

A photograph of graduates in blue caps and gowns, with a large cyan 'TA' overlaid. The background is a blurred outdoor setting with greenery and a bright sky. The graduates are wearing blue caps and gowns, and some are wearing glasses. The 'TA' is a large, stylized, cyan-colored text element that is semi-transparent, allowing the background image to be seen through it.

TA

**COURSE
CATALOG**

Unified Arts

Thetford Academy offers a wide selection of courses in visual, performing, and practical arts. An essential component of the TA curriculum, arts classes provide students a variety of opportunities for hands-on learning.

Whether baking a pastry, painting a picture, building furniture, playing an instrument, or singing and acting on a stage, students are encouraged to express their creativity. Arts courses at TA focus on artistic expression, creative problem solving, critique and revision, collaboration, improvisation, and responsible habits of work. Many classes culminate with community performances or public presentations of student work, providing student artists with an authentic audience and real-world assessment of their hard work and commitment to their craft. One Arts credit is required for graduation.

VISUAL ARTS

The visual arts at Thetford Academy focus on visual literacy. How do color, contrast, value, shape, pattern, and quality of line affect the way one reacts to a visual presentation—either in life or on canvas? And in the studio, how does one employ elements and principles of design to portray creative ideas?

Art students at Thetford Academy study how art theory and methods are employed in skillful creative expression. Students work together, learning the valuable disciplines of effective critique and collaboration. Students also work independently, discovering and evolving their own style.

From Middle School Art to Advanced Art and independent studies, every class begins by revisiting and exploring the employment of the elements and principles of design, or, in the case of ceramics and other three-dimensional work, form and function.

Several opportunities exist for students to pursue individual artistic interests. Within any course, many assignments are open to student choice. In Advanced Art and in an Independent Study, students will choose the media in which they wish to work.

Middle School Art

Grade 7–8 | Arts Rotation

In grade 7, students create artwork in conjunction with an informal introduction to art theory and its associated vocabulary, as well as art materials and skill building. Projects such as color wheels, posters, and brain-teasing designs allow students to put theories into use. Projects may include printmaking, sculpture, and themes that take into account the time of year. Projects in all seasons will make use of the students' imaginations.

In grade 8, students paint landscapes and posters, sculpt in clay or papier maché, and draw from observation and imagination. Using the perspective and shading techniques introduced in the classroom, students will learn how to give a sense of three dimensions or depth to their paintings and drawings. Students will draw figures from life using each other as models and create multi-media compositions based on the drawings. Using architecture as a theme, they will explore the rules of linear perspective in imaginative ways.

Expressive Drawing and Printmaking

Grade 9–12 | Credit: 1

Using various drawing media such as pencil, charcoal, ink, and non-traditional materials, this semester-long course explores in depth the possibilities of mark-making as personal expression.

Emphasizing skill development through accurate drawing from observation, students will focus on still life, figures, and self-portraiture. Students will also use their honed skills for drawing from the imagination and for conceptual work. Experimentation with various printmaking techniques is the focus of the second half of the course. The students will work toward creating a series of prints expressing their interest in a particular subject.

Ceramics: Hand Building & Wheel Throwing

Grade 9–12 | Credit: 1

This course introduces students to working in three dimensions through the medium of clay. Students will learn hand building and wheel throwing techniques in creating both

functional and sculptural pieces, including coil, slab, pinch, and working on the wheel. Surface carving and decoration will also be explored, as well as texture and color through the use of ceramic glaze. Over-arching questions threading through the course are: "Where does the balance exist between form and function in the creation of ceramic art?" and "What is the role of craftsmanship in ceramics?"

Painting

Grade 10–12 | Credit: 1

The Painting class is designed for students wanting a more focused exploration into traditional painting techniques, as well as more thinking outside the rectangle. Painting class challenges students to combine technical skills with experimentation to develop their visual voice.

Emphasis is on the technical qualities of various painting media, (acrylic, watercolor, pastel), as well as the exploration of color theory in order to understand and use color in a personally expressive way.

Prerequisite: Ceramics or Expressive Drawing and Printmaking

Advanced Art and Independent Art

Grade 11–12 | Credit: 1

The Advanced Art course is designed for the serious and self-motivated art student. Students develop a series of independent works based on a concentrated area of study such as pottery, acrylic painting, printmaking, or other media the student chooses to explore in depth.

Students are encouraged to explore and experiment with different themes and media, and will often participate in classroom skill-building exercises, and may elect to cooperate in guided service-learning projects such as The Memory Project. A class climate of mutual support and respect is emphasized through regular class critique. Writing a research paper and completing artwork outside of class is a requirement of this course. This course may conclude with a public exhibition.

Prerequisite: Permission of the Instructor or either Ceramics, Expressive Drawing and Printmaking, or Painting.

DESIGN TECHNOLOGY

The Design Technology program at TA introduces students to design and manufacturing, emphasizing hands-on learning in a collaborative setting. The introductory courses focus on the fundamentals of woodworking, metal fabrication, jewelry making, and introduce students to three-dimensional design software and the computer aided design and manufacturing process. Many students go on to take advanced classes where they design and build more significant projects, such as furniture, musical instruments, metal sculptures, and small buildings.

