics, psychology and sociology, applicable to anyone who might be considering a career in another health care field, such as medicine, physical therapy, pharmacy, occupational therapy, and social work. Students also examine the various roles that nurses undertake and the many professional career choices available to the licensed practitioner. Writing is an integral part of the course as students are expected to do library and internet research as they explore the world of professional nursing.

## 8440 STRENGTH AND CONDITIONING

11-12 SEM .5 cr

*Prerequisites:* Permission of the instructor.

Students participate in a program of weight training, flexibility, plyometric and cardiovascular exercises to improve physical fitness.

## 8460 ADVANCED STRENGTH AND CONDITIONING

11-12 SEM .5 cr

*Prerequisites:* Completion of 8440.

Students participate in an individualized program of weight training, flexibility, plyometric and cardiovascular exercises to improve physical fitness.





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# WORLD LANGUAGES

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## 2400 FRENCH 4 HONORS 11-12 YR 1.0 cr

*Prerequisites:* B+ in French 3 Honors or A- in French 3 and teacher approval.

This course continues the program of study of French 3, including an in-depth survey of French history, literature, and civilization from the Renaissance to the present. The course also includes an intensive study of grammatical structures, reading comprehension, composition and oral skills. Selected texts, audio, video, DVD's, and other materials supplement this course. Class is conducted in French. *This course is available for dual credit through Marymount University.*

## 2450 AP FRENCH 5 LANGUAGE AND CULTURE 12 YR 1.0 cr

*Prerequisite:* Teacher approval.

This course emphasizes in depth the four basic skills of language learning. The class is conducted entirely in French. Students are required to speak only in the target language. All students are required to take the AP French Exam. One literary text is read, and the course is supplemented with videos, publications, and other resources.

## 2460 POST AP FRENCH 6 12 YR 1.0 cr

*Prerequisite:* Permission of the teacher.

This is an intermediate college level course. Teacher determines topics/major pieces of literature to be studied. Research papers are required.

## 2500 SPANISH 1 9-11 YR 1.0 cr

This course aims to develop the four skills of language learning: listening, speaking, reading and writing. This approach emphasizes the study of dialogues, narratives and structural patterns and develops skill in pronunciation and listening comprehension. The culture, geography and history of Spain and Latin America are introduced through the use of maps, videos, technology, and other supplementary materials and assignments.

## 2600 SPANISH 2 9-12 YR 1.0 cr

*Prerequisite:* C in Spanish 1.

Students attain proficiency in the four skills of language learning: listening, speaking, reading and writing. This approach emphasizes the study of dialogues, narratives and structural patterns and uses CDs and DVD's to develop skill in pronunciation, critical thinking, and listening comprehension. The cultural study of Spain and Latin America is supplemented with maps, videos and other supplementary material and projects. Technology is integrated into course work to immerse students in authentic language and culture.

## 2565 SPANISH SPEAKERS 3 HONORS 9-12 YR 1.0 cr

*Prerequisite:* Students are selected based on their oral and written skills. Placement interview is required.

The purpose of the Spanish speakers classes is to refine reading and writing skills of those with native speaking ability. An intensive overview of Spanish grammar, spelling, pronunciation and vocabulary is conducted. The course is enriched with literary and cultural reading selections and projects. Spanish is used exclusively in the classroom.

## 2690 SPANISH 3 9-12 YR 1.0 cr

*Prerequisites:* B in Spanish 2 and recommendation of Spanish 2 teacher.

This course further develops the four basic skills of the target language, with an emphasis on improving oral proficiency. Students are expected to have the ability to initiate conversation as well as to understand and respond in Spanish. An intensive study of Spanish culture and geography is supplemented with maps, videos, projects and technology.

## 2700 SPANISH 3 HONORS 9-12 YR 1.0 cr

*Prerequisites:* B+ in Spanish 2 and recommendation of Spanish 2 teacher.

This advanced course further develops the four basic skills of the target language, with an emphasis on oral proficiency. The curriculum includes literary readings of Spanish and Latin American authors, and introduces more advanced grammatical structures of the language. Classes are conducted primarily in Spanish.

## 2820 SPANISH 4 9-12 YR 1.0 cr

*Prerequisites:* B+ in Spanish 3; B in Spanish 3 Honors; and evidence of competence in Spanish 3 grammar or recommendation from Spanish speakers teacher.

This course continues the study of grammatical structures with alternate units of introductory literature of Spain and Latin America through short stories. The goal of this course is to reinforce and refine all four skills of the target language.



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# WORLD LANGUAGES

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## **2830 SPANISH 4 HONORS**      **10-12 YR 1.0 cr**

*Prerequisites:* B+ in Spanish 3 Honors and recommendation of Spanish 3 Honors teacher; A in Spanish 3 and recommendation of Spanish 3 teacher, plus interview with and writing sample for the teacher of Spanish 4 Honors, or recommendation from Spanish speakers teacher.

This course reviews grammatical structures, and introduces more advanced structures of the language. In addition, it surveys Spanish literature and art. Discussion is in the target language. *This course is available for dual credit through Marymount University.*

## **2890 AP SPANISH 5 LANGUAGE AND CULTURE** **11-12 YR 1.0 cr**

*Prerequisites:* Recommendation of Spanish 4 Honors or Spanish Speakers teacher and approval of AP Spanish Language and Culture teacher.

The AP Spanish Language and Culture course is a program designed to develop students' communication skills in Spanish and to prepare students for the AP Spanish Language and Culture Exam. This course emphasizes conversation, composition and advanced grammar. It provides exposure to a variety of materials that expands students' knowledge of Spanish in both oral and written form. The class is conducted in Spanish. All students are required to take the AP Spanish Language and Culture Exam at the conclusion of the course.

## **2850 AP SPANISH 5 LITERATURE AND CULTURE** **10-12 YR 1.0 cr**

*Prerequisites:* Recommendation of Spanish 4 Honors or AP Spanish Speakers teacher and approval of AP Spanish Literature and Culture teacher.

The AP Spanish Literature and Culture course is the equivalent of a third-year college literature course. It promotes the formal study of a representative body of literature written in Spanish, from Peninsular Spain, Latin America, and the United States. The course offers students ongoing and varied opportunities to develop proficiency in Spanish across a range of skills, with emphasis on critical reading and analytical writing. In addition, the students relate the readings to literary, historical, sociocultural, and geopolitical contexts. All students are required to take the AP Spanish Literature and Culture exam at the conclusion of the course.

## **2860 SPANISH 5 HONORS**      **11-12 YR 1.0 cr**

*Prerequisites:* B+ in Spanish 4 Honors and teacher recommendation; A in Spanish 4 and teacher recommendation. Spanish 4 Honors students who qualify for AP Spanish Language and Culture will be advised to take the AP course rather than Spanish 5 Honors.

This course continues to stress the four basic language learning skills: listening, speaking, reading and writing. Spanish 5 Honors is conducted almost exclusively in the target language, thereby offering the student ample

opportunity to practice speaking and listening skills. The student participates in discussions and conversations. The literature, art, history, geography and culture of Spanish-speaking countries are studied alternately during the year. Writing abilities continue to be developed through more advanced student compositions and journal entries. Films and videos are utilized in order to expand the student's knowledge and understanding of Spanish-speaking people and their cultures.

## **2900 LATIN 1**      **9-12 YR 1.0 cr**

In this course the language and culture of the ancient Romans are introduced through a reading based approach. Latin vocabulary and the basic components of grammar are learned. A study of English word formation and vocabulary building from Latin roots is also incorporated into each chapter.

## **2950 LATIN 2**      **9-12 YR 1.0 cr**

*Prerequisite:* C in Latin 1.

This course continues the study of Latin grammar with an emphasis on more complex grammar. The history and the culture of ancient Rome are also studied.

## **2980 LATIN 3 HONORS**      **9-12 YR 1.0 cr**

*Prerequisite:* B+ average in Latin 2.

This course completes the study of Latin grammar. Grammatical principles are reviewed and consolidated as students are introduced to Latin prose and poetry.

## **2990 LATIN 4 HONORS**      **10-12 YR 1.0 cr**

*Prerequisite:* B+ average in Latin 3 Honors.

Students continue to develop their skill at translating original Latin texts.

## **2995 AP LATIN**      **10-12 YR 1.0 cr**

*Prerequisite:* A- average in Latin 3 Honors.

Students will read, analyze, and interpret portions of Vergil's Aeneid and Julius Caesar's Gallic Wars in Latin. This course follows the syllabus and requirements established by the College Board. Students are required to take the AP Latin Exam in May.

# SCIENCE

The science department ensures that students learn and practice critical concepts in biology, chemistry, physics, and engineering in order to better understand the scientific principles that govern the way the world operates and gain insight into the nature of God. An emphasis is placed on developing laboratory, critical thinking and problem solving skills and fostering an attitude of inquiry and investigative thought, while staying current with a world of ever-expanding scientific knowledge and technology.

The science department offers the courses necessary to meet the needs of the science education of a college preparatory student. These courses are offered at college prep, honors, and AP levels. All science courses meet or exceed the guidelines recommended by the Virginia State Standards of Learning and the National Science Foundation.

