

COURSES OF STUDY BY ACADEMIC DEPARTMENT

Arts Department

VISUAL ARTS AND PERFORMING ARTS

At Tilton, the arts are an essential part of a student's academic experience, as they promote creativity and discernment, enhance our understanding of culture and history, and create innovators and freethinkers with real world skills. For these reasons Tilton requires at least one art credit toward graduation. While enrollment in elective courses is dependent upon enrollment and staffing, Tilton encourages all students to develop their skills in a wide array of fine, commercial and performing arts courses. Our arts program incorporates the disciplines of studio art, new media and performing arts and aligns with the essential skills and Mastery Approach that are the foundation for each student's experience at Tilton.

By experimenting with the basic principles and techniques in each area, students value their perceptions, emotions and intuitions; respond intelligently and sensitively to new experiences; and respect, understand and value diverse artistic expression. At Tilton, students learn to analyze, evaluate and interpret their own work and the work of their peers. Sharing ideas with each other and with the community through group projects, public performances and exhibitions, students develop a sense of ownership in what they have created and they may become inspired by the work of their peers.

The work and goals of the Art Department embody the concept of student-centered, project-oriented learning that is the core of the Mastery Approach. The arts also provide meaningful opportunities for students to engage in activities that will help them better understand who they are and how their individual creativity can lead to productive involvement in the contemporary world.

Art Department Enduring Understandings:

- Art creates innovators and free thinkers with real world skills.
- Art is made up of sets of skills that can be learned and practiced.
- Pushing yourself outside of your comfort zone is vital to self-discovery.
- Art is enrichment.
- Thinking critically and problem solving are important skills for personal growth and

success.

- Communicating through the arts helps us understand people and the world on a global level.

NOTE ON SUPPLEMENTARY FEES | Art classes require specific necessary expenditures for classroom supplies and materials. There are generally no textbook expenses associated with Arts courses. However, expenses for supplies (paint, paper, toner, clay, photographic supplies) may be significant. For this reason, students enrolled in arts classes may be assessed a materials and supplies fee. *The fee varies with the course selected.* In addition, there may be incidental field trip charges to cover the cost of admission to museums and galleries, typically no more than once a semester for any student. Students in Independent Study programs in the arts, or those whose work requires a significantly greater use of materials and supplies than the average student may incur additional charges or may be asked to provide their own materials.

THE STUDIO ARTS

DRAWING & PAINTING FUNDAMENTALS (10TH, 11TH, 12TH, PG; TRIMESTER; 1/3 CREDIT) NOT OFFERED 2021/22

This course will break down the basic elements of drawing and painting. These elements will be practiced and built upon. The students will learn how to mix colors only using the three primary colors. The focus of this class will be on drawing and painting from life. Students will be pushed creatively, critically, will be asked to communicate about their own work and others, they will be pushed outside of their comfort zones and will learn how to take artistic risks.

STUDIO ARTS (9TH-PG; FULL YEAR; 1 CREDIT)

Students develop skills in two- and three-dimensions. Ultimately, students will hone their focus and skills to a specific medium and set of skills to create art within that medium. Students are in control of their own journey in this hands-on art class.

ADVANCED STUDIO PRACTICES (11TH, 12TH, PG; TRIMESTER; 1/3 CREDIT) NOT OFFERED 2021/22

This course is an upper level studio class. Students will be pushed outside of their comfort zones allowing for artistic risks. They will be constantly challenged creatively, need to think critically and will develop the skills to communicate about their own art

and other's work. They will learn how to display art work and how to critique and be critiqued. At the end of the course, each student will know how to create and maintain a working portfolio of work.

ADVANCED PLACEMENT STUDIO ART (FULL YEAR; 1 CREDIT) NOT OFFERED 2021/2022

Students will review the AP Brochure and AP Website in order to understand the portfolios. Students will spend the 1st semester working on their Concentration pieces using a variety of materials, media and methods, starting the Breadth and Quality portfolios and preparing to submit them to the AP Board in May. Students will explore beyond their comfort zone in concepts, ideas and subject matter within the concentration pieces. Students will look at previous students' Portfolios to gain insight into scores and completion. Students will photograph pieces as they are finished and turned in, knowing that as they rework a piece, a new photograph should be taken and stored.

CERAMICS FOUNDATIONS (10TH, 11TH, 12TH, PG; FULL YEAR; 1 CREDIT)

This is a basic course in ceramics with an emphasis on wheel throwing and hand construction techniques, design, aesthetic and the creative development of clay objects, examining cultural, historical and personal models of expression. Students are expected to develop skills in various forming methods. Sensitivity to the materials, to aesthetic design and to the individual and imaginative use of the materials is expected. Students will learn technical skills and develop an artist's vocabulary. Class time will include: demonstrations, videos and personal practice.

ADVANCED CERAMICS (10TH, 11TH, 12TH, PG; FULL YEAR; 1 CREDIT)

For students with a background in basic ceramics, this course provides opportunities for continued explorations in clay media and techniques. Wheel-throwing and hand building methods will be used in ceramic sculpture, tile making, stoneware pottery, and collaborative forms. Students develop ideas based on contemporary culture as well as traditional clay forms and methods. The sculpture process will include: pinch and coil building, extrusion and slab construction methods. Firing will take place primarily in an electric kiln, with opportunities to participate in group raku firings during the fall and spring.

GRAPHIC ARTS & DESIGN (10TH, 11TH, 12TH, PG; FULL YEAR; 1 CREDIT)

This course introduces students to Adobe Photoshop as a creative tool to express themselves digitally. The primary goal of the course is for students to gain proficiency in

using the software so that they can begin to create anything their minds can come up with without limits. We begin by learning basic tools with projects assigned but quickly get to student-designed projects. With individual projects and ideas, students are introduced to more advanced tools and techniques, as needed, which allow them to create their art or design. Projects must fall under either an expressive artwork, which communicates to a viewer, or a design piece, which would be for a potential "client." In both tracks, students are guided using the visual elements of art and encouraged to evaluate their own work and that of others. Assessment is based on class participation, review of complete assignments, peer feedback, and increasingly challenging work. At the completion of the course the students will select their best work for the spring art show.

GLASS FUSING (10TH, 11TH, 12TH, PG; TRIMESTER; 1/3 CREDIT)

This is an introductory course that will allow students to learn the process of glass fusing and create colorful works of art. The curriculum will provide students a greater understanding of the elements of art and basic design principles that will strengthen their compositions and creations. Students will engage in firing techniques such as slumping, tack fusing, and fully fusing, students will have the opportunity to create their own ceramic molds to further develop their forms and create unique sculptural and functional glasswork. Students will leave the course with a vocabulary and scientific knowledge representative of a greater understanding of the process of fusing glass. Projects may include mosaics, slumped bowls, glass trays, hangings, and pendants or other small jewelry. Enrollment is capped at 6 students.

WOODWORKING (10TH, 11TH, 12TH, PG; TRIMESTER; 1/3 CREDIT)

This introductory course teaches students basic skills of woodworking from shop safety through the creation of small furniture and other projects. The enrollment is capped at 6 students.

NEW MEDIA

DIGITAL PHOTOGRAPHY (10TH, 11TH, 12TH, PG; FULL YEAR; 1 CREDIT)

Digital Photography is designed to provide students with a thorough overview of choosing and evaluating digital cameras, and allow students to work with their cameras, manuals and memory cards. We will go over the history of the medium and how it has evolved into the digital realm, exploring how the medium has changed, regarding who a photographer is and how the photograph is perceived by society and our culture. We

will have regular shooting assignments to get the students to think critically and learn how to create images that tell a story to the viewer. This is not a software class, but a course for the emerging digital photo artist.

ADVANCED DIGITAL PHOTOGRAPHY (11TH, 12TH, PG; TRIMESTER; 1/3 CREDIT); NOT OFFERED 2021/2022

Any combination of the photography courses or this course may be taken as a class or as a structured independent study depending on enrollment. *Teacher approval is required.*

YOUTUBE & FILMMAKING (10TH, 11TH, 12TH, PG; FULL YEAR; 1 CREDIT)

In this course, students will explore what constitutes good quality video content on YouTube. Students will learn how to use cell phones and the DSLR camera to produce engaging video content. Essential practices taught will include studio and location lighting techniques, audio recording, and video editing. Elements and principles of design are blended into the curriculum to gain an understanding of guidelines used to create good composition. The course will then explore how to use these skills to produce a short film. Projects for this full time course will include the production of short videos covering a variety of topics for placement on YouTube and a large group project to produce a short film.

