

2019

course

descriptions

ready ...
set ... discover!

Create your own path of discovery
from among our more than
120 course offerings

**high
school**
offerings:

ACADEMIC ENRICHMENT

Note: Boarding students take two major courses and one minor course. Day students may take less than a full course load.

FIVE-WEEK COURSES

ARTS (Double-Period Minor Courses)

fa011 Architecture +

This project-oriented course is designed to help students learn to effectively render their creative ideas graphically. Students get hands-on experience working on an imaginative design for four to five architecture projects and have the opportunity to learn about green or sustainable building methods. No prior experience is necessary.

fa012 Ceramics +

This course introduces students to the medium of low-fire clay. Students explore hand-building, wheel work, glazing, underglazing, and a variety of other finishing and sculptural methods. Students are encouraged to concentrate on developing a single technique and on finishing a project that expands the student's knowledge of the craft. They produce multiple pieces during the course, which culminates with a show of student work at the Paul Mellon Arts Center Gallery.

fa013 Drawing +

In this drawing course, students explore concepts of line, form, and composition. A wide variety of materials and techniques are used to realize this objective. Students are taught to draw from observation and from their imaginations. Emphasis

is placed on individual growth and development, and the course culminates with a show of student work at the Paul Mellon Arts Center Gallery.

fa014 Oil Painting +

This course introduces students to the basic techniques of oil painting through an exploration of the key elements of still life, portraiture, and landscape. Students are taught how to see and mix color, modulate values, and develop form. Assignments are based on traditional and contemporary painting techniques and are designed to stimulate the student's imagination and technical facility. At the end of the program, students display their works at the Paul Mellon Arts Center Gallery.

fa015 Digital Movie Making +

This class takes students through the pre-production, production, and post-production steps in the creation of video projects. In pre-production, students plan, script, and storyboard their ideas. In production, students learn how to use a digital video camera to collect images that communicate a story to the audience. Camera technique and control, balanced with good composition, are mastered in conjunction with sound capture and reproduction so that ideas can be effectively expressed to an audience. In post-production editing, students need to be comfortable with basic computer operations as

rough video footage is captured and then edited using non-linear editing software. Student projects begin with the isolation of elements of production and design and progress to short but complete group video projects. At the end of the session projects are presented to the community at an informal screening.

ENGLISH (Major Courses)

The following courses are open to students currently in grades 8 and 9.

EN11 Short Story, Short Novel

This course focuses on the development of analytical reading and writing skills through the study of a variety of pieces of short fiction from a global perspective. Students examine how writers from different cultures explore similar themes, conflicts, and characters.

EN12 Intermediate Writing Skills

Students receive instruction in writing clear, coherent, and balanced sentences and in constructing unified paragraphs. They also review basic grammar and usage and work on vocabulary development. This popular course is wonderful preparation for many higher-level English classes. Readings, which complement the varied writing assignments, may include short stories, essays, and poems.

+ This course may fulfill a Choate Rosemary Hall diploma requirement. Matriculating and current Choate students who wish to take the course for diploma credit need to obtain prior approval from the appropriate academic year department head as part of the Summer Programs application process and must comply with all attendance and course expectations. Department heads determine final eligibility for diploma credit upon successful completion of the course. Placement in subsequent courses is determined by the appropriate department head.

EN17 Introduction to the Essay

Students learn about the structure and style of analytical, expository, and argumentative papers. Through readings and in-class discussions, students work on their ability to formulate thoughts and express themselves clearly in writing. By the end of the summer, students are able to convey their own ideas in carefully crafted essays, using support from various texts.

EN15 Debate

On one level, debate is an intellectual sport, but on another, debate is superb preparation for life. Students learn to be objective and analytical, to research and organize cases, to prioritize and extemporize, to overcome shyness and handle criticism, to reach an audience, and to work as a team. Beginning with simple extemporaneous debates, (e.g. “winter is better than summer”), students work up to prepared team debates on substantive and subtle issues of public policy, morality, history, and science. The course is intended for potential tournament debaters as well as non-debaters who want to learn how to think faster on their feet.

The following courses are open to students currently in grades 10 and 11.

EN22 Advanced Writing

By definition, an essay is an attempt. Designed for upper-level students, this course centers on the notion of the essay as a trial and challenges students to hone their style and craft. To this end, students compose three pieces – an analytical, expository, and personal essay – and take each through the writing process, devoting ample time for peer review and revision. Students consult models based on their

readings from the anthology, *50 Essays*. By the end of the course, students have a polished essay to use in the college application process.

EN24 American Short Stories

This course introduces students to the many voices of American culture through close readings of a series of short stories, beginning with Edgar Allan Poe, Nathaniel Hawthorne, Herman Melville, Sarah Orne Jewett, F. Scott Fitzgerald, and Ernest Hemingway, and concludes with the broad diversity of more recent fiction: Flannery O’Connor, John Cheever, Raymond Carver, Chang Rae Lee, Amy Tan, Louise Erdrich, Alice Walker, Tim O’Brien, Jhumpa Lahiri, Julia Alvarez, Sherman Alexie, Junot Diaz, and Phil Klay. While the close reading of the texts and many short stories are useful for all Summer Programs students to develop their reading and writing skills, many international students also find it a valuable introduction to American culture.

ENGLISH (Minor Courses)

The following courses are open to students currently in grades 8, 9, 10, and 11, unless otherwise noted.

en011 Public Speaking

This course introduces students to types of speeches, methods of delivery, and qualities an audience looks for in a speaker, allowing ample practice in both prepared and extemporaneous speaking. Students deliver their own prepared speeches as the culmination of their work. They speak in a variety of settings and are videotaped at least once for self-critiquing purposes. Building a speaker’s confidence is the main goal of the course.

en013 Reading and Study Skills

This course emphasizes active reading and study skills to help achieve success across disciplines. Students learn strategies for note taking, annotating and summarizing texts, mapping concepts in texts, and varying their reading rate. Students practice “reading for the conversation” and determine the primary audience and significance for a text. By the end of the course, students are prepared to tackle future reading assignments.

en021 The Personal Essay

Knowing how to write a compelling personal essay is important, for it has a wide variety of uses including college, scholarship, and employment applications. Assignments for this course, therefore, focus on writing the personal essay for the appropriate audiences as well as artistic expression. Also covered is a general overview of English grammar and punctuation. By the end of the course, students produce two or three working drafts of personal essays that may be used for application purposes. *(Note: Open to students currently in grades 9, 10, and 11.)*


HISTORY AND SOCIAL SCIENCES (Major Courses)

The following courses are open to students currently in grades 8 and 9.

Please note: Students with a special interest in politics should consider the John F. Kennedy ’35 Institute in Government. See description on p. 11.

HS10 World Religions 

This course exposes students to the beliefs, practices, ethics, and histories of five major world religions: Judaism,

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Christianity, Islam, Hinduism, and Buddhism. Students study each of the religions in order to gain an understanding of its meaning to individual believers and its impact on human history. The course utilizes resources available through technology as well as a standard text.

HS11 World Issues

A variety of media sources (newspapers, magazines, the Internet, video) serve as the source material for an in-depth study of the current state of affairs around the world. Careful reading and research skills are emphasized. Students write weekly essays on important topics covered in the course.

HS12 First Principles

Most high school courses in history and social sciences introduce students to the way societies, governments, and economies work. This skills-oriented course is designed to bring to life some of these basic concepts: liberalism, conservatism, racism, feminism, human rights, capitalism, socialism, and communism.

HS13 Significant Moments in U.S. History

Students are introduced to important moments in American history and culture at a pace that emphasizes basic skills and encourages personal exploration. Among the historical benchmarks discussed are the American Revolution, Manifest Destiny and Western Expansion, Slavery and the Civil War, World Wars I and II, America's emergence as a global power, the Great Depression, and the Civil Rights Movement.

