

# **COURSE CATALOG**

2024-2025

# Pope Francis Preparatory School Mission Statement

Pope Francis Preparatory School is a Catholic co-educational, college-preparatory school which instills Gospel values and fosters academic excellence in a diverse community of learners.

Our mission is to challenge students to grow spiritually, intellectually, socially, and physically to become critical thinkers and faith-based leaders who embody justice, peace, service, and mercy in the global community.

# **Table of Contents**

Course Selection Process	/
Academic Planning	
Advanced Placement Program	
Pope Francis Academic Pathways	8
Class Level Expectations	9
Elms College Course Opportunity	9
Theology Department	10
502 Theology 1	10
510 Theology 2	10
514 Theology 3	10
Senior Theology Options	11
507 World Religions	11
556 Christian Leadership	11
English Department	12
011 English 1	12
015 Honors English 1	12
026 English 2	12
027 Honors English 2	12
032 English 3: American Literature	12
033 Honors English 3: American Literature	13
031 AP English Language and Composition	13
044 English 3: Communication and Culture	13
042 English 4: World Literature	13
043 Honors English 4: World Literature	13
041 AP English Literature and Composition	
045 English 4: Media and Culture	14
S058 Film Studies	14
S054 Heroes and Villains	14
S055 Creative Writing	14
S048 Fantasy and Sci-Fi	
S061 Murder, Mystery and Madness	14
S062 The Educated Mind	15
S057 English Enrichment	15
Mathematics Department	16
214 Pre-AP Algebra 1	16
215 Honors Pre-AP Algebra 1	
222 Pre-AP Geometry with Statistics	17
216 Honors Pre-AP Geometry with Statistics	17
224 Pre-AP Algebra 2	
225 Honors Pre-AP Algebra 2	18
246 Precalculus	18
240 Honors Calculus	18
259 AP Calculus AB	19
260 AP Calculus BC	19
258 AP Statistics	19
220 Statistics	19
S253 Financial Mathematics	20

S257 Math Enrichment	20
Science Department	21
313 Earth Science	
319 Honors Biology	
323 Biology	
352 AP Biology	22
348 Anatomy and Physiology	22
336 Chemistry	22
337 Honors Chemistry	
365 AP Chemistry (Offered 2025-2026)	
342 Physics	23
344 Honors Physics	
361 AP Physics 1 (Offered 2024-2025)	23
S338 Forensic Science	23
S340 Forensic Applications	
384 Oceanography (Offered 2024-2025)	
300 Environmental Science (Offered 2025-2026)	
383 Honors Aquaculture	
304 AP Environmental Science	24
S320 Astronomy	
331 Principles of Design 1	
333 Honors Principles of Design 2	
Social Studies Department	26
113 World History	
111 Honors World History	26
S127 Civics	
S129 Honors Civics	
126 U.S. History Survey	
128 Honors U.S. History Survey	
138 AP U.S. History	27
120 AP U.S. Government and Politics	
137 AP Psychology	28
S140 Psychology	
S142 Abnormal Psychology	28
S157 Sociology	
S115 BIPOC (Black, Indigenous, People of Color) Studies(Offered 25-26)	29
S117 Genocide & Human Rights	
S163 Community and Civic Engagement	
S155 Introduction to Economics	
World Language Department	
451 Latin 1	
453 Latin 2	
455 Honors Latin 3	
459 Honors Latin 4	
401 Spanish 1	
406 Spanish 2	
418 Honors Spanish 2	31
407 Spanish 3	32

	431 Honors Spanish 3	32
	445 Honors Spanish 4	
	446 Honors Spanish 5	
	449 AP Spanish Language and Culture	
	425 Honors French 3	
	428 Honors French 4	
٧	isual Arts	
	S710 Foundations of Art 1	
	S711 Foundations of Art 2	
	S753 Art 3	
	S743 Ceramics 1	
	S744 Ceramics 2	
	S745 Art Independent Study	
	746 Art Independent Study	
	756 AP 2-D Art and Design	
	757 AP 3-D Art and Design	
	758 AP Drawing	
P	erforming Arts	
	S770 Introduction to Theater	
	S771 Acting 1	
	S772 Acting 2	
	S703 Chorus	
	704 Chorus Full Year	
	S778 Introductory Band	
	798 Introductory Band Full Year	
	S779 Band/Orchestra	
	799 Band/Orchestra Full Year	
	S775 Guitar Ensemble	
	795 Guitar Ensemble Full Year	
	S776 Percussion Ensemble	
	796 Percussion Ensemble Full Year	
	S780 Audio Recording and Production	
	S777 Music and Social Justice Movements	
T	echnology Department	
	S625 Digital Literacy Foundations	
	S623 Graphic Design and Makerspace	
	S627 Computer Science Fundamentals	
	613 AP Computer Science Principles	
	S624 Introduction to Robotics	
	S602 Web Design	
	S601 Yearbook Design and Production	
	631 Yearbook Design and Production Full Year	
W	/ellness and Fitness	
	S907 Wellness 1	
	S908 Wellness 2	
	S909 Strength and Conditioning	
	S905 Martial Arts for Health and Well-Being	
	S906 Fitness for Life	41

Alternative Courses	
S004 Learning Lab	
003 Learning Lab Full Year	
S001 Study Hall	
010 Study Hall Full Year	
S800 VHS (Virtual High School)	
801 VHS (Virtual High School) Full Year	

# **Course Selection Process**

#### INCOMING FRESHMEN

Incoming freshmen will receive information about the scheduling process during a freshmen scheduling session. Students and parents should review the Course Catalog in order to find out more about courses and prerequisites. Based on this information, combined with results from the Entrance Exam (HSPT) and the student's middle school record, students will be scheduled into core courses, and can select electives based on their interests. There may also be additional placement tests required for certain academic areas such as world language and math; these tests are held in May or June. Transfer students will go through a similar process but will not be required to take the HSPT.

#### **CURRENT STUDENTS**

Current students will receive information about electronic scheduling and new course offerings. After this session, students will consult with their guidance counselor about requirements and prerequisites and then fill out a course selection sheet online. This sheet must be reviewed and submitted by both the student and parent. There are no exceptions for meeting prerequisites.

#### **ALL STUDENTS**

It is important to consider an entire academic year during the course selection process. The transition from one grade to another involves a gradually increasing level of sophistication of concepts, skills and acquiring mastery of these. Students that are involved in extracurricular activities also have to consider the time commitment that these activities require.

It is imperative that careful consideration be given to the choice of classes and a commitment to a schedule for the following year. Student registration for courses impacts the allocation of teaching personnel. Students may not drop or change a course unless an *exceptional situation* exists. This decision will be made by the Assistant Head of School after consultation with the student's guidance counselor, the department chair and the teacher. *With few exceptions, changes to schedules must be completed within the first two weeks of the semester*. Any changes after this point will result in a W or F placed on the student's transcript. VHS class enrollment should be completed by the end of June and December.

# **Academic Planning**

The program offered at Pope Francis Preparatory School is designed to prepare students for post-secondary success, as well as a comprehensive high school education. The requirement for graduation is 28 credits. The following are required:

English 4.0 credits
Mathematics 4.0 credits
Theology 4.0 credits

Science 3.0 credits including Biology

World Language 2.0 credits

Social Studies 3.0 credits including Civics

Fitness/Wellness 1.0 credit

Technology 0.5 credit - Digital Literacy Foundations

# **Advanced Placement Program**

The College Board's Advanced Placement Program is an opportunity for students to pursue college-level study in high school. College admissions officers view AP studies as an indicator of college success. Participation in an AP course is, therefore, a great advantage to any student. Students enrolled in AP classes will prepare for and are required to take the AP exam in the spring. There is an additional fee associated with all AP courses that will be billed prior to the student taking the exam. Pope Francis Preparatory School offers the following AP courses:

AP Computer Science Principles AP Environmental Science

AP English Language and Composition AP Calculus BC

AP English Literature and Composition AP Physics 1

AP United States History AP Chemistry

AP Statistics AP Biology

AP Calculus AB AP Studio Art

AP Spanish Language and Culture AP Psychology

AP US Government and Politics

# **Pope Francis Academic Pathways**

Education at PFPS is future oriented and focused on college preparedness. In order to make students' four-year experience more meaningful, students may choose to study within an Academic Pathway. All students at PFPS must fulfill the school's core requirements for graduation. Students, who select an Academic Pathway, will also focus their studies in a certain academic area that will lead to a demonstration of proficiency and commitment to a concentration of study. Students enrolled in the Pathways program will attend field trips and shadow days, meet with community leaders, establish mentorships and participate in internships. Students successfully completing the requirements of an Academic Pathway will have this designated on their final transcript and will be recognized at graduation with a distinctive colored cord. More information about Academic Pathways can be found on the school's website.

Pathway Concentrations include the following:

- Civic Engagement
- Health Sciences
- Performance and Fine Arts
- Environmental Sciences
- Communications
- S.T.E.M.
- Vocations

# **Class Level Expectations**

College Prep students can expect more time spent on content within the discipline as well as more structured instruction within the classroom. These classes are rigorous and will thoroughly cover the requisite material found within the curriculum. Skill development is emphasized, as well as content acquisition.

**Honors** students are challenged to work at an accelerated pace with advanced material. Students are expected to be motivated and able to work with some degree of independence. The amount of preparation required for the class might include more extensive reading and writing assignments; assessments or tests may differ in their format and difficulty level; higher level critical thinking and reasoning skills are expected; science labs may be extended and might require greater analysis of information. Students who want to challenge themselves are encouraged to register for these classes.

Advanced Placement students can expect courses that are specially designed for high school students seeking to earn college credit or simply take a more challenging course. The classes are generally considered to be comparable with college-level requirements and have a very rigorous curriculum. Students are expected to work independently, prepare thoroughly and be very proactive about their studies. Students can attempt to earn college credit by taking the AP exam at the end of the school year in May. These exams are administered by The College Board, the same company that administers the SAT. AP Exams are graded on a scale of 1 to 5. You must score a 3, 4, or 5 (depending on the college to which you are applying) in order to get college credit. Some colleges will recognize a grade of 3 as qualifying for credit. Most, though, require a 4 or 5. Students must pay an additional AP fee, even for courses with no exam.

# **Elms College Course Opportunity**

Pope Francis Preparatory School and Elms College have joined together to offer qualified juniors and seniors the opportunity to take a three credit college course at Elms College for a nominal fee of \$75 per course, per semester. Our students have the ability to acquire 12 college credits even before they receive their high school diploma. Many of these credits will be accepted at a variety of colleges. It is an exciting opportunity and one in which dozens of our students have done well. See Guidance for an application.

# **Theology Department**

In the words of Pope Francis, "Proclaiming Christ means showing that to believe in and to follow him is not only something right and true, but also something beautiful, capable of filling life with new splendor and profound joy, even in the midst of difficulties." In keeping with the charism of Pope Francis and the mission of our school, the primary focus of the Theology Department is to encourage and challenge each student to grow in a Christ-like way and holistically as a human being. This department plays a critical role in our identity as a "Catholic" school and in modeling the ideals of Jesus. Intellectually, the student will be engaged in the academic study of theology, the Bible, the teachings of Christ, Church history and tradition, the principles of Catholic Social Teaching, and the fundamentals of world religions. Spiritually, students will be encouraged to develop a relationship with God, share their faith with others, and foster a sense of the sacred in their lives. Each of the four years of theology will expose students to various styles of Christian prayer with the goal of developing an active prayer life and the ability to lead others in prayer. Socially, students will examine their relationships with others and be encouraged to build healthy communities in the school and in the world in accordance with the ideals and values of Christian morality and justice. Each year, students will express this dimension of faith through community service.

502 Theology 1 Grade 9 1 Credit

Who is God? How does God speak to us? What do Christians believe about God? This freshman year course seeks to provide all students with an understanding of a variety of sources of revelation – both natural and divine – about God. Students come to understand the primary importance of Sacred Scripture and its role in the life of faith for the Christian. The latter part of the course emphasizes the importance of Jesus as the Incarnation – the Living Word made flesh, the Second Person of the Trinity. Spirituality and prayer are additional components woven throughout the curriculum. During the year, students are encouraged to grow in religious knowledge and invited to deepen their lives of faith. The freshman course corresponds with the first two semesters of the U.S. Catholic Bishops' *Curriculum Framework*.12 hours of community service are required.

