

# COURSE OFFERINGS

## Courses by Department

### DIGITAL COMMUNICATION, DESIGN, AND INNOVATION

**Co-Chair: Robert Roffe**

**Co-Chair: Charles Hollinger**

Our Digital Communication, Design, and Innovation program focuses on the development, use, and management of computer science and communication technologies. Our curriculum places emphasis on innovation and the design process in order to prepare students to function as developers and managers of digital applications and content.

Courses include instruction in programming, and robotics, as well as the design and development of digital animation, photography, audio, and video.

#### MAJOR COURSES

##### DIGITAL PHOTOGRAPHY (FALL)

Students will produce a portfolio of finished works while responding to the guiding question: How does perspective impact an image's message? Taking photographs from extreme points of view, students will focus on composition and the basic elements of design: line, value, shape, form, color, and texture. Creativity and self-expression will be encouraged as students have the freedom to explore while simultaneously working within the parameters of each assignment. Other topics covered will be depth of field, shutter speed, and basic image editing using Adobe Photoshop. *This course earns credit towards the Studio and Performing Arts graduation requirement.*

##### INTRODUCTION TO GRAPHIC DESIGN (SPRING)

In this course, students will explore the principles of design, and how to apply them to both text and imagery to convey information. Areas of focus will include typography, logo design, color theory, and publication layouts. The majority of the work will be completed in the studio, but some projects may be digital. *This course earns credit towards the Studio and Performing Arts graduation requirement.*

##### DIGITAL ILLUSTRATION (FALL OR SPRING)

This course offers an introduction to Adobe Photoshop and the basics of illustration. Students will learn how to navigate and organize the Photoshop UI, create custom brushes, use layers and layer effects, and design text to pair with imagery, among other basic skills, through projects focused on concept art and illustrated media. Projects will include illustrating a book cover, designing patterns, creating a character sheet, and painting a panoramic animation background. *This course earns credit towards the Studio and Performing Arts graduation requirement. For Fourth, Fifth, and Sixth formers. Recommended Prerequisite: Drawing (not required)*

##### DIGITAL MEDIA AND VIDEOGRAPHY (FALL OR SPRING)

This course gives an overview into video production and digital media. Through a series of projects, students will be challenged to create short films to learn how to storyboard, frame their shots and edit everything together, plan and shoot interviews to learn about studio lighting, learn about audio production by planning, recording and publishing podcasts, and finally, bring all these skills together by making a mini-documentary. Throughout the semester students will also learn how to work together, plan effectively, and manage the people involved in their productions all while developing their ability to think

creatively and work under a deadline. *For Fourth, Fifth and Sixth Formers. This course earns credit towards the Studio and Performing Arts graduation requirement.*

### **ENGINEERING (FALL OR SPRING)**

This course encourages students to pursue engineering questions and technological solutions that emphasize research and problem-solving using mathematical and scientific concepts. Students achieve a more advanced level of skill in engineering design by learning how to conceptualize a problem, develop possible solutions, design and build prototypes or models, and make modifications if necessary. Students will explore engineering design, construction technologies, energy and power technologies, including fluid systems, thermal systems, electrical systems, and communication and manufacturing technologies. *For Fifth and Sixth Formers.*

## **MINOR COURSES**

### **INTRODUCTION TO APP DESIGN (FALL)**

Students will be introduced to the design process behind creating an app. Students will learn UI design, basic programming concepts, how to integrate art and graphics into an app, all while learning how to effectively use the design process to develop their app through testing and feedback.

### **INTRODUCTION TO GAME DESIGN (SPRING)**

This course offers an introduction to Game Design and will offer a deep dive into the design process and programming that goes into game development. *Prerequisite: Intro to App Design or departmental approval is needed.*

### **INNOVATION LAB (FALL OR SPRING)**

This course will provide a student-led, problem-based approach to learning. Students will navigate the design process - identifying problems, developing prototypes, and evaluating success in order to develop solutions to real-world issues. Students will work throughout the semester on creating innovative solutions to enhance the Canterbury community.

## **ENGLISH**

### **Chair: Madelaine Lord**

The members of the English Department strive to develop in each student the reading, writing, speaking, and critical thinking skills needed to meet the demands of a college curriculum. Novels, plays, short stories, and poems expose students to a rich variety of classic and contemporary world literature and encourage an interpersonal appreciation for literature of other cultures and all genders. Canterbury students practice revision techniques to produce polished essays in different modes, including the narrative, the descriptive, and the analytic. Fifth and Sixth Formers, except students in Honors Race Theory, AP Language, and AP Literature, select two semester-long English electives.

### **THIRD FORM ENGLISH – THE ELEMENTS OF LITERATURE & COMPOSITION**

Studying a variety of short stories, plays, novels, and poems, students look at the ways authors use literary tools to tell moving stories. Readings may include *A Raisin in the Sun*, *The House on Mango Street*, and a collection of short stories and poetry. Students learn to write effective sentences and paragraphs and have the opportunity to practice writing the above-mentioned essay modes. The study of grammar includes instruction on avoiding the more common writing problems. *Honors section available.*

### **FOURTH FORM ENGLISH – AMERICAN VOICES**

This course will explore what it means to write with a unique “American Voice.” We will consider how this definition has evolved since the birth of our nation by tracing its development through poetry, prose, drama, and film. The curriculum explores the complexities of society and the individual, the role of nature, neglected voices, and the American Dream. Students will explore current issues and high-interest topics through the close analysis of literature. The writing curriculum gives students the opportunity to focus on writing organized paragraphs and extended essays while practicing the various essay modes of the English Department writing curriculum. *Honors section available.*

### **ADVANCED PLACEMENT ENGLISH LANGUAGE**

This course cultivates the reading and writing skills that students need for college success and for intellectually responsible civic engagement. Students are guided to become curious, critical, and responsive readers of diverse texts, and become flexible, reflective writers of texts addressed to diverse audiences for diverse purposes. The reading and writing students do in the course should deepen and expand their understanding of how written language functions rhetorically: to communicate writers’ intentions and elicit readers’ responses in particular situations. The course prepares the student to take the AP English Language examination in May. *For Fifth Formers.*

### **ADVANCED PLACEMENT ENGLISH LITERATURE**

This course seeks to help students read, write, and think more deliberately. As readers, they focus on authors’ use of language to elicit responses from their readers. As writers, they strive to write consciously rather than as an afterthought, seeking to communicate ideas more effectively. By improving their reading and writing skills and practicing thoughtful discussion, students learn to think more clearly and precisely. The course prepares the student to take the AP English Literature and Composition examination in May. *For Sixth Formers.*

## **FIFTH AND SIXTH FORM ELECTIVES**

### **ACADEMIC WRITING (FALL)**

Academic Writing focuses on the foundational skills and elements of academic writing. Students will explore analysis, expository, critical reflection, and research components in their writing. It is the philosophy of the department to teach students how to write well, speak consciously, and read critically. The course aims to give students the agency to explain their thought and reasoning through summary, comparison, contrast, evaluation, synthesis, and problem-solving. Students will also need to engage in scholarly discourse and reading to supplement and support their written work. Finally, students will understand writing as a communal process through revision, constructive criticism and feedback.

### **LITERATURE OF CONFLICT (FALL)**

The emotional trauma and confusion of war has led to countless novels, nonfiction narratives, memoirs, song lyrics, and poems often written by those who had fought, but also by those coping with the aftermath of the fighting. The writing continues to this day as many continue to make sense of the fighting that still occurs. With a primary focus on the Vietnam Conflict, this course is offered in honor of Charles L. Bergevin ‘62, David M. Burke ‘65, and Paul M. McGrath ‘62, Canterbury Alumni who lost their lives in the conflict.

### **HONORS IDENTITY AND CULTURE (FALL)**

What do you know to be true about yourself and others? Do you ever wonder how you are perceived in your family, community, and society? Honors Identity and Culture is a complex study of the way our outward appearance and identity have shaped the history of our communities, our nation, our culture, and the world. In this comparative literature course, we will explore not only the academic theory of race, but the stories of men, women, families, and communities where race defined them. Finally, we will

wrestle with difficult questions; we will step outside of our comfort zones, allow ourselves to consider new ideas and ultimately answer what we know to be true about ourselves and others.

### **HONORS ORIGINS, MYTHS AND LEGENDS (FALL)**

Origin stories, myths, and legends are narratives that span many cultures but often attempt to make sense of and add explanation to universal questions of existence and life. Students begin with the origin of myths, proverbs, and legends that span all cultures by studying their similarities and differences. In addition to learning how to recognize mythological metaphors, allusions, analogies, and symbols, students will also analyze the significance of how cultures use myths and legends.