The following courses are open to students currently in grades 9, 10, or 11.

HS21 Economic Principles

A carefully paced study of important economic concepts is presented in this course. How much money should be in circulation? Should the government tell business owners and consumers how to behave? Why do we have inflation? How do presidents make economic policy? The concepts of supply and demand, opportunity cost, scarcity, national debt, and international trade are discussed to gain a greater understanding of the U.S. economy and its links to the global economy.

HS22 Law And Order

This course introduces students to the concept of the law and its importance in history and today. With special focus on the American Constitution and the United States Supreme Court, students read about the law, learn some of the history of the Court, and write about constitutional history. The class will include mock court trials where students have the chance to serve as lawyers and judges. Reading, research, and presentation skills are developed..

HS26 Arabic Cinema and Culture

This course reflects on Arab cinema from colonial times to the 21st century and provides an in-depth exploration of cultural identity and politics in the Arab world. The course includes various cinemas from Morocco, Algeria, Egypt, Syria, Lebanon, Saudi Arabia, and Palestine. Students are introduced to notable moments and phenomena in the history of these films. The course is taught in English and all films will be in

Arabic with English subtitles. Students read critical and theoretical articles in preparation for class discussion. The films and readings serve as the basis for debate, discussion, and written analysis of issues relevant to the history, culture, and politics of the Arab world. Films are on reserve at the school library and screenings are announced when scheduled.

HS25 Introduction to Psychology

Focusing on recent developments in psychology and self-understanding, this course covers several theories of personality, neuroscience, and human behavior. A developmental approach to various psychological theories (e.g. those of Freud, Horney, Skinner, Erikson, and Rogers) creates a framework for the study of identity and self-image, family and peer relationships, and conformity and prejudice. *(Note: Students who successfully complete this course will have fulfilled the prerequisite for Choate's upper-level psychology courses.)*

HISTORY AND SOCIAL SCIENCES (Minor Courses)

hs011 The Spy Game

How does intelligence relate to national security? How vital was the creation of intelligence in America? Students learn about the Golden Age of Central Intelligence, spanning the period between Pearl Harbor to the end of the Cold War. A simulation intelligence game is a culminating class project.

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hs012 Exploring Ethical Dilemmas

Each of us has to wrestle with a wide range of ethical questions in our lives. Some of these questions are personal: Should I cheat? Should I keep my promise? Is it ever acceptable to lie? Some of these questions are about broader values and policies in society: Should we allow stem cell research? What responsibility do we have to help the poor? Should capital punishment be practiced? This course examines frameworks for approaching these kinds of questions and encourages students to investigate moral issues using research and reasoning, developing their own responses and defending them articulately.

hs021 Wall Street

Though only a mile long, Wall Street may be the most celebrated street in the world. This course emphasizes basic microeconomics, an understanding of the current stock market, a history of the stock market in the 20th and 21st centuries, and an overall investigation of the financial world and the decision-making processes of corporations. Students develop and track their own portfolio in this course while gaining an understanding of the stock market and financial terminology. (*Note: Open to students currently in grades 9, 10, and 11.*)

LANGUAGES (Major Courses)**LN10 Introduction to Arabic**

This introductory Arabic course is a five-week intensive immersion program. The course introduces high school students who have no previous knowledge of Arabic to the Arabic language and culture. Students learn the Arabic alphabet and sounds, build

vocabulary, acquire basic grammar and sentence structures, and read and comprehend short authentic texts in Modern Standard Arabic. Students gain a better understanding and appreciation of Arabic culture through music, poetry, movies, and culinary art. Different media are used in this student-centered class to make the learning experience fun and effective. This course helps prepare students for the possibility of study abroad in high school.

LN11 Introduction to Latin

This course is designed for students with no prior Latin background who wish to gain an advantage in their future language studies. Latin is the fundamental root of all Romance languages (French, Spanish, Italian) as well as English. This introductory Latin course explores the structure of language. Students master parts of speech and basic syntax (the formation of phrases, clauses, and sentences) using Latin vocabulary. Students read short stories in Latin and focus on sentence structure, original Latin quotes, and etymology.

LN12 Introduction to Chinese

This course is designed to introduce non-heritage learners to the basic skills of Mandarin Chinese. There is a focus on Mandarin tones, sounds, and numbers, as well as writing characters in standard simplified form using the proper stroke order. Fundamental grammar patterns are also introduced. Other goals include reading and speaking dialogues that feature activities such as asking directions, telling time, making requests, and addressing family members. Students are exposed to the traditions, culture and current affairs of China. This

course helps prepare students for the possibility of study abroad in high school.

LN16 Intermediate Spanish

Students explore contemporary Spanish and Spanish-American culture while building vocabulary and sentence structure. While delving into themes such as global challenges, the arts, family, and community in a level-appropriate manner, students work to strengthen speaking, listening, reading, and writing skills. Students study vocabulary and grammar, and engage authentic material in the language by listening to songs, reading short stories, and studying works of art from the Spanish-speaking world. Intermediate Spanish helps prepare students for the possibility of studying abroad in high school.

LANGUAGES (Minor Course)**ln015 Conversational French Through the Study of the Francophone World**

In this intermediate to advanced course, students explore culture in both contemporary and historical contexts throughout the Francophone world while continuing the study of grammar and vocabulary. This exploration enhances students' ability to speak, write, listen, and comprehend. Students read texts, watch and discuss films, listen to songs, and analyze works of art from Francophone countries thereby developing awareness and appreciation of Francophone culture. Conversational French helps prepare students for the possibility of studying abroad in high school.

MATHEMATICS, COMPUTER SCIENCE, AND ROBOTICS

(Major Courses)

MA11 Introduction to Algebra I

This course is for students who need additional preparation before entering an Algebra I class in the fall. Assuming sound arithmetic skills, including operations with signed numbers, students explore the concept of a variable and its use in problem solving, with an emphasis on linear relationships. Specific topics include understanding and interpreting rates of change, graphing linear functions, and solving linear equations. Throughout the course, students work to strengthen their mastery of skills necessary for success in future algebra classes.

MA21 Introduction to Algebra II

For students who have completed Algebra I and desire to be introduced to Algebra II, this course aims to enhance the understanding of fundamental concepts and offers ample opportunity to strengthen skills. Topics include evaluating algebraic expressions, solving linear equations, and working with inequalities. Students also explore various techniques for solving systems of linear equations, as well as linear programming applications. Additional topics include an introduction to mathematical functions and exploration of quadratic equations. *This course is open to students who have completed Algebra I. Prerequisite: a full-year course in Algebra I.*

MA22 Concepts In Geometry

This course exposes students to various topics in geometry, including the Pythagorean Theorem, angle relationships, properties of parallel

lines, polygon angles, and tessellations. The students may use GeoGebra, a free dynamic software package, to enhance understanding of course concepts. Students also encounter the idea of mathematical proof.

