The Program of Studies at Loyola School is intended to provide an education that is both Christian and humanistic. It is assumed that all Loyola students will continue their education at the college level. As a college preparatory school, Loyola promotes an academically stimulating and challenging environment. The curriculum is designed to place emphasis on the development of those skills and strengths that will be necessary for success in the most demanding colleges. Loyola strives to produce graduates who can form sound analytical judgments, cultivate powers of self-expression, express a keen interest in and concern for all God’s creation, and exhibit a philosophy of life based on sound principles. Important for the achievement of these goals is a sense of maturity and responsibility for one’s own behavior.

At the heart of the Jesuit approach to education is the principle of cura personalis - care for the whole person. At Loyola this means drawing out a student’s gifts and talents, inspiring their use, and encouraging interaction with peers and teachers. Our graduates become people who can question, reason, and articulate their understanding in every setting.

Loyola School’s curriculum is college preparatory in nature and content. With its foundation rooted in the Jesuit philosophy of education, the curriculum stresses strong core requirements, which include four years of English, Theology, and Physical Education; three years of History, Foreign Language, Science, and Mathematics, with further elective courses available in each discipline. Four years of Christian Service are also required. In addition, freshman year includes a required course in Speech, freshman and sophomore year include required courses in STEM, and sophomore year includes required courses in Introduction to Studio Art and Introduction to Music Performance.

A senior’s program may include as many as four full year elective courses.

Course distribution requirements are as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>English</td>
<td>4</td>
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<tr>
<td>Theology</td>
<td>4</td>
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<tr>
<td>History</td>
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<td>Mathematics</td>
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<td>Science</td>
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<td>Foreign Language</td>
<td>3</td>
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<tr>
<td>Physical Education</td>
<td>2</td>
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<tr>
<td>Intro to Studio Art</td>
<td>½</td>
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<td>Intro to Music Theory</td>
<td>½</td>
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<tr>
<td>Speech</td>
<td>½</td>
</tr>
<tr>
<td>STEM</td>
<td>1</td>
</tr>
<tr>
<td>Electives</td>
<td>4</td>
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</tbody>
</table>

Courses listed below are year-long and receive one credit each unless otherwise noted. Electives must include at least an additional ½ credit in Fine Arts.

ENGLISH

The four-year program in English provides sequential learning experience designed to help students think and communicate clearly about the human condition as they confront it both in literature and in their daily lives.

Becoming a careful reader and observer begins with attention to details. Students must learn to appreciate not only the facts of a particular work of literature, but also how and why the author has arranged these facts. Consideration of plot thus leads to discussion of style, technique, structure, and theme. Understanding the interplay among these elements helps make students aware of the strategies underlying literature and helps stimulate discussion of the need for planning, revision, and editing in the students’ writing.

A broad and functional vocabulary, clearly worded sentences, well-organized paragraphs, essays, and papers – all are fundamental to effective written communication. Mastery of the skills underlying these fundamentals requires attention to the details of precise vocabulary, correct grammar and usage, and proper mechanics. As discipline is not the enemy of enthusiasm, developing these skills is not the enemy of finding one’s own voice in writing.

As careful readers and writers, students will grow in their appreciation of the human condition and come to recognize themselves as participants in the human drama of studying, learning, and living.

English I - 9th year

In this introductory course, students embark on their four-year odyssey in literature, writing, grammar, and vocabulary. The literature focus is on genre (fiction, poetry, and drama), with an emphasis on both canonical works such as Shakespeare’s Twelfth Night and modern classics such as August Wilson’s Fences. The writing program includes the writing process of research, prewriting, drafting, revising, and editing. Students gain proficiency in the short essay and its methods of development, and write regularly in a journal. Weekly lessons in vocabulary and grammar hone the skills necessary for successfully navigating subsequent courses.

Speech - 9th year (½ credit)

The course in Speech is required for all students in their freshman year. Students learn the fundamentals of public speaking and practice these fundamentals by making a number of oral presentations in class. Instruction emphasizes the importance of communication in daily life, the intelligent choice of speech topics, the various strategies for effective delivery, and the importance of feedback.
English II - 10th year

In English II, the students' journey in literature, writing, grammar, and vocabulary continues. Students explore British Literature chronologically, beginning with *Beowulf* and traversing the Medieval, Elizabethan, Romantic, Victorian, and Modern movements in literature. Also, students practice the test-taking skills necessary for success on examinations such as the College Board's PSAT/NMSQT.

English III - 11th year

In English III, extensive reading and writing complement the students' ongoing study of vocabulary and grammar. The literature studied is American, and the students' reading takes them from the hardships of the Colonial and Revolutionary Eras, through the growing pains of the Federalist and Romantic Eras, to the harsh realities of war and the more ambiguous temper of the Modern Era. Work in grammar and on building vocabulary extends the students' verbal competence; students strive for mastery of the extended essay and the research paper. Also, students practice the test-taking skills necessary for success on standardized examinations such as the College Board's SAT Reasoning Tests.