510 Theology 2 Grade 10 1 Credit

Who is Jesus? What is His message? How do we continue His mission in the world today? This sophomore year course leads students to understand the need for redemption and how Jesus is the fulfillment of God's promise. This course builds upon the Scriptural studies begun in the freshman year. Salvation history is explored, culminating with a study of the life and ministry of Jesus and our redemption through His death and resurrection. The latter part of the course focuses on the Church as a means to encountering the living Jesus. The sophomore course corresponds with the 3<sup>rd</sup> and 4<sup>th</sup> semesters of the U.S. Catholic Bishops' *Curriculum Framework*. 12 hours of community service are required.

514 Theology 3 Grade 11 1 Credit

How can we live as God calls us to live? How can we encounter Jesus in our everyday lives? What role does conscience play in making moral decisions? What does it mean to be a disciple of Christ? Students in this junior year course engage in an in-depth study of the seven sacraments of the Church: the Sacraments of Initiation (Baptism, Confirmation, and the Eucharist), the Sacraments of Healing (Reconciliation and Anointing of the Sick), and the Sacraments of Vocation (Matrimony and Holy Orders). In the latter portion of the course, students explore the sources, dimensions, and applications of Christian virtues and ethics. The junior course corresponds with the 5<sup>th</sup> and 6<sup>th</sup> semesters of the U.S. Catholic Bishops' *Curriculum Framework*. 24 hours of community service are required.

#### Senior Theology Options

Senior students must take at least one of the following two options in Religion. It is possible to take both of the senior options. All seniors are required to perform 24 hours of community service.

507 World Religions Grade 12 1 Credit

How does the Church relate to other Christian denominations and to non-Christian faiths? How do other faith traditions understand the ultimate reality? What is the nature of religion? Since Vatican II, the Church has expressed an increase in desire for Christians to participate in the ongoing dialogue with fellow Christians and the various religions of the world. This course addresses the Church's mandate for Christians to grow in tolerance, understanding and fellowship with our brothers and sisters around the globe. In the context of a Catholic Christian environment, students deepen their understanding of their own faith, while surveying the similarities and differences of others. The basis for the study of the principles of the great religions of the world is the common elements found in all traditions and the common questions about God and life that human beings strive to answer. The World Religions course acquaints students with the major Eastern and Western religious traditions. The course also explores saints, religious heroes and heroines in relation to social justice issues. With increased awareness of humankind's needs and beliefs, the students are more able to engage our diverse world as informed and concerned citizens. The *World Religions* course corresponds with the senior electives, *Ecumenical and Inter-religious Issues* and *Living as a Disciple of Jesus Christ in Society*, described in the U.S. Catholic Bishops' *Curriculum Framework*.

#### 556 Christian Leadership

Grade 12

1 Credit

Prerequisite: application process, students taking this course must be of a Christian faith and active in their church community

What does it mean to emulate Jesus Christ? How can we adopt an attitude of servant leadership? What skills do we need to act in ministerial roles in a Christian community? The main focus of this course is on training students to be Christian leaders in the school and in the world. The students learn small group facilitation, communication and public speaking skills. Students are trained to organize and present retreats on campus for underclassmen, to plan and lead liturgical celebrations, and to be active participants in their parishes. The other component of the course focuses on the principles of Catholic Social Teaching and how students can apply these teachings to their lives. Membership is based on a screening process which includes an application, an interview, and recommendations from faculty members. This course follows the senior elective *Living as a Disciple of Jesus Christ in Society* for the U.S. Catholic Bishops' *Curriculum Framework*.

# **English Department**

The English Department strives to foster a greater understanding and appreciation of the English language and its literature, and to develop reflective, critical, and creative thinkers through reading, writing, speaking and listening. Further study is given to grammar, mechanics, and vocabulary for the effective communication of ideas, oral and written. College preparedness is strengthened in the department's portfolio and research paper requirements.

<u>011 English 1</u> Grade 9 1 Credit

The English I curriculum is organized around themes appropriate for beginning high school students as they are introduced to a study of the English language and the major literary genres. Mechanics of grammar are introduced. Vocabulary study concentrates on definitions of words and their usage. Students are involved in a variety of learning situations that foster the development of creative and critical thinking, reading, writing, research, and oral communication skills. Portfolio and / or research paper required.

# <u>015 Honors English 1</u> Grade 9 1 Credit

Prerequisite: Determined by achievement level on the HSPT.

The main goal of Honors English 1 is to expose students to a wider variety of reading and writing experiences around themes appropriate for beginning high school students as they are introduced to a study of the English language and the major literary genres. Mechanics and grammar are reviewed with emphasis on problem areas. Vocabulary study concentrates on definitions of words and their usage. Students are involved in a variety of learning situations that foster the development of creative and critical thinking, reading, writing, research, and oral communication skills. Honors students complete the English 1 curriculum at an accelerated pace. The curriculum is supplemented with additional readings and more complex writing assignments. Portfolio and / or research paper required.

<u>026 English 2</u> Grade 10 1 Credit

The English 2 curriculum invites students to further develop their understanding of language and literature. Through a variety of learning situations, students continue to develop critical thinking, reading, writing, research, and oral communication skills. Students continue preparing for SATs through close textual analysis of multicultural literary works, study of English grammar, and vocabulary. Portfolio and /or research paper required.

# <u>027 Honors English 2</u> Grade 10 1 Credit

Prerequisite: 80 or higher average in Honors English 1; 87 or higher average in English 1. The Honors English 2 curriculum invites students to undertake an in-depth and extensive study of the literary forms introduced in the first year at an accelerated pace. Additional required reading further develops these skills. Through a variety of learning situations students continue to develop critical thinking, reading, writing, research, and oral communication skills. Students continue preparing for SATs through close textual analysis of multicultural literary works, study of English grammar, and vocabulary study. Portfolio and / or research paper required.

#### 032 English 3: American Literature Grade 11

1 Credit

The English 3 curriculum spans the development of American literature ranging from its Puritan beginnings to the emergence of contemporary authors. Students explore the genres and themes that have dominated this literary tradition. Through various learning situations, students develop their critical thinking, reading, writing, research, and oral communication skills. Students continue preparing for SATs by the study of grammar and vocabulary as well as practice responding to writing prompts similar to those used in standard testing. Portfolio and / or research paper required.

#### 033 Honors English 3: American Literature Grade 11

1 Credit

Prerequisite: 80 or higher average in Honors English 2; 87 or higher average in English 2. The English 3 Honors curriculum spans the development of American literature ranging from its Puritan beginnings to the emergence of contemporary authors. Additional readings, both over the summer and during the school year, are required. Students explore in greater depth the genres and themes that have dominated this literary tradition. Through various learning situations, students develop their critical thinking, reading, writing, research, and oral communication skills. Students continue preparing for SATs by the study of grammar and vocabulary as well as practice responding to writing prompts similar to those used in standard testing. Portfolio and / or research paper required.

#### 031 AP English Language and Composition Grade 11

1 Credit

Prerequisites: 87 or higher average in Honors English 2. All students are required to take the AP exam and to pay an additional fee.

Advanced Placement English in the junior year is a college-level course that involves students in the analysis and implementation of rhetorical strategies and devices of the English language through the study of American literature. The student is involved in learning experiences to develop critical thinking, reading, writing, research, and oral communication skills. Students practice analyzing language and learn to use techniques of close and critical reading to understand the subtleties of language. Students who enroll are required to take the Advanced Placement Language and Composition Examination as part of the course. Successful performance on this test may qualify the student for college credit or advanced standing in college. Portfolio and / or research paper required.

Grade 11

#### 044 English 3: Communication and Culture

1 Credit

English 3: Communication and Culture introduces the critical study and interpretation of written and spoken texts from a wide range of literary and non-literary genres. The formal analysis of texts is supplemented by awareness that meaning is not fixed but can change in respect to contexts of production and consumption. The student explores English through its cultural development and use, its media forms and functions, and its fictional and nonfictional literature. Students develop skills of literary and textual analysis, and also the ability to present their ideas effectively. A key aim is the development of critical literacy. Portfolio and / or research paper required. This course fulfills the junior English requirement. Students in the Communications Pathway are advised to take this class.

#### 042 English 4: World Literature Grade 12

1 Credi

The English 4 curriculum explores world literature by connecting the works through thematic elements. Students explore diverse literary genres through class discussion and varied written assignments. Students continue practice in grammar and vocabulary to assist them with standardized testing and future endeavors. Through a variety of learning situations, students develop their critical thinking, reading, writing, research, and oral communication skills. Portfolio and / or research paper required.

### 043 Honors English 4: World Literature Grade 12

1 Credit

Prerequisites: 80 or higher average in Honors English 3; 87 or higher average in English 3. The English 4 curriculum explores World literature by connecting the works through thematic elements. Additional readings, both over the summer and during the school year, are required. Students explore diverse literary genres through class discussion and varied written assignments. Emphasis is placed on advanced writing proficiency. Students continue practice in grammar and vocabulary to assist them with standardized testing and future endeavors. Through a variety of learning situations, students develop their critical thinking, reading, writing, research, and oral communication skills. Portfolio and / or research paper required.

#### 041 AP English Literature and Composition Grade 12

1 Credit

Prerequisites: 87 or higher average in Honors English 3; 80 or higher in AP Language and Composition. All students are required to take the AP exam and to pay an additional fee.

Advanced Placement English in the senior year is a college-level course that explores literature through intense study and critical analysis of a variety of literary traditions. The student is involved in learning experiences to develop critical thinking, reading, writing, research, and oral communication skills. Students are required to take the Advanced Placement Literature and Composition Examination as part of the course. Successful performance on this test may qualify the student for college credit or advanced standing in college. Portfolio and / or research paper required.

#### 045 English 4: Media and Culture Grade 12

1 Credit

English 4: Media and Culture continues the critical study and interpretation of written and spoken texts from a wide range of literary and non-literary genres. The formal analysis of texts is supplemented by awareness that meaning is not fixed but can change in respect to contexts of production and consumption. The student explores English through its cultural development and use, its media forms and functions, and its fictional and nonfictional literature. Students develop skills of literary and textual analysis, and also the ability to present their ideas effectively. A key aim is the development of critical literacy. Portfolio and / or research paper required. This course fulfills the senior English requirement. Students in the Communications Pathway are advised to take this class.

S058 Film Studies Grades 11, 12

.5 Credit

Film Studies is an elective course in which students have the opportunity to analyze the impact of film on society. Major emphasis is given to the evolution of film, the techniques of filmmaking and the role of film in our society. Propaganda, racism, stereotyping, and violence in the media are some of the topics explored.

#### S054 Heroes and Villains

Grades 10, 11, 12

.5 Credit

Heroes and Villains is a one-semester elective formulated to offer enrichment to juniors and seniors who wish to know more about the mythology of world cultures. Students read, write, and discuss the lessons of the myths and learn the modern-day relevance of ancient texts.

#### S055 Creative Writing

Grades 10, 11, 12

.5 Credit

Creative Writing is a one-semester course that allows students to expand their writing skills. It is a survey course that covers many genres of writing, including poetry, short fiction and drama. The students explore the various forms within each genre through writing their own work and reading pieces by published authors.

### S048 Fantasy and Sci-Fi

Grades 10, 11, 12

.5 Credit

Students in this course will study how fantasy and science fiction in literature and pop culture has transformed the world we live in today. Students will study a variety of authors of speculative fiction in variety of genres, from J.R.R. Tolkien to J.K. Rowling, from H.G. Wells to Suzanne Collins to Steven Spielberg.

#### S061 Murder, Mystery and Madness Grades 10, 11, 12

.5 credit

Students in this class will study the development of mystery literature from its early days with Edgar Allan Poe and Sir Arthur Conan Doyle to modern mystery writers like Agatha Christie to contemporary masters like Patricia Cornwell. Select mystery films may also be shown. Students may be expected to put on a murder mystery as a final assessment of the course.