MA23 Introduction to Computer Programming

This course provides students with a solid foundation in programming. Concepts such as program design and control, looping, Boolean logic, variables, arrays, and basic object-oriented programming are covered. By the end of the course, students have a portfolio of artistic projects including a generative art program and a game. This course assumes no background in formal computer programming, but a **laptop computer is required.** (*Note: Open to students who have completed Algebra I.*)

MA26 Introduction to Game Theory

Game Theory is the mathematical study of competition, collaboration, and conflict. In this applied-mathematics course, students explore classic game theory “games” including Prisoner’s Dilemma, Chicken, Tragedy of the Commons, and Stag Hunt. Topics covered include payoff matrices, the Nash Equilibrium, zero-sum games, and various types of strategies. Armed with a newfound understanding of strategy and decision-making, students challenge each other to popular games such as Settlers of Catan, poker, Battleship, Magic, and Stratego as well as simple games like Tic-Tac-Toe and ConnectFour. *Prerequisite: Algebra 1 required and Algebra II preferred.*

MA32 Trigonometry

In this course, students thoroughly examine the six trigonometric functions and their graphs. They learn how trigonometric expressions are evaluated, using not only a calculator, but also reference angle computations. They also review the concept of an inverse function and learn to evaluate and graph inverse trigonometric functions. In addition, trigonometric identities are derived and verified, and students learn a variety of techniques for solving trigonometric equations. The course concludes with a study of right triangle trigonometry and the laws of sines and cosines. **A graphing calculator is required for this course.** *Prerequisite: Geometry and Algebra II.*

MA33 Precalculus

This course is fundamentally a study of functions. In addition to gaining a better conceptual understanding of functions in general, students extend their knowledge of polynomial, rational, exponential, and logarithmic functions. Graphing technology enables students to investigate and understand the relationship between families of functions and their graphs. A variety of applications, including growth and decay models, provide students with the opportunity to use mathematics to examine real world phenomena. Additional topics include sequences and series, and if time permits, a brief introduction to limits. This course does not include a study of trigonometric functions. **A graphing calculator is required for this course.** *Prerequisite: Algebra II. (Taken together, MA32 and MA33 cover a great deal of material in five weeks; thus, these courses are designed for students with strong Algebra II skills.)*

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MA35 Introduction to Robotics

This course introduces students to the fundamentals of robotics using the VEX platform. Students learn to design and build robots, to program autonomous behaviors, and to use sensors to improve a robot's ability to interact with its environment. Robots will compete in challenges, including racing and navigating over and around a variety of obstacles. This course also serves as an introduction to some aspects of computer programming, including program design and control, looping, and Boolean logic. Prior programming experience is not necessary.

SCIENCE (Major Courses)

The following courses are open to students currently in grades 8 and 9.

SC11 Introduction to Biology

Designed for students planning to study biology in the fall, this course stresses the study, laboratory, report-writing, and analytical skills necessary for successful work in biology. Topics include evolution by natural selection, biochemistry, cell structure and function, membrane transport, mitosis, meiosis, and genetics. Students use microscopes, molecular models, and other tools to better understand the material.

SC12 Introduction to Physics

Designed for students planning to begin the study of physics in the fall, this course stresses laboratory work, report-writing, and problem-solving skills necessary for successful work in physics. Topics include mechanics, vectors, optics, motion, force, and waves. Students practice solving problems and gaining familiarity

with several fundamental principles. They also experience the excitement of laboratory work and of drawing conclusions from lab experiments. *Prerequisite: Algebra I.*

SC15 Global Scientific Issues: Searching for Solutions +

This non-laboratory course takes up various scientific problems confronting the human species on our fragile planet and also examines ideas for combating these problems. What sources of energy will best serve humankind in the future, while doing the least harm? How can we best employ water for personal use and irrigation without leading to health problems and soil degradation? What are the causes and effects of global warming, and how can Earth's temperatures be stabilized? What measures have proven effective, and what innovations may be employed in the future, in controlling AIDS, malaria, and possible pandemics? How will the growing populations of the world obtain adequate nutrition and shelter? These questions call upon students to consider various viewpoints as they seek ways to achieve sustainability for the human species. The course includes oral presentations and debates as well as writing and assessments.

The following courses are open to students currently in grades 9, 10, or 11.

SC21 Introduction to Chemistry

This course stresses the study, laboratory, report-writing, and problem-solving skills necessary for successful work in chemistry. Different laboratory exercises along with data analysis and class discussion complement the study of introductory

concepts. Topics include chemical reactions, chemical equations, the mole, and stoichiometry. **All students are required to have a scientific graphing calculator.**

SC23 Anatomy and Physiology

Systems of the human body and their interactions are examined through dissections, class discussions, and readings. Laboratory experiments include dissection of mammalian organs such as the heart and eye, and recording of muscular, circulatory, and respiratory responses to rest and exercise. The final lab exercise consists of a whole mammal dissection, during which the anatomy of the major systems of the body are explored over the course of three days. *Prerequisite: A course in biology is required.*

SC24 Forensics

The application of scientific principles to modern criminal justice is examined through a range of inquiry-based units. Activities and laboratory experiments are used to introduce aspects of crime scene investigation, including: fingerprint analysis, DNA and protein typing, a comparison of animal and human hair, forensic skeletal remains, and simulated bloodstain analysis. The final lab exercise consists of a crime scene investigation, during which students collaborate to examine the evidence before presenting their findings in a final report. *Prerequisite: Biology.*

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The following course is open to students currently in grades 8, 9, 10, or 11.

SC26 Environmental Science

Environmental Science combines elements of physics, chemistry, and biology to develop an understanding of the interactions of the physical environment and the organisms that live in it, including humans. Understanding these interactions is important for anyone with an interest in science or public policy. This class introduces central concepts in environmental science and prepares students for further study in the field. Topics may include soils and substrates, nutrient cycling, land use planning, water and hydrology, the atmosphere, climate, and energy resources. Class discussions include current issues in environmental science and provide background for students to better understand these issues.

SC28 Data Analysis and Visualization in Environmental Science

Large datasets have become increasingly valuable in making decisions that help to guide sustainable development policy, protect species diversity, manage alternative energy systems, and shape climate change mitigation and adaptation strategies. In this course, students learn to find and filter large public datasets, to analyze and visualize data, and to

develop and interpret mathematical and conceptual models important for conducting scenario analysis. Students also collect data from energy and weather monitoring systems at the Kohler Environmental Center. Software and languages such as R, Tableau, Mathematica, Python, and ArcGIS are used throughout the course. Students complete independent and group projects using datasets of their choosing. Demonstrated ability in a science course and Algebra II or above are required to enroll in this class; however, no previous coding experience or familiarity with particular software programs is necessary. Expectations for project work are based, in part, upon the previous experience of the student.
Prerequisite: Algebra II

SCIENCE (Minor Courses)

sc017 Astronomy

This non-laboratory course integrates historical, descriptive, and modern technical aspects of astronomy with theories about the evolution of the universe. Students have the opportunity to view planets, nebula, and galaxies. The emphasis of the course is on the historical growth of modern astronomy, the observed characteristics of the planets and the minor members of the solar system, and the theories that account for them. Students have the opportunity to view the night sky with Choate's telescopes.

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COLLEGE BOUND

The following Minor Course is open to students currently in grades 9, 10, and 11. This course meets twice a week as an additional class and has an additional fee.

cp021 College Admission Process

Demystify the college admission process by learning how to manage its different components. This course provides students with guidance on testing, researching schools, presenting a strong application profile, applying for financial aid, and interviewing techniques. Students complete mock applications and draft an application essay. As schedules and time allow, there may be visits to the nearby college campuses of Yale, Wesleyan, or Trinity. This course can be taken in conjunction with en021, The Personal Essay.

The following test prep courses are open to students currently in grades 8, 9, 10, and 11. Test prep courses meet twice a week in the early evening and have an additional fee.

SAT Preparation Course

Pillars of Learning's SAT class is eight sessions long. The first four sessions introduce the critical problem-solving methodologies and education about processing that students need to improve their scores. The last four sessions focus on tailored instruction with individualized worksheets that help students recognize patterns of errors, understand how to approach troublesome problems, and apply what they've learned in both difficult and complex contexts. Using proprietary metrics, the course collects data on what specific stimuli and problem types cause issues with the students' cognitive processes, then disseminates that information to the students quickly via email. All test results and tailored recommendations are emailed to both parent and student so that future practice can be guided from the insights gained through the course. The course includes 10 hours of lectures and two full-length proctored practice tests. Class size is limited to 14 per section; students receive all requisite test materials including practice tests, prep book, and customized worksheets.