The chart below can be used to plan a student's course of study in the science curriculum beginning with initial classes in Biology or Principles of Matter & Energy. Science course placement is dependent upon consistency of quarter grades, exam grades, and recommendation of the current science teacher. Students must maintain a B- average to remain in honor courses.

<b>Principles of Matter and Energy</b> <i>next course options</i> Biology 1 Biology 1Honors	<b>Biology 1</b> <i>next course options</i> Chemistry Chemistry Honors	<b>Biology 1 Honors</b> <i>next course options</i> Chemistry Chemistry Honors	
<b>Chemistry w/Geometry Honors or Geometry/A</b> <i>next course options</i> AP Biology Anatomy/Physiology Anatomy/Physiology Hnrs Ecology	<b>Chemistry w/Alg2/Trig Honors or Alg2/Trig</b> <i>next course options</i> Physics Physics Honors AP Physics 1 AP Biology AP Chemistry AP Environmental Science Forensic Science Anatomy/Physiology Anatomy/Physiology Hnrs Principles of Engineering	<b>Chemistry Honors</b> <i>next course options</i> Physics Physics Honors AP Physics 1 AP Biology AP Chemistry AP Environmental Science Forensic Science Anatomy/Physiology Anatomy/Physiology Hnrs Principles of Engineering	<b>Intro to Engineering</b> Open to Grades 9 - 12 <b>Independent Research</b> Open to Grades 10, 11, and 12 with Department Approval
<b>Physics</b> <i>next course options</i> AP Biology AP Chemistry AP Environmental Science Forensic Science Anatomy/Physiology Anatomy/Physiology Hnrs Ecology Principles of Engineering	<b>Honors Physics</b> <i>next course options</i> AP Physics 2 (2015) AP Physics C AP Biology AP Chemistry AP Environmental Science Forensic Science Anatomy/ Physiology Anatomy/Physiology Hnrs Principles of Engineering	<b>AP Physics B/AP Physics 1</b> <i>next course options</i> AP Physics C AP Physics 2 (2015) AP Biology AP Chemistry AP Environmental Science Forensic Science Anatomy/ Physiology Anatomy/Physiology Hnrs Principles of Engineering	

## 4190 PRINCIPLES OF MATTER AND ENERGY 9 YR 1.0 cr

Freshmen: Students are selected by the science department based on their High School Placement Exam and Diocesan Algebra Exemption Exam scores. Students receive notification of placement in late June.

This is a two semester physical science course that emphasizes chemistry and physics concepts. Students will utilize science, technology, engineering, and math (STEM) skills to apply logical thought and creativity to scientific problems. Students' mathematical problem-solving, laboratory, analytic writing, and technology skills are developed to prepare them for future science courses.

## 4200 BIOLOGY 1 9-10 YR 1.0 cr

Freshmen: Students are invited by the science department based on their High School Placement Exam and Diocesan Algebra Exemption Exam scores. Freshmen receive notification of eligibility in late June.

Prerequisite for Rising Sophomores: Completion of Algebra 1

Biology 1 is a lab-based introductory college preparatory course that emphasizes the following major areas of study: (1) A introduction to the basic structure, function, and chemistry of living organisms; (2) Continuity of life through genetics and history of life through an understanding of evolution; (3) Diversity of life from bacteria to green plants and from protozoa to humans; (4) The interdependency of organisms and their environment; (5) Overview of human processes and interrelation of other species and the environment. Labs and computer-based activities are an integral part of this course.

# SCIENCE

## **4210 BIOLOGY 1 HONORS**                      **9-10 YR 1.0 cr**

Freshmen: Students are invited by the science department based on their High School Placement Exam and Diocesan Algebra Exemption Exam scores. Freshmen receive notification of eligibility in late June.

Prerequisite for Rising Sophomores: Grade of A or higher in Algebra 1/A or enrollment in math/or English Honors classes. Consent of the Biology 1 Honors instructor required.

Biology 1 Honors is a course intended for students who exhibit an above average interest and ability in science. It utilizes the molecular approach to the study of biology. A current, comprehensive background of biology is presented so that the student may make intelligent decisions concerning topics such as growth and development, evolution, genetic engineering, cellular energy, and DNA. The course includes laboratory experiences with emphasis on experimental design and problem-solving skills.

## **4300 CHEMISTRY**                                      **11-12 YR 1.0 cr**

*Prerequisites:* Satisfactory completion of Biology and C in Algebra 1/A or B in Algebra 1.

This is an introductory chemistry course designed for a well-rounded liberal arts education. The composition and behavior of matter and energy are the focus of this general chemistry course. Students are expected to develop problem-solving skills which are both mathematical and conceptual. Laboratory experiences are designed to enhance and reinforce classroom instruction.

## **4350 CHEMISTRY HONORS**                      **10-12 YR 1.0 cr**

*Prerequisites:* B in Biology Honors or A in Biology; B in Algebra 2/Trig Honors or A- in Algebra 2 Trig, and recommendation of current science teacher. Co-requisite: Algebra 2/Trig or higher level math class.

This course is a college preparatory introduction to the study of matter which emphasizes conceptual understanding as well as in-depth mathematical problem-solving. The course curriculum includes: states of matter, kinetics, equilibrium, atomic theory, acids and bases, and other selected topics. Additional time is scheduled for laboratory experiences to support classroom instruction, to practice inductive reasoning skills, to develop concepts of experimental design; and to emphasize data collection and report writing skills. Students are expected to develop and apply analytical thinking and communication skills to theoretical and applied aspects of chemistry. A graphing calculator is required.

## **4400 PHYSICS**    **11-12 YR 1.0 cr**

*Prerequisites:* C in current science and C in Algebra 2/Trig courses or B- in Algebra 2 with concurrent enrollment in College Math Topics, satisfactory completion of Chemistry and consent of Science Department. (Transfer students must have Trigonometry in their background.)

This course presents the physics concepts that form a foundation for the studies of science, technology, and

engineering and focuses on discovering relationships between facts and the patterns that exist in nature. Demonstrations, laboratory exercises, and problem solving using mathematical and graphical techniques are incorporated into these concepts. There is an emphasis on thinking and reasoning to solve problems and apply what has been learned. Topics include kinematics, dynamics, work, energy, heat, and electricity.

## **4430 PHYSICS HONORS**                                      **11-12 YR 1.0 cr**

*Prerequisites:* B- in Chemistry Honors and in Algebra 2/Trig Honors, or B+ in Chemistry and Algebra 2/Trig, and the consent of current science and Physics Honors instructor.

Physics Honors provides a rigorous analysis of the main principles of classical and modern physics and emphasizes the development of critical thinking and problem-solving strategies. Mathematical reasoning, laboratory experiences, some computer-based, and calculator graphing and programming are utilized in the development of the principles involved and the ability to apply these principles in the solution of problems. Topics include kinematics, dynamics, work, energy, waves, light and optics, mechanics, and electricity. A programmable graphing calculator is required.



## **4460 AP PHYSICS 1**    **11-12 YR 1.0 cr**

*Prerequisites:* B in Chemistry Honors and in Algebra 2/Trig Honors, or B+ in Chemistry and Algebra 2/Trig, and the consent of current science and AP Physics instructor.

AP Physics 1 is an algebra-based, introductory college-level physics course that explores topics such as Newtonian mechanics (including rotational motion), work, energy, and power; mechanical waves and sound; and introductory, simple circuits. Through inquiry-based learning, students will develop scientific critical thinking and reasoning skills. Students are required to take the AP College Board Physics 1 exam in May. Graphing calculators are required. This course fulfills the computer requirement for graduation.

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# SCIENCE

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## **4470 AP PHYSICS 2 (This class will be offered Fall 2015)** **11-12 YR 1.0 cr**

**Prerequisites:** Satisfactory completion of AP Physics 1 or B in Physics Honors course. Students should have taken or be concurrently taking Pre-Calculus Honors (3450) or Calculus (3510, 3550, 3580). Requires department approval and consent of the AP Physics instructor.

AP Physics 2 is an algebra-based, introductory college-level physics course that explores topics such as fluid statics and dynamics, thermodynamics with kinetic theory; pressure/volume diagrams and probability; electrostatics; electrical circuits with capacitors; magnetic fields; electromagnetism; physical and geometric optics; and quantum, atomic, and nuclear physics. Through inquiry-based learning, students will develop scientific critical thinking and reasoning skills. Students are required to take the AP College Board Physics 2 exam in May. Graphing calculators are required. This course fulfills the computer requirement for graduation.

## **4490 AP PHYSICS C** **11-12 YR 1.0 cr**

**Prerequisites:** B+ in AP Physics B, AP Physics 1 or Physics Honors (4430). Departmental approval and consent of the current AP Physics C instructor. Co-requisite: Enrollment in Calculus.

Advanced Placement Physics C is designed as a follow-up to an introductory physics course. The curriculum is equivalent to a first year college-level physics course for those students majoring in science and engineering. Emphasis is placed on advanced techniques of problem-solving, including the use of calculus. Topics addressed in this course include mechanics, electricity, and magnetism with strong emphasis on electricity and magnetism. Students are required to take the AP College Board Physics C exams in May.