INTRODUCTION TO THE DIGITAL ARTS (10TH, 11TH, 12TH, PG; TRIMESTER; 1/3 CREDIT)

This course introduces students to a variety of digital tools used to create modern artistic work. It gives students a taste of full year digital arts courses offered at Tilton including Digital Photography, YouTube/Filmmaking, and Graphic Design. Topics covered include fundamentals of photography, video production, and the design process. Students will complete individual and team projects throughout the trimester, starting to build a small portfolio of digital artwork. This is a great class to take if you're not sure which full-time arts class you want to sign up for.

3-D DESIGN AND CREATING (10TH, 11TH, 12TH, PG; FULL YEAR; 1 CREDIT)

A deeper dive into the understanding of design, building, and woodshop safety; this course uses Google Sketch-Up and Adobe. Students will execute a project of their choosing from inception to completion. This new course is similar to studio arts using industrial materials.

THE PERFORMING ARTS

THE PERFORMING ARTS (9TH, 10TH, 11TH, 12TH, PG; FULL YEAR; 1 CREDIT)

This unique course can be for someone who is looking to perform in their future or for someone who is looking to work on their public speaking skills. Students will be able to partake in the entire year or just one trimester.

Trimester 1- Improvisation and Public Speaking- It's important to know yourself as a performer; Trimester one focuses on learning who you are as a performer and speaker.

Trimester 2- Directing and Acting- Students dive into script analysis, scene writing, and creating characters. This trimester is great for performers or potential actors for film or the stage.

Trimester 3- Voice Performance and Lab- Trimester three focuses on using your voice as a tool. For the student who is thinking about being a voice-over performer, or even learning to use their singing voice properly.

ENGLISH DEPARTMENT

The Tilton School English Department understands that we all acquire and hone native language skills and insights at different rates and in different ways. Further, we are motivated to hone these critical thinking and communication skills through reading different kinds of texts and by undertaking different kinds of expressive projects. The English Department invites students to engage in a range of experiences in close and sustained reading and a wide array of writing and performance projects to help them develop essential skills. In addition, at every level, students can opt to engage in more advanced and/or additional projects to earn "honors distinction."

English teachers craft assignments and projects to allow students to express their own creativity and insights and to hone their analytical and mindfulness skills. The writing process encourages revision and refines the students' understanding of grammar and mechanics, placing an emphasis on eventual mastery.

English is required each year of attendance at Tilton School.

FULL YEAR COURSES WITH HONOR* OR ADVANCED PLACEMENT** OPTIONS

IDENTITY AND DISCOURSE -- EXPLORATION OF SELF THROUGH LITERATURE

(9TH; FULL YEAR; 1 CREDIT)

This course is designed to build student capacity in the Five Essential Skills, with a particular focus on inquiry, communication and creation. The course “anchors” student reading with the following texts: *All American Boys*, *American Born Chinese*, *The Curious Incident of the Dog in the Nighttime*, *Julius Caesar*, and *The Merchant of Venice*. The course emphasizes the close reading of literary texts, encouraging students to ask questions about characters, their conflicts and the thematic understanding emerging from these conflicts. Further students will reflect upon such questions as “Who am I becoming?” “How do I know?” and “What changes do you want to make in the world?” The course emphasizes writing clear, well-developed and polished argumentation, reflection, and poetry along with public speaking presentations. Finally, the course encourages technical precision in punctuation, diction and syntax.

Honors Texts: Toni Morrison’s *The Bluest Eye*

Malala Yousafzai’s *I am Malala*

J.D. Salinger’s *The Catcher in the Rye*

ANGELS & MONSTERS WITHIN -- ADVANCED STUDY IN LITERATURE & COMPOSITION (10TH; FULL YEAR; 1 CREDIT)

This course deepens the students’ exploration of self by probing the question of “good and evil.” Reading literary texts from ancient Greece, through the Renaissance and into the contemporary period, students will continue to hone their close-reading, composition and public speaking skills. Ultimately, students will develop their own understanding of living a “good” life. Each year, students will read from of the following texts:

Sophocles’ *Oedipus Rex*

Shakespeares’ *Macbeth* or *Othello*

Mary Shelley’s *Frankenstein*

William Golding’s *Lord of the Flies*

Elie Weisel’s *Night*

Margaret Atwood's *The Handmaid's Tale*
Steven King's *Different Seasons*
Art Spiegelman's *Maus*
Selected Poetry & Film

Honors Texts: *Gone Girl*, Gillian Flynn
The Stranger, Albert Camus

LITERATURE OF THE AMERICAS* (11TH; FULL YEAR; 1 CREDIT)

Learners in this course will develop Tilton's Five Essential Skills through a year-long conversation with the voices and texts of the Americas. Together, we will have conversations with writers from the Americas through their works; we will have conversations with each other through our own creative and critical expression; most centrally, through reading, writing, speaking, and listening we will have conversations about American experiences and identities, deepening our own understanding of the complex identities of the Americas.

This course dives into canonical and contemporary texts and provides opportunities for students to develop their skills with language, both written and spoken, through various modes that range from exploratory and reflective, to expository and argumentative. Students who demonstrate advanced mastery of these skills, along with exceptional Habits of Mind, may earn an Honors distinction.

WORLD LITERATURE & COMPOSITION* (12TH; FULL YEAR; 1 CREDIT)

This course broadens the student's understanding of his or her place in a complex, culturally diverse world. Through the language and backgrounds found in fiction, nonfiction, poetry, and drama from around the globe, students examine the development of universal codes and unique perspectives. Using historical contexts and an interdisciplinary approach, students develop their understanding of this material and gauge their own involvement through argument, exposition, and presentation modes of discourse. Students who choose the "honors" option for this course will have additional responsibilities to convey a deeper skillset.

ENGLISH ELECTIVES

CREATIVE WRITING (9TH, 10TH, 11TH, 12TH, PG; SEMESTER; CREDIT)

Creative Writing opens an opportunity for students who wish to create and share original works of memoir, poetry and fiction.

1st Trimester -- Memoir

2nd Trimester -- Poetry

3rd Trimester -- Fiction

Students may enroll in any one or all of the trimester courses in creative writing. Further, enrolled students lead the production of the School's creative arts journal, *Parnassus*.

CRITICAL READING & WRITING WORKSHOP (12TH, PG; TRIMESTER; 1/3 CREDIT)

Taken in addition to, but not in replacement of, a full year English course, Critical Reading & Writing Workshop (CRW) is designed for students who could benefit from more targeted instruction and practice in reading and writing skills. An intensive, seminar-style course, CRW will help students develop effective analytical and communication skills. Close readings of short texts provide valuable insights into purpose and audience. Revision and reflection of student writings allow for greater focus on more formal mechanics. Practice of posture, poise, pace, and pronunciation produces positive outcomes in public speaking. Through modes such as argumentation, description, comparison and contrast, personal narrative, cause and effect, and textual analysis, students will gain greater confidence in their abilities.

CRW WILL NOT BE OFFERED IN 2021-22

COURSES WITH ADVANCED PLACEMENT OPTIONS

ADVANCED RHETORICAL ANALYSIS: NONFICTION (11TH, 12TH, PG; FULL YEAR; 1 CREDIT)**

AP LANGUAGE AND COMPOSITION OPTION

This course helps students refine their reading and writing for college success and civic engagement. As curious, critical, and responsive readers of mostly nonfiction, this course requires students to be flexible, reflective responders with audience and purpose in mind. Learning to identify and to analyze rhetorical modes and literary devices, students discover a writer's intentions to elicit a reader's response to a particular situation. Context is crucial, and students work to polish their own understanding of formal and informal written and spoken language. Students who choose the AP option

will have “Advanced Placement English Language and Composition” on their transcript and must take the spring AP national exam. All students will create pathways for deep, purposeful, self-directed learning, fueling lifelong discovery, creativity, and growth, unleashing the skills, passion, and courage to address the world’s most challenging problems.

ADVANCED LITERARY STUDIES (12TH, PG; FULL YEAR; 1 CREDIT)**

AP LITERATURE AND COMPOSITION OPTION

This course helps students refine their reading and writing for college success and literary discourse. As critical and responsive readers of fiction, poetry, and drama, students will practice deft reading strategies and generate insightful responses with audience and purpose in mind. Learning to identify and to analyze literary devices within unique genres, students discover a writer’s thematic and emotional intention and connect these intentions to contemporary politics at home and around the world. Context is crucial, and students work to polish their own understanding of cultural perspectives and of formal written and spoken language. Students who choose the AP option will have “Advanced Placement English Literature and Composition” on their transcript and must take the spring AP national exam. All students will create pathways for deep, purposeful, self-directed learning, fueling lifelong discovery, creativity, and growth, unleashing the skills, passion, and courage to address the world’s most challenging problems.