### **SYRACUSE UNIVERSITY PROJECT ADVANCE: CREATIVE NONFICTION WRITING (FALL)**

This course focuses on the genre of creative nonfiction. Students explore varieties of creative nonfiction, such as memoir; biography; the personal essay; travel, science, and food writing; and “new journalism.” As its name suggests, creative nonfiction borrows elements from fiction and poetry (e.g., description, scene construction, dialogue, etc.) yet still aims to tell the truth. For a writer to “tell it slant,” however, is to acknowledge the ways in which one’s subjective viewpoint shapes what counts as “the truth” in telling a story about one’s own or another’s experiences. Students will have the opportunity to experiment with style, genre, and subject in a writing studio environment and to read varied examples of contemporary creative nonfiction. *For Fifth and Sixth Formers.*

### **GENRE IN LITERATURE (SPRING)**

Genre in Literature is a study of various literary works; this course will specifically study detective fiction. This course combines the intrigue of classic and modern detective fiction with real-world investigative journalism from NBC’s Dateline. Students will delve into the captivating world of mystery, crime-solving, and journalistic storytelling. The course will explore the evolution of detective narratives, analyze the techniques employed in investigative journalism, and encourage critical thinking and creative expression through discussions, readings, and hands-on projects.

### **HONORS CONTEMPORARY LITERATURE (SPRING)**

Novels, PDFs, shorts, commercials, the news, tiktok - all of these are forms of literature and communication that are asking something of the audience. We are responsible, as the readers, to be literate to the practices of the creator and delineate the decisions and their impact on the reader. Film is a layered example of both the written word and visual performances working in conjunction to convey a message. This course will explore how visual media does just that. How does visual media move us, make us think, force us to see another perspective? How do directors, writers, customers, lighting directors, etc., get us to question the very same timeless social and personal issues that other forms of literature often do? Students will learn to be critical viewers and analytical observers and to research this literary form with an evaluative lens.

### **HONORS CREATIVE WRITING (SPRING)**

This Honors level writing course delves into the mastery of wordplay and the creative avenues in which we communicate. In today’s rapidly evolving world, creativity has emerged as a cornerstone skill in virtually all fields. Students will be asked to develop the most essential neurological synapses through innovation and problem-solving and answer; how do we make words work for us? Through exercises, trial and error, editing, immersion, and exploration we will push to make the written word reach all audiences; to make them laugh, cry, think, and open their eyes. From crafting compelling narratives, to experimenting with poetry, utilizing journalism, and dipping our toes in satire, students will be exposed to and have to engage in diverse writing styles.

### **POST-INDUSTRIAL LITERATURE (SPRING)**

A century ago, leisure time was limited, and life on the farm and in the factory was hard. Over time, the labor movement, the industrial revolution, and the technology revolution have allowed more time for sports and pastimes. As more people watched and participated in leisure time activities, a body of literature inspired by these activities emerged. Our games have given us a rich variety of real and fictional characters as well as a window into the hearts and souls of towns, regions, and nations.

### **HONORS LITERATURE OF THE RENAISSANCE (FALL OR SPRING)**

Out of the darkness of the Middle Ages springs the Renaissance, a period of vibrant and engaging literature which continues to shape modern thought. Students will explore the advent of new ideas, the influx of original thought, and the emergence of creative thinking and inspiring voices. Students will analyze these voices through thematic connections among authors, periods, and settings. Students will engage in a number of writing assignments that ask them to synthesize, analyze, and comment with their own original thought. They will have opportunities for creative expression in this course.

### **SYRACUSE UNIVERSITY PROJECT ADVANCE: GENDER AND LITERARY TEXTS (SPRING)**

In this course, students will explore how literature plays a role in shaping and maintaining societal ideas about gender. Students will investigate how gender influences the creation and reception of literary works. Students will engage in in-depth reading, evidence-based analysis, and forming arguments based on the text. Through this process, they will become more aware of how personal interpretations are shaped by critical reading. Additionally, they will examine how texts build various distinctions, such as those related to gender, race, and social class. *For Fifth and Sixth Form students.*

## **HISTORY AND SOCIAL SCIENCES**

**Chair: Pádraig Lawlor, Ph.D.**

The History Department endeavors to promote in students an appreciation for historical knowledge, the critical thinking skills necessary to make sense of it, and the compassion to become active world citizens ready and willing to make a difference. While each course presents core subject knowledge necessary for students to develop a better interpersonal understanding of the world in which they live, the courses further aim to promote historical study as a hugely creative endeavor calling students to ask questions, demand substance, think interpretively, and develop an open mind. Students are expected to develop research skills appropriate to their level.

The department incorporates new classroom technologies into creative presentations, class debates, mock trials, and historical simulations in an effort to stimulate innovative thinking, group collaboration, and other cognitive skills. Student work includes analysis and interpretation supported by historical information. Where applicable, courses are related to current events in areas such as economics, politics, foreign affairs, and environmental issues.

### **FOUNDATIONS OF CIVILIZATION**

Foundations of Civilization is offered primarily to Third Formers with the purpose of establishing the basis for historical study. The course is designed not only to cover the content of major civilizations in Afro-Eurasia, but also to introduce and develop organizational, analytical, research, and writing skills. The course is built around those empires between 500 BCE and 1492 CE that had a disproportionate impact on the formation of the modern world. In the fall, students study the Greeks and the Romans and consider to what extent these two civilizations introduced novel democratic forms of government and notions of citizenship. Students then focus their studies on the rise of the Islamic World and debate the factors that facilitated its rapid expansion across Arabia, Persia, North Africa, and Spain. Finally, in the spring, students examine the consequences of the Mongol invasions into China, Persia, and Eastern Europe and consider the extent to which the Mongols impacted the formation of early modern Europe. Students complete a number of writing assignments, including two short research papers in the second semester.

*Honors section available.*

### **WORLD HISTORY**

World History is offered primarily to Fourth Formers. The course builds on the "Foundations of Civilization" studied during the Third Form year by exploring several important turning points in European history and assessing their impact on modern civilization. Topics include the Renaissance & Reformation, the Age of Exploration, the Scientific Revolution & Enlightenment, the French Revolution, the Industrial Revolution, Imperialism, the two World Wars, and the Cold War. Emphasis is given to the continued instruction and the practice and development of essential skills needed for the study of history, including reading comprehension, analyzing primary source documents, outlining historical arguments, and applying an open mind to the study of historical issues. In addition to continuing their development of historical thinking and writing through independent assignments, students work collaboratively throughout the year on a series of "mini-projects" designed to develop specific research skills using a variety of library resources.

### **HONORS WORLD HISTORY**

Honors World History is offered primarily to Fourth Formers. The course uses a thematic approach to explore European history from the Renaissance to the fall of the Soviet Union and to assess the role of historical themes such as culture, religion, geography, technology, economics, war, and ideology in shaping modern western civilization. Students broaden their understanding of critical events by reading and analyzing a variety of source materials, thinking interpretively, and writing persuasively. Students are encouraged to "think 360" by exploring topics from a variety of perspectives and engaging in experiential learning through extended debates and simulations before casting judgment on a variety of historical issues. In addition to continuing their development of historical thinking and writing through independent assignments, students work collaboratively throughout the year on a series of "mini-projects" designed to develop specific research skills leading to a small research project in the spring semester.

### **ADVANCED PLACEMENT WORLD HISTORY**

AP World History is primarily for Fourth Formers. The course builds an understanding of cultural, institutional, and technological precedents that, along with geography, set the human stage. This understanding is advanced through the acquisition of selective factual knowledge, the application of appropriate analytical skills, and the integration of small research tasks into the class curriculum. The course highlights the nature of changes in international frameworks, their causes and consequences, and comparisons among major societies. Students enrolled in this course are required to take the AP World History exam in May and complete a short research paper.

### **UNITED STATES HISTORY**

United States History is offered primarily to Fifth Formers. The course is presented chronologically from European arrival to the post-World War II era with an emphasis on acquiring core knowledge and interpreting the meaning of the essential events and issues that make up the American heritage. Students continue to develop the essential skills needed to think and write like a historian by applying active reading strategies and engaging in student-centered enrichment activities designed to promote analysis of controversial issues. Each chapter is supplemented with primary source documents from the Stanford Reader series designed to develop skills in critical reading, source analysis, and interpretive thinking. Along the way, students continue to develop their persuasive writing and research skills by completing an independent research project during the second semester. *Required for graduation.*

### **HONORS UNITED STATES HISTORY**

Honors United States History is offered primarily to Fifth Formers. This course is structured around this central question: what does it mean to be an American? By this, we mean to search our history from the colonial period to the post-World War II era to discover the beliefs, character traits, and institutions that make America unique. Content is presented thematically by focusing on the role of citizenship, the role of the west, and connecting the past to the present in an effort to understand the consistencies and contradictions in the American Dream. Students engage in experiential learning in the classroom through extended simulations, trials, and debates to promote historical thinking by analyzing controversial issues

through a variety of perspectives before casting judgment as a historian. Students learn strategies for critical thinking, persuasive writing, and research that culminate in an interpretive project during the spring semester.