## **4250 AP BIOLOGY** **11-12 YR 1.0 cr**

**Prerequisites:** B in Biology Honors and B in Chemistry Honors or B+ in Biology and B+ in Chemistry, departmental approval and consent of the current AP Biology instructor.

The AP Biology curriculum encompasses “four big ideas”: evolution, cellular processes, genetics, and interactions” with essential knowledge and process skills that support each one. AP Biology is a rigorous and demanding course which is equivalent to a full-year introductory college biology course. Content will be covered in depth with strong emphasis on scientific process and analytical thinking. In addition, statistical analysis of data and modeling of concepts will be expected. Labs, analytical discussion of results, and inquiry during class sessions will require significant amounts of study and preparation beyond class time. Students are required to take the AP College Board Biology exam in May. *This course fulfills the computer requirement for graduation.*

## **4370 AP CHEMISTRY** **11-12 YR 1.0 cr**

**Prerequisites:** B or higher in science honors and math honors courses, including Algebra 2/Trig Honors. Departmental approval and consent of the current AP Chemistry instructor.

Co-requisite: AP Physics 1 is highly recommended (satisfactory completion of previous Physics Honors or AP Physics B course is acceptable).

The AP Chemistry course is designed to be the equivalent of the general chemistry course usually taken during the first college year. For some students, this course enables them to undertake, in their first year, second-year work in the chemistry sequence at their institution or to register in courses in other fields where general chemistry is a prerequisite. For other students, the AP Chemistry course fulfills the laboratory science requirement and frees time for other courses. There is a strong emphasis on independent reading and study as well as on laboratory skills. The course provides students with the conceptual framework, factual knowledge, and analytical skills necessary to deal with the rapidly evolving science of Chemistry. Students are required to take the AP College Board Chemistry exam in May. *This course fulfills the computer requirement for graduation.*

## **4290 AP ENVIRONMENTAL SCIENCE** **11-12 YR 1.0 cr**

**Prerequisites:** Grade of B+ in Biology and Chemistry. Prerequisite or Co-requisite: Physics, Physics Honors, AP Physics B or AP Physics 1. Consent of the current AP Environmental Science instructor.

This college level interdisciplinary course integrates scientific principles of chemistry, biology, and earth science to understand interrelationships of the natural world. The class explores topics such as ecology, populations, resource use, pollution, and biodiversity. Environmental problems, both natural and man-made, are identified and analyzed in classroom lectures, labs, field work, and independent projects. This course prepares students for the required AP Environmental Science exam in May.

## **4270 ECOLOGY** **11-12 YR 1.0 cr**

**Prerequisites:** Satisfactory completion of Biology and Chemistry.

Ecology is the study of organisms and their interactions with other organisms and their physical surroundings. Students study how populations of organisms are effected by competing organisms, symbiotic relationships, predator/prey interactions, evolutionary changes, and interactions with humans. Unique characteristics of terrestrial and aquatic ecosystems are examined including plant and animal species, ecosystem services, and primary productivity. As humans have a massive impact on the Earth's ecosystems, students learn how anthropogenic changes have affected ecosystems and what conservation efforts are being undertaken to preserve the Earth's biodiversity. During fourth quarter, students focus in greater detail on local ecosystems by studying the characteristics of Eastern forests and learning to identify local tree and animal species.

# SCIENCE

## **4500 ANATOMY/PHYSIOLOGY 11-12 YR 1.0 cr**

**Prerequisites:** Satisfactory completion of Biology and Chemistry.

Anatomy and physiology is the study of the structure and function of the body. The course begins with a review of basic cell concepts, including cell structure, cell reproduction, and protein synthesis. The class then examines major tissue types before discussing each of the organ systems in detail. Health issues such as immunity, common genetic disorders, and cancer are also investigated. Projects and laboratory activities enhance the learning experience.

## **4530 ANATOMY/PHYSIOLOGY HONORS 11-12 YR 1.0 cr**

**Prerequisites:** B in Biology 1 Honors and Chemistry or A in Biology 1 and department approval.

This course is designed for students who have demonstrated an above average proficiency in previous science courses. Anatomy and physiology is the study of the structure and function of the body. The course begins with a review of basic cell concepts, including cell structure, cell reproduction, and protein synthesis. The class then examines major tissue types before discussing each of the organ systems in detail. Health issues such as immunity, common genetic disorders, and cancer are also investigated. This course requires a significant amount of additional reading and the completion of several in-depth projects and laboratory activities.

## **4600 FORENSIC SCIENCE 11-12 YR 1.0 cr**

**Prerequisites:** B in Biology and Chemistry. Co-requisite: Physics

Forensic Science is a multidisciplinary laboratory program that incorporates concepts in many areas of science including chemistry, zoology, anatomy, genetics, physics, medicine, math and statistics, sociology, ethics, law, psychology, and communications. Students study a wide range of forensic disciplines with an emphasis on the practical application of scientific principles in the laboratory. Students are trained to evaluate physical evidence and findings by applying the scientific method. Students must then be prepared to defend conclusions based on their own empirical evidence. *This course is available for dual credit through Marymount University.*

## **4620 INTRO TO ENGINEERING DESIGN 9-12 YR 1.0 cr**

**Prerequisites:** Successful completion of Algebra 1 or permission of the instructor. Co-requisite: Biology 1 or Biology 1 Honors. Consent of engineering instructor required.

Introduction to Engineering Design is a course that focuses on the process of engineering design and its application. Through hands-on projects, students apply STEM concepts, understand important standards in the various fields of engineering, and document their work in solving engineering-based problems. Students use industry standard 3-D modeling software to design solutions as well as an engineer notebook for the

recording of all data. Students conclude projects by presenting their work to peers and faculty members. This course fulfills the computer requirement of graduation.

## **4665 PRINCIPLES OF ENGINEERING 11-12 YR 1.0 cr**

**Prerequisites:** Completion of Algebra 2/Trig Co-requisite: Physics or permission of Engineering Instructor.

This course emphasizes the underlying principles of engineering and technology. Students apply STEM concepts to real-world problems to develop critical thinking and problem solving skills in four engineering disciplines: civil, mechanical, electrical, and aerospace engineering. Students improve their use of mathematical analysis, computer simulations, and scientific method. Engineers often work as part of a team to plan, design, and supervise the development of a project from conception through completion. This course emphasizes project work and team-based assignments. It is intended for students with strong STEM skills who have an interest in engineering as a career. This course fulfills the computer requirement of graduation.

## **4700 INDEPENDENT RESEARCH 10-12 YR 1.0 cr**

**Prerequisite:** Requires consent of the science department chair.

This course is designed to give students the opportunity to perform in-depth scientific research on a particular topic. Emphasis is placed on experimental design, laboratory skills, library research, and computer technology. Appropriate forms of statistical analysis are taught and utilized for research purposes. Students are required to produce a project/paper for submission to regional science fairs, the Virginia Junior Academy of Science, and competitions such as Intel and Toshiba. *This course fulfills the computer requirement for graduation.*



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# FINE ARTS

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## Visual Arts

### 6010 ART 1 9-11 YR 1.0 cr

This course is a foundation course in basic art and design. Students are introduced to the Elements of Design and Principles of Composition. Students will work in various techniques and mediums on projects designed to sharpen their skills of art through observation, design and composition. Students learn to look at art thoughtfully and critically and begin to develop their own aesthetic sense. There are brief lectures and PowerPoint presentations exploring various artists and their mediums. Students develop an art vocabulary as well as gaining an understanding and practice of group and individual critiques. By the conclusion of the course, students are able to formulate a personal and informed response to the question: "What is art?"

### 6020 ART 2 10-12 YR 1.0 cr

*Prerequisites:* Art 1 or Graphic Design and/or presentation of a portfolio for instructor permission.

This course is offered as a sequential step from Art 1 or Graphic Design. Students build on previous knowledge and vocabulary and have the opportunity to publish their work in the school art and literary magazine. They may also participate in shows outside the school environment. Students focus on beginning to build a portfolio. Materials fee required.

### 6030 ADVANCED ART HONORS 10-12 YR 1.0 cr

*Prerequisites:* Formal review of a portfolio containing three completed drawings, including one perspective drawing, and permission of a committee of art instructors.

Advanced Art Honors provides students with the opportunity to engage in the advanced study of art processes, vocabulary and art history. Students are expected to demonstrate principles and elements in art as well as visually communicate ideas, using advanced approaches in drawing and painting. The instructor guides students to form goals and develop individual styles, to become familiar with art schools and art related careers. Students develop a portfolio of their work and contribute artwork to the *Largesse* and to displays within and outside the school. There is a focus on presentation, quality work, exhibition and purpose. Materials fee required.

### 6045 AP DRAWING 11-12 YR 1.0 cr

*Prerequisites:* Formal review of a portfolio containing four completed drawings and permission from a committee of art instructors.

This course is designed for students who demonstrate proficient skills in drawing and painting. Students apply the elements and principles of art effectively to communicate their ideas visually and verbally in two dimensions. They must exhibit a strong commitment to their discipline. Students are required to submit a portfolio for consideration to the Advanced Placement Board for possible college credit pending a qualifying score. Materials fee required.