HISTORY AND SOCIAL SCIENCE

Successful historians and social scientists engage with their world. They seek to understand human goodness, interpersonal fairness and social justice. Successful learners in history and the social sciences probe those moments in history, and in their own lived experience, when the good appears to vanish, allowing injustice, in its many forms, to flourish. Ultimately, successful social scientists become activists, advocating for a theory of being, of societies, of economic systems, and of ecology, that promote the good, the beautiful and the just.

To become successful in this endeavor Tilton School students must continue to develop

their facility with the School's Five Essential Skills. First they must ask good, probing question about how the human world works. They must employ research and critical questions skills to understand what has already been learned on the topic and from a variety of sources. They must consider the perspectives of the multiple stakeholders who are involved in their research. They must strive to develop their written and oral communication skills, employing responsible research practices, thesis development, and clear, engaging presentation. Ultimately, Tilton School students in the Social Sciences emerge from the program with a deepening understanding of their world, a broadening perspective of their place in it, their own vision of responsible, 21st century, global citizenship and the rhetorical power to share that vision.

FOUNDATIONS IN WORLD HISTORY (9TH; FULL YEAR; 1 CREDIT)

The emphasis of this class will be creating a knowledge base in multiple areas of the study of history. The ultimate goal is to have the students be better historians when they finish their coursework. Content work will begin with work on world geography where students will develop a better knowledge of regions, countries and influential topographic features.

The course then moves into work in two major themes. First is an examination of historically influential government and economic systems where ancient world history will be the starting point and the class will examine the development of these systems. The second theme will be world religions where the origins of some of the major world religions will be examined again using their origination point in ancient history as the backdrop for expanded understanding of the complex situations that have arisen around religion in general. Ancient civilizations that will be studied are: Greece, Rome, China, Japan, and the Middle East.

Skill emphasis in this course will be heavily based in communication, critical thinking, and content knowledge acquisition. Students will work to expand their skill sets in each of these areas in order to have a strong foundation as they enter tenth grade.

Students can earn an Honors designation by completing three projects that require significant self-direction under the guidance of the teacher.

EXPLORATIONS IN WORLD HISTORY (10TH; FULL YEAR; 1 CREDIT)

Explorations in World History examines the history of significant global communities

and the intersection of communities, ideas and intellectual movements. Connecting traditional learning of significant historical developments in key regions of the world with an examination of current global issues, the course is designed to engage students actively investigating the changing world and the rise and fall of empires and countries and the role that ideas play in the development of societies and cultures. Students in this course will be focused on how communities, ideas and nations evolve, develop and spread, as well as the increased globalization of the world through migration and exploration and exchange of cultures and ideas. The curriculum is designed to provide students with training and practice in the acquisition of skills, with a clear focus on communication and critical thinking and decision making along with the acquisition of knowledge necessary for the study of history to prepare students for US History the following year. The class is project and discussion based, with a focus on the analyzing of primary source material and the application of skills and ideas.

HONORS EXPLORATION IN WORLD HISTORY (10TH; FULL YEAR; 1 CREDIT)

Honors Exploration in World History will follow the same model as Explorations in World History, but is designed to prepare students for Honors or AP US History and the curriculum will be a more rigorous and in depth curriculum, while examining the same subjects.

U.S. HISTORY (11TH; FULL YEAR; 1 CREDIT)

Designed predominantly for juniors, United States History is a course that provides a thematic investigation of the idea of the American Experiment. The main areas of investigation focus on how the United States changes and experiments with its political system, how it addresses and adapts to the changing social and demographic trends and finally how its interactions with the global world impact the economic realities of its citizens and the world at large. In this course, students are challenged to develop critical thinking, and communication skills. Upon completion of this course, students are expected to be able to formulate and defend an argument that is supported by historical evidence and logical discussion. Students are also expected to understand connections that others have made between the past and the present, but also to be able to make those connections themselves and to apply these understandings to their own lives. The core lesson is that the study of history makes a difference in the experiences of today.

HONORS U.S. HISTORY (11TH; FULL YEAR; 1 CREDIT)

The honors section of the standard United States History curriculum is provided for

students who have demonstrated strengths in communication, and critical thinking, but who choose not to enroll in the AP U.S. History course. While covering the same general topics as the standard curriculum, the pace of the Honors section is accelerated; students read different and/or additional texts and complete more detailed writing assignments and projects. Successful completion of the Honors American History class prepares students well for Advanced Placement courses in their senior year.

PSYCHOLOGY (12TH, PG; FULL YEAR; NON-AP; 1 CREDIT)

In this college preparatory course, students embark on an investigation of the study of human mind and behavior. There is an emphasis on scientific reasoning and analysis of complex human phenomena, as well as on the application of psychological concepts to real-world issues. Major themes of the course are the relationships between brain and behavior, body and mind, nature and nurture. Core topics include the study of the life span development of an individual, major subfields such as cognitive psychology, emotion and motivation, social psychology, abnormal psychology, and personality. The course overlaps in content and skill development with the AP Psychology course, but allows for in-depth investigation of fewer topics, stresses the practical application of theoretical knowledge and asks students to put their learning into practice in their school community as Peer Counselors, Proctors, Team Captains and other community leadership roles.

CIVICS & CURRENT EVENTS (11TH, 12TH, PG; FULL YEAR; 1 CREDIT)

A research-based seminar course, Civics and Current Events develops students' understanding of their contemporary world and their role, not only as global citizens but as citizens in the many communities they are involved with. Based on the ancient Greek notion of *paideia*, the course aims to build a more aware and responsive citizenry/polis/community by focusing on the role of government, economic systems, national and international relationships, the rights of individuals and institutions and the roles that the individual plays in these areas. The course, therefore, will ask students to research and grapple with today's most challenging issues.

Students will develop their critical thinking, communication and mindfulness skills through frequent discussion, weekly writing and project based assessments that will challenge their analysis and synthesis of both original and researched ideas.

CRIMINAL JUSTICE (12TH, PG; FULL YEAR; 1 CREDIT)

What is justice? How do the laws/rules created by societies reflect the values of the people that make up the society? How are laws enforced? What does punishment achieve? How should a society balance the rights of individuals within the society with the well being of the society as a whole? These essential questions will guide our in-depth study of the American criminal justice system. Students will examine the processes by which laws are made and enforced and the ways in which society responds to disputes or law breaking. The class will analyze and examine both local and national recent crimes closely to assess patterns of crime in this country, the effectiveness of courts, attitudes of citizens towards the police, and the prisons' impact on the incarcerated as they combine to function as the criminal justice system. The students will also compare and evaluate the justice system and analyze whether rehabilitative programs and restorative justice systems lower recidivism more than punitive incarceration sentences.

ECONOMICS (11TH, 12TH, PG; FULL-YEAR; 1 CREDIT)

This interdisciplinary course replaces the prior course offering in Economics, and provides an integrated learning experience in which students simultaneously acquire skills and knowledge in a Social Sciences domain (Economics) and in Mathematics (Statistics). IM3 and a US History course are prerequisites. By examining conceptual and real-world economic concepts through the utilization of sound statistical practices, students will internalize the core principles of each field in a deep and lasting manner. The course, and this approach, provides a broad background for students who wish to pursue degrees in business or economics at the college level. The work of the course includes formal written assessments, informal class discussions of relevant real-world events, both current and historical, presentations on interdisciplinary projects and ongoing in-depth project work, leading to Capstone presentations. Examples of specific topics and activities include: discussion of current economic events such as Greece's relationship with the Euro, Brexit, and the United States' engagement in trade wars with foreign countries, as well as historic economic events including the Great Depression and the financial crisis of 2008.

HISTORY THROUGH CONTEMPORARY FILM (12TH, PG; 3RD SEMESTER; 1/3 CREDIT)

This course is a third trimester elective offering in the elective program. *Students taking this course should have successfully completed US history, and a junior level English course.* The

study of history has deep roots in human culture all over the world, but the main task of a historian is not simply to record facts and dates, it is to evaluate the evidence available. History then is the selection, interpretation and evaluation of evidence for the purpose of revealing what happened, how it happened and why it is important. Since Edison's invention of the kinoscope, America and the rest of the world have been transformed by motion pictures. Some films have purposefully taken on the task of recreating past events, with varying degrees of historical accuracy. This has caused many historical purists to argue that since these films are not made by historians they do not accurately recreate the past, and are made only for entertainment and commercial purposes.

Regardless of their accuracy, these films reveal important historical information about the society and culture in which they are created. In this course, students will explore contemporary films as historical evidence for both the time period being depicted as well as the period in which the film is created. Students will watch feature films from a variety of US historical time periods. Students will research the time periods being depicted in the films as well as the time period in which the films were made. Class discussions and a blended learning environment will form the major learning activities, while the main tool for assessing student learning will be expository and persuasive essays.