# S062 The Educated Mind

Grades 10, 11, 12

.5 credit

This class is aimed at providing students with a basis of general knowledge in areas such as history, literature, entertainment, and science, by using competitive quiz programs such as Jeopardy and Who Wants to Be a Millionaire as a background. Students will enjoy learning the information that is the basis of our American culture while understanding the importance of being a well-rounded citizen.

# S057 English Enrichment

Grades 9, 10

.5 Credit

This course teaches students foundational reading and writing strategies to enhance their academic skills across the curriculum and on standardized tests. Students practice the use of close reading (on PSAT-style passages), annotations, graphic organizers, and guided notes to reinforce vocabulary and reading comprehension across a range of texts. An intensive focus on the writing process through a range of genres, from thesis papers to research essays to creative nonfiction, reinforces fundamental essay composition. This course is not a study. Students will practice composing thesis statements, conducting research, outlining, and citing properly to meet the educational requirements of their high school courses. This class is graded on a pass/fail basis.

# **Mathematics Department**

The Mathematics Department believes in the inherent value and ability of each student. We strive to develop each student's ability to think analytically, quantitatively, logically, and critically and to equip each student with the information necessary to meet the challenges of today's society. Our curriculum is designed to expand, challenge, and motivate each student. We aim to help all students view mathematics as a necessary tool for survival in a rapidly changing world and to prepare them for productive and successful service in society.

Ninth grade placement is determined by the 8<sup>th</sup> grade recommendation process. Placement in grades 10-12 is based on prerequisite content knowledge as determined by previous performance in courses, or, in the case of students new to the school who wish to take an Honors or AP course, a Math Department placement test.

College Prep courses provide students with more time on individual topics and include more guided instruction when solving problems. These courses provide a more structured learning environment with additional support and time on each topic of study. Honors courses are appropriate for students with a high interest in mathematics who have demonstrated exceptional understanding of mathematical concepts and skills, can think abstractly and solve problems with a high degree of independence. Advanced Placement courses are recommended for honors students who are highly motivated and able to work independently. Students in Advanced Placement courses will complete a rigorous curriculum of study and take the AP Exam in May and pay an additional fee.

Within each mathematics course students will explore real world applications and complete performance tasks. These tasks will be entered each year into the student's digital mathematics portfolio, allowing students to reflect on their growth and understanding throughout their time at Pope Francis Preparatory School. The portfolio shall serve to guide students to achieve a deeper understanding of mathematical concepts.

All full year mathematics courses have required summer work, to be completed by the start of the new school year. Remedial work may be required during the summer months. This will involve remote on site, asynchronous and/or synchronous classes. Students will receive individual notification of this requirement.

All math courses integrate the use of technology. A TI-84 Plus CE graphing calculator and Desmos will be used for classwork, homework, and testing.

214 Pre-AP Algebra 1 Grade 9 1 Credit

Prerequisite: : Determined by achievement level on the HSPT.

This course shall follow the College Board curriculum for Pre-AP Algebra 1. Additional concepts will be included throughout the year.

Pre-AP Algebra 1 focuses deeply on mastery of linear relationships. Linear functions and linear equations are the basic building blocks of many advanced topics in mathematics. Pre-AP Algebra 1 is streamlined to give students the time and space to thoroughly develop both procedural fluency and deep conceptual understanding of these concepts and skills. This instructional focus fuels students' growth and confidence in mathematics. Students will develop a deep and robust understanding of linear relationships from procedural, conceptual, and applied perspectives, create and use mathematical models to understand and explain authentic scenarios, and use evidence to craft mathematical conjectures and prove or disprove them. A TI-84 graphing calculator is required.

# 215 Honors Pre-AP Algebra 1 Grade 9

1 Credit

Prerequisite: Determined by achievement level on the HSPT and demonstrating mastery of pre-algebra foundational skills on the Math Department's placement test.

This course shall follow the College Board curriculum for Pre-AP Algebra 1. Additional concepts will be included throughout the year.

The Honors Pre-AP Algebra 1 course focuses deeply on mastery of linear relationships. Linear functions and linear equations are the basic building blocks of many advanced topics in mathematics. Honors Pre-AP Algebra 1 is streamlined to give students the time and space to thoroughly develop both procedural fluency and deep conceptual understanding of these concepts and skills. This instructional focus fuels students' growth and confidence in mathematics.

Students at the Honors level will be introduced to additional concepts such as matrices, statistics and other enrichment topics. Assessments will be broad and challenging, with an emphasis on real world application. Students are expected to be self-motivated and able to maintain a rigorous pace throughout the curriculum. A TI-84 graphing calculator is required.

#### 222 Pre-AP Geometry with Statistics Grades 10, 11, 12

1 Credit

Prerequisite: Passing grade in Pre-AP Honors Algebra 1, or Pre-AP Algebra 1

This course shall follow the College Board curriculum for Pre-AP Geometry with Statistics. Additional concepts will be included throughout the year.

Pre-AP Geometry with Statistics is designed to provide students with a meaningful conceptual bridge between algebra and geometry to deepen their understanding of mathematics. In this course, students are expected to use the mathematical knowledge and skills they have developed previously to problem solve across the domains of algebra, geometry, and statistics. The course includes a unit of statistics and probability to help students build a deeper understanding of essential concepts related to quantitative literacy. A TI-84 graphing calculator is required.

#### 216 Honors Pre-AP Geometry with Statistics Grades 9, 10

1 Credit

Prerequisite: 85 or higher in Pre-AP Honors Algebra 1, or 90 or higher in Pre-AP Algebra I. For new students, eligibility will be based on the results of taking the Math Department's placement test. Students must demonstrate mastery of Pre-AP Algebra 1 skills.

This course shall follow the College Board curriculum for Pre-AP Geometry with Statistics. Additional concepts will be included throughout the year.

Honors Pre-AP Geometry with Statistics is designed to provide students with a meaningful conceptual bridge between algebra and geometry to deepen their understanding of mathematics. In this course, students are expected to use the mathematical knowledge and skills they have developed previously to problem solve across the domains of algebra, geometry, and statistics. The course includes a unit of statistics and probability to help students build a deeper understanding of essential concepts related to quantitative literacy. Students at the Honors level will be introduced to additional concepts and enrichment topics. Assessments will be broad and challenging, with an emphasis on real world application. Students are expected to be self-motivated and able to maintain a rigorous pace throughout the curriculum. A TI-84 graphing calculator is required.

# 224 Pre-AP Algebra 2 Grades 10, 11 1 Credit

Prerequisite: Passing grade in Pre-AP Geometry or Pre-AP Honors Geometry

This course shall follow the College Board curriculum for Pre-AP Algebra 2. Additional concepts will be included throughout the year.

In Pre-AP Algebra 2, the third course in the Pre-AP mathematics program, students solidify and extend the understanding of functions and data analysis developed in prior courses. Students build upon linear, quadratic, and exponential functions as they work to define logarithmic, polynomial, rational, square root, cube root, and trigonometric functions. Quantitative literacy is developed by weaving data sets, contextual scenarios, and mathematical modeling throughout the course. Emphasis is placed on understanding mathematical concepts and communicating both verbally and through writing. Technology will be used regularly to reinforce the multiple representations of functions, to confirm written work, to implement experimentation, and to assist in interpreting results. A TI-84 graphing calculator is required.

#### 225 Honors Pre-AP Algebra 2 Grades 10, 11

1 Credit

Prerequisite: 85 or higher average Pre-AP Honors Geometry or 90 or higher average in Pre-AP Geometry. For new students, eligibility will be based on the results of taking the Math Department's placement test.

This course shall follow the College Board curriculum for Pre-AP Algebra 2. Additional concepts will be included throughout the year.

In Pre-AP Algebra 2, the third course in the Pre-AP mathematics program, students solidify and extend the understanding of functions and data analysis developed in prior courses. Students build upon linear, quadratic, and exponential functions as they work to define logarithmic, polynomial, rational, square root, cube root, and trigonometric functions. Additional concepts and in depth study of concepts will occur as time permits for the honors program. Quantitative literacy is developed by weaving data sets, contextual scenarios, and mathematical modeling throughout the course. Emphasis is placed on understanding mathematical concepts and communicating both verbally and through writing. Technology will be used regularly to reinforce the multiple representations of functions, to confirm written work, to implement experimentation, and to assist in interpreting results. A TI-84 graphing calculator is required.

#### 246 Precalculus Grades 11, 12 1 Credit

Prerequisite: Passing grade in Pre-AP Algebra 2 or Honors Pre-AP Algebra 2

Following Algebra 2, Precalculus continues to study functions. This course begins with a review of linear and quadratic functions and other topics from algebra and geometry. The twelve basic functions are introduced, including power functions, exponential functions, logarithmic functions, trigonometric functions, polynomial functions, and rational functions. The emphasis throughout the year is to create a foundation for the study of calculus. A TI-84 graphing calculator is required.

### 240 Honors Calculus Grades 11, 12 1 Credit

Credit Prerequisite: 90 or higher average in Precalculus; or 85 or higher average in Honors Precalculus or Honors Pre-AP Algebra 2

Calculus emphasizes a multi-representational approach to topics. Concepts are introduced and modeled with graphical, numerical, and algebraic representations. Concepts from precalculus are reviewed and extended. Limits and continuity, derivatives, applications of derivatives, the definite integral, and differentials and their applications are introduced. Students will demonstrate their understanding of these mathematical concepts and communicate their solutions. A TI-84 graphing calculator is required.

#### 259 AP Calculus AB Grades 11, 12 1 Credit

Prerequisite: 85 or higher average in Honors Calculus; or 90 or higher average in Honors Precalculus or Honors Pre-AP Algebra 2. All students are required to take the AP exam and to pay an additional fee. This course follows the guidelines set by the Advanced Placement College Board. AP Calculus AB is primarily concerned with developing students' understanding of the concepts of calculus and providing experience with its methods and applications. The course emphasizes a multi- representational approach to calculus with concepts, results, and problems being expressed graphically, numerically, analytically, and verbally. Topics in integral and differential calculus include: limits; derivatives of algebraic and transcendental functions; methods of integration of algebraic and transcendental functions; applications of the derivative (related rates, optimization, simple differential equations, slope fields); and integration (accumulation function area, volume, arc length, surface area). Graphing calculators are used extensively in this course. Technology will be used regularly to reinforce the multiple representations of functions, to confirm written work, to implement experimentation, and to assist in interpreting results. A TI-84 graphing calculator is required.

#### 260 AP Calculus BC Grade 12 1 Credit

Prerequisite: 85 or higher average in AP Calculus AB and a score of 3 or higher on the AP Calculus AB exam. All students are required to take the AP exam and to pay an additional fee.

This course follows the guidelines set by the Advanced Placement College Board. Calculus BC includes all AP Calculus AB topics plus additional topics such as parametric, polar, and vector functions; derivatives of parametric, polar, and vector functions; applications of integrals; additional techniques of antidifferentiation; solving logistic differential equations; and polynomial approximations and series (Taylor and Maclaurin series). Graphing calculators are used extensively in this course. Technology will be used regularly to reinforce the multiple representations of functions, to confirm written work, to implement experimentation, and to assist in interpreting results. A TI-84 graphing calculator is required.

### 258 AP Statistics Grades 11, 12 1 Credit

Prerequisite: 85 or higher average in Pre-AP Algebra 2 or Precalculus or 80 or higher in Honors Pre-AP Algebra 2. All students are required to take the AP exam and to pay an additional fee.

This course follows the guidelines set by the Advanced Placement College Board. Students shall be introduced to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: Exploring Data; Sampling and Experimentation; Anticipating Patterns; and Statistical Inference. Students will have opportunity to think through problems, make decisions and share questions and conclusions with other students. For this reason, they are expected to possess strong critical thinking and writing abilities. Topics covered include explorations and analysis of data using graphical and numerical techniques, the planning of a study including clarification of questions and methods of data collection and analysis, elements of probability, probability distributions, and statistical inference including confidence intervals and test of significance. Technology will be used regularly to reinforce and to confirm written work, to implement experimentation, and to assist in interpreting results. A TI-84 graphing calculator is required.