AP English Language and Composition - 11th year, elective

This course is designed to help students become skilled readers of prose written in a variety of rhetorical contexts and to become skilled writers who compose for a variety of purposes. Both their writing and their reading will make students aware of the interactions among a writer's purposes, audience expectations, and subjects as well as the way generic conventions and the resources of language contribute to effectiveness in writing. In their writing, students will be encouraged to place their emphasis on content, purpose, and audience and to allow this focus to guide the organization of their writing.

As well as engaging in varied writing tasks, students become acquainted with a wide variety of prose styles taken from American literature and from many disciplines and historical periods and gain understanding of the connections between writing and interpretive skill in reading. Students strive for mastery of the extended essay and the researched argument paper, which help students to sort through disparate interpretations to analyze, reflect upon, and write about a topic. Students must take the Advanced Placement Examination in May.

Senior Literature and Drama - 12th year, elective

In English IV students undertake an intense study of the development of the modern novel during their first semester and an examination of the roots of drama in their second semester. Genres treated during the year include the Gothic, the Grotesque, Fantasy, Science Fiction, and Tragedy, as well as Realism, Naturalism, Expressionism, Post Modernism, and Theater of the Absurd. Poetry from the *Sound and Sense* text is an integral part of each semester. Frequent papers help students master the elements of a college level expository essay.

AP English Literature and Composition - 12th year, elective

In the Advanced Placement course in English Literature and Composition, students are involved in both the study and practice of writing in addition to their study of literature. The course emphasizes the resources of language: connotation, metaphor, irony, syntax, and tone. Types of works handled include drama, the novel, poetry, and the short story. Students must take the Advanced Placement Examination in May.

Global Literature and Philosophy - 12th year, elective

This course takes the student through a global investigation of theories of knowledge, ethics, aesthetics, being, and politics. It begins with epistemology, moves to metaphysics, before tackling the problem and nature of evil, human psychology, feminism, and existentialism. In each investigation, students are introduced to primary source material, such as Plato, Descartes, and Sartre, and study creative works from a variety of cultures and disciplines, such as the short story, poetry, play, novel, film, photography, and art to serve as an illustration of various strains of philosophical thought. Students will write both analytic and creative responses throughout the year.

Writing Fiction and Poetry - 12th year, elective

This course will involve a study of selected short stories, from published authors to student work, in order to engage the student in an exploration of structure, voice, and symbol. Students will work in the first half of the year to develop a portfolio of fiction close to 8-10 works. In the second semester, students will work on poetry, studying both traditional and modern poetic forms. As in the first semester, students will engage in an exploration of contemporary and student poets to develop the ear, beat, and pulse of their poetic voice. Second semester will be devoted to developing a poetic portfolio. Time permitting, students will investigate the art form of the personal narrative.

FINE ARTS

The Fine Arts faculty believes that every student is unique. Here there is no competition. Everyone likes different colors, lines, forms, images, sounds, music. The focus is on student confidence in their beliefs and an ability to express them. The knowledge of art and music is an important aspect of a well-rounded education. One day, the student might be in a position to affect the art and music of the future. Art and
music present us with an alternative mechanism for self-expression. Artistic and musical talents need nurturing and the courses offered help with the development of the whole person by emphasizing art and music appreciation, as well as student artistic and musical expression.

**Introduction to Studio Art – 10th year, Required (½ credit)**

This sophomore year required course is meant to give students the opportunity to explore and develop their creative abilities in a studio atmosphere. Students will focus on a variety of media and processes, ranging from observational drawing to digital media, from self-portraits to collaborative public works. The resulting curriculum surveys an array of creative tools and outlets for students to use to begin developing individual expressive voices and creative problem solving techniques.

**Digital Art – 11th or 12th year, Semester Elective (½ credit)**

Digital Art will continue to survey digital processes through various projects and materials, including digital photography, drawing, graphics design, and animation. This track will appeal to students who enjoyed working with Adobe Mix and Sketch during their sophomore elective and want to continue with more extensive and self-directed digital projects. Students can choose to take the Digital Art elective for one semester, multiple semesters, or try various tracks between junior and senior year.

**Drawing & Mixed Media – 11th or 12th year, Semester Elective (½ credit)**

This course will continue to survey drawing processes through various projects including traditional drawing, collage, design, and mixed media. This track will appeal to students who enjoyed drawing during their sophomore elective and want to continue with more extensive and self-directed drawing projects. Students can choose to take the Drawing + Mixed Media elective for one semester, multiple semesters, or try various tracks between junior and senior year.

**Painting – 11th or 12th year, Semester Elective (½ credit)**

Painting will continue to survey painting processes through various projects and materials, including watercolor, acrylic, oil paint (at levels 3 + 4), as well as printmaking. This track will appeal to students who enjoyed painting during their sophomore elective and want to continue with more extensive and self-directed painting projects. Students can choose to take the Painting elective for one semester, multiple semesters, or try various tracks between junior and senior year.

**Studio Art - 12th year, Elective**

This course explores a variety of two-dimensional processes including drawing, painting, mixed-media, collage, and printmaking. Each student will learn new techniques while developing their own artistic abilities and exploring their creative voice. This class requires Intro to Studio Art as a Prerequisite.