The following essential questions will serve as a driving force for this course: *Is film reliable as historical evidence? What determines the reliability of films as historical evidence? What does this film say about the society and culture in which the film was created? Can this film be used to learn about history?* This course offers a diversified learning experience that will prepare students for future learning experiences and will foster a passion for lifelong learning. It will expose students to different cultures and conflicts in the history of our country, and will help students to become more sophisticated and informed consumers of visual media and the film experience of popular culture. Students will learn a new appreciation of the art of film and will understand better how the right skills and knowledge can help to create a just and healthy community.

CULTURAL EXPLORATION: DOMINICAN REPUBLIC (9TH, 10TH, 11TH, 12TH, PG; SEMESTER; 1/2 CREDIT)

This course allows students to earn academic credit for travel abroad and cultural immersion experiences. The course has three phases. The first phase includes preparation and learning about the target country and culture. The second phase is

cultural immersion, an intense period of time, usually seven to ten days during spring break, when students travel to and live in the culture of interest and are actively involved in service work, in environmental exploration and study, in language and social immersion learning, or in historical or cultural study. The course may vary from year to year in its learning focus and target culture. The third phase of the course occurs after return to school and includes a period of personal and group reflection on learning as well as reporting back to the school community using a variety of media resources. The campus-based elements of the course typically involve blended learning activities and are organized outside of the regular daily school schedule.

The course will focus on exploring culture and social justice in a developing Caribbean nation, the Dominican Republic. This immersion experience is organized and provided by the Batey Foundation. The mission statement of this organization is “to raise the living standards of the present generation of children and their families living in the Bateys (sugar workers’ settlements) of the Dominican Republic, who are severely affected by poverty, disease and hunger, while promoting sustainable development for future generations” (www.thebateyfoundation.org). Students taking this course will explore and learn about poverty, social justice/injustice and Caribbean history and culture, and will engage in direct service work, typically working with children in a school or community setting, or helping to build or repair community resources.

Travel and associated expenses are paid for by the student and his or her family, as with other spring break trips. The cost is approximately \$2000/student for airfare, meals, lodging, donation of materials, and recreational/cultural activities. This course bridges the gap between the classroom and the real world with its focus on diversity, change and service. This experiential learning pushes students to reach the power of their potential, by challenging comfort zones and learning how to adapt successfully to a completely different environment and culture.

INTRODUCTION TO ENTREPRENEURSHIP (9TH, 10TH, 11TH, 12TH, PG; EACH TRIMESTER; 1/3 CREDIT)

This course introduces students to the theory of entrepreneurship and its practical implementation. It focuses on different stages related to the entrepreneurial process, including business model innovation, monetization, small business management. Students in the course will study Tilton’s downtown’s Gold Rush Cafe, as a working model of an entrepreneurial venture. Students will also develop skills in written business communication and oral presentations that allow students to integrate

entrepreneurship concepts and interact with business experts. This course is intentionally focused on advanced credit opportunity.

ADVANCED PLACEMENT IN HISTORY & SOCIAL SCIENCE

AP ECONOMICS (12TH, PG; FULL YEAR; 1 CREDIT)

This course is designed as a combined course to prepare qualified students for the AP exams in Microeconomics and/or Macroeconomics. All students are expected to take one of these exams. Students may opt to take both. The course is designed for students with strong mathematical skills, sound critical thinking skills, and the motivation and independence to accomplish the independent work required for success in an AP curriculum. *Enrollment is allowed only for students who are recommended by the Department, and with the permission of the instructor. Qualified juniors may be permitted to enroll.*

According to the College Board, the purpose of an AP course in microeconomics is to give students a thorough understanding of the principles of economics that apply to the functions of individual decision makers, both consumers and producers, within the economic system. It places primary emphasis on the nature and functions of product markets and includes the study of factor markets and of the role of government in promoting greater efficiency and equity in the economy. In comparison, an AP course in macroeconomics gives students a thorough understanding of the principles of economics that apply to an economic system as a whole.

The course places particular emphasis on the study of national income and price-level determination, and also develops students' familiarity with economic performance measures, the financial sector, stabilization policies, economic growth, and international economics. The Tilton School AP Economics course will cover each of these domains, with a general focus on one or the other area in each semester. The course will provide students with a rigorous 21st century learning environment including the use of electronic textbooks and electronic media for sharing course information and discussions. Multiple connections to real-world events supplement traditional concepts and learning in this demanding but highly practical Advanced Placement curriculum.

AP PSYCHOLOGY (12TH, PG; FULL YEAR; 1 CREDIT)

In this course, students investigate the study of human mind and behavior, following the model of a college-level introductory course. There is an emphasis on scientific reasoning and analysis of complex human phenomena, as well as on the application of psychological concepts to real-world issues. Major themes of the course are the relationships between brain and behavior, body and mind, nature and nurture. Core topics include the study of the life span development of an individual, and the subfields of cognitive psychology, social psychology, abnormal psychology and the study of personality. Students spend additional time reviewing and preparing for the AP Psychology exam, which they take in May.

AP U.S. GOVERNMENT & POLITICS (12TH, PG; FULL YEAR; 1 CREDIT)

This course is designed for qualified students who wish to complete studies in secondary school equivalent to a one-semester college introductory course in government and politics. The course replaces an earlier elective course in Politics offered by the department, while maintaining many of the same learning objectives.

This course examines the nature of government and social structures and is organized around a basic assumption that politics is the science, which examines how groups make collective decisions. The philosophy and theory of government and social structures is examined before moving on to an in-depth analysis of the mechanics of American government. Engaging students in inquiry of the issues revolving around the American political system is essential in preparing them to be lifelong learners and responsible, active citizens. While the major focus of the course is the governmental and political systems of the United States, a lens of comparative study of systems of governance throughout the world is employed when possible to deepen understanding of US government while providing a broad global context for appreciating the strengths and limitations of American democracy. In doing so, this course supports the objective of the Senior/PG program in preparing students for active and informed citizenship in the interconnected global political domain of the 21st century. As in all senior level Social Science courses, students complete a Capstone Inquiry research project.

AP U.S. HISTORY (12TH; FULL YEAR; 1 CREDIT)

A faster-paced and more challenging version of the standard United States History course (above), this course provides a rigorous intellectual challenge for students who are seriously interested in the study of history and who have already demonstrated

advanced levels of skills in communication, critical thinking and a strong conceptual understandings world history. The AP program in United States History is designed to provide students with the analytical skills and enduring understandings necessary to deal critically with the problems and issues that are exposed in the course of their study of history.

The course prepares students for intermediate and advanced college courses by making demands upon them equivalent to those made by a full-year introductory college course. Students learn to assess historical materials—their relevance to a given interpretive problem, their reliability, and their importance—and to weigh the evidence and interpretations presented in historical scholarship. The course develops the skills necessary to arrive at conclusions on the basis of an informed judgment and to present reasons and evidence clearly and persuasively in an essay format. By school policy, all students take the AP United States History exam in May.

MATHEMATICS DEPARTMENT

The Mathematics Department at Tilton School offers a sequence of rigorous courses that prepare students for anything they choose to do next. At the same time, Tilton recognizes that all students do not acquire mathematical skills at the same rate or develop the ability for abstract thinking at the same age. There is no grade 9 mathematics course; rather, our offerings provide a variety of placement options at a given grade level. The goal of placement decisions is to offer each student a course that challenges them and allows them to take risks, but at the same time provides them with a reasonable opportunity to experience the satisfaction of success.

When entering Tilton School, students are placed into classes based on their background, ability, interests and STEAM Division Head recommendation. After the first year of algebra, all students study Geometry followed by Algebra 2 and Precalculus. Goals for students throughout the sequence include mastery of fundamental operations along with development of calculator and problem solving skills and an appreciation for the structure and applications of mathematics. **Students are required to have a TI-84 Plus graphing calculator beginning in Algebra 1.**

The Mathematics Department recognizes the importance of having students work with

data throughout the curriculum. In many courses, including Algebra 2, Precalculus, and Statistics, students are given the opportunity to learn about the modeling of functions by using data taken from real-world situations. Students will learn how to apply “continuous mathematics” to data taken from disciplines including science, politics, and current events.

Although any student’s greatest resource is themselves, they will, at Tilton, learn that even more can be accomplished through working with their classmates and teachers. Individual conversations and one-to-one help sessions between a student and their mathematics teacher are an integral part of their learning experience.