#### 220 Statistics Grade 12 1 Credit

Prerequisite: Passing grade in Pre-AP Algebra 2 or Precalculus

This is a full-year college prep course in statistics. Students will be introduced to descriptive and inferential statistics and basic probability theory, explore the data that surrounds them, generate and collect data. They will learn how to represent data in various ways and interpret data. Mathematical reasoning, critical thinking, and problem solving skills are stressed. Students will explore real world applications of the topics, and complete a year-long project-based portfolio of their choice in order to achieve a deeper understanding of the mathematical concepts. Students will use technology and computer programs such as Excel and StatCrunch. A TI-84 graphing calculator is required.

#### S253 Financial Mathematics

Grade 12

.5 Credit

Prerequisites: Passing grade in Pre-AP Algebra 2

In this course students will study personal finance and portfolio management. The course will provide students with insight into the mathematics they will encounter throughout their lives. Topics will include: an overview of personal finance, financial responsibility and decision making, income and careers, spending and credit, and saving and investing. The mathematics of finance includes interest: including compound interest, present value, annuities, loans, the rate of return on an investment, and interest in continuous time. A calculator is required.

#### S257 Math Enrichment

Grade 9, 10

.5 Credit

Objective: To support students to improve basic math skills and teach critical thinking skills, To support students in preparation for standardized tests (such as the SAT, and the PSAT) Prerequisite: Teacher and Guidance Department recommendation

Math Enrichment is intended to assist students in Pre-AP Algebra 1 and Pre-AP Geometry who require additional support in mathematics. Assisted on a regular basis and working in concert with individual teachers of enrolled students, one goal is to provide assistance and clarification of math concepts. This course will offer support for the preparation of standardized tests. Here students may work on their individualized College Board Study Plan. This regularly structured schedule will provide a supportive environment and excellent opportunity for all students to improve skills and their understanding of math. This is not a study. Individual support, group instruction, and online work will occur throughout the semester. Students may enroll in this course more than once. This course is graded Pass / Fail.

# **Science Department**

The Science Department at Pope Francis Preparatory School requires a minimum of three full-year laboratory courses in science, with the intention of producing scientifically literate individuals who are able to make informed choices. Typically, the science program begins with a course in Earth Science, where the students become familiar with our physical planet. The second course is Biology, which is a required course, where students study the structure and function of organisms and their interaction with the physical environment. The third year of study is Chemistry, in which students learn about chemical principles and how they affect us, as well as further developing their skills in analytical and abstract thinking. For students with both high ability and motivation, and who may have a desire to pursue a career in science, there is available an honors-AP science option. Students in this program begin with Honors Biology, followed by Honors Chemistry. In their third year, they may choose to take either AP or Honors Physics. Students taking a fourth year of science may choose from a variety of courses. These include CP, Honors or AP Physics, Oceanography, Ecosystems and Sustainability, Anatomy and Physiology, Honors Aquaculture, Forensics as well as AP Biology, AP Environmental Science and AP Chemistry. A lab component is incorporated into each of the science courses. The lab program will emphasize exploratory and investigative methodologies with a focus on lab procedures, techniques and communication skills.

313 Earth Science Grades 10, 11, 12 1 Credit

A basic knowledge of Earth Science is essential to meeting the lifestyle challenges mankind will face in the 21st century. It is critical in our changing world for students/citizens to understand how the Earth works as a system. This can lead to an understanding of the causes and potential societal consequences of Earth processes (e.g. earthquakes, floods, landslides, tsunamis, volcanic eruptions, weather etc.) as well as the availability and possible depletion of natural resources. Earth Science is an integrated science, bringing together introductory concepts of biology, chemistry and physics as they apply to the workings of Earth and its relation to our neighbors in space. This is accomplished through the four major disciplines within Earth Science: Geology, Oceanography, Meteorology and Astronomy. The applied, often visual, nature of Earth Science helps learners to see the relevance of the sciences to their lives by engaging students in learning about our home planet.

319 Honors Biology Grades 9, 10 1 Credit

Prerequisite: Determined by achievement level on the HSPT or 90 or higher in Earth Science. Honors Biology provides a challenging, in-depth, introductory course. The topics range from molecular and cellular biology, genetics, evolutionary theory, biodiversity and ecology. The students enrolled in this course are expected to be an active partner in the classroom and capable of some independent work and are willing to develop their thought processes and skills at a higher level. As a foundational course, science as a process is emphasized which includes independent research. Laboratory work will be an integral part of the course, enabling students to apply their acquired knowledge to explore the living world.

323 Biology Grade 9,10 1 Credit

Prerequisite: This course is required for graduation.

This is a basic first year introductory course which covers the general themes of biology. These include biochemistry, cell biology, genetics, development, evolution, biodiversity and ecology. The material is presented using various techniques including lecture, cooperative learning and hands-on activities and the use of audiovisual materials. Labs are used to reinforce concepts, as well as acquaint the students with the skills involved in experimentation, data collection, and interpretation. Critical thinking skills are integrated throughout the course

# 352 AP Biology Grades 11, 12 1 Credit

Prerequisite: An average of 85 or higher in Honors Chemistry and Honors Biology or an average of 90 or higher in Chemistry and Biology. All students are required to take the AP exam and to pay an additional fee.

The advanced placement course offers students an opportunity to complete college level work in their last year of high school. This course is taught according to the Advanced Placement outline in biology and builds upon the fundamental principles, ideas and skills presented in the introductory biology course. It deals with such topics as ecology, evolution, chemical and physical laws as they apply to living organisms, biochemistry, taxonomy, anatomy and physiology, genetics and cytology In addition, it aims to provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapid changing science of biology. Students complete the labs set forward by the College Board as part of their AP Biology curriculum. This course is designed for prospective science/biology majors. Summer work and reading are required for this course.

### 348 Anatomy and Physiology

Grades 11, 12

1 Credit

Prerequisite: 80 or higher average in biology and chemistry

This course is a secondary level laboratory science course that is designed to provide an introduction to human anatomy and physiology. In this course the organ systems of the human body are studied with emphasis placed on the relationship between structure and function as well as homeostasis. The concepts presented in this course rely on an understanding of the basic principles of biology and chemistry. Students who are interested in medical careers, nursing, or paramedical fields should select this full-year program.

<u>336 Chemistry</u> Grades 10, 11, 12 1 Credit

Prerequisite: Passing grade in Biology and Algebra 1

The fundamental concepts in chemistry are introduced in this course. The topics covered are atomic and molecular structure, chemical bonding, formula and equation writing, properties and states of matter, mole concept, stoichiometry, behavior of gases, solutions and mixtures, ionization, acid-base theory, and equilibrium. Laboratory investigation is used to reinforce the chemical concepts presented. Competence in mathematical relationships and the ability to apply such relationships to scientific principles is important for success.

# 337 Honors Chemistry Grades 10, 11, 12

1 Credit

Prerequisite: 80 or higher average in Honors Biology and Honors Algebra 1 and current honors math course or 85 or higher average in Biology and Algebra 1

In this course, special emphasis is placed on the mathematical and theoretical aspects of the chemical principles presented in the course. The general themes of chemistry discussed in this course include atomic and molecular structure, chemical bonding, properties and states of matter, chemical equations, stoichiometry, the behavior of gases, acid-base theory, thermochemistry, ionization and chemical equilibrium. Laboratory experiments employing fundamental techniques introduce the chemical principles presented in the classroom. This course is intended for students who may be prospective chemistry or science majors and requires commitment to challenging, faster paced coursework involving more in depth and critical thinking applications.

#### 365 AP Chemistry (Offered 2025-2026) Grades 11, 12

1 Credit

Prerequisite: 85 or higher in Honors Chemistry and current Math course. All students are required to take the AP exam and to pay an additional fee.

The AP Chemistry course provides students with a college-level foundation to support future advanced coursework in chemistry. Students cultivate their understanding of chemistry through inquiry-based investigations, as they explore topics as: atomic structure, intermolecular forces and bonding, chemical reactions, kinetics, thermodynamics and equilibrium.

342 Physics Grades 11, 12 1 Credit

Prerequisites: Students should have a minimum 75 average in all previous science and math courses, must include Algebra 1

This course is a study of the physical world and universe, the nature of matter and energy, and how they are related. Students will discover concepts and mathematical relationships in kinematics, dynamics, momentum and impulse, work and energy, electrostatics, magnetism, and DC circuits through observational experiments and testing experiments. This course is designed to be investigative, where students work in teacher-facilitated groups to explore concepts in a dynamic and exciting format.

344 Honors Physics Grades 11, 12 1 Credit

Prerequisites: 80 or higher in all previous honors math courses or a 90 or higher in all previous college prep math courses.

This course is a study of the physical world and universe, the nature of matter and energy, and how they are related. Students will discover concepts and mathematical relationships in kinematics, dynamics, momentum and impulse, work and energy, electrostatics, magnetism, and DC circuits through observational experiments and testing experiments. This course is designed to be investigative, where students work in teacher-facilitated groups to explore concepts in a dynamic and exciting format. Honors level broaches the subjects more deeply and with more advanced mathematics.

#### 361 AP Physics 1 (Offered 2024-2025) Grades 11, 12

1 Credit

Prerequisite: 85 or higher in all honors Math courses. Students taking this course are required to take the AP exam and to pay an additional fee.

This one year course is equivalent to a one semester college course in algebra-based physics for highly motivated students who intend to specialize in physical sciences or engineering. Topics covered include Newtonian mechanics with rotational dynamics and angular momentum, work, energy and power, gravitation and simple harmonic motion. Emphasis is placed on advanced scientific reasoning with physics concepts; using modeling, advanced problem solving; Experimentation and data analysis. There is a lab component in this course that meets the criteria of the College Board.

# S338 Forensic Science Grades 11, 12 .5 Credit

Prerequisite: 75 or higher in all previous science classes.

This course involves the application of science and technology to criminal and civil law enforcement. Students will focus on the areas of chemistry, biology, physics, and geology and how they are used to evaluate and assess the evidence from crime scenes. Some laboratory work includes fingerprints, blood toxicology, splatter analysis, and crime scene investigations.

# S340 Forensic Applications Grades 11, 12 .5 Credit

Prerequisite: 80 or higher in Forensic Science or in Biology and Chemistry.

Advanced Forensic Science is a laboratory-based science class designed for students who are interested in forensic science. The purpose of this course is for students to gain experience in the major investigative techniques currently used by forensic scientists and crime scene investigators, and to develop an understanding of the scientific concepts which serve as the basis for these techniques. This course will focus on the following topics: Crime Scene Investigation, Evidence Collection, Forensic Pathology, Entomology, DNA Evidence, Blood Evidence, Forensic Anthropology, Casts and Impressions and Ballistics.

# 384 Oceanography (Offered 2024-2025) Grades 11, 12

1 Credit

Prerequisite: Passing grade in 2 science classes.

Oceanography is an interdisciplinary course that will integrate concepts from the biological, chemical, geological and physical sciences. Topics discussed will include: a history of ocean exploration, the physical and chemical nature of water, ocean ecosystems, ocean biodiversity (there will be some dissection included in this topic), tides and currents and coastal dynamics.

#### 300 Environmental Science (Offered 2025-2026) Grades 11, 12

1 Credit

Prerequisite: Passing grade in 2 science classes

This course is designed as a secondary level laboratory science. The topics addressed will include ecology, ecosystems, communities, evolution, energy, natural resources, population growth, and sustainability; these topics being presented in relation to human impact on the biosphere and critical, present day environmental issues. Discussions will include both scientific research and ethical issues. Laboratory investigations will be integrated into the course along with lecture and out of class readings.

#### 383 Honors Aquaculture

Grades 11, 12

1 Credit

Prerequisites: 80 or higher in Honors Biology and Honors Chemistry or 90 or higher in Biology and Chemistry.