SAT Individual Instruction

Individual SAT Instruction provides students with specialized tutoring in test preparation. Students enjoy the same material and methods utilized by the SAT Preparation Course, but in a one-on-one dynamic with an expert tutor. The first two sessions focus on methodologies and problem-solving in general and the remaining six sessions are tailored and customized based on patterns of errors in the student's tests and practice materials. Individual sessions move at a faster pace and offer greater flexibility in adapting the curriculum to the specific needs of the students.

ACT Preparation Course

While similar in length and format to the SAT course, the ACT course offered by Pillars of Learning is built around the essential problem-solving methodologies and education about processing for success on the English, Math, Reading, and Science sections of the ACT. While the first four sessions build those skills, the last four sessions focus on tailored and individualized worksheets and group work sessions. Through that variety of practice, students recognize their patterns of errors, understand how to approach troublesome problem types, and apply what they've learned in the most challenging of contexts so that the test itself feels familiar if not predictable when students take the actual ACT. Using proprietary metrics, the course collects data on what specific stimuli and problem types cause issues with the students' cognitive process, then disseminates that information to the students quickly via email. All test results and tailored recommendations are emailed to both parent and student so that future practice can be guided from the insights gained through the course. The course runs 10 hours of lectures and two full length proctored practice tests. Class size is limited to 14 per section; students receive all requisite test materials including practice tests, prep book, and customized worksheets.

ACT Individual Instruction

Individual ACT Instruction provides students with specialized tutoring in test preparation. Students enjoy the same material and methods utilized by the ACT Preparation Course, but in a one-on-one dynamic with an expert tutor. The first two sessions are focused on methodologies and problem-solving in general and the remaining six sessions are tailored and customized based on patterns of errors in the student's tests and practice material. Individual sessions move at a faster pace and offer greater flexibility in adapting the curriculum to the specific needs of the students.

HIGH SCHOOL SIGNATURE PROGRAMS

Note: May not be combined with Academic Enrichment courses.

FIVE-WEEK PROGRAMS

MA25 IMMERSION GEOMETRY

This intensive course covers the standard year-long geometry curriculum. At a brisk pace, students explore the fundamentals of Euclidean geometry as well as various applications of these concepts in the real world. As time permits, algebra is incorporated to help students review and strengthen their problem-solving skills. After gaining experience making conjectures and testing hypotheses, students progress to writing formal deductive proofs, using paragraphs as well as the two-column format. In order to complete this year-long course in the summer session, students attend class for the full academic day and may not enroll in additional courses. Enrollment carries a full five-week boarding or day tuition. This course is appropriate for highly motivated students who have completed Algebra I. **A graphing calculator is required.**

(Note: Choate students who successfully complete this course may fulfill the diploma requirement in geometry. Returning and matriculating students entering the fourth form who have not yet completed a geometry course may choose this course for that purpose. Students entering the third form are generally not approved to take this course. In all cases, students must first obtain permission to take the course for credit from the academic year Mathematics and Computer Sciences department head, and then must

comply with all attendance and course expectations. The Math department head will determine final eligibility for diploma credit based upon the student's successful completion of the course. Students in Immersion Geometry receive a traditional letter grade which is included on the Summer Transcript.)

THE JOHN F. KENNEDY '35 INSTITUTE IN GOVERNMENT

KI41 American Government and Politics

In this foundation course, the Constitution and federalism are viewed through the lens of contemporary politics. Students learn how the offices of the President, Congress, and the Supreme Court operate in theory and reality. This course focuses on topics of current interest and major political candidates and their respective party platforms.

KI42 Foundations of Political Thought

This course explores the underpinnings of Western political philosophy and exposes students to the basic tenets of modern economics and the ways in which public policy shapes and is shaped by economic conditions. The course explores the meanings of conservatism and liberalism in contemporary politics and provides comparisons with other political and economic systems where appropriate.

ki020 Topics in Public Policy

The *New York Times* and other national and international newspapers serve as the lens through which students analyze how different groups influence American public policy. This work prepares Kennedy Institute students for meetings on the Washington trip.

ENGLISH LANGUAGE INSTITUTE (ELI) (Major Courses)


This program is for English language learners. Level placement is determined by a diagnostic test administered the first day of classes.

HSEL10 Writing Workshop I

This course reviews the structures of English and expands vocabulary. Students practice their writing ability through personal, persuasive, and expository essays. Language skills are further developed through discussion, grammar exercises, reading, assigned compositions, and free writing exercises.

HSEL11 Reading Skills

This course strengthens strategies for reading in English through the study of a broad range of texts and multimedia. Analysis of literary devices, character development, and themes encourages students to become reflective learners and active participants in class and the world around them.

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HSEL20 Writing Workshop II

Writing Workshop II explores various forms of writing. Emphasis is placed on the writing process: prewriting, drafting, revising, and editing. Forms of writing include narrative, expository, persuasive, personal, and research. Revision of papers is at the core of this course.

HSEL21 Reading Analysis

Reading Analysis advances students' analytical reading skills through the study of a broad range of texts. Emphasis is placed on close reading and critical writing, skills essential for study in all disciplines at the college level. The broad range of works gives voice to diverse perspectives in English.

(Minor Courses)**hsel007 Foundational Reading Skills**

This course reviews foundational reading skills such as how to identify the six basic syllable types and syllable division. In addition, students study intonation, rhythm, and how to place emphasis on certain words when reading out loud. Students also practice reading comprehension skills such as annotation, inferencing, and making connections through a variety of short stories and poems.

hsel009 Public Speaking and Performance

In this course, students first develop traditional speech-making and debate skills, and they then move to active exploration of other exciting performance modes, including drama. Through dynamic and challenging exercises ranging from improvisation and theater games to performances of scenes, students become more confident, expressive, and fluent

speakers of English.

hsel011 TOEFL Prep

This course enables students to assess and improve their level of skill in three areas of English proficiency measured on the Test of English as a Foreign Language: listening comprehension, structure, and reading comprehension. The course requires constant drilling, diligent completion of TOEFL-based exercises, and continuous practice with vocabulary terms.

hsel013 Language Through the Arts (Double-Period Minor Course)

This stimulating course uses a comprehensive overview of the arts to improve student proficiency in English. Students collaborate in English on projects in multiple artistic media. Possibilities include photography, film, drawing, painting, printmaking, and ceramics. In addition to lively hands-on experience, students are exposed to multicultural pieces of art in nearby museums and galleries to help develop vocabulary and skills in the critical examination of art.