We strongly encourage students to study mathematics for each of their years at Tilton School and explore the wide array of course offerings that expand their knowledge and critical thinking skills.

ALGEBRA 1 (FULL YEAR, 1 CREDIT)

Algebra I begins with a study of the real number system. We will take a close look at the operations and properties of real numbers, signed numbers, and fractions. We will spend the majority of the year studying the topics associated with equations, inequalities, and systems in one and two variables. This includes simplifying, solving, and graphing. The curriculum also includes an in-depth study of exponents, polynomials, and factoring. We will close out the year with radicals and quadratic equations. Students will need to take concepts they have learned and apply them to real world applications. TI-84 Graphing Calculator is required. An honors distinction is available for 9th and 10th grade students through the completion of additional in-depth work.

GEOMETRY (FULL YEAR, 1 CREDIT)

This introductory course in geometry integrates coordinates and transformations with a traditional approach to 2-dimensional and 3-dimensional Euclidean geometry. We approach and solve problems from different perspectives to gain an appreciation of the interconnectivity among concepts in mathematics. Writing will be used to help students develop their understanding of geometry by applying concepts to their own experiences and constructing meaning for mathematical symbols, procedures and concepts. Technology will be incorporated regularly to strengthen and explore geometric properties. An honors distinction is available for 9th and 10th grade students through

the completion of additional in-depth work. *Prerequisite: Successful completion of Algebra 1*

***HONORS DISTINCTION FOR ALGEBRA 1 AND GEOMETRY (9TH AND 10TH GRADE STUDENTS ONLY)**

ALGEBRA 2 (FULL YEAR; 1 CREDIT)

This course reviews and extends the concepts and methods covered in Algebra 1 while introducing the concept of a function. The course reviews and enhances student skills and understanding of solving equations, inequalities, and systems of inequalities. New topics include the study of quadratic, logarithmic, polynomial, exponential, radical, and rational functions. The course builds strong skills in working with exponents, radical expressions, and complex numbers. Students are instructed in the use of the TI-84 Plus graphing calculator, a tool they use to explore and investigate concepts, to learn about the behavior of the different families of functions in addition to modeling and data analysis. *Prerequisite: Successful completion of Algebra 1 and Geometry*

ALGEBRA 2 ACCELERATED (FULL YEAR; 1 CREDIT)

This second-year algebra course consists of a thorough and fast-paced study of algebra and an introduction to the topic of trigonometry. Its emphasis is on the structure of mathematical systems and their underlying concepts. The focus is on the representation of problems algebraically and graphically. Topics include a study of functions (linear, quadratic, polynomial, and rational), systems of equations in two and three variables, inequalities and complex numbers, variation, exponential and logarithmic functions, and trigonometric functions. Applications include an introduction to data analysis and modeling through the introduction of regression analysis. Strong algebraic skills are presumed. The ability to absorb and master large amounts of material quickly and with little review is essential for success. *Prerequisite: Successful completion of Algebra 1 and Geometry in addition to teacher recommendation.*

COLLEGE ALGEBRA (FULL YEAR; 1 CREDIT)

This course is for students who are in need of a deeper understanding of algebra and trigonometry in order to be prepared for more advanced math courses like precalculus. Topics include properties of functions, matrices, sequences and series, logarithms, trigonometry, and probability, as well as a review of elementary algebra as dictated by the needs of the students in the class. For the various functions, students will gain a deep understanding of domain and range through studying parent functions, transformed functions, algebraic properties, and graphs. Regression will be used throughout the year

as it applies to a variety of functions including linear, quadratic, and exponential.

Prerequisite: Completion of Geometry and Algebra 2; Division Head approval required.

STATISTICS (FULL YEAR, 1 CREDIT)

Statistics introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students will observe patterns and departures from patterns, decide what and how to measure, produce models using probability and simulation, and confirm models. Appropriate technology, including TI-84 graphing calculators and spreadsheets will be used regularly for instruction and assessment. Students will become fluent in basic probability, measures of central tendency and the normal distribution. In addition, students will also study important and timely real-world mathematical skills. These skills—basic accounting, the behavior of the stock market, and financial analysis performed in the business world—will be developed and learned through using statistically based data analysis and technology. A key goal of the course is to focus on students' development of critical thinking skills. *Prerequisite: Senior or PG standing, and successful completion of Algebra 2. Juniors may elect to take Statistics and be concurrently enrolled in another math course.*

PRECALCULUS (FULL YEAR; 1 CREDIT)

This course introduces students to new concepts needed for the study of calculus and strengthens understanding of topics in algebra and geometry. Students study functions with particular attention to linear, quadratic, trigonometric, polynomial rational, exponential, and logarithmic functions. Students learn to work with functions numerically, graphically, algebraically, and verbally. In addition, students spend extensive time studying trigonometric functions and identities. Sequences and series are also covered. Graphing technology is utilized throughout the course to enhance student understanding of mathematical concepts. The frequent use of real-world applications illustrates and reinforces mathematical ideas. *Prerequisite: Successful completion of Algebra 2 and Geometry. Students must demonstrate strong knowledge of the content of Algebra 2 and Geometry and strong problem solving ability.*

PRECALCULUS ACCELERATED (FULL YEAR; 1 CREDIT)

This course includes an extensive study of trigonometric, exponential, and logarithmic functions. Particular attention is paid to the properties of their graphs. Other topics include polynomials, analytic geometry, sequences and series, the binomial theorem, polar coordinates, and probability. During the fourth quarter, students will begin to see

the connections between the mathematics they have studied and the idea of calculus. Graphing technology is utilized throughout the course to enhance student understanding of mathematical concepts. The frequent use of real-world applications illustrates and reinforces mathematical ideas. The ability to absorb and master large amounts of material quickly and with little review of Geometry and Algebra 2 and Trigonometry is essential. *Prerequisite: Successful completion of Algebra 2 and Geometry in addition to teacher recommendation. Students must demonstrate outstanding knowledge of the content of both Algebra 2 and Geometry, and strong critical thinking and problem solving ability.*

CALCULUS (FULL YEAR; 1 CREDIT)

This course provides students with an intuitive approach to the fundamentals of differential calculus and integral calculus. The language of calculus will play an important role in developing the definitions of derivatives and integrals. Focusing on algebraic functions, students explore limits, leading to the definition of derivative. The concepts of average and instantaneous rate of change are investigated. We develop the rules of differentiation, including the chain rule and implicit differentiation, and apply them to problems in optimization, related rates, and curve sketching. We will introduce the concepts of finding area under a curve, the integral regarded as the anti-derivative, and the Fundamental Theorem of Calculus. Applications of integration are also included. Generally, the content of this course is not as broad or as deep as the content of Calculus AB and will take the time to review algebra topics as needed. *Prerequisite: Successful completion of a Precalculus course.*

AP CALCULUS AB (FULL YEAR; 1 CREDIT)

This course is a study of the basic concepts, methods and applications of differential and integral calculus. Students learn through a multi-representational approach with concepts, results, and problems being expressed geometrically, analytically, and verbally. This is a college level course as determined by the College Board. Topics covered include limits, rates of change, the chain rule, implicit differentiation, related rate problems, movement of a particle, optimization, Riemann Sums, fundamental theorem of calculus, area between curves, volume of solids of revolution, differentiation and integration of polynomial, trigonometric, exponential and logarithmic functions, and L'Hopital's Rule. Students may earn one semester of college credit in calculus. They need a TI-84 graphing calculator and must take the College Board AB Calculus exam. *Prerequisite: Completion of Introduction to Calculus or Precalculus Accelerated or Precalculus with permission of the department.*

AP CALCULUS BC (FULL YEAR; 1 CREDIT)

This course is an extension of AB Calculus, not an enhancement. It covers all topics of AB Calculus, as well as analysis of planar curves, differential equations, slope fields, derivatives of parametric, polar and vector functions, the convergence and divergence of sequences and series, as well as Taylor and Maclaurin polynomials. A student may earn two semesters of college credit in calculus. Students must have a TI-84 graphing calculator and must take the College Board BC Calculus exam at the end of the year.

Prerequisite: Completion of AB Calculus and permission of the department.

AP STATISTICS (FULL YEAR, 1 CREDIT)

The course follows the syllabus for the Advanced Placement examination in Statistics. Students study the tools for collecting, organizing, and displaying data. They learn about planning and conducting surveys and experiments and drawing conclusions from their results. The course includes probability, the properties of the normal distribution, and statistical inference. Students must have a TI-84 (or better) graphing calculator and are required to take the College Board AP Statistics exam. *Prerequisite: Completion of math through precalculus or outstanding achievement in Statistics, and recommendation of the Math Department.*

SCIENCE DEPARTMENT

Our students understand that Science plays a central role in developing policies and personal practices promoting the health and sustainability of our diverse and ever-changing world. The Tilton School science curriculum creates enduring understandings through kinesthetic opportunities to test conceptual models in biology, chemistry and physics, developing their capacity to employ Tilton's Essential Skills. The curriculum emphasizes sciences' reach well beyond the lab—into mathematics, history, literature, art, government and the social justice issues confronting our communities and the larger environment.