### **ADVANCED PLACEMENT UNITED STATES HISTORY**

AP United States History prepares students for intermediate and advanced college courses. Students learn to assess historical materials, weigh evidence and interpretations presented in historical scholarship, arrive at conclusions based on informed judgment, and present reasons and evidence clearly and persuasively in an essay format. Students enrolled in this course are required to take the AP United States History exam in May and to write a research paper.

### **ADVANCED PLACEMENT EUROPEAN HISTORY**

In AP European History, students investigate significant events, individuals, developments, and processes from approximately 1450 to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical connections; and utilizing reasoning about comparison, causation, and continuity and change over time. The course also provides seven themes that students explore throughout the course in order to make connections among historical developments in different times and places: interaction of Europe and the world, economic and commercial development, cultural and intellectual development, states and other institutions of power, social organization and development, national and European identity, and technological and scientific innovations. *Prerequisite: United States History. For Fifth and Sixth Formers.*

### **ADVANCED PLACEMENT GOVERNMENT AND POLITICS**

AP U.S. Government and Politics is an introductory college-level course in U.S. government and politics. Students cultivate their understanding of U.S. government and politics through analysis of data and text-based sources as they explore topics like constitutionalism, liberty and order, civic participation in a representative democracy, competing policy-making interests, and methods of political analysis. *Prerequisite: United States History. For Fifth and Sixth Formers.*

### **ADVANCED PLACEMENT MACROECONOMICS**

AP Macroeconomics is an introductory college-level macroeconomics course. Students cultivate their understanding of the principles that apply to an economic system as a whole by using principles and models to describe economic situations and predict and explain outcomes with graphs, charts, and data as they explore concepts like economic measurements, markets, macroeconomic models, and macroeconomic policies.

## **FIFTH AND SIXTH FORM ELECTIVES**

### **HOLOCAUST (FALL)**

This course introduces students to the historical origins of anti-Semitism and surveys German history from the twentieth century to World War II. Emphasis is placed on the political and social developments which elevated the persecution of Jews to official government policy and almost succeeded in the total extermination of Jews from Europe. Through independent reading and research, students will further hone their ability to read and write analytically. A short research paper is required.

### **HONORS FINANCIAL MARKETS (FALL)**

This course provides a broad exposure to economic markets. Topics include: the basic principles of demand, supply, diversification, investment policy statements, price discovery, profit maximization, international trade, and exchange rates. Broad segments include; (1) financial products and services; (2) financial institution management, regulation, and structure; and (3) financial market macro-drivers,

historical performance, and prediction theories. The aim is to provide students with an appreciation of how economic markets function, whether this is an area of potential interest for them, and instill a love of learning about finance.

### **REVOLUTIONS AND REVOLUTIONARIES (FALL)**

This course will compare and contrast a variety of political, social, and intellectual revolutions that have profoundly shaped the modern world. Besides examining the dramatic events surrounding the respective French, Russian, Chinese, and Iranian Revolutions, an analysis of other transformational episodes in history will be studied, including the Industrial and Digital Revolutions. The human agents of major change that we will look at include Lenin, Mao, Ayatollah Khomeini, Martin Luther King, Malala Yousafzai, Mark Zuckerberg, and Jackie Robinson. The continued fallout of both the Orange Revolution and the recent "Arab Spring" will be the focus of a current events component of this class.

### **H FINANCIAL INSTITUTIONS (SPRING)**

This Honors course completes the second half of the textbook from the fall course titled Honors Financial Markets. The topics covered include commercial banks, financial statements, fintech companies, investment banks, regulation, and risk management. After completing the textbook and during the last few weeks, the course will comprise discussion covering financial history, present value, financial statement analysis, and business school case studies.

### **MODERN MIDDLE EAST (SPRING)**

This course will provide students with an in-depth study of the Middle East Region in the 20<sup>th</sup> and 21<sup>st</sup> Centuries. Beginning with the downfall of the Ottoman Empire after World War I, this course examines the European influence on the Middle East, the formation of nation states, and the modernization of the area. It also covers the major events in the region, including the Arab-Israeli conflict, the Iranian Revolution, Islamic radical movements, the Gulf War and US intervention in the region, culminating with the Arab Spring and current events in the region. Students will analyze the causes and effects of the tensions in the region and their global impact. A short research paper is required.

### **MODERN TIMES (SPRING)**

Students in this course will study contemporary world events involving political, social, cultural, and economic issues. Emphasis is placed on world events and the prevailing trends and leaders who are influencing current affairs. Students regularly examine periodicals and evaluate the opinions of reputable commentators reflecting on present-day developments. The course challenges students to further refine their ability to read analytically and write a persuasive historical argument. A short research paper is required.

### **SYRACUSE UNIVERSITY PROJECT ADVANCE: PRINCIPLES & CONTEMPORARY ISSUES IN SPORT/BUSINESS MANAGEMENT (SPRING)**

Principles and Contemporary Issues in Sport Management is an introductory course offered through the Syracuse University David Falk College of Sport and Human Dynamics. This course introduces the student to sport management concepts and sectors through an examination of problems and issues faced by contemporary sport management. Unique characteristics of sport and resulting social and ethical responsibilities of sport managers will be discussed. In addition to the use of traditional pedagogical teaching methods to deliver basic sport management concepts, students are required to complete a comprehensive, hands-on project that demonstrates their comprehension of the different sectors of the industry covered throughout the semester. *For Fifth and Sixth Formers.*

### **AMERICAN GOVERNMENT (FALL OR SPRING)**

This course is designed to help students understand the history and structure of the American government. The class begins with a study of the Articles of Confederation, the Constitution, and the three branches of government. The course then moves on to such topics as state and local government, the



responsibility of the government in domestic affairs, and U.S. foreign policy throughout the years. Through the examination of the American government, students will be better equipped to make informed decisions as citizens. A short research paper is required. *Prerequisite: United States History.*

### **HONORS CONSTITUTIONAL LAW (FALL OR SPRING)**

From freedom of speech to gun ownership, war powers to health care, religious liberty to abortion, virtually every aspect of American life is shaped by our federal Constitution. Yet studies reveal that most of us know surprisingly little about the Constitution itself, and thus are unprepared to assess for ourselves the recent developments in its long, storied, and controversial history. This course will provide an overview of the second Constitution of the United States: its origins, its content, and the history of its interpretation.

### **SYRACUSE UNIVERSITY PROJECT ADVANCE: ECONOMICS OF PERSONAL FINANCE (FALL OR SPRING)**

This Introduction to Personal Finance focuses on the foundations of financial planning—such as setting short-term and long-term financial goals—and then tackles essential aspects of consumer personal finance, including record keeping, budgeting, banking, saving, borrowing, investing, insurance, taxes, and retirement planning. *For Fifth and Sixth Formers.*

## **LANGUAGES**

### **Chair: Keiko Mathewson**

The Language Department strives to instill in each student a love for language, cultures, and the satisfaction derived from the relative mastery of a second language. We aim to develop in the student the ability to read with understanding and to speak confidently and write correctly and effectively. We teach structures in context through storytelling and immersing the student in the language during the class period. Emphasis is placed on comprehensible input. We build on this by further presenting the language to the students through expanded reading, speaking, writing, conversation, and group work. Finally, we encourage the students to study language at the college level and to experience those languages and cultures first-hand through chaperoned trips and exchange programs creating inter/intrapersonal connections to the languages being studied.

Travel is one of the best ways to experience language and so there are a variety of opportunities available for our students. Spanish learners can opt to partake in an exchange with the San Cayetano School in Palma de Mallorca, Spain. Also recently added is a trip for students at level 4 and beyond to Madrid to explore the city and experience the language first hand. The Summer Institute in Puigcerdà is an academic and cultural program for students in all levels of Spanish and lasts about two weeks at the conclusion of the school year. Trips for Latin and French are offered as possible with student interest and faculty availability.

Language courses at all levels are scaffolded to the AP Exam allowing implementation of real-life situations and more useful vocabulary to all students.