### 6049 AP ART HISTORY 11-12 YR 1.0 cr

*Prerequisites:* B+ in English and permission of instructor.

What is art? This college level course explores the history of the art of the world from the prehistoric era to the present. The class addresses stylistic development and cultural values, as well as the historical context that influence artistic production and practice. The class uses an interdisciplinary approach to discuss style, content, meaning, patronage, faith, interpretation, context, and significance of works of art, preparing students for the AP Art History exam in May which all students enrolled in the class are required to take. The course includes one term paper over the course of the year. This course also serves as an elective Social Studies credit.

### 6510 PHOTOGRAPHY 11-12 SEM .5 cr

*Prerequisites:* Graphic Design or Art 1. Students must complete an application and receive a signed permission from instructor.

This is a foundation course in basic skills and understanding in photography. Students are introduced to the Elements of Design and Principles of Composition. Students work in various techniques and mediums in projects designed to sharpen their skills in photography through observation, design and composition. Students learn to look at photography thoughtfully and critically and begin to develop their own aesthetic sense. There are brief lectures and PowerPoint presentations exploring various artists and their mediums. Students develop a photography vocabulary as well as gaining an understanding and practice of group and individual critiques. By the conclusion of the course, students are able to formulate a personal and informed response to the question: "What is photography?"

### 6600 GRAPHIC DESIGN 10-12 SEM .5 cr

This course focuses on commercial design. Students learn the fundamentals of design, including layout, illustration, fashion, poster design and T-shirt design. They experience graphic history and disciplines through multi-media and become comfortable working with a variety of materials. Materials fee required.

## Music

### 6350 CONCERT BAND 9-10 YR 1.0 cr

Admission to the course is based on playing experience and a placement examination. Students learn music fundamentals and basic theory as well as musicianship through performance of technical exercises, scales, and band literature. A continuing goal of the course is to develop students' skills as a musician, including historical connections between art, history, architecture, and music. In addition, concert etiquette and team building skills will be developed. Personal practice on one's instrument is necessary for success in band class. Music fee required.

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# FINE ARTS

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**6440 SYMPHONIC BAND** 10-12 YR 1.0 cr

**6450 SYMPHONIC BAND HONORS**  
10-12 YR 1.0 cr

Admission to the course is based on playing ability and a placement examination. Students continue to learn music theory through the performance of technical exercises, scales, and band literature. A continuing goal of this course is developing mature musicianship in performance. Skills include the process of critically analyzing personal and group performance skills, understanding historical concepts and intermediate theory practices, and the ability to work as a team member. Personal practice on one's instrument is necessary for success in band class. Students may earn honors credit for this course with additional requirements including performing at school functions, school sanctioned functions, and volunteer events. Attendance at two outside Fine Arts performances per semester is required for honors credit. Music fee required.

**6200 STRINGS** 9-12 YR 1.0 cr

**6250 STRINGS HONORS** 10-12 YR 1.0 cr

Admission to this course is based on playing experience and placement examination. This class is open to orchestral string instruments. Students learn music fundamentals, theory, and musicianship through performance of technical exercises, scales, and orchestral literature. A continuing goal of the course is to develop students' skills as a musician, including historical connections between art, history, architecture, and music. In addition, concert etiquette and team building skills will be developed. Personal practice on one's instrument is necessary for success in orchestra class. Students may earn honors credit for this course after completing one year in orchestra class and with additional requirements including performing at school functions, school sanctioned functions, and volunteer events. Attendance at two outside Fine Arts performances per semester is required for honors credit. Music fee required.

**6455 PERCUSSION ENSEMBLE** 9-11 YR 1.0 cr

This class is designed for students who are completely new to percussion instruments or students who play piano and would like to transfer their piano skills into playing mallet percussion instruments. The course begins with basic percussion techniques and includes learning the fundamentals of playing a variety of percussion instruments and developing and applying musicianship and ensemble skills to the genre. Students are expected to learn how to read music, learn how to play a variety of percussion instruments, and perform as an ensemble by the end of the school year. A wide variety of percussion techniques, styles, and music are taught, ranging from traditional western music to contemporary percussion ensemble music. Students are expected to exhibit a strong work ethic and a high level of discipline. Music fee required.

**6831 JAZZ ENSEMBLE** 10-12 YR .5 cr

*Prerequisites:* Department audition and one year in orchestra or guitar class (for strings and guitar) or one year in concert or symphonic band (for wind and percussion).

Admission to this course is based on playing ability through a placement examination. The ensemble is made up of the standard big band instrumentation. Students learn many different styles of popular music including jazz, rock, fusion, Latin, and blues. Each student in the ensemble also learns jazz theory, jazz history, and the art of improvisation. This class meets after school. Music fee required.

**6260 PIANO FUNDAMENTALS** 10-12 YR .5 cr

This class is designed for students who are beginners or who have very little prior piano experience. This class covers basic theory and harmony, scales and arpeggios, improvisational techniques, music history, and performance practices. This course will prepare students for the Piano Seminar. Music fee required.

**6360 PIANO SEMINAR** 11-12 YR 1.0 cr

**6365 PIANO SEMINAR HONORS** 11-12 YR 1.0 cr

Piano Seminar is designed for students who have completed Piano Fundamentals or students who have prior experience at the intermediate level or above. Admission to the course is based on playing experience and a placement examination. Students learn basic theory and harmony, scales and arpeggios, improvisational techniques, music history, and performance practices. This course is designed to shape a well-rounded pianist. This course is available for honors credit with audition and instructor approval. Students may earn honors credit for this course with additional requirements including performing at school functions, school sanctioned functions, and volunteer events. Attendance at two outside fine arts performances per semester is required for honors credit. Music fee required.

**6370 BEGINNING GUITAR** 9-12 SEM .5 cr

Beginning Guitar is a course designed for those with little to no knowledge of how to play guitar. The focus of this class is on basic classical guitar techniques and playing styles. A mixture of older traditional songs and more contemporary pop tunes is used to educate the student on the proper methods of playing. Basic music theory, guitar history and the ability to read music are taught as well. Music fee required.

**6380 INTERMEDIATE GUITAR** 9-12 SEM .5 cr

Admission to this class is based on playing experience and placement examination. Intermediate Guitar is a course designed for those with a basic understanding of classical guitar playing. The focus of this class is on more advanced classical guitar music and techniques. A mixture of older traditional songs and more contemporary pop tunes are used to further educate the student on the proper methods of playing. Music theory and history are taught as well. Music fee required.

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# FINE ARTS

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## 6390 ADVANCED GUITAR ENSEMBLE

9-12 YR 1.0 cr

Admission to this course is based upon experience and placement examination. Participants in this year-long course will perform frequently in various contexts, including large ensemble, small ensemble, and individual performances, both in and outside of school. The focus of the course will be to further the performance skills of students through study of classical guitar technique, literature, and history. Projects for this class include opportunities for Christian service activities and performances. Music fee required.

## 6570 CONCERT CHOIR-MEN 9-12 YR 1.0 cr

### 6571 CONCERT CHOIR-MEN HONORS

9-12 YR 1.0 cr

Concert choir is open to all interested male singers. This class and Concert Choir-Women perform and rehearse together as a mixed ensemble in addition to rehearsing and performing separately. Students master the fundamental mechanics of choral singing and perform a wide variety of choral literature in multiple styles. Students cover basic music theory including melodic and rhythmic sight-singing. Attendance at two outside fine arts performances per semester and auditioning for District XII Chorus is required for honors credit. Music fee required.

## 6575 CONCERT CHOIR-WOMEN 9-12 YR 1.0 cr

### 6576 CONCERT CHOIR-WOMEN HONORS

9-12 YR 1.0 cr

Concert choir is open to all interested female singers. This class and Concert Choir-Men perform and rehearse together as a mixed ensemble in addition to rehearsing and performing separately. Students master the fundamental mechanics of choral singing and perform a wide variety of choral literature in multiple styles. Students cover basic music theory including melodic and rhythmic sight-singing. Attendance at two outside fine arts performances per semester is required for Honors credit. Music fee required.



## 6585 O'CONNELL SINGERS HONORS

10-12 YR 1.0 cr

*Prerequisite:* Audition.

O'Connell Singers is open to highly qualified female singers. The class focuses on further developing vocal technique in an ensemble setting through performing challenging choral literature from various traditions. A continuing goal of this course is developing mature musicianship in performance. Skills include the process of critically analyzing personal and group performance skills, understanding historical concepts and intermediate theory practices, and the ability to work as a team member. Opportunities for Christian service activities and performances are offered to students taking the course. Attendance at two outside fine arts performances per semester and auditioning for District XII Chorus is required. Admission by audition only and prior choral singing experience is required.

## 6640 MUSICAL THEATRE 10-12 YR 1.0 cr

*Prerequisite:* By audition or teacher recommendation.

This course is designed to teach students how to apply advanced acting techniques to interpreting songs and ensembles from the music theatre repertoire and to prepare them for college and professional auditions. The student analyzes songs and text, studies how to perform a musical theatre piece, learns how to perform in an ensemble, learns and practices audition techniques to provide a firm musically-based foundation as a performer. Music fee required.