At Tilton, student scientists learn by doing—designing and executing labs, working through problem solving investigations, debating environmental and economic policy implications and doing hands-on project work in the field and in the lab. Whether through a chemistry experiment, an investigation of an ecological dilemma, a design

challenge in Engineering, case studies in Anatomy and Physiology, or a building project in Conceptual Physics, students create hypotheses, gather and analyze data, check assumptions, consider alternate points of view, generate reliable conclusions, and present their work, with special attention to the consequences and implication of their study and to the clarity, depth of insight and precision of their presentation.

A typical sequence of courses would include Conceptual Physics, followed by biology and then either Advanced Chemistry or Chemistry. Electives can be taken additionally or concurrently depending on availability.

CONCEPTUAL PHYSICS (FULL YEAR; 1 CREDIT)

The first part of a three-year curriculum, Conceptual Physics is a theme-based course. The themes, organized as major units of study, include: Mechanics, Properties of Matter, Heat, Sound & Light, Electricity & Magnetism, Atomic & Nuclear Physics. The development of Critical Thinking will be a major goal of the course. Students will learn through a wide range of methodology, with an emphasis on “hands-on” learning. A variety of means will be employed for evaluating and assessing student progress. Resources for the course include an introductory textbook, applied technology, films, computer simulations, and demonstrations. An honors distinction is available for 9th and 10th grade students through the completion of additional in-depth work. *There are no prerequisites for Conceptual Physics.*

BIOLOGY (10TH; FULL YEAR; 1 CREDIT)

Biology is the second-year course in a three-year curriculum sequence of Tilton School core science. In Biology, topics include ecology, cellular structure and function, molecular genetics, evolution, plants, invertebrates and vertebrates. The course involves classroom discussions, lectures, investigations, weekly lab activities and dissections. Students will be evaluated on their understanding of concepts through a variety of assessments including written expression, problem solving, laboratory reports, and oral presentations. An honors distinction is available for students through the completion of additional in-depth work. *There are no prerequisites for Biology.*

CHEMISTRY (FULL YEAR; 1 CREDIT)

The third course in the three-year science curriculum is an introductory chemistry course. Students will develop a solid understanding of the composition of substances

(chemicals) and the changes they undergo (chemical reactions). Students will also be introduced to the major themes of materials, reactions, atmosphere and gases, atomic bonding, solutions, acids and bases. Examples from everyday life will be used to relate to the conceptual material. The course seeks to give each student an understanding and appreciation for the natural world around us and for the roles and effects of chemical substances in our lives and ecology. This course has a significant laboratory component which includes writing lab reports using a standard scientific format. Critical thinking skills as well as scientific communication skills are emphasized. Students are evaluated through a variety of means to assess their understanding, knowledge, and skills. *There are no specific prerequisites for Chemistry, although Algebra skills at the Algebra II-level are recommended. If a student performs at a high level, this course can serve as a prerequisite for the AP Chemistry course.*

ADVANCED CHEMISTRY (FULL YEAR; 1 CREDIT)

The Advanced Chemistry course is an accelerated first year chemistry course. The course may be selected by students who have completed Biology and Conceptual Physics (or AP Physics) and have a strong interest and demonstrated aptitude in science, and the recommendation of their current science teacher. Students taking this course should have a strong background in advanced algebra topics. Advanced Chemistry supports the Tilton School mission in helping to prepare students for a science concentration in their college programs. Students mastering the understanding, skills, and knowledge in this course would be prepared for enrolling in the AP Chemistry course. With the recommendation of a science teacher and permission of the Division Head, Advanced Chemistry can also be taken concurrently with Biology for rising sophomores who would like to prepare for multiple AP science courses in their junior and senior year.

Students will uncover chemistry topics in more depth and will get to some topics not generally covered in a first year chemistry class. Enduring understandings of the course are derived from concepts of atomic theory, stoichiometry, thermochemistry, chemical bonding, solubility, kinetics, equilibrium, and organic chemistry. This course has a significant laboratory component, which includes writing lab reports using a standard scientific format. Students are evaluated through a variety of means to assess their understanding, knowledge, and skills.

SCIENCE OF SUSTAINABILITY (FULL YEAR; 1 CREDIT)

In this class students investigate and design environmentally friendly and sustainable

solutions in response to several real-world challenges that include developing climate-neutral energy alternatives to fossil fuels, ensuring food security for a growing world population, maintaining biodiversity in different ecosystems, supplying clean, safe, and abundant drinking water for the global community, providing for management of industrial, commercial, electronic and household waste, and other topics relevant to current global and local news. Students demonstrate their knowledge of environmental science and sustainability through hands-on learning, activity and project-based team approaches, computer simulations, scientific field work and laboratory experiments, and site visits as they research and design potential solutions to these true-to-life problems. Students compare and contrast diverse living environments and ecosystems, and the myriad organisms adapted to living within them, through both directed and independent lessons. Students will also critically investigate past, current, and possible future environmental concerns and issues as they develop a greater understanding of the interdependence of the parts of their world.

ANATOMY & PHYSIOLOGY (FULL YEAR; 1 CREDIT)

Anatomy and Physiology is an upper-level yearlong science elective course designed to meet the needs and interests of students who may pursue careers in sports medicine, health, exercise physiology, athletic training, or other medical or veterinary-related fields. The course is open to students with prior science coursework in biology and chemistry. The goal of the course is for students to learn the fundamental concepts, principles and knowledge of mammalian physiology. Some comparative work with other phyla will be included. The objectives include mastery of concepts and knowledge as well as attaining skills in organismal, organ and tissue analysis through laboratory work. Animal dissection laboratories will be conducted on a regular basis. Evaluation of student learning will take place through traditional means (quizzes, tests, lab reports) as well as through project presentations and authentic, practical skills assessments. An ongoing effort will be made to link student work with professional work in medical and veterinary research sites in the local area.

SCIENCE OF WELLNESS (FULL YEAR, 1 CREDIT or *TRIMESTER, 1/3 CREDIT each trimester*)

Science of Wellness is an upper-level elective that will focus on the health and well-being of the human species. Main units of the course include general health and wellness, sports medicine, human anatomy and physiology, nutritional science, psychology, the

neurobiology of mental health, and mindfulness. Science of Wellness is a course that is relevant to each students' personal life and growth as current topics will be uncovered and researched with applications to personal experience. Evaluation of student understanding, knowledge and application will be assessed through project-based assessments.

Semester 1: Nutrition

Semester 2: Neuroscience of Mental Health

Semester 3: Sports Medicine

INTRODUCTION TO COMPUTER SCIENCE (FULL YEAR; 1 CREDIT)

Introduction to Computer Science is a full year course designed to introduce students to the fundamental concepts of computational thinking through the use of an industry-standard programming language. The course will adopt a hybrid online/flipped design to efficiently maximize the time spent in class while enabling the students to work independently and to experience certain elements of online instruction. Specific learning goals include: the process of writing and debugging a program, developing reusable solutions to similar problems, formulating problems in computational language, representing data through models and simulations, automating solutions through algorithmic thinking, and seeking efficient and elegant solutions programming problems.

ENGINEERING (FULL YEAR; 1 CREDIT)

Engineering is an upper level science course for students who have completed the core science requirements. The course is intended for students who want to investigate beginner engineer principles, specifically the engineer design process, and apply these principles to a project with an outside partner. The students will begin the year by practicing these engineering design principles, before applying these principles outside of the classroom. Students will meet with partners, travel to project sites, and contact outside experts to better the students' understanding of the material. The final goal for the partnership project is for partners to use student work, and for students to see their ideas become fully realized and used in the world. Evaluation of the students will be based on presentations, peer evaluations, and frequent feedback given by the instructor.

ADVANCED PLACEMENT IN SCIENCE

AP BIOLOGY (FULL YEAR; 1 CREDIT)

Advanced Placement Biology is a laboratory course designed for 11th- and 12th-graders that have sufficient background preparation in biology and chemistry. Entrance to the class is by permission of the science department faculty and the Division Head. Our studies focus on the four big ideas that are set by the Advanced Placement Biology curriculum. This course utilizes a rigorous, college-level textbook. Consequently, this course is both reading and writing intensive. There is limited time during the school year to cover the extensive material of the AP curriculum. Students who wish to prepare for the AP exam must make a commitment to independent work, including the prior summer and extended vacations. Students are assessed on daily class preparation, essay tests, papers of varying length, and special projects.