*Note: In addition to fulfilling the three-year language requirement, students may elect to take a second language. In doing so, they must commit to study that language for at least two years. Sixth Formers may not enroll in a first-year language.*

*The Donovan Center for Learning may waive the three-year language requirement for students with diagnosed language or learning differences. Students for whom English is a second language are expected to meet all of the School's distribution requirements with the exception of foreign language.*

## **FRENCH**

### **FRENCH 1**

In French 1 students acquire useful, high-frequency vocabulary and practice all four skills from day one. Students are actively engaged in class and have periodic speaking and written assessments. By the end of the first year, the students are able to express themselves in the present and past tenses. Thematic vocabulary includes family, home, school schedule, sports, weather, places to go in a city, numbers, dates, and life at Canterbury.

### **FRENCH 2**

In French 2 students continue to acquire useful, high-frequency vocabulary and practice all four skills from day one. Students are actively engaged in class and have periodic speaking and written assessments. Students in French 2 master the present, past and imperfect tenses as well as reflexive verbs and object pronouns. Thematic topics of vocabulary include household chores, food and drinks, clothing and colors, daily routine, health and wellness, and the countries of the world. A reader is introduced and students present projects on various topics and work frequently with a partner during in-class activities.

### **FRENCH 3/ H FRENCH 3**

In French 3, the emphasis is on oral communication, culture, reading, and films. Students round out their study of French grammar, continue the mastery of the past tenses, and are introduced to the future tense and conditional mood. Students read short stories (such as “La dernière classe” or “Le grand Michu”) and their first major work (Le petit prince and/or Les aventures du petit Nicolas). Assessments are primarily oral or project-based, with some written tests as well.

### **FRENCH 4/ FRENCH 5**

This combined course focuses primarily on developing the skill of conversational French. Topics and units of study will be determined by student interest and may include: the nature of communication, political parties in France, French artists, famous French people in history, making commercials, film study, exploring stereotypes, the media/social media, famous monuments in Paris, travel in France, Quebec Winter Carnaval, comparing sports in France and the US, driving/car vocabulary, creating a tv or game show, etc. Some writing and grammar topics will be incorporated as needed for communication. Projects, presentations, journal writing, class participation, pair conversations, and vocabulary quizzes will be the primary assessments. *Prerequisite is completion of French 3, Honors French 3, or Honors French 4. Offered as an alternative for those upper-formers wanting to continue their study of French in a non-honors track.*

### **ADVANCED PLACEMENT FRENCH LANGUAGE AND CULTURE**

Conducted exclusively in French, this course is the culmination of multiple years of rigorous study and continues to develop all four language skills leading to proficiency. Through the study of the six cultural themes, students explore the French-speaking world and learn to compare various cultural aspects of it to their own community. The students also read articles online, watch videos of native speakers, keep a journal in French, make regular recordings for homework, compose and express more complex thoughts and ideas, review grammar, collaborate with the teacher on vocabulary lists, and become familiar with the format of the AP exam. The course prepares students to take the AP French Language exam in May and

requires permission of the instructor.

### **ADVANCED TOPICS IN FRENCH - FRANCOPHONE LITERATURE, ART AND FILM STUDY**

Students will read a variety of literary works ranging from poetry to short stories to excerpts from novels and a play. Through authentic texts, articles, and film, students will explore the themes and issues facing people in the French-speaking world as a springboard for discussion, journal writing and oral presentations. Additional assessments may include debates, essays, and persuasive writing, as students culminate their language experience in this course where French is spoken 100% of the time.

## **SPANISH**

### **SPANISH 1**

In Level 1 students acquire useful, high-frequency vocabulary. By the end of the first year, the students are able to express themselves effectively in the present tense. Thematic vocabulary includes family, home, school schedule and sports, travel, clothes and colors, numbers and dates, and life at Canterbury.

### **SPANISH 2**

By the end of Level 2, students can tell stories using the present, past, and future. Students in Spanish 2 are proficient in the past tenses, the imperfect and preterite. Thematic topics of vocabulary include families and personal relationships, shopping, daily routine, life at home and at Canterbury, and other topics related to our students' lives.

### **SPANISH 3**

In Spanish 3 the students complete their study of grammar, focusing on the perfect tenses and the subjunctive. We continue the emphasis on oral and more advanced written communication at this level. Students who have shown a knack for and ease with the language may be selected for the honors Spanish 3 class where we begin to focus on Advanced Placement tasks. *Honors section available.*

### **SPANISH 4**

In Spanish 4 the students refine their grammar through a final, sweeping review of the major grammatical topics and verb tenses. In addition, the students study culture through film, original literature, and music. A series of film shorts supplement the learning along with novels. *Honors section available.*

### **ADVANCED TOPICS IN SPANISH - CONVERSATION AND CONTROVERSY**

Students will cover a variety of topics ranging from deforestation to immigration, racism, and the many challenges that arise with these issues. Through authentic documentaries, articles, and podcasts, students will live the issues facing many Spanish speakers in the United States and in their home countries. With the use of debates, speeches, and persuasive writing, the students will culminate their language experience by covering current topics and being able to speak to the topic in the second language.

### **ADVANCED PLACEMENT SPANISH LANGUAGE AND CULTURE**

Conducted exclusively in Spanish, this course continues to develop language skills. Students will also compose and express more complex thoughts and ideas, review grammar, and become familiar with the format of the AP exam. Though the AP exam is the final assessment, this class continues language acquisition and fine-tunes language use and skills. The course prepares students to take the AP Spanish Language exam in May.

## **ADVANCED PLACEMENT SPANISH LITERATURE AND CULTURE**

Students in this class read representative prose (short stories, novels, and essays), poetry, and drama from the Spanish-speaking world. This is a survey course that follows the reading list published by the College Board. The students make connections between the works read and the historical period and regions in which they were written. Students develop a deeper understanding of the cultures of the Spanish-speaking world. The course prepares students to take the AP Spanish Literature exam in May.

## **CLASSICS**

### **LATIN 1**

Students learn the fundamentals of Latin grammar, vocabulary, and syntax as they focus on reading Latin and using conversational Latin. The reading passages are adapted from Plautus to Boethius, through which the students come to understand the many facets of the Roman and post-Roman world.

### **LATIN 2**

Students expand their learning of basic grammar and vocabulary as they read about Heloise and Abelard, Charlemagne, and Christopher Columbus. Cultural study includes aspects of the use of Latin in the Middle Ages, the Renaissance, and early modern life.

### **LATIN 3**

Students begin the year by reading excerpts from Julius Caesar's *De Bello Gallico* and selections from Catullus and Cicero. In the second semester, the students read selections from books 1-6 of Vergil's *Aeneid* as well as excerpts from Horace's *Odes* and Ovid's *Metamorphoses* within the cultural context of the Augustan age. Finally, they will read post-antique-era authors, including Erasmus, Petrarch, and John Parke. *Honors section available.*

### **LATIN 4**

Students in Latin 4 will read selections from Vergil's *Aeneid*, books I-VI, and will study the necessary grammar and syntax as well as versification and figures of speech. Students will take periodic tests on the material and will write essays on the meaning of the poetry and the historical background of the poem. *Honors section available.*

## **ADVANCED PLACEMENT LATIN**

AP Latin is equivalent to an upper-intermediate level college course in Latin focusing on the in-depth study of selections from two of the greatest works in Latin literature: Vergil's *Aeneid* and Caesar's *Gallic War*. Students cultivate their understanding of classics through preparing and translating readings and considering themes in the context of ancient literature as they explore concepts like literary techniques, Roman values, war and empire, leadership, views of non-Romans, history and memory, and human beings and the gods.

## **MATHEMATICS**

**Chair: Christopher Roberts**

Our dynamic mathematics program makes use of iPads and Apple TV to create an interactive experience for students in class. Teachers are able to interact with the textbook and can create and make class notes available to students. Additionally, interactive calculators and course-specific apps allow students to focus on problem-solving, critical thinking, and the exploration of mathematical principles at the highest levels. By creating an interactive environment, teachers are able to engage students in discussions of multiple approaches to math problems and provide instant feedback. Math becomes more than an exercise in finding the right answer as students learn the richness of mathematical concepts and how they can be used. Students experience the flipped classroom, allowing them to watch informational videos at home and tackle challenging problems in a collaborative class environment. Eligible Fifth and Sixth Formers may continue with advanced studies in courses that include AP Statistics, AP Calculus, Honors Linear Algebra, and Honors Multivariable Calculus.