Honors Aquaculture is a combination of the fields of aquatic biology and aquaculture (fish farming). Building on the concepts learned in their previous biology and chemistry classes, students will be exposed to an intensive academic program as they learn to raise fish in a sustainable manner as a dietary protein source and to relieve the stresses imposed on our natural fish stocks. Using a 400+ gallon recirculating system, students will study various aspects of aquatic systems, fish anatomy, fish culture and aquaponics. Topics will include: An Introduction to Aquaculture, The Properties of Water, Aquatic Ecosystems, Aquaculture Species, Water Quality, Aquaculture Facilities, and Pathogens and Predation.

### 304 AP Environmental Science Grades 11, 12

1 Credit

Prerequisite: An average of 85 or higher in Honors Chemistry and Honors Biology or an average of 90 or higher in Chemistry, Biology or Earth Science. All students are required to take the AP exam and to pay an additional fee.

This advanced placement course offers students an opportunity to complete college level work within their last two years of high school. AP Environmental Science is an interdisciplinary lab course; it embraces a wide variety of topics from different areas of study and is taught according to the Advanced Placement outline in Environmental Science and builds upon the fundamental principles, ideas and skills presented in the introductory Biology, Chemistry, and Earth Science courses.

The goal of the course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, to examine alternative solutions for resolving and/or preventing them, and to develop and focus their own political perspective.

#### S320 Astronomy Grades 11, 12 .5 Credit

Prerequisite: Passing grade in current science.

The purpose of this course is to enable students to develop and apply knowledge of the universe and compare the conditions, properties, and motions of bodies in space. Emphasis shall be placed on concepts basic to Earth, including materials, processes, history, and the environment. This course introduces you to the composition and structure of the universe. The content includes, but is not limited to, historical astronomy, astronomical instruments, the celestial sphere, the solar system, the earth as a system in space, the earth/moon system, the sun as a star, and stars.

### 331 Principles of Design 1

Grades 11, 12

1 Credit

Prerequisite: 75 or higher in all science and math classes

In this course students will learn to apply the fundamentals of several software applications such as Tinkercad©, SketchUp©, and Microsoft 3D Builder©. Using 3D printers, students will obtain hands-on experience in producing a design from concept to prototype. Throughout this course students will learn the fundamentals of the design process in engineering through challenging real-world projects which will allow students to develop and apply their technical skills with organization, management, communication, ethics and teamwork. Classroom activities will also include reading, research and problem-solving as it relates to their projects. Student assessments will include written exams and quizzes in addition to their projects.

# 333 Honors Principles of Design 2 Grade 12

1 Credit

Prerequisite: Passing grade in Principles of Design 1 or Design Technology Year 1.

The Principles of Design program aims to develop students whose enhanced understanding of design and the technological world can simplify our shared responsibility for caring for our planet and create a better world. This program is appropriate for students who are interested in design and engineering. The major focus of this program is to expose students to the design process, research and analysis, teamwork, communication methods, global and human impacts, engineering standards and technological documentation. The program gives students the opportunity to develop skills and understanding of course concepts through activities and project based learning (PBL). The program challenges students to improve their interpersonal skills, creative abilities and understanding of the design process as well as develop strategies to direct their own learning.

# **Social Studies Department**

The Social Studies program at Pope Francis Preparatory School represents a diverse and comprehensive course of study that allows endless possibilities to explore the people, places and ideas that have and continue to shape our changing world. Through the use of historical documents and sources, students will learn to acquire, organize, analyze, and interpret information that can be applied to past and present challenges. These skills will be reinforced through a variety of activities such as Socratic Seminars, presentations both individual and group, field trips as well as the incorporation of current technology. In addition, community resources are utilized to provide speakers and programs, which enhance the topics being studied. Through our efforts, we encourage our students on their quest to become life-long learners and active participatory citizens.

# 113 World History Grade 9 1 Credit

The World History course will provide students with a solid foundation in the knowledge and skills that will allow them to recognize the role of individuals in society and develop deeper insight into the political, economic, and cultural movements that have helped shape our world. Special attention will be given to strengthening the student's ability to find, critically evaluate, and effectively use, primary and secondary sources. Through research, discussion, and analysis, students will improve and expand their writing skills so that they may more clearly and effectively express their well-reasoned analytical viewpoints. Students will leave this course prepared for success beyond the classroom as well-informed and responsible global citizens.

### 111 Honors World History Grade 9

1 Credit

Prerequisite: : Determined by achievement level on the HSPT.

The Honors World History course will encompass the same topics as the college prep sections but will provide a more in-depth study of thematic and chronological history. Students will develop an understanding of history and offer a balanced study with an emphasis on the peoples and cultures of Europe, Africa, Asia, and the Americas. An integral part of this course will be the use of primary sources, maps, research projects, oral presentations, essay writing and nonfiction historical literature.

#### S127 Civics Grades 10, 11, 12 .5 Credit

This class satisfies the Civics requirement. Recommended to be taken in 10<sup>th</sup> grade.

Students will study the foundations of American democracy and the origins of American government.

This one-semester course provides students with a basic understanding of civic life, politics, and government, and a short history of government's foundation and development in this country. Emphasis is placed on the Constitution where students learn how power and responsibility are shared and limited by government, the impact American politics has on world affairs, the place of law in the American constitutional system, and which rights the American government guarantees its citizens. Students also examine the importance of civic participation in the American political system.

# S129 Honors Civics Grades 10, 11, 12 .5 Credit

Prerequisite: (87 or higher in Honors World History or 90 or higher in World History) and (87 or higher in current Honors or AP English or 90 or higher in current College Prep English)

This class satisfies the Civics requirement. Recommended to be taken in 10<sup>th</sup> grade.

Students will study the foundations of American democracy and the origins of the American government using selected Federalist Papers, The U.S. Constitution and landmark cases. This one-semester course provides students with an understanding of civic life, politics, and government; a history of the government's foundation and development of The United States. The review of our government's foundational documents provides emphasis on the Constitution and the role it plays in our daily lives and the lives of future generations as our foundational document. Students learn how power and responsibility are shared and limited by government, the impact American politics has on world affairs, the place of law in the American constitutional system, and which rights are enjoyed by our citizens. Students also examine the importance of civic participation in the American political system through a semester-long legislative process simulation.

# 126 U.S. History Survey

Grades 11, 12

1 Credit

The U.S. History Survey course is intended to build upon the knowledge gained from the civics curriculum. In addition, the course will cover the major social, economic, and political trends in the development of America. The course emphasizes historical connections as it begins with a discussion of factors leading to the American Civil War extending to the polarizing state of present-day America. Critical reading and thinking skills are exercised as students work with primary documents and engage in local historical sources. Students have regular practice with historical investigation, research, and writing while using technology and research tools to prepare them for college-level courses. The goal of the U.S. History Survey course is to help develop active and thoughtful citizens.

# 128 Honors U.S. History Survey

Grades 10, 11, 12

1 Credit

Prerequisite: 87 or higher in Honors World History, or 90 or higher in World History.

The Honors U.S History Survey course will cover the same topics as the college prep sections but, will challenge students with an increased emphasis on independent learning. Students will be expected to read and take notes on their own while using class time to look at documents and information that support the initial book readings. Students taking this course should have not only an interest in history, but also have sound writing skills. The course places great emphasis on analytical thought that challenge students to make connections between various time periods.

#### 138 AP U.S. History Grade 11, 12

1 Credit

Prerequisite: (87 or higher in Honors US History and 87 or higher in current Honors or AP English) or permission of the instructor; and completion of an extensive summer assignment due on the first day of academic classes. Students are required to take the AP exam and to pay an additional fee.

Advanced Placement United States History will cover topics ranging from the era of early European explorers to modern day America. The course will utilize the Civics curriculum to help students better understand the development of American society throughout the country's history. The course is an indepth and fast paced look at major themes in United States History. The course breaks United States History into nine periods and combines historical knowledge with analyzing primary sources to better understand the connections between the nine periods. An emphasis is placed upon writing skills to prepare students for the AP test which will be taken at the end of the course. Students should be prepared for independent work as well as summer work to promote critical thinking skills, and to ensure the completion of information relevant to the course work.

# 120 AP U.S. Government and Politics Grade 11, 12

1 Credit

Prerequisite: (87 or higher in Honors Civics and 85 or higher in current English) or permission of the instructor. This course has limited enrollment. Students are required to take the AP exam and to pay an additional fee.

AP U.S. Government and Politics is an excellent continuation to the concepts and ideas introduced in the Honors Civics course and provides a college-level, in depth discovery of key political and legal concepts, ideas, institutions, policies, interactions, roles, and behaviors that characterize the constitutional system and political culture of the United States. Students will study U.S. foundational documents, federalist papers, Supreme Court decisions, and other texts to gain an understanding of the relationships and interactions among political institutions, processes, and behaviors. Underpinning the required content of the course is the understanding of the foundation of our American Republic, the interaction of the three branches of our government, and how civil liberties and civil rights are core to our political participation and beliefs. Students will also engage in skill development that requires them to interpret data, make comparisons and applications, and develop evidence-based arguments.

# 137 AP Psychology Grades 11, 12 1 Credit

Prerequisite: 87 or higher in Psychology and (87 or higher in current Honors or AP English or 90 or higher in current College Prep English) and completion of an extensive summer assignment due on the first day of academic classes. Students are required to take the AP exam and to pay an additional fee. For 2024-2025 only, 87 or higher in Abnormal Psychology can satisfy the Psychology portion of the prerequisite.

In this course, students will examine psychology's core concepts and theories to understand psychology as the study of the mind and human behavior. Students learn about essential psychologists past and present, research methods, statistics, biopsychology, cognitive psychology and more. There is an extensive amount of terminology throughout the course. There are also project and presentation requirements. Students will prepare to take the AP Psychology exam.

#### S140 Psychology Grades 11, 12 .5 Credit

Psychology is an introductory course in the scientific study of human behavior. It is presented from an eclectic view with equal emphasis on psychoanalytic, cognitive, behavioral, humanistic, and biological views of human behavior. Topics include methodology, learning, development, emotions, motivation, personality, and abnormality. Research projects and experiments allow students to explore their interests and learn about the broad field of psychology.

#### S142 Abnormal Psychology Grades 11, 12

.5 Credit

Prerequisite: 87 or higher in Psychology.

This course will provide an overview of the scientific study of mental illness (also known as psychopathology). 25% of the course will cover basic concepts and definitions, historical perspectives on psychopathology, different theoretical models of psychopathology, the assessment and diagnosis of mental illness, and research methods for studying mental disorders. The remaining 75% of the course will address leading categories of mental disorders. The legal and ethical issues pertaining to the assessment and treatment of mental illness will be investigated, as well as the role of culture and diversity in assessment and treatment.

#### S157 Sociology Grades 11, 12 .5 Credit

Sociology introduces the student to the basic concepts as well as the tools and methods used by specialists in this field while studying social life, relationships and social problems. The course is designed so that students will acquire a greater understanding of human group life and the role of the individual. This course will prepare students interested in such fields as criminal justice, social work and related people professions.

S115 BIPOC (Black, Indigenous, People of Color) Studies (Offered 25-26) Grades 10,11, 12 .5 Credit The purpose of this course is to educate students to be politically, socially, and economically conscious about their personal connections to local and national history. BIPOC Studies centers on themes of social justice, social responsibility, and social change. Students will gain a better understanding of African-American, Indigenous, Latin-X and Asian cultures and histories and how they fit into The American mosaic. The course spans from past to present, from politics to social reform, as well as cultural contributions, allowing students to identify similar social patterns and universal qualities present in other societies, including their own. This course will also incorporate an Identity section where students will consider concepts related to their own personal, group, and/or national identity. Community resources will be utilized to help students further understand their own ethnic narrative in the neighborhoods in which they live.

### S117 Genocide & Human Rights Grades 10, 11, 12

.5 Credit

This course develops an understanding of human rights and genocide in history. Students will examine the Holocaust and subsequent occurrences of genocide with emphasis placed on avoiding the potential of repetition. Students will define and explain the nature of prejudice as a universal human phenomenon while developing an understanding of the root causes endangering basic human rights. Students will also investigate extremist groups and examine the positive and negative behaviors associated with obedience, conformity, and silence. Current events and issues are woven throughout the curriculum as well as the addition of nonfiction literature, guest speakers, and film.