AP CHEMISTRY (FULL YEAR; 1 CREDIT)

The AP Chemistry course is a rigorous and challenging one, equivalent to a general chemistry course taken by college freshmen. Receiving a good score on the Advanced Placement examination in chemistry may allow students to by-pass a similar course in some colleges. The course is designed for students who have done well in an introductory high school chemistry course. Students should have also completed a high school physics course or its equivalent before taking this one. A high level of mathematical sophistication is also required, and entrance to the course will also be determined by students' proficiency in advanced algebra. Enrollment in the course is by permission of the science department faculty and the Division Head. The course content covers the major concepts of inorganic chemistry in both breadth and depth. Through consistent work and self-directed effort, students are expected to gain a fairly sophisticated level of understanding of concepts through experience in solving chemical problems and engaging in laboratory experiments. Success in the course means that students will have achieved abilities to think clearly and to express their ideas with clarity in their written work. Laboratory work is an integral part of the course, and students will be expected to write laboratory reports in addition to their regular assignments in the course.

The course has limited time to cover the amount of necessary material. Therefore, it will also be expected that students make a commitment to independent work, including the prior summer and extended holidays

AP PHYSICS 1 (FULL YEAR; 1 CREDIT)

AP Physics 1 is a full year course that follows the latest revision of the College Board curriculum. It is both algebra and inquiry based while focusing on the “Big Ideas” of introductory college Physics. Enrollment in the course is by permission of the Science Dept. faculty and the Division Head. The typical topics of a first semester introductory college level physics course are covered; kinematics, Newton’s Laws, rotational motion, harmonic motion, momentum, energy and work, electrostatics, DC current, and sound. We use a college level text and a College Board guidebook. Students are expected to take initiative in their work, independently solving problems and using available resources. A commitment to some independent work, including during the prior summer and on extended vacations, is expected of students in the AP curriculum. Inquiry based laboratory work is an important aspect of the course. Students will be discovering the important underlying concepts and mathematical relationships through this work. *Students must have successfully completed Pre-calculus mathematics prior to taking this course.*

AP PHYSICS C: MECHANICS (FULL YEAR; 1 CREDIT)

AP Physics C: Mechanics is a full year course that follows the latest revision of the College Board curriculum. It is both calculus and inquiry based while focusing on the “Big Ideas” of introductory college Physics. This course serves as the foundation in physics for students hoping to major in the physical sciences or engineering and the subject matter is classical mechanics. Topics include kinematics; Newton’s laws of motion, work, energy and power; systems of particles and linear momentum; circular motion and rotation; oscillations; and gravitation. Calculus is used freely in formulating principles and in solving problems. Enrollment in the course is by permission of the Science Dept. faculty and the Division Head. We use a college level text and a College Board guidebook. Students are expected to take initiative in their work, independently solving problems and to use available resources. A commitment to some independent work, including during the prior summer and on extended vacations, is expected of students in the AP curriculum. Inquiry based laboratory work is an important aspect of the course. Students will be discovering the important underlying concepts and mathematical relationships through this work. *Students must have successfully completed or be currently enrolled in calculus mathematics or be current prior to taking this course.*

WORLD LANGUAGE DEPARTMENT

More than just an interesting part of one’s education, world language study is now a practical necessity as well. We live in a global society. The United States is both a nation of diverse peoples and languages and a society in which many cultures unite to form a

whole. For students to function effectively as part of the global community, they must develop fluency in other languages and sensitivity to cultural diversity.

We are fortunate that technology can unite us in seconds with our global neighbors, but we must also embrace the responsibility that goes along with it. The study of world languages at Tilton School not only teaches students to be multilingual, but also it teaches them to understand and respect the cultural and societal differences within the human family.

At Tilton, we believe that to communicate effectively in a new language, one must have command of the four language skills: speaking, listening, reading, and writing. Further, we ask our students to demonstrate an awareness of how people from another country think, feel, and act within the context of their native culture. It is through such study that students discover how to learn a new language.

Through oral, aural, written, and reading performances, students exhibit their language competency to their peers and the world language faculty.

Each course in the World Language department is a yearlong course, and upon successful achievement in each course (Meeting the Standard or higher) and successful achievement on the final examination, students advance to the next level. To meet graduation requirements, all students must successfully complete a 2nd-year level of language study. Upon entering Tilton School, all students engage in placement assessments that include speaking, listening, reading, and writing tests. The World Language faculty determines the most appropriate course enrollment for each student based on his or her performance on the placement examination. This process is conducted during the first two weeks of school in the fall.

For some students, it may take three years to meet the graduation requirement, while other students may meet the graduation requirement in only one year. The World Language department recommends that students engage in language study throughout the course of their Tilton career, regardless of the minimum requirement. Selective college admissions standards generally call for at least three years of language study. Students who do not achieve the minimum requirements to move on to the next course will be required to repeat the course at Tilton or during summer school off campus. Students will be required to take the placement examination before enrolling in another

language course if they study off campus.

Study Abroad: As trips abroad encourage direct application of the Tilton's five essential skills, the department believes that it is an important way to continue to reinforce what goes on in the classroom. Tilton School encourages the application of what is learned in the language classroom to outside study. Each year, the school offers a travel and video-blog opportunities that will help students use what they already know to further develop their language skills and the understanding of the world around them. All students are encouraged to consider this invaluable experience, both for what it can do linguistically and the benefits it has toward greater understanding of the world around us.

Technology, Language Lab, and Online Resources: Student exposure to authentic language allows for greater mastery of reading, writing, speaking and listening skills, as well as allows for important exposure to cultural, historical, and thematic content. Students can therefore expect to use a variety of technology tools and online resources both inside and outside of the classroom, not only to aid them with their production and understanding of written and spoken language, practicing essential structures and idiomatic expressions, but also as a means to connect, beyond the classroom, with the communities where the target language is spoken. Some textbook materials will have a required online component.

WORLD LANGUAGE DEPARTMENT COURSE OFFERINGS

COURSE OFFERING IN FRENCH AND SPANISH

A parallel sequence of language and cultural studies | First-year language study incorporates a cultural focus on the linguistic home nations, France and Spain. Second and third year language study follows the diffusion of the French language into Europe, Africa, and North America, and of Spanish into the Caribbean and the rest of the Americas. The fourth year of language allows the student to understand and appreciate the global reach of French and Spanish in communities throughout the world of the 21st century. Fifth and sixth year programs of study provide opportunities for students with advanced levels of skills and knowledge to master fluency, to read literature and write with skill and competence, for native speaker students to practice and polish the formal academic use of their language skills, for non-native speaker students to interact easily

with native speakers of the language, and for all students to prepare for a range of college and university entrance exams, including the SAT Subject tests, the Advanced Placement exams, and European University entrance examinations.

INDEPENDENT STUDY OPTIONS IN CHINESE, JAPANESE, AND OTHER LANGUAGES

Study of languages other than French and Spanish may be arranged through Independent Study online courses and travel abroad. Additional fees are applicable for online instruction, though New Hampshire residents may access tuition-free online courses through the New Hampshire Virtual Learning Academy. In past years, students have pursued learning programs in Japanese, Chinese (Mandarin), Russian, Italian, German, Latin, Arabic, Portuguese, and American Sign Language through these opportunities.

FRENCH 1 (FULL YEAR; 1 CREDIT; OPEN TO ALL STUDENTS)

French First Year: Exposure to the Francophone World

This introductory-level class explores basic French expression through everyday thematic vocabulary and fundamental grammatical structures. The Francophone community is the context through which students will be exposed to the language. Students will be actively engaged in listening to and speaking authentic French both in the classroom, where interactive group work will be generated, as well as through authentic online materials. The main goal of the class is for students to feel comfortable speaking and asking simple questions to express likes and dislikes, simple descriptions of self and family, and discussing their lives at school. In addition to beginner level speaking skills, students will be exposed to writing simple sentences and paragraphs. By the end of the year this course is conducted entirely in the target language.

FRENCH 2 (FULL YEAR; 1 CREDIT)

French Second Year: Understanding the Francophone World

This advanced beginner-level course is designed for students who feel comfortable with simple oral expression and feel ready to push their speaking skills to a new level. During this course, the main focus will be getting students comfortable narrating in the past tense, as well as developing more advanced circumlocution skills, keeping students in the target language. To advance these skills, this course will include thematic units such as holidays, city life, housing, travel, food, and nature, taught using authentic materials. Moreover, these materials taken from the Francophone world will allow students to not only solidify vocabulary but also provide them with a basis of comparison in their own

lives. Finally, students will become more comfortable with grammatical concepts and be able to identify simple syntactical and grammatical errors. Fully conducted in French.