### **ALGEBRA 1**

Basic concepts and properties of elementary algebra are introduced early to prepare students for equation solving. Concepts and skills are introduced algebraically, graphically, numerically, and verbally, often in the same lesson to help students make connections. Frequent and varied skill practice ensures student proficiency and success. Special attention is given to signed numbers, positive and negative exponents, linear equations, factoring, radicals, simultaneous equations, verbal problems, and test-taking strategies.

### **GEOMETRY**

This full-year course regards the properties of right triangles, similar triangles, polygons, and circles. Their geometric properties are treated synthetically with logic and proof, as well as analytically with coordinates and algebra. Multiple formats are supported through mastery including two-column and indirect proofs. Students learn to value the need to think logically and present ideas in a clear order. Traditional geometry concepts and deductive reasoning are emphasized throughout, while measurement and applications are integrated to motivate students via real-world connections. Algebra 1 skills are reviewed at point-of-use, ensuring students maintain these skills. *Honors section available.*

### **ALGEBRA 2**

The goal of the intermediate algebra course is to introduce and automate middle-level algebra skills. Practice in the fundamental topics including linear equations, exponents, logarithms, graphs, verbal problems, systems of linear and nonlinear equations, complex numbers, quadratic equations, and linear and quadratic functions is provided. *Honors section available.*

### **ELEMENTARY FUNCTIONS**

Elementary Functions will extensively review concepts covered in Algebra and Geometry. Additionally, we will explore both familiar functions and new functions through a more critical lens. Throughout the year your knowledge and skills acquired in previous courses will be strengthened through effort and practice. Some topics we will explore include— linear systems, polynomial functions, exponents, and logarithms. We will end the year with an extensive study of trigonometry both as the solution to triangles and as the study of circular functions.

### **PROBABILITY AND STATISTICS**

This course provides an elementary introduction to probability theory and mathematical statistics that emphasize the probabilistic foundations required to understand probability models and statistical methods. Topics include basic combinatorics, discrete and continuous random variables, probability distributions, mathematical expectation, hypothesis testing, confidence intervals, and linear regression.

### **PRE-CALCULUS**

Pre-Calculus prepares students for a college-level Calculus course by extending the student's knowledge and skills acquired in previous courses. The course begins with a thorough review of selected topics—linear systems, polynomial functions, exponents, logarithms, sequences, and series—and continues with an extensive study of trigonometry both as the solution to triangles and as the study of

circular functions. At a more rapid pace, the honors section includes the usual topics treated at the beginning of a Calculus course (limits, derivatives, applications of derivatives). *Honors section available.*

### **CALCULUS**

This course covers many of the topics included in a college-level Calculus course. Topics include limits, methods of differentiation, related rates, maximization, Riemann sums, methods of integration, and area. The course is not as rigorous as AP Calculus and will not cover all of the topics on the AP syllabus. *Honors section available.*

### **ADVANCED PLACEMENT CALCULUS**

This course closely examines the theory behind and the applications of the derivative. A strong background knowledge of function analysis and trigonometry is required. The second half of this course closely examines integral calculus. The course curriculum satisfies the AB syllabus of the AP program. The course prepares students to take the AP Calculus exam in May.

### **ADVANCED PLACEMENT STATISTICS**

This course covers the AP syllabus with specific emphasis on data exploration, experimental design, probability, and statistical inference. AP Statistics is a non-calculus-based course that introduces students to methods and tools for collecting, analyzing, and drawing conclusions from data. This course is graphing calculator intensive. The course prepares students to take the AP Statistics exam in May.

### **HONORS LINEAR ALGEBRA\***

This course covers concepts and mathematical tools such as systems of linear equations, matrices, determinants, vector spaces, inner product spaces, eigenvectors, and linear transformations. These topics are particularly useful for students interested in pursuing engineering, physics, economics, statistics, or computer science.

### **HONORS MULTIVARIABLE CALCULUS\***

This college-level course is for students with a strong interest in mathematics and solid foundation in single variable Calculus. This course introduces and explores differentiation and integration of functions of more than one variable, including partial derivatives, directional derivatives, and gradients. This course also investigates max/min problems, Lagrange's method, double and triple integrals, vector fields, line integrals, Green's, Gauss's, and Stokes's theorems. Enrollment in this year-long course is restricted to students who have successfully completed Advanced Placement Calculus.

*\*Offered every other year*

## **SCIENCE**

### **Chair: Cammy Roffe**

The Science Department focuses on the excitement of learning about the natural world. Introductory courses provide a solid foundation in analytical and critical thinking, experimentation, and problem-solving. Laboratory work and guided inquiry-based experiments engage students with modern science techniques that connect concepts learned in the classroom to practice and application in the lab. Recent technological innovations are used in the classroom and laboratory to reach a wide range of learners and increase student involvement. Applications and current events in science are addressed on a regular basis to create interpersonal connections with the material and apply knowledge to problem-solving in the real world. Traditional laboratory courses in biology, chemistry, and physics are offered at three levels: regular, honors, and Advanced Placement (AP). Numerous advanced science electives are also available for Fifth and Sixth Form students. **\*Indicates a lab fee for the course.**

### **BIOLOGY (LAB)\***

This introductory laboratory course explores a molecular approach to the study of living systems by examining evolutionary development, genetic continuity, and biological and ecological diversity. Using actual data from laboratory evidence, students develop analytic skills consistent with the biological themes of change, diversity, energy, homeostasis, and scientific inquiry. In the lab students investigate the molecular and cellular structures of living organisms, proceeding to larger and more inclusive organizational levels. This course provides many of the primary skills and knowledge necessary for success in the study of subsequent science courses. *Primarily for Third Formers.*

### **HONORS BIOLOGY (LAB)\***

This course includes in-depth coverage of living systems with extensive laboratory experiences. Students develop analytic skills consistent with the biological themes of change, diversity, energy, homeostasis, and scientific inquiry. Students must demonstrate excellent understanding of the molecular and cellular structures of living organisms. In the lab, students investigate the molecular and cellular structures of living organisms, proceeding to larger and more inclusive organizational levels. In inquiry-based laboratory experiments, students learn to critically analyze and interpret data. *Primarily for Third Formers.*

### **ADVANCED PLACEMENT BIOLOGY (LAB)\***

In Advanced Placement Biology, students explore science as a process where new properties emerge at each level in the biological hierarchy. They explore how organisms interact with each other and with the physical environment, energy transfer and transformation, and the correlation of structure and function at all levels of biological organization. Studying cells as an organism's basic unit, students proceed to studies of the heritable continuity of life in the form of DNA, the feedback mechanisms that regulate biological systems, and evolution as the overarching theme of biology. A strong emphasis on advanced laboratory analysis is critical for understanding the molecular and chemical functions of living organisms and systems. The course prepares students to take the AP Biology exam in May. *Minimum prerequisite: Honors Biology and Honors Chemistry. For Fifth and Sixth Formers.*

### **CHEMISTRY (LAB)\***

This introductory laboratory course covers fundamental chemical concepts and helps students develop their critical thinking and problem-solving skills. Students learn about matter, physical and chemical properties and changes, chemical composition and nomenclature, reactions and stoichiometry, energy, modern atomic theory and bonding, gasses, liquids, solids, solutions, acids and bases, and equilibrium. The course may be blended and include interactive activities and assignments in both traditional and web-based formats. Students practice collaboration and problem-solving in the laboratory as well as at the whiteboards. In weekly laboratories, students observe and explore chemical phenomena in inquiry-based labs. Students keep a laboratory notebook and learn to collect, analyze, interpret, and present experimental data. A balance of traditional low-tech equipment and state-of-the-art probeware is used. *Minimum prerequisite: Algebra 1. For Fourth and Fifth Formers.*

### **HONORS CHEMISTRY (LAB)\***

This in-depth laboratory course covers fundamental chemical concepts and helps students develop their critical thinking and problem-solving skills. Students learn about matter, physical and chemical properties and changes, chemical composition and nomenclature, reactions and stoichiometry, energy, modern atomic theory and bonding, gasses, liquids, solids, solutions, acids and bases, and electrochemistry. The course is blended and includes interactive activities and assignments in both traditional and web-based formats. Students practice collaboration and problem-solving in the laboratory as well as at the whiteboards. In weekly laboratories, students observe and explore chemical phenomena in inquiry-based labs. Students keep a laboratory notebook and learn to collect, analyze, interpret, and present experimental data. A balance of traditional low-tech equipment and state-of-the-art probeware is used. *Minimum prerequisite: Algebra 1. For Fourth and Fifth Formers.*