Middle School Design Technology Grade 7–8 | Arts Rotation

This course introduces students to basic woodworking techniques, wire jewelry making, and wood turning. Emphasis is on the proper use of hand tools, principles of design, appreciation for fine craftsmanship, and shop safety. Students learn to use SketchUp as a three dimensional design software, and use computer numeric controlled machines to embellish their work. Student projects are often displayed at the end of the term.

Design Technology I: Technology for the 21st Century Grade 9–12 | Credit: 1

This course is designed for beginning Design Tech students who may or may not have any previous experience in Design Tech. The course helps students gain knowledge and skill using a variety of hand tools and power machinery including the table saw, surface planer, wood lathe, and welding equipment. Students are also introduced to the computer aided design and manufacturing process. Students complete individualized projects in woodworking, wood turning, jewelry making, and metal work.

Design Technology II Grade 10–12 | Credit: 1

This course is designed for those students who want to pursue additional studies in one or more areas of design technology. Students are required to utilize computer aided design and manufacturing when appropriate.

Prerequisite: Successful completion of Design Tech I with a minimum grade of B and demonstration of ability to work safely in the shop. **Note:** This semester-long course may be taken for a half block or a full block.

Computer Graphic Design Grade 9–12 | Credit: 1

This course introduces students to computer graphic design, emphasizing the fundamental elements and principles of design and following the National Standards for the Arts. Engaging in the design process, students learn to interpret a design brief, prepare sketches and initial drafts, incorporate client feedback, and follow through with a finished project. Students are introduced to several software programs as they start to design and lay out projects, which might include posters for their class dances; logos, signs, social media posts, etc. for local companies; style guides, media brochures, or other real-world design tasks. Students prepare a portfolio of their work for display at the Arts Night in May. Written reflections accompany each project. While homework is minimal, this course requires student motivation, perseverance, and self-directed learning.

Timber Framing Grade 10–12 | Credit: 1

Students collaborate to design a timber-framed structure, complete with a scale model, site plan, engineering calculations, brief environmental impact statement, timeline, and budget. They then cut the frame in the workshop, raise the frame on site, and contribute towards the completion of the structure. Readings, math work, and other traditional assignments supplement the hands-on learning. Homework may include spending time outside class hours contributing to the project after school or on weekends.

Yearbook Grade 9–12 | Credit: ½ or 1

The Yearbook class meets for a half block both semesters; students can enroll for one or both semesters. In this course students create and publish the annual TA yearbook. Students learn the fundamentals of layout and design, photography, journalistic writing, and copy editing. Students need to work independently and collaboratively and take initiative to be productive and meet deadlines in this product-driven class. The students will produce a high quality yearbook publication to be distributed to the student body.

DRAMA

The Drama program at Thetford Academy offers students varied opportunities to explore the theater arts. Drama production is the assembling of people and things in a delicate balance of believability, in order to bring the artistic creation of a playwright to life.

Theater can open up a fascinating world in which students may find opportunities to exercise their drives for self expression and creativity.

Middle School Drama Grade 7–8 | Arts Rotation

This course focuses on improvisation and the fundamentals of acting technique. The class begins with improv games and evolves to individual character development. Students learn to use aspects of voice and movement to enhance a role, and are introduced to theater vocabulary. The class culminates with the performance of a short, selected piece.

Fall Play and Ten-Minute Play Festival Grade 9–12 | Credit: 1

The first half of this class is devoted to a full-length production. The play the class will produce is normally announced during the prior term, and auditions held during the first week of classes. The second half of the course is dedicated to producing ten-minute plays written by Thetford Academy students. Students may act in multiple dramatic roles, and they may also have an opportunity to direct a play. Students in tech roles have the opportunity for hands-on experience creating the technical elements of theatrical production, from set construction and painting to lighting design and sound.

Note: Students may elect Fall Play and Ten Minute Play Festival for either Arts or English credit.

One-Act Play Competition and Playwriting

Grade 9–12 | Credit: 1

In first half of the class, students prepare a one-act play for entry in the Vermont Drama Festival in March, where exciting theater is presented by students from other schools throughout the state. One-Act students study the principles of acting, from character analysis to improvisation. They also gain a working knowledge of the technical aspects of theater. The second half of the class is dedicated to playwriting. Students study several published plays, and then draft, revise, and polish a ten- minute play. Up to eight plays may be selected for TA’s annual Ten-Minute Play Festival.

Note: *Students may elect One-Act Play Competition and Playwriting for either Arts or English credit.*

Literary Adaptations

Grade 11–12 (10 with permission) | Credit: 1

This English elective explores the relationship between literature and movies by focusing on adaptations of literary fiction, mainly short stories. The transformation from text to film raises many interesting questions that students will explore through study of the original stories, viewing their adaptations, and participating in class discussions and weekly blog assignments. As a culminating activity, students will collaborate with peers to create and screen a short film adapted from a piece of short fiction. Some stories and films studied may include: *Memento*, *Minority Report*, *The Sentinel / 2001: A Space Odyssey*, *Rear Window*, and *The Killers*. This course includes an ‘embedded honors’ option for students to pursue.