#### S163 Community and Civic Engagement Grades 10, 11, 12

.5 Credit

This course will provide students experiential opportunities to learn in real world contexts and develop skills of community engagement. Through hands-on and first-hand approaches students will develop an understanding and appreciation for their own community. This course is interdisciplinary in nature and will incorporate trainings and presentations with experts from several fields to promote understanding of the human experience. Students will see themselves as an important part of a larger, interconnected and interdependent community with the ability to apply what they have learned in "the real world." In this class community and classroom resources will be used to enhance the student learning process.

### S155 Introduction to Economics Grades 10, 11, 12

.5 Credit

Introduction to economics is a course designed to give students a beginning insight into the world of economics. Students will learn about microeconomics by studying the relationship between scarcity, supply and demand, opportunity, and cost. Students will study macroeconomics by studying the economy as a whole and how it is impacted by factors such as unemployment, inflation, deflation, and productivity. The course provides students with hands on learning in developing knowledge of how economics can be applicable in their own lives. Students will use the economic factors described above to create a final project that involves them developing, designing, and pitching their own product.

# **World Language Department**

The Pope Francis Preparatory School World Language Department applies both the Massachusetts framework standards and the national standards developed by ACTFL, the American Council of Teaching of Foreign Languages. This framework affirms the belief that students graduating from high school should be able to read, write, and converse in a second language in order to participate in the multilingual, multicultural interdependent communities of the twenty-first century.

When differentiating College Prep and Honors, we consider course load; reading and writing expectations, expected communication in the target language, pacing and rigor of the course as well as the motivation and independence of the student.

Please consider that although two years of the same language are required, many colleges prefer 3 or 4 years of the **same** language.

451 Latin 1 Grades 9, 10, 11, 12 1 Credit

In this introductory level course, students learn the fundamentals of the Latin language covered in the first book of the *Ecce Romani* series. Students will be introduced to different verb tenses, noun declensions, pronouns and other fundamental grammatical constructs of the introductory level. Through various readings, lessons, class discussion and personal research, they will explore the religious, social and political culture of the Ancient Romans as well. This course will give them a comprehensive overview of fundamental vocabulary, grammar, and cultural content, as well as providing insight into the many realms in which Latin is present today. Students will also prepare to contend on the National Latin Exam, a prestigious nation-wide examination that takes place during the spring semester.

<u>453 Latin 2</u> Grades 10, 11, 12 1 Credit

Prerequisite: Passing grade in Latin 1

In this intermediate level course, students continue to work on mastering the Latin language through completion of the *Ecce Romani* series. Students will complete their knowledge of verb patterns and be introduced to complex clauses and verb forms to better prepare them for the reading of legitimate Latin authors. Through various readings, lessons, class discussion and personal research, they will further explore the religious, social and political culture of the Ancient Romans as well. This course will give them a more in-depth experience of the fundamental vocabulary, grammar, and cultural content, as well as providing further insight into the many realms in which Latin is present today. Students will also prepare to contend on the National Latin Exam, a prestigious nation-wide examination that takes place during the spring semester.

455 Honors Latin 3 Grades 11, 12 1 Credit

Prerequisite: Grade average of 85 or higher in Latin 2

In this honors course, students master the forms and constructions of Latin grammar, building in their knowledge of Latin vocabulary as they complete and move on from the *Ecce Romani* series. As they gain full mastery of the Latin grammar, students will engage in readings that include original Latin prose and poetry by authors such as Ovid, Catullus, Petronius, Livy, Virgil, and Horace, among others. Students will gain experience and confidence in translation of original texts as well as of comprehension of texts for literal, cultural and social significance. Through various readings, lessons, class discussion and personal research, they will further explore the religious, social and political culture of the Ancient Romans as well. Students will also prepare to contend on the National Latin Exam, a prestigious nation-wide examination that takes place during the spring semester.

# 459 Honors Latin 4 Grade 12 1 Credit

Prerequisite: Grade average of 85 or higher in Latin 3

In this highest-level honors course, students will read largely from Virgil's *Aeneid*, with some supplementary material as well, including selections from Caesar's *Commentarii de Bello Gallico*. Throughout the year students will learn to identify and explicate the literary devices employed by Virgil, to properly scan and recite dactylic hexameter, and to analyze the major themes present in the text. Through various readings, lessons, class discussion and personal research, they will further explore the religious, social and political culture of the Ancient Romans as well. Students will also prepare to contend on the National Latin Exam, a prestigious nation-wide examination that takes place during the spring semester.

### <u>401 Spanish 1</u> Grades 9, 10, 11, 12 1 Credit

A communicative approach is used to teach this course. Emphasis is placed on the student becoming a competent communicator. In the first year, the focus is on vocabulary, introductory grammatical concepts, and the introduction to Hispanic culture and geography through a variety of music, brief readings, and short length films. This course introduces the student to the four language skills of listening, speaking, reading, and writing. A student should be able to speak well enough to communicate within his/her range of experience, read, write, and understand the material covered. Spanish culture is introduced as part of the curriculum with the inclusion of cultural readings and video segments. Some projects, readings, songs, holiday customs, and cuisine are included.

# 406 Spanish 2 Grades 9, 10, 11, 12 1 Credit

Prerequisite: Passing grade in Spanish 1

Level 2 continues in the advancement of the four basic language skills: speaking, writing, reading, and listening. Much of the class is conducted in Spanish with the expectation that students will use the target language to communicate to the best of their ability. This course continues to build vocabulary, develop and reinforce grammatical concepts along with fostering knowledge and appreciation of Hispanic culture. This course is project-based as students learn best by doing. This course leads the student to a practical control of the four basic language skills with an emphasis on communication and self-expression in the language. The course continues to develop and reinforce an understanding of the fundamentals of Spanish grammar and a familiarity with Hispanic culture.

### 418 Honors Spanish 2 Grades 9, 10, 11, 12 1 Credit

Prerequisite: Grade of 85 or above in Honors Spanish 1 or Grade of 87 or above in Spanish 1 and an 87 or above on the Honors Spanish 1 final exam.

This intensive level course continues in the advancement of the four language skills: speaking, writing, reading, and listening. The majority of the class is conducted in Spanish, in accordance with ACTFL standards, with the expectation that students will use the target language in all communication. This course continues to build vocabulary, develop and reinforce grammatical concepts along with fostering knowledge and appreciation of Hispanic culture.

This course prepares students for advanced-level Spanish classes through a variety of authentic readings, projects and oral presentations of longer lengths along with regularly assigned essays. This leads the student to a stronger control of the four language skills, with an emphasis on communication and self-expression in the language. This course requires personal responsibility and determination as more material is covered and students are expected to consistently review material outside of the classroom.

<u>407 Spanish 3</u> Grades 10, 11, 12 1 Credit

Prerequisite: Grade of 70 or above in Spanish 2

This course begins with a review of the essential concepts learned in the first two years and provides for the development and expansion of vocabulary as well as advanced grammatical structures. Oral presentations, essays, readings, and projects are integral to this course. Students at this level will be speaking and participating in the target language to the best of their ability. Hispanic culture is studied through various media and short literary readings by noted Hispanic authors. This course assists the student to grow in language ability and cultural appreciation. It reinforces the foundation already acquired in levels one and two and provides for the development and expansion of vocabulary, useful conversation, and grammatical structures. Oral presentations, essays, and projects are also part of the curriculum.

# <u>431 Honors Spanish 3</u> Grades 10, 11, 12 1 Credit

Prerequisite: Grade of 85 or above in Honors Spanish 2 or Grade of 87 or above in Spanish 2 and an 87 or above on the Honors Spanish 2 final exam.

This advanced level course begins with accelerated review of the essential concepts learned in the first two years. This faster-paced course provides for the development and expansion of vocabulary as well as advanced grammatical structures. Oral presentations, essays, in-depth readings, and projects are integral to this course. Students at this level should be comfortable speaking and participating in the target language. Hispanic culture is studied through various media and short literary readings by noted Hispanic authors. Oral proficiency and fluency are emphasized. More material will be covered than the regular Spanish 3 class with the goal of enhancing the student's language skills.

445 Honors Spanish 4 Grades 11, 12 1 Credit

Prerequisite: Grade of 85 or above in Spanish 3 Honors or 87 in Spanish 3

In this accelerated course, students are challenged using a variety of authentic materials from textbooks, the Internet, films, some television, and international as well as local community newspapers. Emphasis is placed on speaking in the target language through presentations and debate to express opinions, wishes, and beliefs. Written fluency is gained through the composition of research papers, opinion pieces, and analyzing short stories, poems, and legends. Personal responsibility is expected since the review of basic concepts takes place outside of the classroom. This course helps the student develop greater facility in both oral and written expression of the language. This goal is accomplished through continued reinforcement of previously-learned grammatical structures with an emphasis on creative expression, and by the careful study of short literary selections and culturally authentic materials. Hispanic culture is also studied in-depth through selected films, music, and research-based projects.

# 446 Honors Spanish 5 Grades 11, 12 1 Credit

Prerequisite: Grade of 85 or above in Spanish 4 Honors or 87 in Spanish 4

In this accelerated course, often taught in conjunction with Spanish 4, students are challenged by using a variety of authentic materials from textbooks, the Internet, films, some television, and international as well as local community newspapers. Emphasis is placed on speaking in the target language through debate by expressing opinions, wishes, and beliefs. Written fluency is gained through the composition of research papers, opinion pieces, and analyzing short stories, poems, and legends. Personal responsibility is expected since the review of basic concepts takes place outside of the classroom. This course helps the student develop greater facility in both oral and written expression of the language. This goal is accomplished through continued reinforcement of previously-learned grammatical structures with an emphasis on creative expression, and by the careful study of short literary selections and culturally authentic materials. Hispanic culture is also studied in-depth through selected films, music, and research-based projects.

# 449 AP Spanish Language and Culture Grades 11, 12

1 Credit

Prerequisite: Grade of 85 or above in Spanish 4 Honors. Students are required to take the AP exam and to pay an additional fee.

AP Spanish Language and Culture course is an advanced language course in which students acquire proficiencies that expand their cognitive, analytical and communicative skills. The AP Spanish Language and Culture course prepares students for the College Board's AP Spanish Language and Culture exam. As its foundation, it uses the three modes of communication (interpersonal, interpretive and presentational) as defined in the Standards for Foreign Language Learning in the 21st Century. The course is designed as an immersion experience and is conducted almost exclusively in Spanish. In addition, all student work, practices, projects, participation, and assessments are in Spanish. The course is based on the six themes required by the College Board, namely, 1. Global challenges 2. Science and technology 3. Contemporary life 4. Personal and public identities 5. Families and communities 6. Beauty and aesthetics The course teaches language structures in context and focuses on the development of fluency to convey meaning. Students explore culture in both contemporary and historical contexts to develop an awareness and appreciation of cultural products, practices, and perspectives. Students will broaden their written, oral and reading skills and complete projects, speaking activities and conversations in the target language.

### <u>425 Honors French 3</u> Grades 10, 11, 12

1 Credit

Prerequisite: Passing grade in French 2 Honors or French 2

This faster-paced course begins with a review of the essential concepts learned in the first two years. This faster-paced course provides for the development and expansion of vocabulary as well as advanced grammatical structures. Oral presentations, essays, in-depth readings, and projects are integral to this course. Students at this level should be comfortable speaking and participating in the target language. Francophone culture is studied through various media and short literary readings by noted Francophone authors. This course assists the student to grow in language ability and cultural appreciation. It reinforces the foundation already acquired in levels one and two and provides for the development and expansion of vocabulary, useful conversation, and grammatical structures. Short oral presentations, essays, and projects are also part of the curriculum.