SUMMER STUDY ABROAD

Choate Rosemary Hall's Summer Study Abroad programs offer a life-changing experience of language immersion, intellectual discovery, and cultural exchange. Located in France, Morocco, and Spain, Choate's four-week to five-week programs enable participants to live and learn in a new and different environment. By stepping out of their comfort zones, participants challenge preconceived notions about other cultures and ways of thinking, becoming more flexible, versatile, and creative. Choate continuously monitors world

events and may, when safety and/or security dictates, move a program's location, or cancel a program entirely. *The application deadline for Choate's Summer Study Abroad programs is March 15, 2019.*

France +

Our five-week program in France offers intermediate to advanced level high school French language students the opportunity to live in Parisian homes, take courses conducted exclusively in French, participate in cultural outings that use the city as an extension of the classroom, and travel to the Loire Valley. Through art history and French history, and during four museum visits per week as well as regular reading and writing, students improve their interpersonal, interpretative, and presentational skills. Daily immersion in French studies and in the routines of life in Paris enables participants not only to improve their knowledge of French language and culture, but also to gain self-confidence and a better understanding of themselves as global citizens. *Upon successful completion of the Art History course, Choate students earn a visual arts credit. Successful completion of Summer Study Abroad in France also fulfills the contemporary global studies graduation requirement for Choate students.*

Morocco +

Our four-week program in Morocco is open to beginning through advanced level Arabic language students as well as intermediate to advanced level French language students who are interested in studying in this Francophone region. Students live with host families in Rabat (either Arabic

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or French-speaking), take courses in the appropriate level language and in colloquial Arabic, and participate in lectures and cultural activities. Immersion in the routines of daily Moroccan life enables participants to not only improve their knowledge of language and culture, but also to gain self-confidence and a better understanding of themselves as global citizens. Excursions to Fez, Chefchaouen, Meknes, Merzouga, Aubege (the desert), Ouarzazate, and Marrakech round out the experience. *Successful completion of Summer Study Abroad in Morocco fulfills the contemporary global studies graduation requirement for Choate students.*

Spain ⁺

Our five-week program in Spain offers intermediate to advanced level high school Spanish language students the opportunity to live, study, and travel in Spain. Students reside with families in La Coruña, Spain (Galicia) and take courses taught exclusively in Spanish by our in-country faculty. Daily immersion in Spanish studies and in the routines of life in La Coruña enables participants to improve their knowledge of Spanish language and culture, and to gain self-confidence and a better understanding of themselves as global citizens. Visits to historical and cultural sites in and around La Coruña, including a trip to the capital city of Galicia, Santiago de Compostela, as well as trips to Salamanca, Segovia, Toledo, and Madrid complement the classroom experience. *Successful completion of Summer Study Abroad in Spain fulfills the contemporary global studies graduation requirement for Choate students.*

FOUR-WEEK PROGRAM

THEATER ARTS INSTITUTE

The Theater Arts Institute offers students a total theater immersion experience for four weeks. Students learn the process of theater through daily classes in acting, singing, dance, set and costume design, and playwriting. In addition, students attend nightly laboratory sessions to work together on performance and design projects and attend master classes in movement, voice and diction, improvisation, lighting design, children's theater, and stage management. All aspects of the dramatic experience are highlighted, with opportunities for young artists to grow in many areas. Throughout the summer, students complete scene work in classical and modern drama, rehearse and perform numbers from a variety of musicals, and design set and costume pieces for different periods. Weekly field trips to professional theater and artistic performances throughout New York and New England inform our work and inspire our students. This program is designed for young people who are serious about expanding their knowledge and willing to take risks in all areas of theater.

TWO-WEEK PROGRAMS

Combine two-week programs in **Math, Science, Writing, Oceanography, Documentary Filmmaking, and Service and Society** to create an individualized four-week program.

MATH AND SCIENCE WORKSHOPS

MA80 Concepts in Precalculus (Sessions I & II)

This workshop starts with a thorough investigation of functions and their graphs (operations, symmetries, stretches, translations, and inverses). Specific functions studied include polynomial, exponential, and logarithmic functions. Real world applications of functions are an important focus of many discussions. Other topics such as sequences and series, conic sections, and limits are covered as time permits. **A graphing calculator is required.** *Prerequisite: Algebra II.*

SC40 Concepts in Chemistry (Sessions I & II)

Designed as an introduction to some of the central concepts in first-year chemistry courses, this workshop exposes students to some of the more challenging parts of the traditional chemistry curriculum so they have a greater chance for success. Classroom demonstrations as well as lab exercises will provide a framework for making connections between phenomena and theory. Proper problem-solving techniques are emphasized in those segments dealing with quantitative analysis. Some of the topics covered include chemical equation writing and predicting products, mole conversions, and stoichiometry. **A scientific calculator is required.** *Prerequisite: Algebra I.*

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SC45 Advanced Topics In Chemistry (Sessions I & 2)

Intended for students with previous chemistry experience, this course introduces students to more complex chemistry concepts in preparation for Advanced Placement Chemistry or a first-year college chemistry class. Topics include thermochemistry, equilibrium, and kinetics. Students connect concepts through demonstrations, experimentation, and problem solving. **A scientific calculator is required.** *Prerequisite: Algebra I and successful completion of a previous chemistry course.*

SC50A Concepts in Physics: Mechanics (Session I)

This workshop focuses on increasing student comfort level in this often challenging discipline. The course focuses on several introductory topics including kinetics and Newton's Laws of Motion in order to help students transition into their prospective high school courses. Hands-on experimentation provides students practical examples of the phenomena they study in a traditional physics curriculum. In addition, students are exposed to problem-solving techniques that support much of the quantitative analysis that they are likely to see. **A scientific calculator is required.** *Prerequisite: Algebra I.*

SC50B Concepts in Physics: Waves and Light (Session II)

Session II of this workshop focuses on several introductory topics included in a study of sound and light waves such as interference, refraction, diffraction, and dispersion in order to help students transition into their

prospective courses. Hands-on experimentation provides students practical examples of the phenomena they study in a traditional physics curriculum. In addition, students are exposed to problem-solving techniques that support much of the quantitative analysis that they are likely to see. **A scientific calculator is required.** *Prerequisite: Algebra I (Concepts in Physics - Mechanics is preferred, but not required.)*

WRITING WORKSHOPS

The focus of this two-week intensive curriculum is to develop student mastery. Students practice both creative and analytical writing and are challenged to incorporate higher-order thinking and skills into their writing.

WWL-2 Writing Workshop (Level 2) (Session I & II; students who are currently in grades 8 and 9)

This two-week course explores various forms of writing with a focus on drafting and revising. Within this curriculum, students both read and try their hand at a variety of forms, with an emphasis on fictional narrative, poetry, and personal essays. Participants work closely with classmates as pieces are carried through the writing process, learning the value in having immediate, thoughtful feedback as they each prepare a formal portfolio by the end of the session.

WWL-3 Visual Storytelling (Level 3), (Session I; students who are currently in grades 10 and 11)

For decades, directors have created film adaptations of beloved novels, and today, illustrators are increasingly creating graphic novel adaptations of bestsellers. In our visual storytelling course, students learn how directors and illustrators use visual mediums to give new energy to classic works. Over the course of the two-week session, students examine the art of storytelling and transform written stories into graphic novels and video vignettes all while enhancing their writing and visual literacy skills.

WWL-3 Writing Truth and Crime (Level 3), (Session II; students who are currently in grades 10 and 11)

The Adventures of Sherlock Holmes, *Serial Podcast*, and *Letter from Birmingham Jail* are three texts that reflect how the pursuit of justice shapes literature and society. In Writing Truth and Crime, students explore the tropes that make detective fiction so popular and also consider how writing about injustice is a powerful tool that spurs social change. This is the ideal course for aspiring lawyers, future fiction writers, and budding community leaders. Students in this two-week workshop analyze common figures in crime fiction, such as the troubled detective and the curious butler, and they write their own spin on these classic characters. Students also review real-life accounts of legal debates and civil disobedience and analyze how the written word aids the quest for justice and truth.

TWO-WEEK PROGRAMS

Combine two-week programs in Math, Science, Writing, Oceanography, Documentary Filmmaking, and Service and Society to create an individualized four-week program.

INTRODUCTION TO OCEANOGRAPHY

(Session II)

In this two-week introduction to Oceanography, students are exposed to content, skills, and technologies used by oceanographers. Topics include bathymetric maps, mineral identification, salt marsh habitats, ocean currents, tides, and the health of our oceans. When possible, students experience science happening in real time by connecting with researchers on board the exploration vessel *Nautilus*. Numerous field trips provide opportunities to learn about biotic and abiotic factors, to interact with the myriad of creatures that live in an estuary such as plankton, crabs, and a variety of fish. Recent trips have included the Peabody Museum at Yale University, Mystic Aquarium, Hammonasset State Park, and a marine life excursion on Long Island Sound.