**Digital Photography – 12th year, Semester Elective (½ credit)**

This course explores the art of digital photography, and the use of Adobe Photoshop to format, manipulate, and even create digital images. Students will work on a portfolio of photographs designed to help them determine a creative theme and explore it visually. This class doesn’t require any experience with digital photography or Photoshop; it is designed to teach the techniques while creating the work. No experience with Photoshop or photography is required for this class, although students will need to have regular access to a digital camera.

**Film Study - 12th year, Semester Elective (½ credit)**

This course views a thematic grouping of films (selected annually) to understand the basic elements of the Art of Film: photography, mise en scene, sound, and editing. Students will learn about the components of each element of film study, and then watch a film with the purpose of analyzing it in relation to that element. Film Study students will never view movies in the same way after taking this course.

**AP Studio Art – 12th year, Elective**

AP Studio Art will run as an extension of the regular Studio Art Class, with extra meeting times, working towards the goal of submitting the AP Portfolio. The final breadth portfolio will show work ranging in techniques and materials, while the concentration portfolio can include any two-dimensional media (i.e. drawing, painting, mixed-media, photography, digital art, etc.) as long as the work is thematically unified. This class is intended for students who take the subject seriously, and are willing to put the necessary time and effort into portfolio preparation. This class requires Intro to Studio Art as a prerequisite.

**Music Tech**

Music Tech will continue to survey
digital instruments and production. This track will appeal to students who really enjoy working with Garageband, Logic Pro X, and Sibelius. Students can choose to take the Digital Music elective for one semester, multiple semesters, try various tracks between junior and senior year.

Recording Techniques will make extensive use of Logic Pro X, and Recording Studio Equipment. This course examines how studio recordings are produced. Students will create original projects through Digital Audio Workstations, MIDI and Audio Interfaces, and can work collaboratively with Orchestration students. Students can choose to take the Digital Music elective for one semester, multiple semesters, try various tracks between junior and senior year.

Performance – 11th or 12th year, Semester Elective (½ credit)

Students have the opportunity to learn or improve their musical abilities through performance. Instrumental Performance begins with Piano and Keyboard, and can continue in future semesters to string instruments, woodwind instruments, and/or voice. Students can choose to take the Performance elective for one semester, multiple semesters, or try various tracks between junior and senior year.

Orchestration – 11th or 12th year, Semester Elective (½ credit)

Composition and Arranging will continue to survey orchestration processes through various projects. Students will analyze compositional techniques from 1950 through present day, accompanied by historical overviews. This track will appeal to students who really enjoyed Theory during their sophomore elective and want to continue with more extensive composing and arranging projects. Students can choose to take the Orchestration elective for one semester, multiple semesters, or try various tracks between junior and senior year.

AP Music Theory - 12th year, Elective

In this course, students continue to develop their music theory, sight-singing and ear-training skills from the intermediate to the advanced level. Topics covered include voice leading in two parts and four part “chorale style,” traditional counterpoint in two and three parts, sight-singing and ear training, dictation, rhythm training, chord functions, composition of music, Roman and Arabic numeral analysis of harmony, formal and structural analysis, musical arranging, and transcription. The main goal of this course is to help students find ways to put their theoretical knowledge of music into action. The course will make extensive use of MIDI Keyboards and notation software, and of interactive ear-training and theory-training software which will allow students to progress at a faster pace according to their abilities and level of dedication. The course serves as preparation for the AP Music Theory Exam.

FOREIGN LANGUAGE

A Loyola education focuses on *cura personalis*. The program of study strives to provide an awareness of the contemporary world, the ability to be part of it and the courage to shape it. To effect these goals, the study of foreign languages is crucial. Students must choose a language in freshman year, and study that language for a minimum of three years.

Language is a means of communication, and the philosophy of Loyola’s Foreign Language Department is that this communication can be developed through listening, speaking, reading and writing a foreign language. The emphasis in Classical Language (Latin) is on reading and writing. Through development and practice of these skills, a Loyola student is afforded the opportunity to be more open to growth, more tolerant of other cultures, more academically excellent and more committed to understanding and accepting his own – as well as others’ – way of thinking. In short, the time spent studying a foreign language at Loyola can help the student to become a more fully empathetic person for others.

Beginning with the first level and advancing through the highest level, the student learns to manipulate the language for a dynamic, proficient mode of communication that is level-appropriate. He or she actively employs all four skills outlined above in real-life and authentic situations and contexts.

In addition to using the language for communication, the student is exposed to the study of other cultures, which in turn allows him or her to develop an understanding and appreciation of other people.

French I - 9th year

This course is designed to help students gain beginning proficiency in speaking, listening, reading, and writing in French. Students will be given opportunities to gain the competencies to participate in a face-to-face interview with a French speaker, answering questions about themselves and their immediate environment in French. They will begin to read simple texts and to scan more complex ones for specific information. They will write lists, short notes and short narratives.