### 428 Honors French 4 Grades 11, 12 1 Credit

Prerequisite: Grade of 85 or above in French 3 Honors or 87 or above in French 3

In this accelerated course, students are challenged using a variety of authentic materials from textbooks, the Internet, films, some television, and international as well as local community newspapers. Emphasis is placed on speaking in the target language through debate by expressing opinions, wishes, and beliefs. Written fluency is gained through the composition of research papers, opinion pieces, and analyzing short stories, poems, and legends. Personal responsibility is expected since the review of basic concepts takes place outside of the classroom. This course helps the student develop greater facility in both oral and written expression of the language. This goal is accomplished through continued reinforcement of previously-learned grammatical structures with an emphasis on creative expression, and by the careful study of short literary selections and culturally authentic materials. Francophone culture is also studied in-depth through selected films, music, and research-based projects.

# **Visual Arts**

The Pope Francis Visual Arts Department strives to create a passionate and rigorous studio art curriculum that fosters individual expression as well as technical skills. Students explore the Elements and Principles of art with exciting and challenging projects that are designed to develop problem-solving techniques while building a strong foundation in visual communication. Students explore many different mediums and artistic approaches while studying various art movements and past and contemporary artists. Observational drawing is emphasized and woven throughout the curriculum to enhance visual training. The studio art courses at Pope Francis Preparatory School include: Foundations of Art I, Foundations of Art II, Art 3, Pottery, Illustration, Photography and Printmaking, Sculpture (3 Dimensional Art) and Modern Art and AP Art and Design. Independent art studies are offered to art students who have completed advanced art and want to focus on portfolio building for application to art schools. Students are encouraged to participate in art competitions, art shows, portfolio days and attend art galleries and museums. Past field trips include: The Boston Museum of Fine Arts, Smith College Museum of Art, Mt. Holyoke Museum of Art and MASS MoCA. The Visual Arts Department encourages dialogues with the greater arts community and invites local artists into the classroom for projects and presentations.

#### S710 Foundations of Art 1

Grades 9, 10, 11, 12

.5 Credit

This course is designed to offer students a comprehensive overview of the visual arts. This class will be a hands-on introduction to a wide variety of artistic disciplines, including: drawing, painting, ceramics, and sculpture. This course will also serve as a foundation for understanding art history, composition, and design. Methods of instruction will be through guided lessons, working from observation, and exercises from imagination. Students in Foundations of Art 1 are challenged to think critically about their own work and the work of their peers through regularly planned critiques and discussions.

#### S711 Foundations of Art 2

Grades 9, 10, 11, 12

.5 Credit

Prerequisite: Passing grade in Foundations of Art 1 or permission of instructor based on portfolio This course is designed to explore a variety of approaches, strategies, and techniques in 2dimensional art. Students will be guided through the creative process from sketches to finished works. Lessons will include working from direct observation, using photographic sources, and building an image through imagination. Some of the materials used in this course will include: charcoal, graphite pencils, color pencils, watercolor paint, and India ink. In addition to building technical skills, students are challenged to think critically about their own work and the work of their peers. Students will be expected to participate actively in class critiques and discussions.

<u>S753 Art 3</u> Grades 10, 11, 12 .5 Credit

Prerequisites: Passing grade in Foundations of Art 1 and 2

The Art 3 course is designed to be a more mature approach to artistic production. Students are expected to be involved in their own artistic exploration. The curriculum is organized to offer maximum flexibility in student directed projects. The emphasis is on creative problem solving and continued technical and intellectual growth. A wide range of media is available. Students will advance and apply their knowledge of the Principles of Design while creating observational and conceptual drawings and paintings, studying and critiquing art, and learning how to document their work through photography. Student portfolio preparation for college admission can be part of the course work. Students are encouraged to enter art contests and attend gallery talks and exhibits.

<u>S743 Ceramics 1</u> Grades 10, 11, 12 .5 Credit

Prerequisite: Passing grade in Foundations of Art 1 and 2

This is a fundamental course in creating functional and sculptural objects in clay. It is the study of one of the oldest crafts using contemporary materials and ideas. Students in Ceramics 1 will learn the basics of the potter's wheel, which includes centering and making small functional forms, glazing and hand building. Students will learn the coil, slab, and pinch methods of hand building while learning about the elements and principles of art and how they are applied to three dimensional forms. Students will be expected to plan and draw their designs in a process sketchbook prior to hands on building.

<u>S744 Ceramics 2</u> Grades 10, 11, 12 5 Credit

Prerequisite: Passing grade in Ceramics 1

This course is designed for the more advanced art student who seeks to increase their skills in wheelwork, design and sculptural hand building techniques. Emphasis will be on building a cohesive body of work, keeping a detailed process journal, critiques and an artist's statement. Students are expected to have a strong work ethic, work independently and assist their peers.

S745 Art Independent StudyGrade 12.5 Credit746 Art Independent StudyGrade 121 Credit

Prerequisite: Grade 12 and Permission of teacher. Students will need to fill out a proposal by May 1st prior to being accepted into the course. The Assistant Head of School and instructors will meet with the student to discuss the proposal. Please consult with an art teacher for more information.

This course is offered to students who have a passing grade in the Advanced Art course and wish to continue portfolio work. A comprehensive, focused outline of expectations and assignments must be developed by the student and the art teacher.

#### AP Art and Design Program Grade 10,11,12

1 Credit (Each course)

Prerequisite: Passing grade in Foundations of Art 1 & 2 and one additional art class and Teacher Portfolio Review. All students are required to prepare a portfolio for submittal to the AP for examination and to pay an additional fee.

The AP Art and Design Program includes three different courses: AP 2-D Art and Design, AP 3-D Art and Design, and AP Drawing. Students may choose to take 1, 2 or all 3 courses. The AP Art and Design courses are for the serious artist who is prepared to spend the year developing a college level portfolio that is focused on a Sustained Investigation. These courses will be taught at a faster pace than the normal high school art class. The expectations and standards are higher. Essentially, these are college level courses, with higher-level skills and outside projects. In order to be successful, you should expect to spend at least the same amount of time outside of class on your work as you do during class in order to successfully prepare an AP Art and Design Portfolio. You will be expected to complete roughly a project every two weeks. In addition to spending more time outside of class, the assessment of your work will be more stringent. Consequently, it is a good idea to begin working now to develop your knowledge of contemporary artists, trends, and artwork. Please note, you will need to accept the responsibility of documenting your work and preparing digital slides for your final portfolio. The submission of a portfolio is mandatory, and you may only submit original work. As an AP Artist, you are expected to create and submit quality artwork that is comparable to artwork produced at the college level.

#### 756 AP 2-D Art and Design

Grades 10, 11, 12

1 Credit

Prerequisite: Passing grade in Foundations of Art 1 & 2 and one additional art class and Teacher Portfolio Review. All students are required to prepare a portfolio for submittal to the AP for examination and to pay an additional fee.

AP 2-D Art and Design is designed for the highly motivated student who is seriously interested in the study of art. This course involves purposeful decision-making about using the elements and principles of art in an integrative way. In AP 2-D Art and Design, you should demonstrate your understanding of design principles as applied to a two-dimensional surface. The principles of design (unity/variety, balance, emphasis, contrast, rhythm, repetition, proportion/scale, and figure/ground relationship) can be articulated through the visual elements (line, shape, color, value, texture, space). Any 2-D process or medium may be submitted, including, but not limited to, graphic design, digital imaging, photography, collage, fabric design, weaving, illustration, painting, printmaking, drawing, etc.

#### 757 AP 3-D Art and Design

Grades 10, 11, 12

1 Credit

Prerequisite: Passing grade in Foundations of Art 1 & 2 and one additional art class and Teacher Portfolio Review. All students are required to prepare a portfolio for submittal to the AP for examination and to pay an additional fee.

AP 3-D Art and Design is designed for the highly motivated student who is seriously interested in the study of art. AP 3-D Art and Design is intended for the advanced art student who is seriously interested in sculptural issues. In this course, students are asked to demonstrate their understanding of design principles as they relate to the integration of depth and space, volume, and surface. Students are able to show an enduring understanding of 3-D design through any three-dimensional approach, including, but not limited to, figurative or nonfigurative sculpture, ceramics, glass work, assemblage, and 3-D fabric/fiber arts. This course involves purposeful decision-making about using the elements and principles of art in an integrative way. You should demonstrate your understanding and mastery of design principles as applied to form, concept, and activation of physical space and execution of work. The principles include: unity/variety, balance, emphasis, contrast, rhythm, repetition, proportion/scale, and figure/ground relationships. Originality, imagination, invention, experimentation, and risk taking are all components of a successful portfolio. In addition, technical competence with materials, confidence in execution, evocative work, and engagement of the viewer are also significant descriptors for successful work.

# <u>758 AP Drawing</u> Grades 10, 11, 12

1 Credit

Prerequisite: Passing grade in Foundations of Art 1 & 2 and one additional art class and Teacher Portfolio Review. All students are required to prepare a portfolio for submittal to the AP for examination and to pay an additional fee.

AP Drawing is designed for the highly motivated student who is seriously interested in the study of art. In this course, your mastery of drawing can be demonstrated through a wide range of approaches and media. Light and shade, line quality, rendering of form, composition, surface manipulation, and the illusion of depth are drawing issues that can be addressed through a variety of means, which could include painting, printmaking, mixed media, etc. Abstract, observational, and inventive works may be submitted. The range of marks used to make drawings, the arrangement of the marks, and the materials used to make the marks are endless.

# **Performing Arts**

In this department can also be found the courses of Theater, Acting 1 and Acting 2 as well as Chorus. Chorus may be taken multiple times for credit. Students are encouraged to grow and evolve as performing artist with emphasis on expression, creativity and performance.

S770 Introduction to Theater

Grades 9, 10, 11, 12

.5 Credit

This course is designed to give students the knowledge they would need to produce a play. The course covers producing a play (the production, pre-rehearsal activities and rehearsal); producing a musical, stage settings, lighting and sound, costuming and make-up. Students will receive a comprehensive education regarding all things theater and play production within this course.

<u>S771 Acting 1</u>

Grades 9, 10, 11, 12

.5 Credit

Prerequisite: Passing grade in Introduction to Theater or permission of instructor based on theatrical experience

This course is designed to give students the knowledge and skills of stage acting. The course covers voice and diction, all types of acting, using the voice effectively and extensive experience onstage and rehearsing. Students work toward a final production of scenes from the American Theater. The course helps students build creative thinking skills, public speaking skills, and overall confidence.

<u>S772 Acting 2</u> Grades 10, 11, 12

.5 Credit

Prerequisite: Passing grade in Acting 1

This intermediate-level acting class is designed for students with a half year of experience or more, and promotes enjoyment and appreciation for all aspects of theater through opportunities to build significantly on existing skills. Class work focuses on improvisation, creative dramatics, and scene work which are used to help students challenge and strengthen their acting skills and explore the technical aspect of scene work. As students gain skills and experience, they explore the relationships among technology, theater, and theater's sister arts. Acting II provides opportunities for students to strengthen skills in critical listening and thinking, as well as stage presence, ensemble work, and aesthetic response through understanding of the organizational structures and historical and cultural influences on theater. Students will receive training for the audition process.

S703 Chorus Full Vac

Grades 9, 10, 11, 12

.5 Credit 1 Credit

704 Chorus Full Year

Grades 9, 10, 11, 12

Students in Chorus will engage in vocal development exercises, musical literacy instruction, and preparation of multi-part choral selections for performance. They will learn melodies and harmonies in songs to perform at an end-of-semester concert, as well as several masses and occasional special events. Musical selections will reflect a wide range of cultures, time periods and styles, to help students connect

and grow as caring global citizens. Students are encouraged to sign up for the full year course.

<u>S778 Introductory Band</u> Grades 9, 10, 11, 12 .5 Credit 798 Introductory Band Full Year Grades 9, 10, 11, 12 1 Credit

This course serves as an introductory instrumental course for students with little or no experience playing an instrument. Students are given individual or small group instruction on their chosen instrument, as well as practice time during class. They are required to practice the skills they are learning daily, in addition to the practice time during the class period. They will learn sequentially the skills to read and perform music from standard notation and chord symbols. With this individual instruction every class period, and routine practice, they should advance quickly, and potentially be prepared to participate in the band following a semester of study. Each student will prepare music to perform individually and/or with a small group at the end-of-semester concert. Musical selections will reflect a wide range of cultures, time periods and styles, to help students connect and grow as caring global citizens. Students are encouraged to sign up for the full year course.