DOCUMENTARY FILMMAKING

(Session II)

The program offers a two-week introduction to documentary filmmaking for students going into 9th grade and above. Week one focuses on identifying the strategies and tools of documentary filmmakers through screenings and discussion of a wide array of documentary content. Week two focuses on a shooting and editing practicum and the production of a

documentary short film. This hands-on course offers real world skills and experience in project planning and development, interviewing subjects, and using film to tell a story. Guest artists visit the classroom to share their professional journeys and offer workshops in their area of expertise.

SERVICE AND SOCIETY +

(Session I & II)

Service and Society gives students two weeks of unforgettable experience doing, creating, and reflecting in an array of settings close to the Choate campus. Multiple hands-on opportunities in the local area equip students with the knowledge to become change-agents in their home communities. Recognizing the importance of service in the lives of youth, the program offers an academically reflective service-learning experience. Through daily excursions to nearby organizations, students learn about topics relating to socioeconomic inequities and the subsequent impact on communities and individuals, the experiences of refugees and displaced peoples, the importance of environmentalism, the importance of understanding and combating food insecurity, and ways to provide for special needs populations including eldercare. Three evenings a week, students view documentary films and hear personal stories from those affected by the topics addressed at the program's service sites. Social issue documentaries and group discussions provide students with an expanded view of some of the persistent forces resulting in societal issues. Working together as an internationally diverse group

of students and sharing reflections on the volunteer experience gives program participants the opportunity to learn about similarities and differences between the challenges faced in Connecticut and those faced in other parts of the world. Students leave with the tools and inspiration to contribute to positive change in their home environment.

(Note: Matriculating and current Choate students who wish to earn Choate community service credit while participating in Service and Society must first obtain permission from the Community Service Director as part of the application process for Summer Programs, and must then comply with all attendance and course expectations. The Community Service Director will determine final eligibility for service hour credit upon the student's successful completion of the program.)

+ This course may fulfill a Choate Rosemary Hall diploma requirement. Matriculating and current Choate students who wish to take the course for diploma credit need to obtain prior approval from the appropriate academic year department head as part of the Summer Programs application process and must comply with all attendance and course expectations. Department heads determine final eligibility for diploma credit upon successful completion of the course. Placement in subsequent courses is determined by the appropriate department head.

**Middle
school
offerings:**

ACADEMIC ENRICHMENT

Boarding students take two major courses and one minor course. Day students may take less than a full course load.

FIVE-WEEK COURSES

ARTS (Double-Period Minor Courses)

msa010 Ceramics

This hands-on course develops basic fundamentals in clay construction, wheel work, glazing, underglazing, and a variety of other finishes. Strong emphasis is placed on freedom of expression using hand-building and wheel-throwing skills.

msa020 Digital Photography and Imaging

The goal for this course is to teach young photographers how to tell an engaging story with their pictures. Emphasis is placed on the principles of good composition and how to find the most effective ways for framing a shot. The subjects for projects range from the “selfie,” the portrait, to more abstract concepts such as light and patterns. While a dedicated digital camera may be preferred and can provide more options for control over the pictures, a camera phone is an acceptable tool for this class. Post-production editing is explored using Adobe’s Photoshop on the art studio’s computers. Portfolios of student images are printed at the end of the session and included in our art exhibition during the final week of the session.

msa030 Drawing

Students expand their visual literacy through the drawing process. Using a variety of media, students sharpen their skills through projects created from observation and the imagination. Such fundamental elements as line, form, value, and composition are explored. Emphasis is placed on individual growth and development.

ENGLISH (Major Courses)

MSE1 The Language of Literature: Critical Reading and Critical Writing

The twin tasks of reading literature and writing critically about it are expectations of all students in their educational careers. Students in this course read, consider, discuss, and write about important works of literature. The course aims to impart tried and true methods for critical reading and successful techniques for effective critical essay writing.

MSE3 Gods and Goddesses

Mythology serves as a reference point for countless works of art and literature and is a keystone of Western culture. In this course, students read and discuss major mythological cycles, explore the shared themes in world mythology, and begin to recognize mythological characters and their significance in contemporary culture.

MSE4 Rebels and Heroes

From Huckleberry Finn to Katniss Everdeen, literature has been shaped by its rebels and heroes. This course explores – through readings, discussions, debates, and essays – how we characterize, define, and understand literature’s rebels and heroes.

MSE5 Inquiry-Based Writing

Throughout the summer, students use 21st century skills to research a topic and share their ideas with others. Students use a variety of print and digital sources to dig deeper than their prior understanding of the topic. With their new knowledge, students are able to share their findings with others.

ENGLISH (Minor Courses)

mse011 Journalism

Have you ever wanted to be a reporter? In this course, students read and learn to write interviews, personal profiles, travel articles, political editorials, sports essays, and movie reviews. Students also regularly update blogs and produce a print newspaper.

mse012 Public Speaking and Debate

Oral presentation is an essential component of effective communication. Learning to organize one’s thoughts and to present them effectively are critical life skills. In this course, students learn to express themselves with greater confidence in small and large groups, and practice prepared and extemporaneous speeches in both informal and formal settings.

HISTORY AND SOCIAL SCIENCES (Major Courses)

MSH1 From Athens to Washington, D.C.: The Evolution of Democracy

First imagined in ancient Greek city-states, democracy has evolved over the centuries into one of the most important and polarizing political ideals in the history of civilization. This course explores the earliest seeds of democracy, as well as its modern iterations. Students examine what democracy is and what democracy is not, and ultimately are better equipped to understand democratic governments.

MSH3 Everyday Economics

Why do fruits and vegetables cost more in the winter? What market forces determine the price of gas at the pump? Economics is vital for educating students to live in our global economy. In this course, students explore fundamental concepts of supply and demand, opportunity costs, and trade through real-world examples and hands-on demonstrations.

HISTORY AND SOCIAL SCIENCES (Minor Courses)

msh010 The Makeup of the Modern Metropolis

How have the economic, political, and social fabrics of some of the world's great cities evolved over time? Students examine the historical events and cultural characteristics that have been instrumental in shaping cities such as New York, Paris, and Beijing, and explore the identities unique to each.

msh011 How Government Works in the United States

As citizens, we have a responsibility to understand the workings of our governments. In the U.S., we are bombarded daily with news that originates with the Executive, the Legislative, and the Judicial branches. What are these institutions? How do they work both independently and in concert with each other? This course looks at several examples of public initiatives, the process by which a bill becomes law, and how the Court applies issues of constitutionality to challenge a law.

LANGUAGES (Major Courses)

MSL1 Introduction to Latin

Latin is the fundamental root of all Romance languages and for centuries served as the language of choice for Europe's greatest scholars, writers, and philosophers. In this course, students explore the structure of language through a mastery of Latin parts of speech, syntax, and vocabulary. Coursework also includes daily readings of short stories and quotes, as well as lessons in etymology.

MSL2 Introduction to Spanish

The study of Spanish opens doors to a language spoken by nearly 400 million people worldwide. This course introduces students to the rules of grammar, vocabulary, and pronunciation crucial to conversational Spanish, and is designed for those with little or no background in Spanish. This course helps prepare students for further language study.

MSL3 Introduction to Chinese

This course aims to introduce students to the basic skills of Mandarin Chinese. Coursework focuses on Mandarin tones, sounds, and numbers, as well as writing characters in standard simplified form using the proper stroke order. Lessons also include fundamental grammar patterns, reading and speaking dialogues, and exposure to the traditions, culture, and current affairs of China. This course helps prepare students for further language study.