French II – 9th /10th year

This course is designed to move students further toward proficiency in oral and written French. Students will begin to have more sustained conversations with each other and their teacher. They will read more complicated texts, study linguistic elements of grammar and pronunciation necessary to begin to ask questions spontaneously, and role play situations they might encounter in a French speaking country. They will write short narratives, descriptions, and letters, and will learn about French life and culture.
French III - 10th /11th year

In the third year course, students have the opportunity to master French well enough to live in a country where it is spoken. They will study the grammar and structures necessary to use French with sufficient accuracy to be understood and to sustain sentence level discourse. They will engage in conversation with their classmates and teacher, listen to authentic audio tapes and view video cassette material, write letters and reports, and read articles in a journal for French young people. They may read about French art, literature, music, entertainment, etc.

French IV - 11th /12th year, Elective

This course is for students who are strongly interested in French. It integrates the feature-length film, Le Chemin du Retour, to help develop increasing proficiency in French. Cultural and historical content are a central focus of the development of the plot for the film, and the characters interact with each other as they deal with complex interpersonal and professional issues, providing students with exposure to communicative language, literature, and grammatical structures. Students will also engage in an in-depth study of additional French texts and documents.

AP French - 11th /12th year, Elective

For very strongly motivated and well-prepared students, this course prepares students to take the newly revised AP French Language and Culture Examination. Students study grammar and structures intensively through authentic documents to prepare students to demonstrate their proficiency in three communication modes (interpersonal, interpretive and presentational), and the five goal areas outlined in the Standards for Foreign Language Learning in the 21st Century (communication, cultures, connections, comparisons, and communities). The course is designed around six themes: global challenges, beauty and aesthetics, science and technology families and communities, personal and public identities and contemporary life.

Spanish I - 9th year

This course is designed to help students gain beginning proficiency in speaking, listening, reading, and writing in Spanish. In the first year program, fundamental vocabulary and the grammatical structure of the language are emphasized through conversation. Elementary creative writing is introduced with special emphasis on original written dialogue.

Spanish II - 9th /10th year

This course is designed to move students further toward proficiency in oral and written Spanish. Students further develop their speaking and listening comprehension abilities through the study of more extensive vocabulary and more difficult grammatical structures. Conversational skills are emphasized through class discussions, question and answer practice, and listening to tapes. Greater emphasis is placed on reading and writing skills as the students’ proficiency in speaking increases.

Spanish III - 10th /11th year

Integration of skills in considering the content of selected readings characterizes much of the activity in the third year program. Students read texts which deal with a variety of contemporary and cultural topics. Further complexities of grammatical structure are studied and intensified mastery of vocabulary is stressed.

Spanish IV - 11th /12th year, Elective

This course is for students who are strongly interested in Spanish. It entails an in-depth study of a wide variety of authentic texts and documents on Spanish culture, history, and literature. While the emphasis is less on grammar, the students will continue to master the language.

AP Spanish - 11th /12th year, Elective

This Advanced Placement course is designed to prepare strongly-motivated and well-prepared students to take the AP Spanish Language Examination. Students study grammar and structures intensively to increase accuracy of expression in writing and speaking. Students write essays and speak on a variety of topics. They read a variety of texts including short works of modern Spanish fiction, newspaper articles, and other authentic texts. They listen to audiotapes and view videocassette tapes to improve their listening skills.

Latin I - 9th year

The primary aim of this course is to provide a solid foundation for reading Latin. To this end, students learn vocabulary, do drill work in declensions and conjugations, and study the basics of Latin grammar. Stress is placed on English-to-Latin translation during the first semester.

Latin II - 9th/10th year

The second year of Latin study begins with a review of the material covered in first year. Students then advance to such constructions as the ablative absolute, gerund, and gerundive. Vocabulary and grammar are studied, particularly with a view to recognition in reading. During the year, students read the story of the Argonauts and selections from Caesar and Ovid, and are introduced to some Christian poets and to Catullus.

Latin III - 10th/11th year

After a summary review of the material covered in the first two years of study, students then concentrate upon the different uses of the subjunctive mood and the passive voice, with a view to reading selections from Cicero, Virgil and Horace, and to developing a deeper understanding of the Augustan Period in Roman history.
Latin IV / AP Latin – 11th/12th year

This course will serve as a continuation of the study of authentic Latin literature that was begun in Latin III. One semester will focus on Latin prose of the late Republic, the Augustan Age, and the early Empire; the other semester will be a study of Latin poetry. In addition to reading the literature in Latin, students will analyze its composition and explore its literary, historical, social, and political contexts. When there is insufficient enrollment to run the course, students may be offered the opportunity to take a Latin IV or Latin course through an on-line offering.

Mandarin Chinese I – 11th year

This course combines the study of the Chinese language with an introduction to Chinese culture. Students will gain practical experience in speaking Mandarin with proper pronunciation using the pinyin system to acquire basic conversational skills. Students will learn basic vocabulary and sentence pattern used in daily life and social interaction. Culture notes will be given along with speaking practice necessary for interpersonal communication. In addition, a certain amount of Chinese written characters are studied with a fun approach. This course is an ON-LINE offering.

Mandarin Chinese II – 12th year

Mandarin Level 2 builds upon the grammar, writing, and conversational skills established in Mandarin Level 1. The course is an ON-LINE offering.