Note: *Students may elect Literary Adaptations for either Arts or English credit.*

MUSIC

Music is a form of aural expression; its impact upon us can be instantly and profoundly experienced. Music reaches across time and influences us regardless of our differences. Recognizing that music is an effective communicator, provides great joy to both performer and listener, and brings people together, the Thetford Academy Music Department ensures that students:

- Learn to use music to express what they understand and experience about their world, and to realize and respect what others have said about theirs;

- Recognize that working together in a cooperative, caring atmosphere fosters positive results;
- Develop an awareness of the musical concepts of pitch, melody, harmony, rhythm, meter, timbre, and form through participation in various performing ensembles, private and small group lessons, and general music activities;
- Take responsibility for attending class regularly and arriving ready to work, as attendance, work attitude, effort, and commitment are important to achieving the best possible product.

All music classes are semester-long. Under extenuating circumstances, qualified high school students may join classes for the second or fourth quarter with permission from the instructor. Participating in only the first or third quarter is not permitted.

INSTRUMENTAL MUSIC

Beginning Instruments

Grade 7–8 | Arts Rotation

This course is designed for students with little or no experience on a musical instrument. Students in the course work out of a method book and learn proper playing technique, scales, music reading skills, and appropriate care of their instruments. The course explores music from a variety of styles and eras, and students are expected to rehearse and perform with larger ensembles at two concerts per year. Students who need instruments should rent or purchase from a local instrument dealership. If needed, Thetford Academy also has several band instruments available for use.

Instrumental Ensembles

Grade 9–12 | Credit: 1

Instrumental Ensembles meets daily for a half block and performs concerts in December and May and at assemblies and celebrations throughout the school year. Concert attendance is mandatory and is part of the student’s grade for the course.

In this course, students learn and perform music from a variety of styles and eras. Instrumental Ensembles emphasizes learning basic improvisation techniques, understanding how to rehearse, following direction, playing both as a member of an ensemble and as a soloist, and performing in a formal manner. The course also includes study of music theory and its application to the instrument. Instrumental Ensembles is open to all students.

Stage Band

Grade 9–12 | Credit: 1

This ensemble is open to high school instrumental students who are looking for an advanced, more intense, musical experience. Participation in Stage Band is by audition only, and interested students should plan to audition in the year prior to taking the course.

Stage Band participants rehearse and perform a variety of challenging, professional-level music from different eras and musical styles. The course emphasizes the development of music reading skills, basic improvisation techniques, performance as an ensemble and as a soloist, and performing in a formal manner.

CHORAL MUSIC

Chorus

Grade 7–8 | Arts Rotation

Grade 9–12 | Credit: 1

Choral Music provides training and performance opportunities for all interested students. The course explores music from a variety of eras, styles, and cultures, and teaches students the basics of how to follow choral scores and read music. Students in Choral Music work together to create a bright, expressive choral sound and unified ensemble. Performances (in December or January for first semester students, and May or June for second semester students) are a mandatory part of a student’s evaluation.

Select Choir

Grade 9–12 | Credit: 1

Select Choir is a smaller, select choral group for high school chorus members. Participation in Select Choir is by audition only, and interested students should plan to audition in the year prior to taking the course. Once students are accepted into this ensemble, they “hold their places” until they graduate or decide not to participate. The ability to read music is desirable, but not a requirement. Most music performed is unaccompanied.

Musical Theater

Grade 9–12 (7–8 with permission) | Credit: 1

This course is offered during TA's second semester and corresponds with the production of the spring musical. Students who plan to audition for the musical should sign up for the full block of Musical Theater in both the third and fourth quarters. Students interested in tech crew must request permission from the instructor to take this class.

Class activities may include rehearsing and performing the show, determining the scenic and technical requirements of the show, determining the best way to rehearse this particular show, choreographing some of the musical numbers and possibly directing some of the scenes, raising funds and arranging publicity, helping create and/or gather props and costumes, and helping build and/or paint sets. Note that while much of the rehearsal process occurs during class time, some rehearsals may be required after school and on weekends.

CULINARY ARTS

Culinary Arts courses address multiple skills, which include: food preparation, nutritional health, consumer skills, and time management. Food courses concentrate on the fundamental cooking skills used in everyday life, such as reducing recipes, kitchen safety, and sanitation. In select coursework, students may also look at budgeting and consumer skills: unit pricing, comparison shopping, and time management strategies.

Culinary courses offer practical applications for traditional academics. By using reading comprehension skills to decipher a recipe, math skills to alter quantities, or the scientific method to modify recipes, participating in Culinary Arts builds transferable skills that can be used across the curriculum.

Introduction to Cooking

Grade 7–8 | Arts Rotation

Introduction to Cooking is a middle school elective designed for hands-on learning. The course explores the fundamentals of standard cooking procedures, vocabulary, and measurement. Students work through a variety of recipes, including simple entrees, breakfast foods, and desserts, with weekly selections reflecting students' growing skills and efficiency.

