2020
Diploma Requirements and Other Offerings

DIPLOMA REQUIREMENT OFFERINGS

Successful completion of the following courses may fulfill a Choate diploma requirement in a specified discipline.

ARTS

Matriculating and current Choate students who wish to take the course to fulfill a diploma requirement must first obtain permission from the academic year Arts department head as part of the application process for Summer Programs, and must then comply with all attendance and course expectations. The Arts department head will determine final eligibility for diploma credit based upon the student's successful completion of the course.

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.

HISTORY AND SOCIAL SCIENCES

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

HS10 World Religions
This course exposes students to the beliefs, practices, ethics, and histories of five major world religions: Judaism, 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. *Note: Matriculating and current Choate students who wish to take the course to fulfill the diploma requirement in philosophy/religion must first obtain permission from the academic year History, Philosophy, Religion, and Social Sciences department head as part of the application process for Summer Programs, and must then comply with all attendance and course expectations. The department head will determine final eligibility for diploma credit based upon the student's successful completion of the course.*

SCIENCE

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

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. *Note: Matriculating and current Choate students who wish to fulfill the diploma requirement in contemporary global studies must first obtain permission from the academic year Science department head as part of the application process for Summer Programs, and must then comply with all attendance and course expectations. The Science department head will determine final eligibility for diploma credit based upon the student's successful completion of the course.*

SIGNATURE 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.*

SSA Study Abroad: France

Our five-week program in Paris 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 several museum visits per week as well as regular reading and writing, students improve their interpersonal, interpretive, 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.*

SSA Study Abroad: Jordan

Our four-week program in Jordan is open to beginning through advanced level Arabic language students who are interested in deepening their knowledge of the Arabic language and exploring the rich culture of the Hashemite Kingdom of Jordan, a land of mesmerizing beauty and contrasts. During this month-long program, students live with host families in Amman, take Modern Standard Arabic and Levantine colloquial courses, engage in history and current issue workshops conducted in English, and participate in cultural activities. Immersion in the routines of daily

Jordanian life enables participants to not only hone their language skills but also to gain self-confidence and a better understanding of themselves as citizens of the world. Excursions to Jerash, Wadi Rum (the desert), and Petra among others round out the experience. *Successful completion of Summer Study Abroad in Jordan fulfills the contemporary global studies graduation requirement for Choate students.*

SSA Study Abroad: 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.*

HSVolCT Service and Society

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.*

OTHER OFFERINGS

The following courses give students the opportunity to prepare themselves for an upcoming course.

FIVE-WEEK ACADEMIC ENRICHMENT COURSES:

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.*

MA21 Intro 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.*

MA34 Advanced Topics in High School Mathematics
This course examines a variety of advanced topics in high school mathematics. Areas of focus will be determined by student and instructor interest, previous coursework and a diagnostic exam given at the start of the course. Topics could include: functions (exponential, logarithmic, rational, trigonometric, parametric), limits, polar graphs, sequences and series, conic sections, trigonometry, statistics, and/or advanced topics in trigonometry. In the process of looking at the chosen topics, students will review techniques for solving equations (exponential, logarithmic, polynomial, rational, and radical), graphing, and analyzing functions using a graphing calculator. **A graphing calculator is required** (the math department recommends the use of the TI-84 CE for this course). *Prerequisite: Geometry and Algebra II.*

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. *(Note: Matriculating and current Choate students who successfully complete this course will have fulfilled the prerequisite needed to apply for Choate's Advanced Robotics Concentration. The ARC application process includes satisfying one of the prerequisite courses, submitting a written application, and interviewing with ARC program directors.)*

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.*

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 calculator.**

TWO-WEEK WORKSHOPS:

HS Ocean 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.

HS DocFilm Documentary Filmmaking (Session II)
The Documentary Filmmaking 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. Field trips to

local businesses and facilities expand the scope of subject matter available to students, and guest artists visit the classroom to share their professional journeys and offer workshops in their area of expertise. Evening lab hours complement class day sessions and enable students to accomplish even more with their projects.

MA60 Concepts in Algebra II

This workshop is designed to give students an introduction to some of the core topics and functions covered in a typical Algebra II course. Families of functions (linear, absolute value, quadratic, cubic, reciprocal, root, exponential, and logarithmic) will be covered with a focus on domain, range, and transformations. The course will explore composition of functions as well as inverse functions. Solving equations will be taught as a means to help analyze functions and graphs. After further study of the families of functions, polynomial and rational functions may be introduced. Connections will be made between functions and their real world applications. Time permitting, the course may include other topics such as: systems of equations or inequalities, matrices, regression analysis, or conic sections. **A graphing calculator is required** (the math department recommends the use of TI-84 series calculators for this course). *Prerequisite: Algebra I.*

SC40 Concepts in Chemistry

Designed as an introduction to some of the central concepts in first-year chemistry courses, this course 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.*

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: Mechanics (Session I)

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 WORKSHOP

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

Level 2 (Session I or II) 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. For students who have completed grades 8 or 9.

Level 3, Visual Storytelling (Session I) 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. For students who have completed grades 10 or 11.

Level 2, Writing Truth and Crime (Session II) 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. For students who have completed grades 10 or 11.

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