HISTORY / SOCIAL SCIENCES

The word history comes from the Greek “HISTOREO,” which means to learn by inquiry. The study of history at Loyola will help students to develop within them the ability to inquire intelligently about the human experience. The student studying history must achieve more than the accumulation of facts and information. The study of history at Loyola will enable students to continue independent learning and to relate their classroom experiences to their daily lives. It is the department’s conviction that the primary function in the study of history is the cultivation of values; to this end we strive to enable students to identify and form their own value assumptions.

The History Department aims to make students aware of the pluralistic nature of today’s world. The mores, roles, and expectations of cultural, social, national, and political groups other than their own must be identified and their implications and merits explored. True historical understanding demands that all events be viewed not in isolation, but within the context of time and space. Loyola students will grasp the historical trends of the human experience, the collision of the great forces of history that in their aftershocks have produced our world. Regarding space, Loyola students will understand the affects, the limitations and opportunities that the physical world has imposed upon these forces. Loyola students will also gain an appreciation for the human factor, the “wildcard of history,” the personalities that have affected the events and the landscape of our world.

A hallmark of Jesuit education is the emphasis on cura personalis. The History Department is committed to meeting each student where they are and tailoring teaching styles to accommodate the diverse and individual learning styles among our students in an effort to maximize individual learning and growth.

Global Studies - 9th year

This survey course addresses four major regions of the world -- Africa, Asia (East, South, and Southeast), Latin America, and the Middle East. The geography of each region as well as its cultural, historical, and political development is investigated.

Modern European History - 10th year

This course is a survey of the major movements, events, and people from the Reformation through contemporary time. Highlights include the Enlightenment, 19th Century liberalism and nationalism, imperialism, the interrelationship between World War I and World War II, the outbreak and end of the Cold War, and the post World War II emergence of nations in Asia, Africa, Latin America, and the Middle East.

AP European History - 10th year, Elective

This Advanced Placement course in European history is a chronological study ranging from the Renaissance in 1450 to current events in modern-day Europe. The course brings together a three-pronged approach covering intellectual and cultural history, political and diplomatic history, and social and economic history. The course emphasizes primary and secondary sources to enrich the study and understanding of each period. Prominent historical writings provide diversity of opinion and variety of interpretation. Emphasis is placed on developing good analytical writing skills, participation in class discussions, and collaborative interaction in cooperative learning exercises.

US History - 11th year

This survey course provides an overview of the main currents in United States history from the earliest colonization of America to the present day. A chronological approach is followed to point up the causality found in American history and to show how the present is affected by the events of the past.

AP US History - 11th year, Elective

This Advanced Placement course in American history is an in-depth topical study of conflicting interpretations of great issues in American history from
the earliest colonial period to the present day's problems. Emphasis is placed on developing the student's ability to work with primary sources and to engage in historical analysis and critical thinking in both small and large group discussions. Students are expected to be able to draw upon factual knowledge to make evaluations of, and judgments on, the various topics, authors, and theories studied.

Global Perspectives and Insights - 12th year, Elective

In this course students are exposed to culture, customs, and traditions from Asia, Africa, Latin America, and the Middle East. This survey course gives students an appreciation for the political, social, and economic conditions prevalent in these regions of the world and focuses attention on contemporary events and problems that afflict these regions. Students use a series of books dedicated to a particular region.

History of New York – 12th year, Elective

From its beginnings in 1609, as a Dutch trading post, New York City has been not only a major international economic center, but also a multicultural city. By the end of the 17th century, New York was home to: Belgian Huguenot settlers, Africans from Angola, Sephardic Jews from Spain, and English Colonists. By the 19th century, immigrants from Germany, Ireland, Italy, Poland, and Russia had all left their cultural mark on the city as well. The 20th century saw large Asian and Latino communities rise, introducing the city to yet more rich cultures and traditions. New York’s complex and dramatic history has been shaped by the myriad immigrants who have come to this fascinating and challenging city. This year-long elective course examines the major immigrant groups who have settled in New York City, from its Dutch origins, to the present, as well as their impact on the historical development of this unique metropolis.

Economics - 12th year, Semester Elective (½ Credit)

The course is a one-semester introduction to basic microeconomics, macroeconomics, and international principles. The course mixes theory with application, utilizing discussion of current economic conditions and phenomena.

Political Science - 12th year, Semester Elective (½ Credit)

The course is a one-semester introduction to the principles, practices, and institutions of government and politics as these pertain to the United States. It seeks to make students realize that all nations are affected by the actions of other nations, and that the United States, through its policies, influences other nations and is, in turn, influenced by the decisions of other nations.

AP Psychology – 12th year, Elective

The AP Psychology course introduces students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the ethics and methods psychologists use in their science and practice. In order to be approved for this course, students must have demonstrated success in Math and Science courses. Students take the AP Psychology examination at the conclusion of this course.

MATHEMATICS

The Mathematics Department offers a college preparatory program in mathematics for all students, recognizing the range of mathematical abilities and individual differences within the student body. Sound analytical judgment and intellectual development are fostered in the students.