### **ADVANCED PLACEMENT CHEMISTRY (LAB)\***

Advanced Placement Chemistry is a college-level course that provides students with a detailed understanding of foundational chemical principles. Critical thinking and problem-solving skills are developed as students learn about atomic theory and structure, chemical bonding, gas laws and kinetic-molecular theory, reaction types, stoichiometry, equilibrium, thermochemistry, and electrochemistry. Students perform advanced chemical calculations using data acquired during laboratory experimentation. The course prepares students to take the AP Chemistry exam in May. *Minimum prerequisite: Honors Algebra 2 and Honors Chemistry. For Fifth and Sixth Formers.*

### **PHYSICS (LAB)\***

This is an introductory, laboratory-based course that emphasizes a conceptual understanding of physics. Topics covered include kinematics, Newtonian mechanics, momentum, collisions, energy, electricity and magnetism, heat, sound, and light. Numerous real-world applications are explored so that students come away from the course understanding the rules of nature and how things work. In the laboratory, students observe and explore physical phenomena and ultimately design experiments in inquiry-based labs. Experimental design methods, laboratory data analysis techniques, and error analysis are covered. A balance of traditional low-tech equipment and state-of-the-art probeware is used to appeal to a wide variety of learners. *Minimum prerequisite: Algebra 2, concurrently. For Fifth and Sixth Formers.*

### **HONORS PHYSICS (LAB)\***

In this honors-level course, advanced physics topics are covered without an emphasis on a strict schedule. Material is cumulative and covers the majority of a college-level, algebra-based mechanics course. This includes kinematics, Newton's laws, work and energy, momentum and collisions, Newton's Universal Law of Gravity, and basic rotational kinematics and energy. If time permits, students will investigate advanced topics in group projects giving them the opportunity to present a research project or participate in a final exam. Collaborative work is promoted in problem-solving, laboratory experiments, and presentations. In the laboratory, students observe and explore physical phenomena and ultimately design experiments in inquiry-based labs. Experimental methods and techniques of data collection, interpretation and error analysis are covered. A balance of traditional low-tech equipment and state-of-the-art probeware is used. *Minimum prerequisite: Algebra 2, concurrently. For Fifth and Sixth Formers.*

### **ADVANCED PLACEMENT PHYSICS 1 (LAB)\***

In this college-level course, topics are covered in-depth and the material is cumulative. In the first semester, students study kinematics, Newton's laws, work, energy and power, momentum and collisions, as well as the universal law of gravitation. In the second semester, they study circular motion, simple harmonic motion, torque, rotational kinematics, and statics as well as rotational energy and angular momentum. Additionally, given extra time, topics within modern physics may be covered with an interest-based research project. Collaborative work is promoted in problem-solving, laboratory experiments, and presentations. In the laboratory, students observe and explore physical phenomena and ultimately design experiments in inquiry-based labs. Experimental methods and techniques of data collection, interpretation, and error analysis are covered. A balance of traditional low-tech equipment and state-of-the-art probeware is used. The course prepares students to take the AP Physics 1 test in May. *Prerequisites: Honors Chemistry, Honors Pre-Calculus. For Fifth and Sixth Formers.*

### **ADVANCED PLACEMENT PHYSICS C (LAB)\***

In this college-level course, topics are covered in-depth and the material is cumulative. In the first semester, students study kinematics, Newton's laws, work, energy, and power, linear momentum and collisions, circular motion, simple harmonic motion, rotational kinematics, rotational energy, angular momentum, and the universal law of gravitation. In the second semester, they study electrostatics, conductors and dielectrics, circuits, magnetic fields, and electromagnetism. Both differential and integral calculus is used often throughout the course. Collaborative work is promoted in problem-solving. In the



laboratory, students observe and explore physical phenomena and ultimately design experiments in inquiry-based labs. Experimental methods and techniques of data collection interpretation and error analysis are covered. A balance of traditional low-tech equipment and state-of-the-art probeware is used. The course prepares students to take the AP Physics C Mechanics test and the AP Physics C Electricity and Magnetism test in May. *Minimum prerequisites: Honors Chemistry and Calculus. For Fifth and Sixth Formers.*

### **ADVANCED PLACEMENT PSYCHOLOGY**

The Advanced Placement Psychology course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the ethics and methods psychologists use in their science and practice. The course prepares students to take the AP Psychology exam in May. *For Sixth Formers.*

### **SYRACUSE UNIVERSITY PROJECT ADVANCE: EARTH SYSTEM SCIENCE (LAB)\***

Earth System Science illustrates the interconnectedness of biologic, hydrologic, atmospheric, and geologic processes in shaping our planet. This new approach to geology reflects a more integrated view of the study of Earth. In today's world, with an increasing global population, the threat of global warming, and a growing demand for raw materials and energy, a basic understanding of the Earth system is more important than ever. *Minimum prerequisite: Pre-Calculus. For Fifth and Sixth Formers.*

## **ELECTIVES**

### **ASTRONOMY (FALL)**

This course is an introduction to Astronomy from its beginning to the current exploration of space. Students will learn about our Solar System, our Sun and Moon, planets, stars, galaxies, quasars, and interstellar space. The celestial sphere and tools used by astronomers to study celestial objects will be introduced and students will learn to identify constellations in the night sky. The course will end with an introduction to dark matter, wormholes, black holes, and astrobiology. *For Fifth and Sixth Formers.*

### **BIOME ECOLOGY (FALL)**

The science of Biome Ecology classifies Earth's terrestrial ecosystems into major ecological units that are correlated with regional climate types. The course begins with a basic overview of the principles of ecology. Students study Tropical Rainforests, Tropical Dry Forests, Tropical Savannas, Temperate Grasslands, Mediterranean Scrub Forests, Taiga, Temperate Rainforests, Deserts, Deciduous Forests, Tundra, and Rivers and Lakes. Students study the human impact on each of the ecosystems. Students must have successfully completed a course in introductory biology. *For Fifth and Sixth Formers.*

### **ECOLOGY (LAB)\* (FALL)**

This semester lab course introduces basic concepts in the ecology of individual organisms, their populations, and the biological communities in which they live. Using the Canterbury environs as a case study, students explore forest and field ecosystems, identify and plot campus trees, and do a survey of the bird populations. Emphasis is on terrestrial plant and animal ecology. The historical, evolutionary, and ecological processes determining the distribution of ecosystems, habitats, and species are introduced. Theories of competition, predation, disease, and mutualism help explain the functioning of biological communities. *For Third and Fourth Formers.*

### **HUMAN PERCEPTION AND BEHAVIOR (FALL)**

Why do we act the way we do? How do we process information? This course is designed to offer students a deep dive into the physical psychology of the brain. With topics including the Nervous System, Cognitive

Functions, Neurons, and Synapses, the class will focus on the larger and more broad systems and functions of the brain. *For Fifth and Sixth Formers.*

### **COMPARATIVE ANATOMY (LAB)\* (SPRING)**

This course is designed to provide the student with an understanding of basic structural and functional anatomy and physiology of the human body. Upon completion of this course, the student will be able to do the following:

- identify basic athletic injuries & effectively implement appropriate rehabilitation techniques
- apply supportive & preventive taping & bracing techniques
- practice techniques in “field” situations
- understand mechanisms of injury as applicable to the healing process
- gain a thorough understanding of the five domains of an Athletic Trainer

*For Fifth and Sixth Formers.*

### **ENVIRONMENTAL SCIENCE (LAB)\* (SPRING)**

This semester lab course introduces some of the Environmental issues facing our planet. Topics include population dynamics, how the human population drives these issues, biodiversity and endangered species, climate change and alternative energy sources, land use and agriculture, and water resources. The course will include several oral presentations. The students will spend time analyzing water quality of a local stream by collecting chemical and biological data. *For Third and Fourth Formers.*

### **MARINE SCIENCE (SPRING)**

Students study the diversity of marine organisms, from the smallest plankton to the largest whales. Investigations of major marine environments focus on the complexity of living systems and the resulting interactions between organisms. Students learn that global weather patterns, currents, and tides are crucial to marine life. Lecture presentations, interactive discussions, multimedia materials, and laboratory studies are used to stimulate interest and promote academic success. The class takes a full-day field trip to the Maritime Aquarium in Norwalk, CT. The day includes a research trip or excursion on Long Island Sound. Students must have successfully completed an introductory biology course to enroll in this class. *For Fifth and Sixth Formers*

### **PSYCHOLOGICAL FUNCTIONS OF LIFE (SPRING)**

This semester-long course takes a deep look at three of the five major senses. It explores touch and how our body accepts pain, our auditory pathways and how we hear, and vision and how we view our surroundings and our place in the world. This course also touches on topics such as emotion, psychological disorders, wakefulness and sleep - all things that are triggered, affected, or based on how we perceive the world through our senses. *For Fifth and Sixth Formers.*