## 6650 AP MUSIC THEORY 11-12 YR 1.0 cr

*Prerequisite:* One year of vocal or instrumental class or ensemble.

This course is offered to students who have a strong foundation in music. Successful completion of a preparatory summer assignment is required. Students work at a college pace mastering musical rudiments such as notation, intervals, scales and keys, chords, metric organization, and rhythmic patterns. Students work on aural skills, compositional skills, sight-singing skills, and analytical skills as they apply to music theory. Students are required to take the AP Music Theory exam in May.

## 6660 SURVEY OF WORLD MUSIC 10-12 SEM .5 cr

This course explores the classical and folk music of different world cultures. Students are challenged to identify the characteristics of the types of music studied and to understand how music is viewed in different cultures. Course curriculum includes reading, listening and writing assignments related to the music being studied. In addition, learning and playing a variety of world drums and instruments are explored. Students have the opportunity to learn the basics of playing world instruments. Students must have access to a computer with Internet capability as listening is assigned from Internet sources.

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# FINE ARTS

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## 6665 SURVEY OF AMERICAN MUSIC

10-12 SEM .5 cr

This course explores the development of classical and folk music in the United States. Students are challenged to identify the characteristics of Native American music, colonial music, a variety of folk music in American history including, slave songs, classical music, the blues, jazz, country and western, rock and funk. Course curriculum includes reading, listening and writing assignments related to the music being studied. Students must have access to a computer with Internet capability as listening is assigned from Internet sources. This class also serves as an elective credit in social studies.

## 6595 MUSIC AND COMPUTER TECHNOLOGY

9-12 SEM .5 cr

This course focuses on how technology has affected music performance and reproduction and distribution. Students learn recording technology methods including live and studio recording techniques and remixing. They learn computer-based notation, sound sampling, and electronic music production and have the opportunity to utilize beat making and mid technology. This course fulfills the computer requirement for graduation. Music fee required.

### *Media, Drama, And Humanities*

## 6700 INTRO TO FILM

10-12 SEM .5 cr

The description for this class which fulfills a student's fine arts requirement may be found in the English department offerings.

## 6800 VIDEO PRODUCTION I

10-12 SEM .5 cr

In this course students learn the fundamentals of digital video production. The course covers all aspects from developing an idea into a plot and script, storyboarding, coordinating all necessary actors, lighting, settings and props, filming, directing, and ultimately editing their finished product, using current video and sound editing software. A minimum of four films are produced; one of which is a final production done by each individual student.

## 6850 INTRODUCTION TO HUMANITIES HONORS

11-12 YR .5 cr

*Prerequisite:* B+ in English.

This honors course presents artistic patterns of relationship from ancient Greece to the present among philosophy, literature, architecture, sculpture, painting and music—all in light of the major historical events of each period. Content focuses on the interrelationships between arts and ideas in the framework of their proper historical and cultural settings. Field trips to local art centers and theatrical productions are scheduled for first hand experiences.

Lessons include presentations by experts in art, music, philosophy, and literature drawn from O'Connell faculty and the community. Sample topics include: Greek drama

and architecture; Roman poetry, painting and architecture; Medieval music, painting and architecture; Renaissance poetry, drama, painting and music as well as samples of the artistic productions of the Neo-classic, Romantic and Modern Periods. This class also serves as an English or social studies elective.

## 6920 ACTING

11-12 SEM .5 cr

Acting focuses on basic acting techniques such as improvisations, pantomime, mime, voice, diction, beginning characterization, and scene study. Exercises include monologues and group scene work. Students are acquainted with the responsibilities of a producer and director, as well as set, lighting, costume, and makeup designers.

## 6930 THEATER TECHNOLOGY

10-12 SEM .5 cr

This semester course explores the ways that changing technology of theatre affects scenography, the coordinated design of scenery, lights, costumes, and other technical aspects of stagecraft. Students learn the vocabulary of equipment, the properties of modern scene materials, the advances in technological fields, and the professional standards in design and technology. In addition, a hands-on laboratory component is part of the course: Students will design and execute the technological aspects of the Acting classes' and Drama Club's productions.



# TECHNOLOGY AND BUSINESS

The faculty of the technology and business department is committed to equipping all students with the skills needed to succeed in the fast-changing world of business and technology. We provide learning experiences that:

- Are authentic, interactive, and global
- Use technology responsibly in a safe, moral, and ethical way
- Focus on fostering critical thinking, problem-solving, collaboration, and creativity within the whole person

Through a variety of electives, members of this department prepare students for success in ever changing, rapidly evolving technology fields. Business courses such as personal finance and sports/entertainment marketing provide students with a strong foundation for further entrepreneurial studies at the university level.

Bishop O'Connell requires every student to earn a .5 computer credit for graduation. The following is a list of courses offered by this department that meet this requirement:

Introduction to Digital Technology and Productivity Tools (7520)  
Multimedia and Image Management (7640)\*  
Dreamweaver: Web Authoring and Scripting (7830)  
HTML: Intro to Web Page/Mobile Application Development (7810)  
Personal Finance in the U.S. Economy (7300)  
Computer Science Fundamentals (7770)  
AP Computer Science (7790)  
Cybersecurity 1 (7920)  
Cybersecurity 2 (7930)

\*also meets the Fine Arts .5 credit requirement

## Business Courses

### 7250 ACCOUNTING 1 HONORS 11-12 YR 1.0 cr

**Prerequisites:** B+ in Math or B in Math Honors and permission of instructor.

This course is designed to provide students with an understanding of the basic accounting systems in a sole-proprietorship and a partnership. It explores the financial records of a service business and a merchandising business. The course introduces terminology that enables students to have a better understanding of the economic and financial activities of the business world for both employment and personal use.

This course also teaches basic payroll procedures and the accounting cycle for a corporation. The course provides students the opportunity to work on case studies that enhance student interest. This course provides a practical background for future study in accounting and business management. Students are afforded a real life business situation through an assignment of an accounting practice set for a merchandising business. Students complete a simulation and complete more detailed work on the computer. This is an excellent course for students who are planning to pursue a business major in college.

### 7350 ACCOUNTING 2 HONORS 11-12 YR 1.0 cr

**Prerequisites:** B+ in Accounting 1 Honors and permission of instructor.

This advanced accounting course is a one-year course that builds on the concepts learned in Accounting 1. Students further examine accounting theory and accounting concepts for corporate accounting. New topics include: uncollectible accounts; depreciation; inventory; various types of liabilities; global business; and accounting for partnerships. Students

examine case studies to apply concepts learned to real-life situations. This is an excellent course for students who are thinking about pursuing a major in accounting or related fields.

### 7370 SPORTS & ENTERTAINMENT MARKETING 11-12 SEM .5 cr

This class is designed to introduce students to various aspects of sports and entertainment marketing. Each marketing function is incorporated throughout the course. Through the use of the textbook, the Internet, and class activities/projects, students explore the history of the sports and entertainment industries; similarities and differences between the two; product, promotion, pricing, branding, imaging, and licensing within these industries; and identifying career opportunities. This course is only offered in first semester.

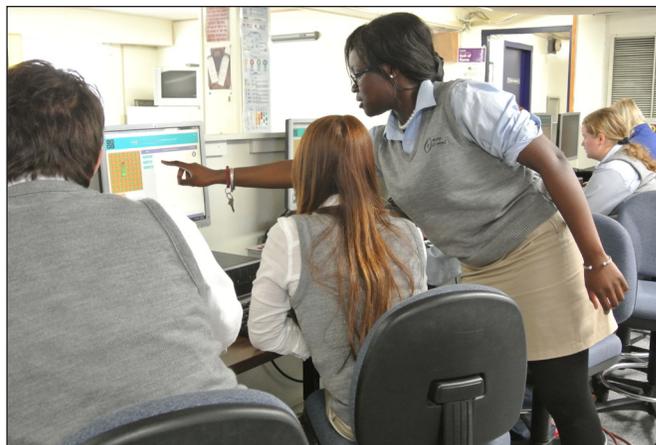
### 7300 PERSONAL FINANCE IN THE U.S. ECONOMY 11-12 YR 1.0 cr

Personal Finance in the U.S. Economy explores exciting and interesting areas that help students gain the necessary skills to ensure their future financial security. Students explore ways to be effective budgeters, savers, investors, consumers, and workers. To help students extend their understanding, they complete tax forms; participate virtually in the stock market; reconcile checking accounts; prepare a budget; compare traditional banks to credit unions; and research the different credit card companies and insurance policies. Economic concepts are presented which will help students understand how the economy and current events can impact their lives. This course fulfills the computer requirements for graduation.

# TECHNOLOGY AND BUSINESS

## **7320 PERSONAL MONEY MANAGEMENT AND YOUR FUTURE** 11-12 SEM .5 cr

Do you know how to create a budget? Can you balance a checkbook? Do you know how to file a tax return? Should you put your money in an IRA or Roth fund? What is your FICO score? Should you invest in stocks or bonds? There are many skills you will need to succeed after graduation that deal with how you handle your personal finances. Learn how to navigate the financial decisions you will face to make informed decisions related to careers, budgeting, banking, credit, insurance, spending, taxes, saving, investing, living independently, and inheritance. This course explores the exciting and interesting areas that can help you gain the skills to ensure your future financial security.