Cooking for Health

Grade 9–12 | Credit: 1

Cooking for Health focuses on both cooking skills and on planning a healthy diet. Students in the course plan and prepare meals from a variety of food groups using the My Plate Food Guide. The course teaches students how to read the USDA Food Nutrition Label to deduce and compare the health quality of different food items. Cooking labs provide an opportunity to try nutrient-rich foods with complementing flavors to make healthy and delicious meals. Empowering students to cook opens the world of food possibilities.

Gaining confidence in the kitchen benefits personal health throughout life. Meals made from scratch with real ingredients are more nutritious.

Meal Planning and Preparation

Grade 9–12 | Credit: 1

Meal Planning and Preparation offers students opportunities to develop cooking know-how. Students practice standard cooking methods and are introduced to more advanced culinary techniques. Using the textbook *Guide to Good Food*, students will cook two to three times per week, while learning about basic cooking methods, techniques, common dilemmas, and best practices. Meal Planning and Preparation is linked to Service Learning, with projects including Empty Bowls for the Thetford Food Shelf and a Holiday Luncheon for the Thetford Elder Network.

Foods Around the World

Grade 9–12 | Credit: 1

Trying new foods with unfamiliar flavors is an adventure in Foods Around the World. Students in this class have the opportunity to select, prepare, and share foods from a wide variety of countries and cultures. The course introduces basic and intermediate cooking procedures, cooking vocabulary, and measurements. In cooking labs, students develop culinary skills through regular practice and experience. In each unit, students dive deeper into a culture's recipes, comparing regional crops with diet profiles and customs, and learn about the role of spices and their identity in ethnic foods. The course culminates with a smorgasbord "banquet" highlighting each unit with student-prepared dishes and emphasizing ethnic blends of spices, form, appeal, and presentation.

Pastries

Grade 9–12 | Credit: 1

Pastries offers students the opportunity to create a variety of pastry shop delicacies including: éclairs, napoleons, palmiers, croissants, Danish pastries, tarts, tortes, artisan cakes, and cookies. Students learn the secrets of flaky and buttery crusts, rich and creamy fillings, and light, airy pate à choux.

This course introduces the techniques for cutting and folding in butter to make laminated dough and blitz puff pastry. Students learn about form, symmetry, appeal, and presentation. This course satisfies the graduation requirement in the Arts.

Humanities

The academic area of the humanities includes courses in English, Social Studies, and World Languages. In English, students broaden their competence in the areas of reading, writing, speaking, and listening. Core English courses for students in 7th to 10th grade are required. Juniors and seniors have a wide range of English electives from which to choose.

Social Studies courses emphasize skill development in critical reading, writing, and oral expression. Students explore vital concepts in a variety of classes, including U.S. and Modern World History, Economics, and Psychology.

The primary goal of the World Languages program is to help students develop linguistic proficiency and cultural sensitivity through the study of French and/or Spanish. By interweaving language and culture, the program seeks to broaden students' communication skills while deepening their appreciation of other cultures. Many humanities courses provide students the opportunity to pursue honors work.

ENGLISH

In the English Department, students work to achieve competence and aim for excellence in the areas of reading, writing, speaking, listening, studying, reasoning, participating in literate communities, and establishing enduring human values.

The English Department offers a variety of courses. Core English courses for students in grades 7 through 10 are grouped heterogeneously. Juniors and seniors have a range of electives from which to choose, and are required to take at least one credit of English per year. Students with an exceptional interest in reading and writing are encouraged to take additional courses beyond their required core English program.

ENGLISH REQUIRED COURSES

English 7

Grade 7 | Required

The goal of English 7 is to meet standards of participation in a literate community by talking about books, ideas, and writing. Students accomplish this through reading and writing workshops; in addition, they practice grammar and vocabulary skills.

Discussions and writing assignments are designed to help students make connections between their own experiences and the readings. Titles may include: *Nothing but the Truth*, *Day of Tears*, *The Outsiders*, *Diary of Anne Frank*, and *Mississippi Trial, 1955*. Students use the writing process and write "Response to Literature" essays, a personal essay, a persuasive essay, poetry, and other creative pieces.

English 8

Grade 8 | Required

This course emphasizes skill development in reading, writing, speaking, and listening—all essential tools for communication. Students study a variety of both fiction and non-fiction literature, including novels, short stories, plays, poetry, and personal essays. Over the course of the year, students engage in reading and writing workshops, several interdisciplinary units, and plenty of grammar and vocabulary work. For the final exam, students create a bound portfolio of the "best" work from middle school.

English 9

Grade 9 (Required) | Credit: 1

English 9 is designed to strengthen students' academic literacy—the skills of reading, writing, and reflection that are essential to success in high school. Participating in the course's literate community and sharing ideas and work with others helps students develop both expressive and collaborative skills. Students explore themes of coming of age, respecting differences, human dignity, and justice. Students may read *The Curious Incident of the Dog in the Night*, *The Secret Life of Bees*, *Twelfth Night*, *Twelve Angry Men*, and *To Kill a Mockingbird*. Students write personal responses, response to text essays, creative pieces, and other assignments as time and interest allow. The English 9 course includes an 'embedded honors' option for students to pursue. Titles for the embedded honors option will likely include: *Look me in the Eye: My Life with Asperger's*, *The Hate U Give*, *The Other Wes Moore*, and *Go Set a Watchman*.