### **ANIMAL ANATOMY (LAB)\* (FALL OR SPRING)**

Students in this course study the anatomy of a diverse selection of animal life in a project-based approach. They learn the homologous and analogous structures and functions found in invertebrates and vertebrates. Students investigate structures at the cellular level through microscopes; the study of larger animals involves the dissection of preserved specimens. The course will also include how today’s newer classification system reflects a more phylogenetic arrangement and more consistent evolutionary relationships. *Prerequisite: Biology. For Fourth and Fifth Formers.*

### **ENGINEERING (FALL OR SPRING)**

This course encourages students to pursue engineering questions and technological solutions that emphasize research and problem-solving using mathematical and scientific concepts. Students achieve a more advanced level of skill in engineering design by learning how to conceptualize a problem, develop possible solutions, design and build prototypes or models, and make modifications if necessary. Students will explore engineering design, construction technologies, energy and power technologies, including fluid

systems, thermal systems, electrical systems, and communication and manufacturing technologies. *For Fifth and Sixth Formers.*

### **WAVELENGTHS & FREQUENCIES (SPRING)**

Wavelengths and Frequencies will highlight how we have progressed in our ability to communicate over short and long distances, from carrier pigeons to cell towers. The course is an overview of the evolution of how humanity utilizes and advances different technologies to communicate over long distances. We will analyze methods of written, digital, video, and media communication as well as how they directly affected key historical events. The curriculum will touch on topics such as hieroglyphics, messengers, the telegraph, radio waves, brief history of USPS, the telephone, and cell phones. *For Fifth and Sixth Formers*

## **THEOLOGY**

The Theology Department educates young men and women in the Catholic sacramental worldview and tradition in a challenging academic environment. Students discern their intrapersonal relationships with God and their neighbor and consider the moral rights and responsibilities that come with this relationship. The academic program includes an in-depth study of the life of Jesus and his mission, Scripture, tradition, Catholic social justice, morality, and world religions. The program informs our school community through active participation in service to others to build interpersonal relations in our surrounding communities and the liturgical life of the School.

### **MINOR COURSES**

#### **THEOLOGY III: INTRODUCTION TO MORALITY**

This course introduces students to the concepts of morality, social conscience, and the common good. Students will use Canterbury's Five Values as a framework to explore the aspects of the development of character and its influence on decision-making and the promotion of the common good. Modern Catholic Social Thought speaks of solidarity not only as a virtue to be enacted by individual persons one at a time, but also as expressed in the economic, cultural, political, and religious institutions that shape society. Through topical readings, case studies, and personal reflection, students will imagine a new model of international interdependent responsibility and pursuit of the common good through the lens of Catholic Social Teaching and our relational roles as agents of moral action within society. Analytical reflection, critical thinking, and community dialogue will form the framework of the course. *For Third Formers.*

#### **THEOLOGY IV: SOCIAL JUSTICE AND THE COMMON GOOD**

Students in this course will explore social justice issues, the foundational principles of Catholic social teaching, and apply their knowledge and faith to their experiential service work by engaging in an ongoing community service project. This course requires students to engage in learning about the organizations and communities they serve, the challenges they face, and issues of social justice on a local, national, and global level. While students engage in their service projects independently, they meet as a group to examine the theological foundations of social justice, discuss readings, current events, and to share reflections on their experiences. The coursework includes assigned readings, a reflection journal, and culminates with a final project presentation or research project. *For Fourth Formers.*

#### **THEOLOGY VI: LIFE WORTH LIVING**

The Life Worth Living course aims to engage students in critical discussion about the most important question of our lives: What is a life worth living? What kind of life would be truly worth wanting? What kind of world would be truly worth seeking? How ought I to live? This course spurs critical thinking on the question of what constitutes a flourishing life by drawing upon several religious and philosophical traditions, as well as literature, poetry, and art. Students and teachers together approach the core question—what is a life worth living?—by examining different models of the good life, by active reflection,

discernment, and how to pursue the good life, and by practicing collective habits of discussion within a respectful, honest, and diverse community of learners. *For Sixth Formers.*

## **FIFTH FORM ELECTIVES**

### **GRIEF AND LOSS (FALL OR SPRING)**

Grief and Loss is an exploration into the different aspects of grief, death, and life. Students will explore common misinformation about grief, as well as the different types of loss other than death. Other topics covered are different cultural perspectives on death, the survivor's experience of grief, and different cultural and religious beliefs about life after death. We also explore near-death experience and conclude the course by reading the book *The Shack*. The goal of the course is to introduce students to loss in a way that is informative and gives them the tools to help navigate this experience in the future.

### **SPIRITUAL JOURNEY (FALL OR SPRING)**

Readings from scripture, literature, modern theologians, and spiritual heroes will be our guides through an exploration of the theme of life as a journey toward reality, universal truth, and ultimately God and spirituality. Students will also specifically explore the concept of pilgrimage. This course will cover topics such as mindfulness, spiritual renewal, intentional travel, and the sacred journey. Inspired by formulating more questions than answers, the value of searching for those answers, and the process of discernment, students will challenge themselves to consider how responses to experiences allow opportunity to draw into deeper understanding and connection with God, self, and others.

## **STUDIO AND PERFORMING ARTS**

The Studio and Performing Arts provide students with courses leading to aesthetic literacy and an appreciation of the arts. Our many offerings give students an opportunity for intrapersonal exploration to make "art" through music, theater, and studio art. Emphasis is on understanding aesthetic principles and placing the arts in a historical and cultural context. Studio and Performing Arts courses have workload expectations similar to other academic areas. Students fulfill course requirements while visiting museums, galleries, instrumental performances, participation in recording sessions, or on-campus workshops. Fees depend upon the destination. For the serious Studio Arts student, the department offers portfolio direction and preparation in each area, a varied curriculum, exposure to many media, and independent study opportunities.

### **STUDIO ARTS**

**Curator of The Edward J. Duffy Family Art Gallery: Charles Hollinger**

### **MAJOR COURSES**

*(Course fee applies to all Studio Arts classes)*

#### **CERAMICS (FALL)**

This course investigates various ways to create functional and sculptural objects with clay. Hand-building techniques include pinch, slab, and coils along with a preliminary introduction to throwing on the wheel. *For Fourth, Fifth and Sixth Formers.*

#### **SCULPTURE (SPRING)**

This course explores the processes of modeling, carving, construction, and assemblage in wood, paper, plaster, wire, and found materials. Students begin with projects that help them visualize the transition from two- to three-dimensional design. Assignments progress into sculpture-in-the-round or free-standing works.

### **DRAWING (FALL OR SPRING)**

Students study the expression of visual thought through drawing. Areas covered include contour drawing, still life, portrait, perspective drawing, and experimental techniques. Students use pastels, charcoal, ink, pencils, markers and other mediums. Students will be assigned projects that utilize images from everyday surroundings and their imagination to form unique compositions.

### **PAINTING (FALL OR SPRING)**

Through experimentation and related exercises, students learn about painting as a medium of visual expression. Basic studies include drawing, color theory, and composition. Students explore a variety of subject matter from direct observation as well as from their imagination. Materials may include watercolor, acrylic, and collage. *For Fourth, Fifth and Sixth Formers. Advanced option available.*

### **ADVANCED DRAWING (SPRING)**

Building on skills established in Drawing, Advanced Drawing will be reviewing basic drawing skills and the elements and principles of design, while exploring a deeper understanding of how they are used in art. Students will explore several different types of media and artistic styles in order to define their personal aesthetic and design their own compositions. In addition to building a stronger foundation in art students will observe and analyze various artworks to expand their knowledge of art history and develop their personal aesthetic. *Requires teacher approval. Prerequisite: Drawing*

### **ADVANCED PAINTING (SPRING)**

Building on skills established in the Painting course, Advanced Painting allows students to continue exploration into paint as a medium, through projects that push their observational and imaginative capabilities. Students will dive deeper into color theory and painting techniques, as well as have the opportunity to try out different kinds of paint, like gouache and watercolor. Students will also analyze the work of painters throughout history through the contemporary era in order to help build their visual vocabulary. *Requires teacher approval. Prerequisite: Painting*

### **ADVANCED PLACEMENT TWO-DIMENSIONAL DESIGN**

(OFFERED AS STUDENTS QUALIFY)

This course is for the serious art student whose prior work exhibits advanced technical experience and conceptual thought processes. Students work in drawing, painting, photography, collage, and mixed media. Students spend the academic year focusing on a chosen theme or concentration. Explored in-depth, this theme is expressed using various color, design, and compositional techniques. AP Portfolios are submitted in May.