Through exploration and discovery, students are encouraged to use, with increasing confidence, problem-solving approaches to investigate and understand mathematical content, to express mathematical ideas orally and in writing, to judge the validity of arguments, to use and value the connections among mathematical topics and between mathematics and other disciplines, to appreciate the power of mathematical abstraction and symbolism, and to model real-world phenomena with a variety of functions. Students become logical thinkers, confident in their mathematical abilities and responsible for their own learning. Technology is integrated throughout the courses as an aid to developing conceptual understanding.

Algebra I - 9th year

The ninth year algebra course introduces the student to the study of the basic concepts and techniques of algebra.

Algebra II Honors - 9th year

This honors section of freshman mathematics allows for the study of intermediate algebra. Students are placed into this section on the basis of results on the entrance exam and previous mathematical experience and achievement.

Geometry Honors - 9th /10th year

Students who have successfully completed the freshman Algebra II Honors section (or have placed out of it as freshmen) and have obtained the recommendation of the Mathematics Department are enrolled in this course. The course begins with a thorough study of Euclidean Geometry. This course is designed to permit advanced math students to progress through the curriculum at a faster pace, advancing students to a place where they are prepared for the study of precalculus the following year.
Geometry - 10th year

The course in geometry is a comprehensive study of inductive and deductive reasoning as applied to plane and space figures. Skills and techniques are developed that allow the student to apply postulates, axioms, and theorems to theorem proving and proof writing. Algebraic skills are strengthened through applications to practical problem solving.

Precalculus Honors - 10th/11th year

This course is open to sophomores or juniors who have completed Algebra II & Geometry Honors in good standing. The course focuses on a thorough study of the basic functions from a graphical, numerical, and analytical perspective. In preparation for Calculus, the course also includes an in-depth study of trigonometric functions, sequences and series, and a study of limits.

Algebra II & Trigonometry - 11th year

This intermediate algebra and trigonometry course further develops algebraic skills and extends the student's ability to reason logically. A solid background is provided for the study of precalculus.

AP Calculus/AB - 11th/12th year, Elective

This Advanced Placement course is an introduction to differential and integral calculus including work in analytic geometry. It is offered to students who have successfully completed a precalculus course and have obtained the recommendation of the Mathematics Department. Students take the Calculus/AB Advanced Placement Examination at the conclusion of this course.

AP Calculus/BC - 12th year, Elective

This Advanced Placement course is available (usually as an independent study or on-line course) to those who complete Calculus/AB during junior year. It is designed to qualify the student for college placement and credit one semester beyond that granted for Calculus/AB. Topics such as vector functions, parametric equations, polar curves, and sequences and series are covered in depth. Students wishing to take this course must obtain the recommendation of the Mathematics Department, and will be expected to take the Calculus/BC Advanced Placement Examination at the conclusion of the course.

Discrete Mathematics - 12th year, Elective

The technological advances of recent years have placed increased importance on certain areas of mathematics. While the impetus to study discrete mathematical concepts has come from the area of computer science, the value of these topics extends to social sciences, engineering and the natural sciences. Students in this course strengthen their mathematical modeling and reasoning skills and their ability to estimate, generalize, and simplify. This course covers such topics as: set theory and logic; elementary number theory; combinatorics and probability; algorithmic approaches to problem solving; and statistics.

AP Statistics - 12th year, Elective

This course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: exploring data by observing patterns and departures from patterns; planning a study by deciding what and how to measure; anticipating patterns by producing models using probability theory and simulation; and using statistical inference to confirm models.

PHYSICAL EDUCATION

Through Loyola’s Physical Education curriculum, each student cultivates an awareness of the potential of their physicality and an awareness of the actualization of their range of movement. Student application of movement concepts and principles to the learning and development of motor skills is crucial throughout the duration of the physical education classes.

The classroom atmosphere is non-competitive and tolerant, which permits students help one another in clarifying learning discrepancies. The department also hopes to instill in students a desire to exhibit a physically active lifestyle and a health-enhancing level of physical fitness. Students are also required to demonstrate personal and social behavior in the setting of physical activity as well as demonstrate the utmost respect for all safety procedures and guidelines.

Physical Education - 9th - 12th years, (2 credits in total)

The four-year physical education program is designed to develop a student’s physical fitness levels, as measured by performance in five key components: Muscular strength, muscular endurance, flexibility, and cardiorespiratory endurance; Sports skill capabilities, as demonstrated in a variety of traditional team and
individual sports such as soccer, volleyball, basketball, gymnastics, and softball; Fundamental motor skills, as measured in skills such as throwing, catching, balancing (both static and dynamic), striking, and agility; Play capabilities, as measured in the degree of student cooperation, participation, enjoyment, and, at times, creativity; and knowledge of sports and games and their etiquette, as measured in the level of understanding and application of game rules, strategies, regulations, and etiquette.

Chemistry - 10th year
Topics studied in this introductory course include matter and energy, atomic structure, bonding, the periodic table, stoichiometry, kinetics, equilibrium, acids, and bases. Redox reaction, electrochemistry, and organic and nuclear chemistry are also covered. Laboratory experiments, modeling instruction, and project-based learning are all an integral part of the course.