English 10: Identity & Voice

Grade 10 (Required) | Credit: 1

In English 10, students read the classics: Salinger's *The Catcher in the Rye*, Shakespeare's *Romeo and Juliet*, and Steinbeck's *Of Mice and Men*, as well as contemporary plays, poems, independent reading, and Sandra Cisneros's *The House on Mango Street*. In addition, students write responses to literature, personal essays, poetry, and vignettes. Students focus on developing their own sense of identity and voice as readers and writers. Part of this sense is highlighted via a Thetford Academy tradition known as "The Anthology," a project in which students collect excerpts of both original and published literature that feel important to them—citing all sources and exhibiting their own artistic touch. To cap off the project, students formally present their anthologies to an audience. The English 10 course includes an 'embedded honors' option for students to pursue.

ENGLISH ELECTIVE COURSES

Creative Writing

Grade 11–12 | Credit: 1

For students who love literature and want to create their own, this course explores crafting poetry, creative nonfiction, fiction, and personal essays. For inspiration, students draw upon powerful texts old and new, art, music, and nature, as well as workshops led by local authors. Students frequently read their work aloud to each other during class. Grammar and vocabulary are regular components of study; woven into the examination of rules and definitions is a consideration for how writers control the reader's experience by the punctuation, grammar, and words they choose. As a culminating project, students present a sampling of their work to an audience in the theater. Reading one's work aloud is a requirement of this course.

Composition for College & Career

Grade 11–12 | Credit: 1

This course strengthens students' everyday writing and vocabulary skills. It aims to make the study of grammar, punctuation, and vocabulary relevant to their lives. Students write a short paper each week on a topic

that is meaningful to them, and through consistent practice, revision, games, activities, and weekly quizzes, they get better and better at editing their own writing. Reading includes Jeannette Walls' *The Glass Castle* and selections from Annie Proulx's *Heart Songs and Other Stories*.

Fall Play and Ten-Minute Play Festival Grade 9–12 | Credit: 1

The first half of this class is devoted to a full-length production. The play the class will produce is normally announced during the prior term, and auditions held during the first week of classes. The second half of the course is dedicated to producing ten-minute plays written by Thetford Academy students. Students may act in multiple dramatic roles, and they may also have an opportunity to direct a play. Students in tech roles have the opportunity for hands-on experience creating the technical elements of theatrical production, from set construction and painting to lighting design and sound.

Note: Students may elect Fall Play and Ten Minute Play Festival for either Arts or English credit.

Literary Adaptations Grade 11–12 (10 with permission) | Credit: 1

This English elective explores the relationship between literature and movies by focusing on adaptations of literary fiction, mainly short stories. The transformation from text to film raises many interesting questions which students will explore through study of the original stories, viewing their adaptations, and participating in class discussions and weekly blog assignments. As a culminating activity, students will collaborate with peers to create and screen a short film adapted from a piece of short fiction. Some stories and films studied may include: *Memento*, *Minority Report*, *The Sentinel / 2001: A Space Odyssey*, *Rear Window*, and *The Killers*. This course includes an 'embedded honors' option for students to pursue.

Note: Students may elect Literary Adaptations for either Arts or English credit.

Civil Rights Literature Grade 11–12 | Credit: 1

The class explores the history of what is often called the "Classic Civil Rights Movement" by examining the literature of that period, as well as the literature about that period that has been published more recently. Course texts include a wide range of fiction and

non-fiction, including (but not limited to) speeches, poetry, novels, short stories, news articles, and movies. Students will write traditional essays, as well as creative compositions such as poetry and short stories. By exploring the major milestones and markers of the Civil Rights Movements, the course aims to provide students a foundational understanding of the events themselves and the associated literature.

Note: Students may elect Literary Adaptations for either Arts or English credit.

Human Nature in Literature— Honors Course Grade 11–12 | Credit: 1

Because students in this course read literature with challenging, unconventional structures, and because they push beyond their current achievements when they write about this literature, the subtitle of this course is "Breaking Boundaries." The writing focus is on responses to text, specifically clarity of purpose. Students work on choosing apt quotes as evidence as well as crafting dynamic introductions and solid conclusions. This work prepares students for Senior English, college applications, college courses, and...life! After all, being able to make an argument backed up by relevant evidence is a useful skill. In addition, students write poetry and creative non-fiction. Vocabulary study is a weekly component of the course, and students also take an in-depth look at how grammar affects writing style and voice. Reading may include works of literature such as Toni Morrison's *Beloved*, Shakespeare's *Hamlet*, Jhumpa Lahiri's *Interpreter of Maladies*, and Sarah Ruhl's *Eurydice*, as well as independent reading choices.