### **Computer Courses**

## **7520 INTRODUCTION TO DIGITAL TECHNOLOGY AND PRODUCTIVITY TOOLS** 10-12 SEM .5 cr

Using Microsoft Office, Google Docs, and other Web 2.0 tools, this course integrates lessons in word processing, spreadsheets, and presentation software into student-centered, hands-on approach to integrating computing concepts that are now essential life skills. This course encompasses the evolution of technology from its early history to the latest developments, such as blogs, podcasts, wikis, VOIPs, social networking, and cloud computing.

## **7640 MULTIMEDIA AND IMAGE MANAGEMENT** 10-12 YR 1.0 cr

In this course students explore the creative end of business technology and prepare for a business world in which they are expected to use business-standard software applications to complete projects and solve problems. The applications include digital photography and video, image manipulation, desktop publishing, and animation. Topics include print publishing systems, presentation strategies, and professional communication skills. Students complete hands-on activities using Adobe Photoshop CS5, Illustrator CS5, Flash CS5, Microsoft Excel, and mobile devices. Students learn tips for taking better digital photographs, how to edit them, how to complete several original projects using image editing skills, and how to create and edit animated movie clips. A small expense may be involved for materials. This course fulfills both the computer and the fine arts requirement for graduation.

## **7810 HTML: INTRO TO WEB PAGE/MOBILE APPLICATION DEVELOPMENT** 10-12 SEM .5 cr

*Prerequisite:* Permission of instructor.

This course focuses on the design and development of web pages and/or mobile applications. Students are introduced to Hypertext Markup Language standard (HTML & CSS) to create web pages and/or mobile applications. Among the topics covered are: organization, style, updating, proofreading, incorporation of graphics, and enhancements to the site or application. Scanners, smartphones, and digital cameras may be used for some of the projects.

## **7830 DREAMWEAVER: WEB AUTHORIZING AND SCRIPTING** 10-12 SEM .5 cr

This course introduces students to Adobe Dreamweaver CS5 by guiding them step by step through the development of web projects. Using this web authoring tool, students learn how to visually design and manage websites and pages. Students plan, build, and maintain four uniform websites and one individual website throughout the semester.

## **7920 CYBERSECURITY 1: INTRODUCTION TO COMPUTER SECURITY** 10-12 SEM .5 cr

Offered summer of 2014

This course is designed to provide students with an introduction to the fundamentals of basic computer security issues, from the home-user/student/general public's point-of-view. Students focus on personal security for computer systems and devices at home, at work, on mobile devices, and especially as they relate to the Internet & World Wide Web. The course capitalizes on the incorporation of additional content from the EC-Council, and in activities that link to the Information Security Community, via organizations such as ACM, IEEE, CSTA, ISSA-NOVA, and the EC-Council, and will ultimately allow students to take the EC-Council's C|SCU Certification Exam, as a first step toward future cybersecurity credential's achievements.

# TECHNOLOGY AND BUSINESS

## **7930 CYBERSECURITY 2: INTRODUCTION TO NETWORK SECURITY 10-12 SEM .5 cr**

*Prerequisite:* Cybersecurity 2: Introduction to Computer Security

In this course, students will be introduced to the fundamentals of network security, including compliance and operational security; threats and vulnerabilities; application, data, and host security; access control and identity management; and cryptography. The course covers emerging topics in network security, including psychological approaches to combating social engineering attacks, Web application attacks, penetration testing, data loss prevention, cloud computing security, and application programming development security. Students will also engage in activities that link to organizations such as ACM, IEEE, CSTA, ISSA-NOVA, Cyber Patriots, Cyber Aces, and CompTIA. This course also presents an opportunity for students who choose to pursue further studies and/or training toward additional certifications, such as the CompTIA Security+ SY0-301 Certification Exam. (Not available in 2014)



## **7770 COMPUTER SCIENCE FUNDAMENTALS 10-12 YR 1.0 cr**

*Prerequisites:* Algebra 2/Trig or higher math Co-requisite: Algebra 2/Trig or higher math

In this hands-on computer programming course, students learn the basics of computer programming. Students develop working programs in a variety of languages and environments, including Alice, Java, and Python, and gain an understanding of programming fundamentals and object-oriented design. Students are also introduced to topics related to society and technology, including ethical issues and emerging trends in computer science. This course is a prerequisite for AP Computer Science. Students may elect to take this class on line in the summer prior to scheduling AP Computer Science.

## **7790 AP COMPUTER SCIENCE 11-12 YR 1.0 cr**

*Prerequisites:* Successful completion of Computer Science Fundamentals (7770) and permission of computer science instructor.

Utilizing the Java Programming language, students advance their study of computer science with an emphasis on developing computer programs or parts of programs to solve problems. Topics include the development and analysis of algorithms, the development and use of fundamental data structures, the design issues that make programs understandable and adaptable, and social and ethical issues in computer science. Students must have access to a network-enabled computer to complete assignments at home. This course prepares the students for the required AP Computer Science exam in May.

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# SOCIAL STUDIES

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The Bishop O'Connell social studies department desires to transform students into informed, faith-filled citizens, able to navigate a new global community.

The social studies department is committed to providing a challenging and engaging learning experience for students by employing creative pedagogies and leveraging the use of variety of instructional technologies. Those who qualify for Honors and Advanced Placement are encouraged to select these courses.

## Required Courses

### Grade 9

5100 World History  
5150 World History Honors

### Grade 10

(Choice of Elective)

### Grade 11

5300 U.S. and Virginia History  
5320 U.S. and Virginia History Honors  
5350 AP U.S. History  
5000 American Studies

### Grade 12

5400 U.S. Government  
5420 U.S. Government Honors  
5460 AP Government

## Electives

### Grades 10-12

5175 World Geography  
5255 Modern European History Honors  
5250 AP Modern European History  
5960 Principles of Economics  
5280 African-American History (SEM)  
5287 U.S. Civil Rights and Civil Liberties (SEM)  
5760 Issues for the 21st Century (SEM)  
5295 American Identity (SEM)

### Grades 11-12

5330 African Cultures and Civilization (SEM)  
5800 Asian History and Culture (SEM)  
5810 Mid-East History and Culture (SEM)  
5340 World Religions (SEM)  
5510 AP Macroeconomics/Microeconomics  
5580 Psychology  
5590 AP Psychology  
6049 AP Art History

## 5100 WORLD HISTORY 9 YR 1.0 cr

World History is a survey course covering the major political, economic, social, religious, and cultural developments of the peoples of the world. The course is presented chronologically, beginning with prehistoric man and continuing into modern times. Emphasis is placed on the development of Western civilization, but students are also introduced to the major achievements of non-western civilizations and cultures woven into the continuing development of humanity. Social studies skills such as analysis, interpretation, and evaluation are explored and practiced by the students.

## 5150 WORLD HISTORY HONORS 9 YR 1.0 cr

**Prerequisite:** Acceptance in English 1 Honors and/or approval of department chairperson.

This course provides students with a challenging and stimulating view of world history. Beginning with human origins and the earliest civilizations, the course develops an in-depth knowledge of the human presence in the world along the path of history through the present. Emphasis is placed on the development of Western civilization, but students are also introduced to the major achievements of non-western civilizations and cultures woven into the continuing development of humanity. Instructional format is multifaceted with the use of lectures, questioning and exchange, independent research using the Internet and frequent written assignments (projects and papers) based on the student's research.

## 5175 WORLD GEOGRAPHY 10-12 YR 1.0 cr

**Prerequisites:** Completion of World History or World History Honors.

The focus of this course is the study of the world's peoples, places, and environments, with an emphasis on world regions. The knowledge, skills, and perspectives of the course are centered on the world's peoples and their cultural characteristics, landforms and climates, economic development, and migration and settlement patterns. Spatial concepts of geography are used as a framework for studying interactions between humans and their environments. Using geographic resources, students employ inquiry, research, and technology skills to ask and answer geographic questions. Particular emphasis is placed on students' understanding and applying geographic concepts and skills to their daily lives.

Geographic skills provide the necessary tools and technologies for thinking geographically, making reasoned political decisions, and aiding in the development and presentation of effective, persuasive arguments for and against matters of public policy. All of these decisions involve the ability to acquire, arrange, and use geographic information. Maps, as well as graphs, sketches, diagrams, photographs, and satellite-produced images, are essential tools of geography used in this course.

## 5255 MODERN EUROPEAN HISTORY HONORS 10-12 YR 1.0 cr

**Prerequisites:** B+ in World History or B in World History Honors; B in current English class; recommendation of World History teacher and approval of department chairperson.

The course involves the study of the history of Europe from the origins of the Renaissance to the fall of Eastern European

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# SOCIAL STUDIES

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communism, the reunification of Germany, and the movement to the creation of a united Europe. Emphasis is placed on analysis of primary source materials, development of analytical reading skills, coherent essay writing, and independent thought and study skills.