Sophomore STEM CAD - 10th year (¾ credit)
The Sophomore STEM CAD (Computer Aided Design) class is a semester-long series of project-based drafting and CAD assignments. The course starts with an overview of drafting using orthographic and isometric drawing techniques. After this, class sessions are designed to introduce students to CAD skills that will build on each other as the semester progresses. Students will use Autodesk Inventor to complete all design work. The course helps students increase their proficiency in problem solving and basic engineering through spatial reasoning, geometric applications, and group work. Most importantly, this course is designed to give students an opportunity to explore CAD before embarking on college level engineering classes.

Sophomore STEM Computer Science - 10th year (¾ credit)
The Sophomore STEM CS (computer science) class is a semester-long series of projects that provide students an opportunity to engage in problem solving, programming, and algorithm design using the JavaScript library p5.js. This course introduces students to programming concepts such as conditionals, loops, functions, and data structures, and is designed to give students a solid programming foundation and the skills to code simple applications.

Junior STEM Advanced Programming - 11th year (½ credit)
In this Computer Science elective, students will write programs that model physics concepts, and thereby both learn Python and come to a deeper understanding of physics.

Junior STEM Introduction to Engineering - 11th year (½ credit)
This Engineering elective uses project-based assessments modeled around the design process. Students will explore the different fields of engineering, the historical impact of engineering accomplishments and catastrophes, and how engineering can be a means of creating a more just world.

Physics - 11th year
This introductory course in physics covers the fundamental laws underlying physics as well as general applications to other areas of science. Topics covered include translational and rotational kinematics, Newton’s laws, heat and thermodynamics, optics, electricity and magnetism, and Conservation of Energy and Momentum. Laboratory experiments are an integral part of the course. An honors section of this course allows students with strong mathematical backgrounds to cover additional topics in Physics.

AP Biology - 12th year, Elective
This Advanced Placement course integrates general biology domains including evolution, matter, energy, information, regulation, communication, and interactions, throughout 4 big ideas: The process of evolution drives the diversity and unity of life; biological systems utilize free energy and molecular building blocks to grow, to reproduce and to maintain dynamic homeostasis; living systems store, retrieve, transmit and respond to information essential to life processes; and biological systems interact, and
the systems and their interactions possess complex properties.

Students will learn to use representations and models, use appropriate mathematics, engage in scientific questioning, collect appropriate data and analyze it, use scientific explanations, and work with information across multiple domains. Students must complete eight major labs during the course of the year. All students are required to take the Advanced Placement examination at the conclusion of the course. Course prerequisites include biology, chemistry, and the recommendation of the science department.

AP Physics C - 12th year, Elective

This Advanced Placement course is a calculus-based introduction to classical mechanics. Topics include straight line kinematics, motion in a plane, forces and equilibrium, experimental basis of Newton’s laws, particle dynamics, universal gravitation, collisions and conservation laws, work and potential energy, vibrational motion, conservative forces, inertial and non-inertial frames, central force motions, rigid bodies, and rotational dynamics. Lab experiments are integral to the course. All students are required to take the Advanced Placement examination in May. Course prerequisites include Physics, Calculus (which can be taken concurrently with AP Physics), and the recommendation of the Science Department.

Engineering Science –12th year, Elective

This course introduces students to the major fields of modern day engineering. It begins with a brief history of engineering and ethics followed by the study of engineering branches including Civil, Mechanical, Environmental, Chemical, Electrical and Computer. Group projects and laboratory experiments are emphasized as the main focus of the course. Course prerequisites include Physics and Algebra II/Trig.

Forensic Science - 12th year, Elective

This course integrates basic elements from biology, chemistry, and physics. Topics include crime scene analysis, physical evidence, properties of matter, drugs and toxicology, serology, the microscope, DNA analysis, analysis of evidence, investigation of fire and explosions, fingerprint analysis, and computer forensics. Laboratory investigations are an integral part of the course.

The changes in society and in the Roman Catholic Church after the 2nd Vatican Council force us to re-examine our effectiveness as a vehicle of Christian nurture. We have to admit that our program is counter-cultural to what the students encounter each day in the world around them. We believe that an atmosphere of openness and mutual respect in the classroom will assist in making the curriculum relevant to the students and in fostering the learning environment.

Christian formation is an integral part of the educational process. It cannot be an isolated element of the program, but must be a vital influence that affects every facet of the educational experience. It must include instruction, reflection, prayer, and service within a pervasive religious milieu. This process is facilitated by assisting the students to “find God in all things.” By interaction with the students on the cognitive, emotional, and spiritual levels in a spirit of openness we can assist the students in linking their classroom activities with the world in which they live and in their interaction with each other.

The Theology Department seeks to educate Loyola’s students to develop basic skills such as prayer, worship, and scripture by involving them in all aspects of both planning and executing all school religious activities. We seek to transmit not only the doctrinal element, but also the moral imperatives. These skills can only be alive and meaningful to the student by daily application in and out of the classroom by the students and by the entire faculty and administration. What is taught must be lived out in the school by example and reminder in the everyday life of the school and in specific liturgical activities.