One-Act Play Competition and Playwriting Grade 9–12 | Credit: 1

In first half of the class, students prepare a one-act play for entry in the Vermont Drama Festival in March, where exciting theater is presented by students from other schools throughout the state. One-Act students study the principles of acting, from character analysis to improvisation. They also gain a working knowledge of the technical aspects of theater. The second half of the class is dedicated to playwriting. Students study several published plays, and then draft, revise, and polish a ten-minute play. Up to

eight plays may be selected for TA's annual Ten-Minute Play Festival.

Note: Students may elect One-Act Play Competition and Playwriting for either Arts or English credit.

Honors American Literature— Honors Course Grade 12 | Credit: 1

The primary goal of Honors American Literature at Thetford Academy is for students to develop their abilities as writers and independent critical readers. In this college-level course, seniors read and study selections from some of the best writings of American and world literature—books, plays, poetry, and short stories that are often called "classics." The writing component includes personal responses, analytical essays about literature, and a research essay. Senior English is for those seniors with an exceptional interest in literature and writing who are willing to work hard at both.

Prerequisite: Summer reading and writing are mandatory for this course; the assignments may be picked up during the last week of May.

World Literature Grade 11–12 | Credit: 1

World Literature gives students an opportunity to expand their global cultural awareness by examining literary perspectives and traditions through the work of non-American writers. This study provides opportunities for dynamic discussion and a deeper understanding of other cultures. The course explores questions such as: How does where we come from impact who we are or who we become? What is the relationship between one's personal experience and one's cultural perspective? How does literature reflect the culture? Readings to include global selections such as Achebe's *Things Fall Apart*, Hosseini's *A Thousand Splendid Suns*, and Lahiri's *The Namesake*. Writing assignments to include informational pieces, narratives, journal entries, and poetry.

ENGLISH FOR SPEAKERS OF OTHER LANGUAGES

ESOL I—English for Speakers of Other Languages I Grade 9–11 | Credit: 1

This course introduces students to basic structures and vocabulary of the English language by enhancing their skills in reading, writing, speaking, and listening. Students

learn strategies in order to advance their reading, listening, and pronunciation skills. They expand oral comprehensibility and write complete sentences, standard paragraphs, and short content-based essays. They utilize level-appropriate conventions of grammar and punctuation with a minimum of errors.

ESOL II—English for Speakers of Other Languages II *Grade 9–12 | Credit: 1*

This course is an extension of the skills learned in ESOL I. It focuses on syntax, continued vocabulary development, reading, listening comprehension, speaking and pronunciation skills, and writing multiple-paragraph compositions that demonstrate organization of ideas, use of a thesis statement, and supportive elements. Intensive grammar instruction is emphasized to support academic writing skills. This course contributes to skills needed in mainstream classes and standardized tests such as PSAT, SAT, and TOEFL.

SOCIAL STUDIES

Social Studies courses help students contextualize modern society and current events through the study of major historical eras, influential individuals and groups, and economic and governmental systems. Students will learn to analyze information and differentiate between fact, opinion, and interpretation, and build a solid background in the skills of reading, writing, and oral expression. All students are expected to complete two major research papers and two oral presentations during their high school careers.

SOCIAL STUDIES REQUIRED COURSES

Introduction to Social Studies 7 *Grade 7 | Required*

This course is an introduction to Social Studies focusing on the American experience. It includes orientation to social sciences such as geography, economics, and civics, as well as topics in history. Some units of study include: What is History, Thetford History, Native American People, Slavery, Civil Rights, Immigration, and major American conflicts. For each unit, students are expected to maintain an organized notebook, participate in class discussions, and complete daily homework assignments. Methods of learning

include small group discussions, large group discussions, presentations, note taking, projects, research papers, and tests.

Global Studies and Geography *Grade 8 | Required*

Global economic, cultural, and political forces increasingly shape our lives in the 21st century. This course aims to equip students with the skills and knowledge necessary to successfully navigate our global society. Major questions in this course will include: Where are the countries, regions, and major physical features on earth located? What does it mean to be a responsible global citizen? Why should one know and care about what goes on in other parts of the world? Students develop skills in a variety of disciplines including history, geography, and current events. Coursework focuses on analytical reading and writing as well as individual and group research projects.

World Civilizations *Grade 9 (Required) | Credit: 1*

What enabled the western European nations, in a process that began around the year 1500, to dominate nearly all of the peoples of the world? How did the geographic positioning, the history, and the cultural traditions of the West create the foundation for all that is familiar today? These are the two focusing questions of this course. Knowing, thinking, and writing about how the West developed is crucial to understanding our responsibilities in the world today. This course is divided into 12 units that survey the history of western civilization from its ancient Near Eastern beginnings to the Renaissance. An additional emphasis is placed on academic writing; students complete research papers in this class. This course includes an ‘embedded honors’ option for students to pursue.

United States History *Grade 10 (Required) | Credit: 1*

This course examines colonization of the New World through the end of the 19th century, with specific attention paid to the American Revolution, the Constitution, slavery, and the Civil War. Students learn to analyze the major causes and effects of important events; compare, contrast, and evaluate conflicting interpretations of events; and propose and defend solutions to problems. Part of the course is dedicated to learning strategies for

reading a variety of historical texts and writing analytical essays. These skills will be used to write a major research paper. This research paper must be successfully completed in order to receive credit for the course. This course includes an ‘embedded honors’ option for students to pursue.