## **5250 AP MODERN EUROPEAN HISTORY** **10 YR 1.0 cr**

*Prerequisites:* A- in World History or B+ in World History Honors; B+ in current English class; World History teacher recommendation and approval of department chair. Students are required to submit a writing sample.

The course involves the study of the history of Europe from the origins of the Renaissance to the fall of Eastern European communism, the reunification of Germany, and the movement to the creation of a united Europe. Emphasis is placed on analysis of primary source materials, development of analytical reading skills, coherent essay writing, and independent thought and study skills. All students enrolled in this course are required to take the AP European History exam in May. The completion of a summer project is required by the beginning of school.

## **5960 PRINCIPLES OF ECONOMICS** **10-12 YR 1.0 cr**

*Prerequisites:* Completion of World History or World History Honors.

This is a multi-faceted, action-oriented, in-school elective economics course. It is designed and developed for the purpose of giving students an opportunity to examine their talents related to business and economics in long range preparation for following one of the areas of instruction as a career. Students are instructed in the basic tenets of the American free enterprise system. Work on computer simulations that relate to both micro and macroeconomics is an integral part of the course work.



## **5280 AFRICAN-AMERICAN HISTORY** **10-12 SEM .5 cr**

This course is an introductory survey of African-American history starting with the African background and following through to the status of African-Americans in the United States today. Topics include: accomplishments of African civilizations before contact with Europeans, African way of life, the trans-Atlantic slave trade, slavery, African-Americans in the Civil War, the abolition of slavery, Reconstruction, Jim Crow and segregation, the Great Migration and issues facing African-Americans in the North, the civil rights revolution, Christianity in African-American history, equality movements in the North, Black nationalism, and contemporary issues in the African-American community, including the achievement gap, the wage gap, Hip-Hop culture, housing discrimination, and overrepresentation/unjust treatment in the criminal justice system.

## **5295 AMERICAN IDENTITY** **10-12 SEM .5 cr**

This history and sociology course studies the roots of American cultural beliefs and their practice and impact in the modern world. Using history, literature and multi-media sources, students will examine Native American myths, legends of the U.S. frontier and settlement, belief systems unique to the U.S., the impact of technology, and the influence of great leaders in politics, the arts and social roles. The goal is for students to understand the influences on how Americans saw themselves and their world in the past, and how they do so today. The class will have daily readings, tests and essay papers, and graded class discussions/projects.

## **5287 U.S. CIVIL RIGHTS AND CIVIL LIBERTIES** **10-12 SEM .5 cr**

This course examines the civil rights and liberties in the United States of Asian Americans, African Americans, Hispanics, Women, as well as the disabled, religious groups, and minor political parties. Civil liberties such as freedom of speech and of assembly as they relate to these groups and how they are used in times of social change and unrest are also covered. Students examine the denial of these rights by laws, social convention and other factors. The time period of study begins at the end of Reconstruction, but focuses on the 20th century. How these rights and liberties were strengthened and gained through laws, protest, economics, and the arts and entertainment pursued through a variety of sources both print and online. Student participation and group discussion plays an important role in the class. Assessments focus on essay tests on the class material, and research papers on such topics as leaders in the civil rights/civil liberties movement.

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# SOCIAL STUDIES

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## **5300 U.S. AND VIRGINIA HISTORY 11 YR 1.0 cr**

United States and Virginia History is a survey course in American history with special emphasis on the history of Virginia. The course traces the development of the political, economic, religious, and social life of the people of the United States from the 15th century to the contemporary period. U.S. relations with foreign countries are explored. The positive influence of Judeo-Christian values in American life is emphasized. Geography is stressed as a factor in the complete understanding of the social development of the country.

## **5000 AMERICAN STUDIES 11 YR 1.0 cr**

American Studies is an interdisciplinary course that integrates U.S. History and English 3 into a humanities-based curriculum. The course is designed to unite American history and literature in order to expand students' understanding of the origin and development of American traditions, values, and institutions. Works of literature are taught within their historical context and, similarly, works of history are used to support and strengthen students' understanding of literary trends. The course also draws extensively from its related disciplines. Theme related art, music, selected readings, and writing are incorporated into daily lessons to enhance the study of social history and to illustrate for students how individuals, communities, and social organizations and movements have shaped, and continue to shape, the American landscape. This course meets the requirements for 1 credit each in U.S. & Virginia History and English 3.

## **5320 U.S. AND VIRGINIA HISTORY HONORS 11 YR 1.0 cr**

*Prerequisites:* A- in History or B+ in Honors History or B in AP Modern European History; B in English; Social Studies teacher recommendation and approval of department chair. Students are required to submit a writing sample.

The course traces the development of political, economic, religious, and social life of the people of the United States from the Constitutional Period to the present. A college text is used and an increased focus on writing skills is required. Syllabus from the selections of the College Board is a guideline for the teacher. Geography is stressed throughout the course. The completion of a summer project is required by the beginning of school.

## **5350 AP U.S. HISTORY 11 YR 1.0 cr**

*Prerequisites:* A in History, A- in Honors History, or B in AP History; B+ in current English class; Social Studies teacher recommendation and approval of department chair. Students are required to submit a writing sample.

This course involves a study of the formative movements in the development of American civilization within a chronological framework. Emphasis is placed on historiography, analysis of primary source materials, development of discriminatory reading powers, coherent essay writing, and independent

study skills. All students enrolled in this course are required to take the AP U.S. History exam in May. The completion of a summer project is required by the beginning of school.

## **5580 PSYCHOLOGY 11-12 YR 1.0 cr**

*Prerequisite:* B in current History class.

This course covers the core concepts in psychology emphasizing the use of the scientific method in social science research and the physiological bases of behavior. Topics covered in the first semester includes the brain, sensation and perception, states of consciousness (sleep/dreams/hypnosis/daydreams), memory and learning. During the second semester the course covers human development, personality, disorders, therapy and social psychology.

## **5590 AP PSYCHOLOGY 11-12 YR 1.0 cr**

*Prerequisites:* B+ in current Social Studies class; recommendation of current social studies teacher and/or permission of instructor; approval of department chair.

The AP Psychology course is designed to introduce students to the systematic and scientific study of the behavior and mental process of human beings and other species. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. Additionally, students study and implement the ethics and methods psychologists use in their science and practice. At the completion of the course, students are required to take the AP Psychology exam covering such areas as research methods, states of consciousness, learning, personality, and abnormal psychology.

## **5510 AP MACROECONOMICS/MICROECONOMICS 11-12 YR 1.0 cr**

*Prerequisites:* B in Mathematics and English.

This is a full-year freshman college level course concentrating on an analytical rather than a descriptive approach to the principles of economics. The major aspects of macroeconomics are: economic models, inflation, unemployment, GDP accounting, aggregate demand/supply analysis, the banking system, monetary and fiscal policy and competing theories of income stabilization. The study of microeconomics includes: demand and supply, markets, price theory, elasticity, costs of the business firm, models of pure competition, monopoly, monopolistic competition and oligopoly, international trade and selected topics as time allows. Students are required to take the AP Economics exams in May.

## **5330 AFRICAN CULTURES AND CIVILIZATION 11-12 SEM .5 cr**

This course focuses on African culture, tradition, history, socio-economic development and overall colonial and post-colonial development. Each country is discussed in its turn, but longer discussions revolve around those countries embroiled in current global events. The political environment of many

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# SOCIAL STUDIES

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African nations requires in-depth discussion and study—for instance, Somalia, Kenya, Ghana, Sudan, Uganda, Libya and Egypt. The often-unsteady social, economic, and cultural development of some of these countries has led to disease, famine, ethnic cleansing and civil war, with which students should become familiar.

## 5800 ASIAN HISTORY AND CULTURE

11-12 SEM .5 cr

This course is an introductory survey of ancient to recent histories of Far Eastern cultures (predominately China), focusing on the major watersheds in these countries' modern experiences. The roles of indigenous culture and forces of change as well as foreign influences is considered. Although a survey course, class focus centers on recent economic, social, and political changes in China from Mao Tse-Tsung's Communist Revolution to the present.



## 5810 MID-EAST HISTORY AND CULTURE

11-12 SEM .5 cr

This course is a survey of the development of social, political and cultural life in the Middle East, starting with the rise of Islam in the seventh century and following through to the present. Topics include: rise and spread of Islam, formation of a Middle Eastern/Islamic world, the shift in world trade from the Mediterranean to the Atlantic; social, political, and cultural change; Ottoman and European relations: imperialism and revolution; World War I and the peace settlement; state formation; the rise of nationalism and religious fundamentalism.

## 5340 WORLD RELIGIONS

11-12 SEM .5 cr

This elective explores spiritual riches of the world's major religions and the influence of religion on culture. Students are encouraged to re-examine their own faith while reflecting on founders, major beliefs and special practices of Christianity, Hinduism, Buddhism, Taoism, Judaism, Confucianism, Shintoism, and Islam.

## 5760 ISSUES FOR THE 21ST CENTURY

10-12 SEM .5 cr

This course is an introduction to significant events in the 21st century. Students investigate cause, effect, and change in places across the world. One principal aim of the course is for students to develop a better understanding of the response of traditional societies to the impact of modernization on their values and customs. Another is to examine ideological conflicts of the modern world. Students also research contemporary problems that originated in the 21st century that demand creative and thoughtful solutions. Analytical skills, synthesis of conflicting viewpoints, conducting research, participating in deliberations and writing historical essays are all emphasized in this course.