### **ADVANCED PLACEMENT THREE-DIMENSIONAL DESIGN**

(OFFERED AS STUDENTS QUALIFY)

This course is for the serious art student whose prior work exhibits advanced technical experience and conceptual thought processes. The course focuses specifically on developing advanced spatial design solutions. An understanding of drawing, painting and sculpture is expected. Students spend the academic year focusing on a chosen theme or concentration. Explored in-depth, this theme is expressed using various color, design, and compositional techniques. AP Portfolios are submitted in May.

### **ADVANCED PLACEMENT DRAWING**

(OFFERED AS STUDENTS QUALIFY)

This course is for the serious art student whose prior work exhibits advanced technical experience and conceptual thought processes. The course focuses specifically on using a variety of drawing media. Students spend the academic year focusing on a chosen theme or concentration. Explored in depth, this theme is expressed using various color, design, and compositional techniques. AP Portfolios are submitted in May.

## **PERFORMING ARTS**

**Department Chair: Christopher Rich**

**Director of Music: Dave Overthrow**

### **MAJOR COURSES**

#### **HONORS CONTEMPORARY MUSIC BAND**

The Contemporary Music Band is a high-level ensemble composed of a select group of instrumental and vocal students, specializing in music from a broad spectrum of contemporary music styles such as pop, R&B, rock, jazz, and funk. Students prepare music for performance at various concerts and special events throughout the year, both on and off campus. In addition, students are given the opportunity to record a digital portfolio in our on-campus recording studio. When selecting pieces for the group, students' musical experience as well as musical interests are considered. Students enjoy having some input into song selections. *By audition.*

#### **HONORS VARSITY VOICES**

Varsity Voices is Canterbury's high-level, mixed vocal ensemble, specializing in acappella and accompanied contemporary and popular music. Explore tight vocal harmonies, complex rhythms, and advanced vocal techniques in this challenging and fast-paced environment. Varsity Voices is an auditioned ensemble for all voice types as well as students who have interest and experience in vocal percussion/beatboxing. This ensemble will perform regularly both on and off campus. *By audition.*

#### **COMPUTER MUSIC 1: USING GARAGEBAND (FALL)**

This is a course open to beginners as well as those experienced with GarageBand. Students learn how to record and edit music, create beats, and mix tracks. After taking this class students will be able to record a project, record a podcast episode and record a movie score.

#### **COMPUTER MUSIC 2: USING PRO-LOGIC (SPRING)**

In this class students learn how to create, record, and mix music with Logic Pro X. This course is open to all students. Students will learn how to create their own music with Apple Loops, record MIDI with software instruments, learn how to write beats, and learn how to record audio. At the end of this class, students will be able to create their own beats and songs with the Logic Pro X Software. *(Computer Music 1 is not a requirement of Computer Music 2)*

### **MINOR COURSES**

#### **ACTORS STUDIO**

Make your voice heard in this flexible, workshop style acting class open to all Canterbury students. Whether you would like to simply improve your public speaking skills or develop the tools to be a successful performer in theater, film and television, this collaborative and engaging acting class will challenge your creativity, imagination, humor and spontaneity. Students will explore acting through a variety of individual and group activities such as theater games, improvisation, scene work, monologues, voicework, singing (optional) and movement. In addition, specialized workshops in areas such as musical theater, stage combat, auditioning and more will be offered periodically throughout the school year.

#### **CANTERBURY SINGERS**

Canterbury Singers is the place where anyone can find their singing voice. This non-auditioned, multi-level,

mixed singing ensemble is open to all Canterbury students who have a love of music. Improve vocal skills and build confidence while exploring multi-part ensemble singing through a variety of styles including pop, classical, seasonal, musical theatre and multicultural music. Canterbury Singers performs at various concerts and special events throughout the school year.

### **CLASSICAL CHAMBER**

Classical Chamber is made up of small groups of two to four players, who rehearse and perform selections from the standard chamber music repertoire and contemporary pop. The material is chosen based on the ability and instrumentation of each group. This is an excellent opportunity for students to be exposed to material that is often not studied on the pre-college level. Each student will be expected to participate in all rehearsals and performances of the ensemble. *Prerequisite: These ensembles are for more advanced students and are not classes in instrumental instruction. Students are expected to have an instrument available for full-time use. Private lessons are encouraged but not necessary, as long as the student can perform the music assigned. By audition.*

### **GROUP PIANO 1**

This beginning group piano class is geared towards those new to piano study and as a refresher course for those who studied for a short time as a young child. Learn basic keyboard skills and music theory including melodic and rhythmic notation, sight-reading, transposition, harmonization and improvisation. This class is highly recommended for those students interested in singing and theatre who have no formal music training. Class size is limited to maximize individual attention while working in a small supportive group. Private piano lessons are also available by appointment for those who have had previous experience or would prefer to study independently.

### **INTRODUCTION TO GUITAR**

An introduction to the fundamentals of guitar playing, designed for the beginning student. The student will learn chords, progressions, strumming patterns, flat picking and finger-picking. Students will learn to read guitar tablature, how to read chord diagrams, meters, scales, positions, with the emphasis on developing technique and dexterity. *If a student does not own a guitar an instrument can be rented for a minimal fee.*

### **JAZZ/ROCK/POP ENSEMBLE**

The Jazz/Rock/Pop Ensemble plays contemporary styles of music in the pop, rock, and jazz genres. Students with experience playing the following instruments are welcome: alto sax, tenor sax, baritone sax, soprano sax, trumpet, trombone, piano, bass, guitar, and drums. Students in this ensemble will work together to prepare music for performance at concerts and special events. *By audition.*

### **ORCHESTRA**

The Canterbury Orchestra will perform various selections from an expanded repertoire including styles of music ranging from symphonic to contemporary pop selections. The material will be chosen based on the ability of the group as a whole. Students will be expected to participate in all rehearsals and performances of the Orchestra. *Prerequisite: This is not a class in instrumental instruction. Students must have played an orchestral instrument (woodwind, brass, or string) and have the basic knowledge thereof. This instrument must be available to the student for full-time use. Private lessons are encouraged but not necessary, as long as the student can perform the music assigned. By audition.*

### **ROCK BAND**

In Rock Band, students of beginner to intermediate level on the guitar, bass, drums, or vocals can enjoy preparing songs from a variety of rock music styles. Students will explore the stylistic elements of classic to modern rock and perform at concerts in the fall, winter, and spring. *By audition.*

## **PRIVATE LESSONS**

Private instruction is offered on guitar, bass, piano, voice, drums, sax, trumpet, clarinet, violin, and cello. All private instructors are experienced musicians in the fields of music education and performance. Private lessons meet once a week and can count towards fulfilling the Fine Arts credit requirement. This is a great opportunity for any student who wishes to learn an instrument or excel on an instrument they have experience in playing. *A fee is charged for private instruction.*

## **THEATER**

**Theater Director: Co-Director: Keiko Mathewson, Co-Director: Christopher Rich**

*Theater course credits count toward fulfilling the Studio and Performing Arts requirement.*

### **THEATER PRODUCTION (FALL)**

Student actors, through rehearsal and performance in the fall play, practice techniques unique to theatrical production. Analyzing character, understanding relationships between characters, vocal projection and body expression are all part of the course. Actors are expected to display disciplined work ethic, teamwork, and personal responsibility as basic requirements for participation. Two performances on the Canterbury stage for audiences culminate the course. This counts as either minor (.25) or major (.5) credit, depending on time commitment. *By audition.*

### **MUSICAL THEATER PRODUCTION (SPRING)**

Student actors, through rehearsal and performance in the spring musical, practice performance techniques unique to musical productions. Singing, dancing, and the art of performance in this genre are part of the course. Actors are expected to display disciplined work ethic, teamwork, and personal responsibility as basic requirements for participation. Two performances on the Canterbury stage for audiences culminate the course. Counts as either minor (.25) or major (.5) credit, depending on time commitment. *By audition.*

### **TECHNICAL THEATER (FALL OR SPRING)**

Students will obtain knowledge of the behind-the-scenes collaboration that takes a production from an initial script selection through design and implementation to the final curtain. Students will learn the basics of set-building, lighting, and sound design for drama productions and will be well-prepared to handle operations on their own at showtime. Students will become familiar with the proper use of tools for set-building, gain an understanding of set design as it applies to Canterbury's theater space and learn the basics of stage maintenance, lighting, and sound needs for the actors. Instruction will emphasize terminology, basic concepts, and safety. Two performances on the Canterbury stage for audiences culminate the course. This course counts as either a minor (.25) or major (.5) credit, depending on time commitment.