MSL4 Introduction to French

Spoken as a native language in countries on five continents, French has contributed enormously to language and culture worldwide. This course, which is aimed at students with little or no background in the language, introduces students to rules of grammar, vocabulary, and conversation central to mastering French. Furthermore, students explore French culture as it exists from the serpentine streets of the Latin Quarter to the Congo. This course helps prepare students for further language study.

MSL5 Arabic for Beginners

This introductory Arabic course is designed to introduce middle school students who have no previous knowledge of Arabic to the Arabic language and culture. By the end of this five-week course students learn to read and write in Arabic, to understand and initiate basic conversations about daily life topics, and to explore some aspects of the Arabic culture through music, poetry, and culinary art. It is a student-centered class where different media are used to make the students'

learning experience fun and effective. This course helps prepare students for further language study.

MATHEMATICS, COMPUTER SCIENCE, AND ROBOTICS (Major Courses)

MSM1 Pre-Algebra

This course is designed for students who have not yet studied any algebra and would like to gain some experience with algebraic concepts prior to enrolling in an Algebra I course. Beginning with a brief review of arithmetic skills, students are introduced to the early Algebra I topics, including signed numbers and variables and their use in problem solving. Students also learn basic equation-solving techniques, as well as additional algebra concepts as time permits.

MSM2 Introduction to Algebra I

This course is intended for students who are comfortable with pre-algebra topics, but would like some additional preparation before enrolling in Algebra I in the fall. Students are expected to have a basic understanding of signed numbers as well as the concept of a variable. Students review basic equation-solving techniques and explore additional topics, including systems of linear equations and inequalities, rates of change, and the graphing of linear equations. Additional topics may be included as time permits. This course is not intended to replace a full year of study of Algebra 1.

MSM3A Special Topics in Algebra I

This course is for students who already have extensive experience with Algebra I concepts. Beginning with a brief review of rates of change, linear equations, inequalities, and graphing, students will explore additional topics, including absolute value, factoring, rational expressions, and quadratic relationships. As much as possible, students will consider real world applications and gain problem-solving experience. Strong arithmetic skills are essential. A diagnostic test on the first day of class is given to confirm placement.

MSM3 Concepts in Geometry

Students explore topics such as the Pythagorean Theorem, angle relationships, properties of parallel lines, polygon angles, and tessellations. The students may use GeoGebra, a free dynamic software package, to enhance understanding of course concepts and to develop the idea of proof.

MSM4 Introduction to Computer Programming

This course introduces students to programming concepts such as variables, loops, events, logic, arrays, program design and control, and basic object-oriented programming. Students begin their exploration of code in Scratch, and then move on to program in Processing, a Java-based programming language created to teach computer programming fundamentals within a visual context. This course assumes no background in formal computer programming, but the expectation is that students have had some prior computer experience.
Note: A laptop computer is required.

MSM5 Introduction to Robotics

This course introduces students to the fundamentals of robotics using the VEX platform. Students learn to design and build robots, to program autonomous behaviors, and to use sensors to improve a robot's ability to interact with its environment. Robots compete in challenges, including racing and navigating over and around a variety of obstacles. This course also serves as an introduction to some aspects of computer programming, including program design and control, looping, and Boolean logic. Prior programming experience is not necessary.

MATHEMATICS (Minor Courses)

msm011 Puzzles and Logic

Learning how to solve puzzles and win strategy games is not only fun, but it also strengthens critical thinking and reasoning skills. By exploring some of the classic riddles, problems, and strategy games of mathematics history, students develop oral and written communication skills as they are asked to defend their thinking and explain their solution strategies. Students also explore multiple ways to approach logic problems, with an emphasis on clear organization of work and given information.

msm012 Dynamite Data

What is data? How can data help us learn something about the world? Gathering, organizing, summarizing, displaying, analyzing, and interpreting data are essential 21st century skills. In this course, students explore randomness and calculate basic probabilities in order to begin learning how to unravel the story that data is trying to tell.

MATHEMATICS**(Double-Period Minor Course)****msm013 Games and Strategy:
An Introduction to
Game Theory**

Through playing and discussing a variety of games, students explore the foundations of game theory, the mathematical study of competition and cooperation. Students play traditional games such as checkers, chess, ConnectFour, Stratego, Risk, Settlers of Catan, and Magic while seeking to answer questions about how these games work. Are there strategies that make winning more likely? Why do those strategies work? Are there strategies that make it impossible for either player to win? This course also introduces some of the fundamentals of game theory including equilibrium, payoffs, and zero-sum games.

SCIENCE (Major Courses)**MSS1 Marine Biology**

With marine life as a focus, students explore biological principles in order to understand better our world's oceans. This course draws on local resources such as a boat trip on Long Island Sound.

MSS2 Environmental Science

Through an interdisciplinary scientific look at the earth's systems, students explore the delicate interconnectedness of their environment. This hands-on course introduces key elements from the physical, chemical, and biological sciences.

MSS3 Phenomenal Physics

What makes a baseball curve? How do eyeglasses help you see? This hands-on course explores various properties of physics, such as force, motion, and energy, and applies them to hands-on laboratory experiences.

MSS5 Science of Alternative Energy

In this course students explore the science behind sustainable, alternative energy technologies and green building design. Classes take place in Choate's USGBC LEED-Platinum certified and net-zero energy Kohler Environmental Center so that the specific energy systems and design elements of the building can be examined. These include photovoltaic arrays, solar thermal systems, insulation, geothermal heat pumps, biodiesel fuel, and passive solar design. Through projects and labs, students are introduced to basic physics and chemistry principles underlying the green technology movement.

SCIENCE**(Double-Period Minor Course)****mss010 Mad Scientist**

This course helps students better understand the scientific method and basic lab practices. Fun-filled labs familiarize students with lab apparatus, writing lab reports, data presentation, and interpretation for scientific inquiry – skills necessary for future, more advanced science coursework.

MIDDLE SCHOOL SIGNATURE PROGRAMS

Note: May not be combined with Academic Enrichment courses.

FIVE-WEEK PROGRAMS

ENGLISH LANGUAGE INSTITUTE (ELI)

This program is for English language learners. Level placement is determined by a diagnostic test administered the first day of classes.

MSEL70 Expository and Creative Writing

Students improve their skills in writing English by completing forms of expository writing such as a description, a personal narrative, and a compare-and-contrast essay; then, for creative writing, they write pieces such as a poem and a short story. For each writing assignment, students pursue the process of planning, writing a first draft, revising, completing the second draft, and sharing their work. They also write regularly in a dialogue journal and engage in class discussions to increase their fluency in the language. In addition, students have opportunities to review and improve their work through writing conferences with the teacher.

MSEL80 Reading Non-Fiction and Fiction

Students improve their skill in reading English. First, students read a variety of non-fiction works such as autobiography, biography, newspaper and magazine articles, as well as works on the Internet. Next, students read a variety of fiction genres such as poetry, short story, and excerpts from novels. Students are expected to

volunteer in class discussions, read aloud, participate in small group activities, and write short critical and creative responses to the reading. They also practice a variety of organizational techniques using various graphic organizers and note taking skills.

mse1011 Research Skills

Utilizing topics in American culture, this course introduces students to a variety of research techniques that support their academic work. As part of the research process, students learn how to identify key words, choose credible sources, and create proper citations. Students develop their English language skills, both spoken and written, and deepen their understanding of American culture and current events while working on their research projects.

mse1012 Public Speaking and Performance

In this course, students develop their speaking skills by studying and presenting a variety of speeches including informational, persuasive, and debate. They learn how to create and implement effective visual-aids and presentations that fit their audience and adjust to listener feedback. Through performance and observation, students become more fluent, confident, and active English speakers.