Modern World History *Grade 11–12 (Required) | Credit: 1*

The society in which we live is a direct result of 20th-century events, both in the U.S. and across the world. This course reviews important domestic and international developments and events since 1900, and approaches the 20th century through the themes of communism versus capitalism, genocide, colonialism, war, human rights, and globalization. Students learn to analyze the causes and effects of important events and developments; compare, contrast, and evaluate conflicting interpretations of historical events; display knowledge of worldwide current events and their impact on the U.S.; write in a variety of styles; and complete a culminating research paper and oral presentation. This course includes an ‘embedded honors’ option for students to pursue.

Note: *World History 1900 through Today is required, and it should be taken in the junior year.*

SOCIAL STUDIES ELECTIVE COURSES

Economics—Honors Course *Grade 11–12 | Credit: 1*

This two-part, honors-level course is offered in the fall and spring semesters. The two parts may be completed independently of one another, but it is recommended that they be completed sequentially. The course begins by focusing on introductory concepts in micro and macroeconomics. Fundamental principles governing economic activities of the individual and firm, as well as those of the aggregate economy, are examined. The course will emphasize the development of critical thinking skills and the application of economic principles and methodologies in problem solving.

Prerequisite: *Successful completion of Algebra II or permission of the instructor.*

Psychology

Grade 11–12 | Credit: 1

Why do people do the things they do? What does it mean to be “normal”? How do we learn and remember? What does it mean to think and feel, and how do we know? People have pondered these questions for ages, and the field of psychology provides the tools to search for answers. In this upper level course, students will rely heavily upon primary sources, small group work, independent research, and student presentations, as they explore such topics as personality theories, biopsychology, cognition, sensation, emotions, states of consciousness, abnormal psychology, and the interface between psychology and the law.

Gender Studies

Grade 10–12 | Credit: 1

In this course, students explore how gender roles in the world have changed and expanded since the 1860’s. Students look at the political, social, economic, educational, and gender issues of the past and apply them to contemporary issues. The course focuses on everyday sexism and how it affects not just women but everyone in our culture. Through media and technology, writing, presentations and discussions, students will broaden their knowledge and critical thinking skills while respectfully considering other perspectives.

Perspectives

Grade 11–12 | Credit: 1

This course examines different perspectives on complex contemporary issues such as socio-economic class, immigration, mental illness, and other timely topics depending on the semester. Students respond to a variety of viewpoints connected with these issues by reflecting on their own experiences and by considering their opinions alongside outside sources of information. Students develop a service-learning project, making hands-on activism a part of the course.

Why Food Matters : An Introduction to Local, Regional, and Global Food Systems

Grade 9–12 | Credit: ½

We interact with food on a daily basis and yet its origin and journey is often unclear. This course is designed to introduce students to the complex systems that bring food from farm to table. The study of food systems is

dynamic and multidisciplinary, so the curriculum will integrate Social Studies, humanities, nutrition, and environmental science. Students will engage in hands-on learning to discover their place in the complex web of food production, distribution, and consumption. The ultimate goal of the course is to prepare students to become active and informed participants in their own local, regional, and global food systems.

WORLD LANGUAGES

All students at Thetford Academy are invited to study languages other than English. Thetford Academy strongly encourages college-bound students to take at least three courses of the same language in high school; four or five courses are preferred.

The primary goal of our language program is for students to develop linguistic proficiency and cultural sensitivity. By interweaving language and culture, the program seeks to broaden students’ communication skills while deepening their appreciation of other cultures. The language program adheres to the National Standards for Foreign Language pertaining to the 5 Cs: communication, cultures, connection, comparisons, and communities.

MIDDLE SCHOOL PROGRAM

French I—A and B | Spanish I—A and B
Grade 7–8 | strongly recommended

Thetford Academy offers French I and Spanish I as a two-year program in the middle school. Students may start language studies as 7th graders and continue in 8th grade, covering the equivalent of a French I or Spanish I course in two full years of study. Students will need to complete both years successfully in order to advance to the second level as 9th graders. They will not receive high school credit, but will be able to enroll directly in French II or Spanish II. Please refer to the French I and Spanish I descriptions that follow. Middle School languages teach students the skills to be successful language learners, and places importance on projects, interactive games, and activities.

FRENCH PROGRAM

The language department believes that students of French should be equally proficient in the four communication skills: listening, speaking, reading, and writing.

The French program emphasizes each of these skills throughout the curriculum. At the end of a four- or five-year sequence, the student will be able to communicate with a native speaker about most aspects of daily life, express opinions, and discuss a variety of subjects including interpretation and analysis of music, poetry, art, and literature. Our program offers a communicative, whole-language approach.