The ultimate goal of the Theology Department is that by graduation the students will have a basic knowledge of the major doctrines and practices of the Catholic Church. The graduate will also have examined his or her own religious feelings with a view to choosing a fundamental orientation toward God and establishing a relationship with a religious tradition and/or community. What is said here, respectful of the conscience and religious background of the individual, applies to the non-Catholic graduate of Loyola School as well.

Theology I - 9th year

This course focuses on issues of faith confronting adolescents. Students are encouraged to discover who they are, how they got to this point, and where they want to go. Special emphasis is placed on how the resources of the Catholic Tradition assist young people in making the challenging decisions facing them today.

Theology II - 10th year

The course in the first semester focuses on the concepts and specifics of sacraments, the basic presumption being that we need a way of viewing all reality as sacrament. Catholicism is essentially and particularly sacramental. The seven official sacraments have a history and are earthly, concrete, personal experiences of God’s grace. The second semester offers a course in morality to assist students in developing their own faith identity. It focuses on attitudes and values to encourage the students to a more ethical sense and to grow in the art of Christian living. In addition to the exploration of basic principles, it offers case studies to concretize students’ reflections.
Theology III - 11th year

The entire year is spent in the study of Sacred Scripture. Methods of biblical criticism are explained, as well as the geographic, social, political, economic, and cultural background necessary for an understanding of the Bible.

Theology IV - 12th year (½ credit)

Student select two semester-long elective courses from the following options:

Death and Dying: This course focuses on the rich tradition of Christianity concerning the mystery of death and responds pastorally to students as they face the phenomenon of death and dying in their personal lives.

Ecological Justice: In 2015, Pope Francis, a Jesuit, composed Laudato Si, a document focused on the moral and spiritual imperative of caring for God’s creation by addressing the environmental crisis of our day. The course will examine specific environmental issues -- the cry of the earth -- and their effects on vulnerable populations - the cry of the poor -- through the lens of caring for creation as articulated in Catholic Social Teaching and in the work of the Society of Jesus over the past 50 years.

Ignatius Loyola – His Life and Spirituality: Ignatius of Loyola made an indelible mark upon the Catholic world of the 16th century and his influence remains strong in our day. This course looks closely at St. Ignatius’s life amid the political and religious conflicts of his time, his natural charisma and gift for leadership, his classic book, The Spiritual Exercises, Ignatian ways of prayer and discernment, his role in founding the Jesuit religious order, and his enduring contributions to contemporary Christian life, ministry, and education.

Prayer: This course is an introduction to the various forms of prayer that will enable the student to feel comfortable in talking with his or her God.

Saints and Sinners: This course will examine the definitions of “sainthood” and explore the lives of saints, both canonized and uncanonized. In the final years of the 20th century, a remarkable number of new saints were canonized, demonstrating the multiplicity of ways to live “holy” lives of discipleship; some were humble men and women of faith, others were larger than life characters, all were complicated people. The course will examine what the lived experiences of the saints (old and new) suggest about responding to the challenges of our time from a faith perspective.

Social Justice: This course explores the foundational elements of Catholic social teaching, investigates the means and meaning of work for justice and leads to a recognition of the importance and duty of all Christians to work for justice.

World Religions: This course invites students to re-examine their personal faith in more depth by looking in depth at some of the world’s major religions. The course examines the principles of religion in general: worship, revelation, and community. The course also examines in depth the theology and sacred texts of Hinduism, Buddhism, Islam, and Judaism, among others.

CHRISTIAN SERVICE

The Loyola School Christian Service Program is an experiential education program for the values of Christian Service. The program offers guidance and structure in the development of this constitutive part of the Gospel values fostered by the school.

To challenge the students to apply the Gospels in their lives, most especially in their relationships to the poor and marginalized, the Christian Service Program seeks to foster awareness of the practical demands of following Christ in the students and to engender quality, Christian relationships within the school, New York, American, and international communities.

GUIDANCE

Each student meets individually with a guidance counselor who is available to help the student identify, compensate for, or eliminate problems that inhibit academic progress, and to discuss personal issues that may be of immediate concern. In addition, counselors meet with all students once per cycle in Guidance Groups. These groups are semi-structured, psycho-educational groups that address issues relevant to the academic, social, and psychological development of our students, such as study skills, coping with stress, dating and relationships, and substance abuse issues. Students may also meet with the Counseling Consultant who is available for students, parents, and faculty to address better an individual student’s needs. Support groups are occasionally convened to address specific needs identified within the student body, such as dealing with divorce, healthy eating and nutrition, substance abuse, identity concerns, and loss and grief issues.

At Loyola, the mentor system is an integral part of the guidance program. The mentor serves as a teacher-advisor for a small group of students, and in formal and informal ways, should help the students consider the alternatives, implications, and consequences of their decisions. The mentor’s first concern is in helping his or her mentees integrate into the school community through the contribution of their individual talents and through participation in activities sponsored by Loyola.

Peers also provide personal support, education, and interventions through the Peer Leadership Program. The student members of the team are seniors who meet regularly with small groups of freshmen. The purpose of the meetings is to help freshman students better adjust to high school life at Loyola on all levels – academic, personal, and social.