Prerequisite: Placement exam, successful completion of 1st-year French, and/or department approval.

FRENCH 3 (FULL YEAR; 1 CREDIT)

French Third Year: Interacting with the Francophone world

Fully conducted in French, this intermediate-level course is designed for students who demonstrate a solid understanding of all the past tenses, have been exposed to commands, and are able to express themselves both orally and in written forms. Cultural elements of the course will include themes such as technology, the environment, the workplace, government, and volunteerism. Integration of all aspects of the language will occur using online resources and authentic materials. The language will be heard and practiced, in and outside of the classroom, where student-generated presentations, productions, and discussions will be created. As students begin to master the nuances of the French language, more emphasis will be placed on their ability to express themselves with the French of today as seen through short films, native speaker dialogues, songs, television programs, current event articles, and excerpts from French literature. The class will progress to encompass expression in several tenses and moods such as the conditional, the future, and the subjunctive mood. *Prerequisite: Placement exam, successful completion of 2nd-year French, and/or department approval.*

FRENCH 4 (FULL YEAR; 1 CREDIT)

French Fourth Year: Immersion in the Francophone world

Fully conducted in French, this course is designed for students who have demonstrated proficiency with all tenses and moods, including the subjunctive mood. Through intensive study of literature, film, music, art and daily living, students develop a greater understanding of the cultural practices and historical realities of the francophone world. Students continue to expand and refine their communication skills while becoming more familiar with grammatical nuances and idiomatic phrases specific to the language. They also participate in oral dialogue and impromptu discussions, as well as prepare formal presentations, that further develop advanced communication skills. Use of online resources and authentic materials will be utilized in order to complete assignments that reflect more sophisticated knowledge and manipulation of the language. The purpose of this class is to build on skills and mastery of the French language, while further developing compassion and understanding of the diverse contributions and concerns of

the French-speaking world. *Prerequisite: Placement exam, successful completion of 3rd-year French, and/or department approval.*

SPANISH 1 (FULL YEAR; 1 CREDIT; OPEN TO ALL STUDENTS)

Spanish First Year: Exposure to the Hispanic World

This introductory-level class explores basic Castilian Spanish expression through everyday thematic vocabulary and fundamental grammatical structures. The Hispanic community is the context through which students will be exposed to the language. Students will be actively engaged in listening to and speaking authentic Spanish both in the classroom, where interactive group work will be generated, as well as through authentic online materials. The main goal of the class is for students to feel comfortable speaking and asking simple questions to express, likes and dislikes, simple descriptions of self and family, and discussing their lives at school. In addition to beginner level speaking skills, students will be exposed to writing simple sentences and paragraphs. By the end of the year this course is conducted entirely in the target language.

SPANISH 2 (FULL YEAR; 1 CREDIT)

Spanish Second Year: Understanding the Hispanic World

This advanced beginner-level course is designed for students who feel comfortable with simple oral expression and feel ready to push their speaking skills to a new level. During this course, the main focus will be getting students comfortable narrating in the past tense, as well as developing more advanced circumlocution skills, keeping students in the target language. To advance these skills, this course will include thematic units such as holidays, city life, housing, travel and food, and nature, taught using authentic materials. Moreover, these materials taken from the Hispanic world will allow students to not only solidify vocabulary but provide them with a basis of comparison in their own lives. Finally, students will become more comfortable with grammatical concepts and be able to identify simple syntactical and grammatical errors. Fully conducted in Spanish. *Prerequisite: Placement exam, successful completion of 1st-year Spanish, and/or department approval.*

SPANISH 3 (FULL YEAR; 1 CREDIT)

Spanish Third Year: Interacting with the Hispanic world

Fully conducted in Spanish, this intermediate-level course is designed for students who demonstrate a solid understanding of the past tenses, have been exposed to commands, and are able to express themselves both orally and in written forms. Cultural elements of

the course will include themes such as relationships, technology, the environment, the workplace, government, and volunteerism. Integration of all aspects of the language will occur using online sources and authentic materials. The language will be heard and practiced, in and outside of the classroom, where student-generated presentations, productions and discussions will take place. As students begin to master the nuances of the Spanish language and how it is most authentically expressed, more emphasis will be placed on their ability to express themselves with the Spanish of today as seen through short films, native speaker dialogues, songs, television programs, current event articles, and excerpts from Spanish literature. The class will progress to encompass expression in several tenses and moods, such as the imperative, conditional, future, and subjunctive mood. *Prerequisite: Placement exam, successful completion of 2nd-year Spanish, and/or department approval.*

SPANISH 4 (FULL YEAR; 1 CREDIT)

Spanish Fourth Year: Immersion in the Hispanic World

Fully conducted in Spanish, this course is designed for students who have demonstrated proficiency with all tenses and moods, including the subjunctive mood. Through intensive study of literature, film, music, art, and daily living, students develop a greater understanding of the cultural practices and historical realities of the Hispanic world. Students continue to expand and refine their communication skills while becoming more familiar with grammatical nuances and idiomatic phrases specific to the language. They also participate in oral dialogue and impromptu discussions; as well prepare formal presentations that further develop advanced communication skills. Use of online resources and authentic materials will be utilized in order to complete assignments that reflect more sophisticated knowledge and manipulation of the language. The purpose of this class is to build on skills and mastery of the Spanish language, while further developing compassion and understanding of the diverse contributions and concerns of the Spanish-speaking world. *Prerequisite: Placement exam, successful completion of 3rd-year Spanish, and/or department approval.*

Advanced Spanish Language and Culture (FULL YEAR; 1 CREDIT; NON-AP ELECTIVE; PERMISSION ONLY)

This course is fully conducted in Spanish and is designed for advanced level students who have mastered skills and content at the fourth-year of proficiency or beyond, and/or native/heritage speakers of the Spanish language. Students must also have the maturity, independence and teacher recommendation to pursue a rigorous individualized

program of study.

This course functions as an advanced level course for students seeking to maintain and further develop presentational language skills, explore Hispanic culture, and prepare for various subject tests, international travel/immersion experiences, and/or college level study of Spanish. In this course, students will continue to practice and develop their communication skills (reading, writing, listening, speaking) through the use of authentic written texts and audio/video recordings, as well as the provision of a variety of speaking and writing opportunities, including interpersonal, interpretive, and presentational address, in formal and informal situations. Learning units will include historical and cultural explorations of the countries and communities where Spanish is spoken. Students are encouraged to make comparisons and connections between the cultures studied and their own.

ADVANCED PLACEMENT IN WORLD LANGUAGE

AP French Language and Culture (FULL YEAR; 1 CREDIT; BY PERMISSION ONLY)

This course is fully conducted in French and is designed for advanced level students who have mastered skills and content at the fourth-year of proficiency or beyond, and/or native/heritage speakers of the French language. Students must also have the maturity, independence, and teacher recommendation to pursue a rigorous Advanced Placement (AP) program of study including instructional materials, communication activities, assignments, and assessments equivalent to that of a third-year college level course in French. Students who take this course will prepare to take the French Language and Culture AP Exam in May.

In this course, students will continue to practice and develop their communication skills (reading, writing, listening, speaking) by engaging with authentic print texts, short films, and audio recordings in the target language, taking part in a variety of speaking and writing opportunities, including interpersonal, interpretive, and presentational address, in formal and informal situations. Learning units will be based on the themes and recommended contexts from the College Board's AP French Language and Culture curriculum framework, in which students are encouraged to make comparisons and connections between the cultures/languages studied and their own.

AP Spanish Language and Culture (FULL YEAR; 1 CREDIT; BY PERMISSION ONLY)

This course is fully conducted in Spanish and is designed for advanced level students who have mastered skills and content at the fourth-year of proficiency or beyond, and/or native/heritage speakers of the Spanish language. Students must also have the maturity, independence and teacher recommendation to pursue a rigorous Advanced Placement (AP) program of study including instructional materials, communication activities, assignments, and assessments equivalent to that of a third-year college level course in Spanish. Students who take this course will prepare to take the Spanish Language and Culture AP Exam in May.

In this course, students will continue to practice and develop their communication skills (reading, writing, listening, speaking) by engaging with authentic print texts, short films, and audio recordings in the target language, taking part in a variety of speaking and writing opportunities, including interpersonal, interpretive, and presentational address, in formal and informal situations. Learning units will be based on the themes and recommended contexts from the College Board's AP Spanish Language and Culture curriculum framework, in which students are encouraged to make comparisons and connections between the cultures/languages studied and their own.