## 5400 U.S. GOVERNMENT

12 YR 1.0 cr

This course is a study of the development of our national government and the organization and function of the United States government on the federal, state, and local levels. The major topics in the course include: the Constitution, Bill of Rights, civil liberties, federalism and the division of powers, the three branches of government, political parties, voting behavior and statistics, foreign policy and national security. Problems of popular representation, responsible leadership, and the challenges facing American government are also examined. Emphasis is also placed on current events that are regularly discussed in class. The last part of the course is devoted to comparing U.S. government with other governments in the world.

## 5420 U. S. GOVERNMENT HONORS 12 YR 1.0 cr

*Prerequisites:* A- or above in U.S. History or B+ in AP or U.S. History Honors; Social Studies teacher recommendation and approval of department chair.

This accelerated course examines the social, economic, and political aspects of national, state, and local government in the United States with particular focus on contemporary issues. The last part of the course is devoted to comparing U.S. government with other governments in the world.

## 5460 AP U.S. GOVERNMENT AND COMPARATIVE POLITICAL SYSTEMS

12 YR 1.0 cr

*Prerequisites:* B+ in AP U.S. History, A- in U.S. History Honors or A in U.S. History; B+ in current English class; Social Studies teacher recommendation and approval of department chair.

This accelerated course examines the political, social and economic aspects of national, state, and local government in the United States. It also includes a study of the governments of Britain, France, Russia, China, and a developing country. There is a particular focus on contemporary issues. Students are required to take the AP Government exams in May.

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# CLUBS AND SPORTS

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*Fostering the pursuit of excellence in the whole person*

## Interscholastic Team Sports

*Bishop O'Connell currently fields more than 40 different boys and girls teams at the freshman, junior varsity and varsity levels for the sports listed below. Visit [www.bishopoconnell.org/athletics](http://www.bishopoconnell.org/athletics) for a complete list of teams.*

### Fall

Cheerleading  
Cross Country  
Dance Team  
Field Hockey  
Football  
Soccer  
Tennis (Girls)  
Volleyball

### Winter

Basketball  
Cheerleading  
Dance Team  
Ice Hockey  
Swim & Dive  
Wrestling

### Spring

Baseball  
Crew  
Golf  
Lacrosse  
Softball  
Sailing  
Tennis (Boys)  
Track & Field



## Clubs & Organizations

*More than 60 student clubs and organizations help students balance their lives and feed their spirits.*

- |                                    |                              |                                |
|------------------------------------|------------------------------|--------------------------------|
| Altar Society                      | Guitar Club                  | Robotics Club                  |
| Anime Club                         | Habitat for Humanity         | Rocketry Club                  |
| Art Club                           | Health Services              | SADD                           |
| Asian American Student Association | Interact Club                | Social Justice Club            |
| Athletic/Game Day Management       | It's Academic                | Spanish Club                   |
| Audio Visual Club                  | Keyettes                     | Spanish Honor Society          |
| Chinese Culture Club               | Ladies Golf                  | Spanish Tutoring               |
| Debate                             | Largesse                     | Spirit Club                    |
| Destination Imagination            | Latin Club                   | Strength and Conditioning Club |
| Digital Photography Club           | Latin Honor Society          | Student Council Association    |
| Drama                              | Math Club                    | Stock & Finance Club           |
| Ecology Club                       | Medical Missionaries         | Teens Against Cancer           |
| Essay and Oratorical Contests      | Model UN                     | Tri-M Music Honor Society      |
| Fashion & Design Club              | Mu Alpha Theta Math NHS      | Ultimate Frisbee               |
| FBLA                               | Music Club                   | Unity Council                  |
| Foosball Club                      | National Honor Society       | Visor - Newspaper              |
| French Club                        | O'Connell Car Club           | Yearbook                       |
| French Honor Society               | O'Connell Ice Skaters        | Young Democrats                |
| Game Day Management                | Pagemasters                  | Young Executives               |
| Gaming Club                        | Philosophy Club              | Young Republicans              |
| German Club                        | Project Unify                | Young Women's Leadership       |
| German Honor Society               | Pro-Life Club                |                                |
| Green Thumb Project                | Rho Kappa Social Studies NHS |                                |

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# GLOBAL STUDIES CERTIFICATE PROGRAM

Thinking globally, preparing to lead and serve.

Bishop O'Connell High School established this unique Global Studies Certificate Program to prepare students to be well-informed, self-motivated adults with the skills, confidence and moral perspective needed to succeed as leaders in the 21st century. This optional program is centered on student-selected, beyond-the-classroom learning experiences focused on themes of world importance in our time.

The Bishop O'Connell curriculum requires completion of 26 credits in specific subjects studied over a period of eight semesters. Students who choose to participate in the Global Studies Program receive a certificate upon graduation which indicates the completion of a set of non-GPA credit units in global studies, the approximate equivalent of a ninth semester of academic work.

## PROGRAM COMPONENTS

### Choose a Thread

*Each student selects an area of concentration from the following: Faith and Humanitarian Issues, Global Business and Finance, Language and Culture, Global Health and Environmental Issues, Arts and Humanities, Global Politics*

*In order to keep a truly "global" perspective for this program, each student is asked to participate in learning experiences in the other five threads.*

### Attend Core Sessions

*The following three-hour core sessions are offered periodically throughout the school year: Understanding Politics, in a Globalized World, Foundations of Global Business and Finance, Morals and Ethics for a Globalized World.*

### Include a Bishop O'Connell Course

Each student includes in his/her class schedule one course at O'Connell that relates to his/her particular focus area, such as: World Geography, AP Art History, Ecology/Environmental Science, World Religions, Survey of World Music.

### Participate in Supplemental Seminars and Learning Experiences

*Students plan a specific set of personal field experiences, each of which is approved by the global studies advisor. In addition, the global studies program arranges events with special guest speakers who share their work experiences and provide insights into future trends and career opportunities. Field trips to local organizations or events are also coordinated. During the course of this program, students seek out and participate in a wide range of experiences that are related to their interest areas.*

### Complete a Capstone Project

Each participant is required to prepare a capstone presentation, activity or project that demonstrates how the student has synthesized the knowledge gathered during the global studies experience.

## HOW TO ENROLL

The Global Studies Certificate Program is open to students in grades 10 through 12. In order to enroll in the program, a student must complete the registration form and schedule an individual meeting with the global studies advisor. The registration form can be found at [www.bishopoconnell.org/global](http://www.bishopoconnell.org/global). Participants incur no additional tuition fee. Additional information is available by contacting Ms. Whitney Webb, Global Studies Advisor, [wwebb@bishopoconnell.org](mailto:wwebb@bishopoconnell.org) or 703-237-1400 ext. 587.

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# DUAL CREDIT/DUAL ENROLLMENT WITH MARYMOUNT UNIVERSITY

Bishop O'Connell High School and Marymount University are working in partnership to expand opportunities for high school students to pursue excellence in their academic development. Through the Dual Credit and Dual Enrollment programs, participating O'Connell students may earn college credit while in high school from Marymount University, a four-year Catholic university and a proud Arlington neighbor. This opportunity for obtaining dual credit is open to juniors and seniors whose general academic profile meets Marymount University criteria.

## **Dual Enrollment: Classes at Marymount – Credits from O'Connell and Marymount**

Students whose academic profiles meet Marymount University criteria may register to enroll in classes offered at Marymount. Students must consult with, and receive approval from, the counseling department and the Academic Dean with priority given to timing of classes scheduled at O'Connell. Seniors interested in continuing a program of study at a higher level than currently offered at O'Connell are ideal candidates for dual enrollment.

## **Dual Credit: Classes at O'Connell – Credits from O'Connell and Marymount**

At this time, Marymount University offers college credit for four classes taught at Bishop O'Connell High School. Dual Credit classes are taught at O'Connell by O'Connell faculty. These instructors have applied for and obtained adjunct professor status at Marymount University. Students enrolled in Statistics (3600) at Bishop O'Connell may request and be approved to earn credit for Statistical Analysis (MU MA 132) at Marymount University. Likewise, students enrolled in Forensic Science (4600) at O'Connell may request to be approved to earn credit for Principles of Forensic Science I (CJ 208) at Marymount. Similarly, French 4 Honors (MU FL 201) and Spanish 4 Honors (MU SP 201) are available at O'Connell for Dual Credit.

## **Student Status**

Students registered for Dual Credit or Dual Enrollment are billed by Marymount University for tuition. Dual Credit courses are offered at a significantly reduced rate for O'Connell students. Marymount also offers special reduced rates for students enrolling in Dual Enrollment courses at their campus. Please inquire about tuition rates during the application process.

Once accepted into the program, students attend an orientation at Marymount University where they officially register for classes and receive instructions for using school resources. These students receive a Marymount ID card with full student privileges, including complete access to the school's library resources. They will receive official grades and transcripts from the university as well as from Bishop O'Connell.