 S779 Band/Orchestra
 Grades 9, 10, 11, 12
 .5 Credit

 799 Band/Orchestra Full Year
 Grades 9, 10, 11, 12
 1 Credit

Band/Orchestra offers students who already have experience playing a musical instrument the opportunity to progress individually while learning the skills to play with a varied group of instruments. Instruction will be aimed at establishing musical literacy, improving upon individual and ensemble performance skills, and preparing selections of music to perform at an end-of-semester concert. Each student is expected to be applying what is learned in class, practicing on their own at least five times per week, and learning their instrumental parts for performance. Musical selections will reflect a wide range of cultures, time periods and styles, to help students connect and grow as caring global citizens. Students are encouraged to sign up for the full year course.

S775 Guitar EnsembleGrades 9, 10, 11, 12.5 Credit795 Guitar Ensemble Full YearGrades 9, 10, 11, 121 Credit

This course is open to students who play guitar, or would like to begin learning guitar. Students will receive weekly small group instruction at their current level, individual practice time, and will prepare and rehearse music with the group, to perform at the end of semester concert. Musical selections will reflect a wide range of cultures, time periods and styles, to help students connect and grow as caring global citizens. Students are encouraged to sign up for the full year course.

S776 Percussion EnsembleGrades 9, 10, 11, 12.5 Credit796 Percussion Ensemble Full YearGrades 9, 10, 11, 121 Credit

This course is open to students who play percussion or piano, or would like to begin learning percussion. Students will receive small group drum/percussion instruction at their current level, some practice time, and will prepare and rehearse music with the group, to perform at the end of semester concert. Musical selections will reflect a wide range of cultures, time periods and styles, to help students connect and grow as caring global citizens. Students are encouraged to sign up for the full year course.

#### S780 Audio Recording and Production Grades 11, 12

.5 Credit

This course will introduce students to the basics of sound recording and music production techniques. Students will use audio equipment, computer software, and digital audio workstations to record, edit and create music. Prior experience in music is very helpful, but not required.

S777 Music and Social Justice Movements Gr

Grades 9, 10, 11, 12

.5 Credit

In this non-performance course, students will explore the integral role music has played in major social justice movements in American history. In two introductory lessons, students examine how "the beat" in American popular music has both brought people together and threatened the status quo, as they discover how musical performance has been used as a way to promote awareness and encourage activism. The lessons then detail music's role in specific social justice movements, from the Civil Rights, Anti-War, and Women's movements in the 1960s to the Black Power and Red Power movements in the early 1970s. In Civil Disobedience: Fighting Segregation in New Orleans, students consider how small, individual actions might contribute to social justice.

# **Technology Department**

The Technology Department offers elective courses to enhance students experience and interests at Pope Francis Preparatory School. These elective courses include Digital Literacy Foundations, Graphic Design and Makerspace, Computer Science Fundamentals. Web Design, Yearbook Design and Production, and Robotics. Each student enters into these opportunities with different academic abilities, learning styles and interest levels in each of the subject matters. As a department, teaching methods are varied to help lead to success for each of the students in gaining a mastery of the subject matter. The department also recognizes that many of the courses within the department are a means of helping a student see if they have an aptitude to continue their studies and/or future employment in these areas. The curriculum is designed to challenge and motivate each student to meet their personal goals. Overall, the department strives to educate the whole student to succeed in the technologically immersed society that exists today.

#### S625 Digital Literacy Foundations

Grades 9, 10, 11, 12

5 Credit

This is a faith-based hands-on, collaborative course that teaches students how to incorporate their faith while being effective digital citizens. Students will develop digital literacy skills using Google and MS applications, graphical skills using Canva, and create their very own digital citizenship multimedia book using a web-based application called, Book Creator. They will also develop soft skills by practicing communication and collaboration with their classmates.

#### S623 Graphic Design and Makerspace Grades 9, 10, 11, 12

.5 Credit

This hands-on, collaborative course introduces students to design principles and design elements while learning Adobe Express applications. Students will also explore 3D graphical design through design and fabrication projects by using TinkerCAD and 3D printing as well as Design Space and the Cricut Maker.

### S627 Computer Science Fundamentals Grades 9, 10, 11, 12

.5 Credit

This is an exploratory course about a variety of topics within computer science. During this hands-on course, students will explore the functions of a computer by working with a variety of physical devices. They will make a variety of small electronics-based projects, work with small robots, and learn Python coupled with AI (artificial intelligence) machine language while driving a remote car. In every project, students will work collaboratively with a partner or a small group.

### 613 AP Computer Science Principles Grades 10, 11, 12

1 Credit

Prerequisite: Passing grade in Pre-AP Algebra 2 or Precalculus or 85 or higher in Honors Pre-AP Algebra 1. No prior computer science experience required. Students are required to take the AP exam and to pay an additional fee.

AP Computer Science Principles introduces students to the breadth of the computer science field by covering the five Big Ideas. In this course, students will learn to design and evaluate solutions and apply computer science concepts to solve problems by developing algorithms and programs. They will incorporate and use data to discover new knowledge. Students will also explain how computing innovations and computing systems, including the Internet, work, explore their potential impacts, and contribute to a computing culture that is collaborative and ethical. This course will utilize the Python 3 programming language but does not include object-oriented projects

### S624 Introduction to Robotics

Grades 10, 11, 12

.5 Credit

Prerequisite: (Passing grade in Computer Science Fundamentals or 80 or higher in Pre-AP Algebra 1, Pre-AP Geometry, or Pre-AP Algebra 2) or is a member of the Cardinal Coders at any grade level. This hands-on collaborative course introduces students to the field of Robotics and stimulates their interests in science and engineering through the engineering design process. Students will become familiar with OnShape, a collaborative CAD application, to design a variety of parts or assemblies used in robotics.

Students will learn how to program the robot using simulation software at the component level. Once their simulation works, they will transfer their code to their robot.

This course covers various multidisciplinary topics necessary to understand the fundamentals of designing, building, and programming robots. Each topic is presented and includes a hands-on lab where students will begin to build and program their robot. During this course, students will work in small groups and will be required to complete the design, construction, and programming of their group's robot.

### S602 Web Design

Grades 9, 10, 11, 12

.5 Credit

Web Design is a half-year course where students create Web pages using Adobe Dreamweaver. The pages will include: links, images, tables, forms, templates, style sheets, layers, image maps, navigation bars, frames, animations, behaviors, time lines and media objects. In addition to learning how to use Dreamweaver, the course will expose students to proper Web site design and management techniques. The students will become familiar with procedures to create Web sites suitable for school, work and personal use.

#### S601 Yearbook Design and Production Grades 9, 10, 11, 12

.5 Credit

631 Yearbook Design and Production Full Year Grades 9, 10, 11, 12

1 Credit

In this course, you will gain, develop, and master skills in one or multiple areas of the yearbook creation process. Students will gain knowledge and hands-on experience in the areas of page design, digital photography, copywriting, marketing, and project planning. Beyond developing these individual skills, this class will focus on working towards a single, shared goal: to create the most memorable yearbook Pope Francis Preparatory has ever seen. Students will utilize their Surface Pro & Digital Camera (DSLR or Smartphone) No prior design skills are necessary. Students in this course will work with the Digital Photography Club. Students may enroll in this course multiple times. Students are encouraged to sign up for the full year course.

# **Wellness and Fitness**

S907 Wellness 1 Grade 9 .5 Credit

Required course for all freshmen

In the Wellness 1 Program students will be encouraged to develop appropriate attitudes, behaviors and skills necessary to build a healthy lifestyle. Through participation in a variety of individual/team sports and recreational activities, students will develop the knowledge and skills of physical fitness. Students will be introduced to the basic exercises in the Fitness Room. Health awareness concepts will also provide students with essential knowledge and decision-making skills for a healthy lifestyle. Students will be encouraged to apply principle of health and wellness to their own lives. A developments guidance program will be incorporated as well, as the students begin to plan their journey through high school and beyond.

<u>S908 Wellness 2</u> Grades 10, 11, 12 .5 Credit

Preference for enrollment given to seniors

The Wellness 2 course is designed for those students who are enthusiastic and enjoy actively participating in individual/team sports as well as recreational activities. Through participation in a variety of activities, emphasis will be placed on game play strategies, understanding the concepts of teamwork and to develop a person's own personal skill level in each of the activities.

# S909 Strength and Conditioning Grades 11, 12

.5 Credit

Prerequisite: Passing grade in two "Wellness and Fitness" courses

This course is intended for upperclassmen with an interest in strength and conditioning and leading a healthy lifestyle in the collegiate setting. Emphasis will be placed on physical fitness and nutrition. Through hands-on learning in the fitness facility, students will explore topics such as mobility, flexibility, plyometric training, weight training, functional movement patterns and more. This course will also aid in preparing students for the transition to college, focusing on a holistic approach to personal growth and wellness. Students will set personal fitness goals, follow individualized workout plans, and explore different methods of achieving short and long-term goals in the fitness world. Grading will be based upon a student's ability to engage and participate in class as well as successfully complete assignments. At the conclusion of the course, students will have better knowledge of strength and conditioning techniques as well as how to accomplish their personal fitness goals both now and in the future.

Stressed? Looking for a way to improve your health, while developing an overall feeling of well-being? This course will provide you with the skills to improve health while learning the soft-style martial art of T'ai Chi Ch'uan. The slow, meditative movements of this martial art allows one to gradually reduce stress, increase balance, and develop an understanding for internal strength. This course will also include a study of Taoism through the translations of Lao Tzu's "Tao The Ch'ing".

S906 Fitness for Life Grades 11, 12 .5 Credit

Prerequisite: Passing grade in Wellness 1

Fitness for Life students are encouraged to reflect upon their current wellness goals while preparing to set and create positive lifelong wellness habits. Students will reflect on the 8 Dimensions of Wellness (emotional, physical, occupational, intellectual, financial, social, environmental, and spiritual) and self-assess what their future could look like based on these dimensions. Through real-world examples and analysis, students will be encouraged to develop a plan relating to how to maintain health throughout their lives. Students will also participate in various physical activities (team and individual) throughout the course.

# **Alternative Courses**

S004 Learning LabGrades 9, 10, 11.5 Credit003 Learning Lab Full YearGrades 9, 10, 111 Credit

Teacher and Guidance Department recommendation

Students that have some academic challenges may be recommended to be placed into a Learning Lab. During this course, students are given direct instruction and help by a teacher. Reinforcement of effective study skills will take place, along with encouragement to utilize other resources within the school, including monitoring of Portals, Khan Academy, receiving additional instruction, after school help etc. This course is graded Pass / Fail.

 S001 Study Hall
 Grades 9, 10, 11, 12
 No Credit

 010 Study Hall Full Year
 Grades 9, 10, 11, 12
 No Credit

Students can choose to have a Study Hall during one or both semesters. The scheduled semester for students choosing just a semester study hall will be determined based on the other courses selected.

S800 VHS (Virtual High School)Grades 11, 12.5 Credit801 VHS (Virtual High School) Full YearGrades 11, 121 Credit

Students taking VHS must be independent learners and be proficient with technology. Only classes NOT offered at PFPS will be allowed to be taken on VHS. If a student fails a VHS class, they must reimburse the school for the cost of the class. A student failing a first semester VHS class will not be allowed to take a VHS class second semester.

Pope Francis Preparatory School has partnered with the VHS Collaborative, a non-profit pioneer in the area of online learning. Students are able to access over 200 courses with classmates that are distributed geographically across the country and the world. VHS classes are offered at the college prep, honors and AP level. Students enrolled in VHS are scheduled to "meet". This is not a study hall --- students are expected to log in to VHS every day throughout their daily rotation. It is expected that students also log in from home. VHS courses suggest additional time will be necessary to complete weekly assignments. AP classes suggest students put in 10 plus hours of study each week.