FOUR-WEEK PROGRAMS

ENVIROTECH FOR GIRLS (ETG)

This four-week program is designed to inspire and motivate young women in the fields of technology, data analysis, math, and science. Students use school-issued iPads for daily assignments and laboratory work, and have opportunities to learn in state-of-the-art Choate facilities. While exploring multiple fields of study, students acquire essential laboratory skills and enhance their field observation techniques. Local ecosystems including freshwater and marine communities are studied through field trips, hiking campus nature trails, and investigating stream ecology. Students explore important mathematical concepts and problem-solving methodologies through hands-on design and construction, and are introduced to computer coding. Grounding the four weeks is a common theme involving case studies, data analysis, and applied science which culminates in final projects. In recent summers, students have studied temperate deciduous forests and biodiversity and plant diversity and ecosystem functions. Culminating projects have included the creation of a field guide to freshwater streams, the identification and labeling of trees growing on campus, and the building of geometric holders for air plants. Problem solving, decision making, scientific inquiry, and teamwork are the hallmarks of the program and the projects each summer and give participants extensive hands-on experience across disciplines which will serve them well in future STEM studies.

THEATER ARTS INSTITUTE

The Theater Arts Institute offers students a total theater immersion experience for four weeks. Students learn the process of theater through daily classes in acting, singing, dance, set and costume design, and playwriting. In addition, students attend nightly laboratory sessions to work together on performance and design projects and attend master classes in movement, voice and diction, improvisation, lighting design, children's theater, and stage management. All aspects of the dramatic experience are highlighted, with opportunities for young artists to grow in many areas. Throughout the summer, students complete scene work in classical and modern drama, rehearse and perform numbers from a variety of musicals, and design set and costume pieces for different periods. Weekly field trips to professional

theater and artistic performances throughout New York and New England inform our work and inspire our students. This program is designed for young people who are serious about expanding their knowledge and willing to take risks in all areas of theater.

TWO-WEEK PROGRAMS

Combine two-week programs in Writing Workshop, Invention and Design Lab, Introduction to Robotics, and Documentary Filmmaking to create an individualized four-week program.

WRITING WORKSHOP

This two-week curriculum focuses on the development of critical thinking skills and independent analysis. Students learn the importance of including detail and description in their creative writing and evidence and support in their analytical writing.

WWL-1 Writing Workshop Level 1 (students who are currently in grades 6 and 7)

This two-week course focuses on the development of personal creativity, critical thinking, and independent analysis through the reading and writing of both fiction and nonfiction. Students gain confidence as they learn techniques for building good writing sentence by sentence and become fully comfortable with writing as a process, all while developing a portfolio of unique pieces.

CS15 Invention and Design Lab

This two-week intensive workshop is a hands-on exploration of topics in designing and making. Students are introduced to design thinking, sketching, modeling, 3D printing, electronics, and basic computer programming with Arduino micro-controllers. Utilizing Choate's state-of-

PREP SCHOOL BOUND

The following test prep courses are open to students currently in grades 6, 7, and 8. These courses meet twice a week in the early evening, and have an additional fee.

SSAT Preparation Course

Both the Middle and Upper Level SSAT classes offered by Pillars of Learning are eight sessions long. The first four sessions introduce the critical problem-solving methodologies and education about processing that students need to improve their scores. The last four sessions focus on tailored and individualized worksheets and group work sessions that help students recognize their patterns of errors, understand how to practice efficiently, and complete difficult problems similar to the ones they missed on the tests. Using proprietary metrics, the course collects data on what specific stimuli and problem types cause issues with the students' cognitive process, then disseminates that information to the students quickly via email. All test results and tailored recommendations are emailed to both parent and student so that future practice can be guided from the insights gained through the course. The course runs eight hours of lectures and two full length proctored practice tests. Class size is limited to 14 per section; students receive all requisite test materials including practice tests, prep book, and customized worksheets.

SSAT Individual Instruction

Individual SSAT Instruction provides students with specialized tutoring in test preparation. Students enjoy the same material and methods utilized by the SSAT Preparation Course, but in a one-on-one dynamic with an expert tutor. The first two sessions focus on methodologies and problem-solving in general and the remaining six sessions are tailored and customized sessions based on patterns of errors in the student's tests and practice material. Individual sessions move at a faster pace and offer greater flexibility in adapting the curriculum to the specific needs of the individual student.

the art i.d.Lab, students are guided through a series of projects which help them build skills and unlock their creative potential. Part engineering and part art, and always fun, this course helps students turn their ideas into reality through the steps of brainstorming, sketching, designing, prototyping, and constantly revising.

CS20 Introduction to Robotics

This robotics workshop is a two-week program that facilitates the development of STEM skills: engineering building and design, C programming, resource management, and electrical and programmable debugging. Students design, assemble, operate, and program a robot to complete complex tasks through both remote control and autonomous systems. The program utilizes VEX hardware and Robot C programming language to complete several projects. Each assignment has a unique objective from a robot balloon battle to an autonomous ball collector. Students are put to the test and encouraged to release their creative energy by making their robot dream fantasies into reality.

MSDF1 Documentary Filmmaking

The program offers a two-week introduction to documentary filmmaking for students going into 7th and 8th grades. Week one focuses on identifying the strategies and tools of documentary filmmakers through screenings and discussion of a wide array of documentary content. Week two focuses on a shooting and editing practicum and the production of a documentary short film. This hands-on course offers real world skills and experience in project planning and development, interviewing subjects, and using film to tell a story. Guest artists visit the classroom to share their professional journeys and offer workshops in their area of expertise.

▼ APPLYING TO CHOATE SUMMER PROGRAMS

Applications are accepted on a rolling basis at www.choate.edu/summer/apply

A completed application must include:

- Application (student information and course selections, as applicable)
- Personal Statement
- Two teacher recommendations (Study Abroad applicants only need one teacher recommendation)*
- School Official Recommendation*
- Current school transcript, which includes **current academic year courses and grades**
- Graded English essay from current year, with teacher comments
- A non-refundable application fee – \$75 domestic / \$100 international

* *Recommendation Request Form available online (PDFs of the School Official and Teacher Recommendation forms also available online)*

DEPOSIT Within two weeks of acceptance, students must pay a non-refundable \$1,000 deposit (\$2,000 deposit for Summer Study Abroad) that is credited toward tuition. To ensure the student's admission, the final balance is due no later than May 1. Students who are accepted after April 10 must submit their payment in full. This payment includes the \$1,000 non-refundable deposit (\$2,000 for Summer Study Abroad). Charges include tuition, room, board, activities, trips, and textbooks.


FINANCIAL AID Choate Rosemary Hall seeks the best qualified candidates from a variety of backgrounds and offers need-based financial aid to students who could not otherwise attend our on-campus programs. Financial aid applicants should provide all supporting IRS documents including a copy of the 1040 form and any other income-tax forms by the deadline indicated on www.choate.edu/summer. Materials that arrive after the deadline will be considered on a rolling basis for any remaining funds.

INTERNATIONAL APPLICANTS Please note that a TOEFL or TOEFL Junior Test is strongly recommended for the English Language Institute and **required** for all other programs.

DAY STUDENTS Summer Programs welcomes day students who live close enough to commute to campus. Day students are expected to participate in all aspects of the academic program – including evening projects, field trips, and sports activities.



CHOATE
ROSEMARY HALL

A large, stylized sunburst graphic in the bottom half of the page, consisting of a semi-circle at the bottom with numerous thin lines radiating upwards from its edge.

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