French I

Grade 9–12 | Credit: 1

This course is an introduction to the study of French and the francophone world. Students will establish a solid foundation for more advanced study as they develop the tools necessary to communicate in French about a variety of topics drawn from their daily lives. They will gain proficiency in each of the four areas necessary for really learning a second language—listening, reading, speaking and writing—as they acquire basic vocabulary and begin to develop an understanding of the way French works.

Components of the class include oral drills, pair and group work, total physical response (TPR), silent writing, games, songs, dialogues, and other activities. All languages exist within a broader cultural context, and an equally important objective of the course is for students to better understand French speakers and cultures around the world.

French II

Grade 9–12 | Credit: 1

In French II, students improve their proficiency in listening, reading, speaking, and writing as they expand their vocabulary, gain increasing confidence and facility with the language, and deepen their understanding of French grammar. There is an intensive review of the key grammatical concepts and vocabulary from French I at the beginning of the course. As in French I, oral drills, pair and group work, total physical response (TPR), silent writing, games, songs, dialogues, and other activities are all components of the class. A much greater portion of the course, however, is conducted in French. As students gain confidence and facility with the language, they will be expected to communicate with the teacher and their classmates in French. French language websites, video documents, and other realia supplement the text program.

Prerequisite: Successful completion of French I with a grade of C or better or permission of the instructor.

French III

Grade 10–12 | Credit: 1

French III begins with review and expansion of the most important concepts from French II. There is an emphasis on vocabulary development and oral and written self-expression. The class is conducted entirely in French, as students focus on improving their listening comprehension and developing the ability to express themselves fluidly in French. Activities are regularly drawn from French-language movies, YouTube videos, songs, and newspapers. By the end of the class, students will be comfortable in a French-only classroom environment and have the skills necessary to succeed in Advanced French. Students taking this course commit to speaking French during class.

Prerequisite: *Successful completion of French II with a grade of B or better or permission of the instructor.*

Advanced French IV and V— Honors Course

Grade 11–12 | Credit: 1

In French IV and V, students explore childhood and growing up by reading Antoine de Saint-Exupéry's classic, *Le Petit Prince*. Historical and cultural areas of study are related to this seminal work and to the life and times of its author. In addition, the instructor focuses on selected grammatical topics appropriate to advanced-level communication, using the text *Imaginez* and supporting v-text and web materials. An emphasis is placed on developing oral and written expression. Students who sign up for Advanced French commit to speaking French during class. This course is generally offered every other year.

Prerequisite: *Completion of French III or IV with a grade of B or better or permission of the instructor.*

SPANISH PROGRAM

The language department believes that students of Spanish should be equally proficient in the four communication skills: listening, speaking, reading, and writing. The Spanish program emphasizes each of these skills throughout the curriculum. At the end of a three or four-year sequence, the student will be able to communicate with a native speaker about most aspects of daily life, express opinions, and discuss a variety of subjects including interpretation and analysis of music, poetry, art, and literature. The program offers a communicative, whole language approach.

Spanish I

Grade 9–12 | Credit: 1

This course is an introduction to the study of Spanish and the hispanohablante world and helps students establish a solid foundation for more advanced study, travel, and intercultural communication. The number of Spanish speakers in this country is rapidly increasing; therefore, there is both academic and practical purpose in pursuing Spanish. Students will be engaged in a variety of active methods that will contribute to the development of skills in speaking, listening, reading, and writing.

Oral drills, pair and group work, total physical response (TPR) exercises, written and oral exercises, games, music, dialogues, multimedia projects, and other activities are all components of the Spanish program. This course explores a wide variety of cultural topics, with an emphasis on the daily lives of young people. An additional feature of this course is the exploration of the history of Mexico and the Mexican muralists.

Spanish II

Grade 9–12 | Credit: 1

This course begins with an intensive review of Spanish I. Methods are much the same as in level I; however, more of the course is conducted in Spanish as students continue to develop the ability to understand, speak, read, and write. Oral work is stressed and self-initiated conversation is encouraged. Students will be prompted to manipulate the language at a more advanced level while expanding vocabulary, applying grammatical structures, and strengthening awareness of cultural similarities and differences.

Performance-based assessments such as skits and videos are a regular component of the course. Short readers, various realia and media, as well as a text-based *Supersite* accompany the text program.

Prerequisite: *Successful completion of Spanish I with a grade of C or better or permission of the instructor.*

Spanish III

Grade 10–12 | Credit: 1

This course continues the work accomplished in Spanish II, including a complete review and expansion of the most important concepts. However, this level is taught mostly in Spanish (with the exception of some grammatical explanations). Spanish III

involves intensive work on the development of fluid speaking, listening, reading, and writing. In addition to text activities, this course includes current events, studies of traditional and contemporary music, short stories, dramas, legends, poetry, films, YouTube videos, and various realia and media. Upon completion of this course students will have enhanced their ability to communicate with hispanohablantes about many topics and be well prepared for Advanced Spanish.

Prerequisite: *Successful completion of Spanish II with a grade of B or better or permission of the instructor.*

Advanced Spanish IV and V— Honors Course

Grade 11–12 | Credit: 1

This course is designed to provide an active and rewarding experience as students continue to strengthen language competency and cultural awareness. Students interpret a broad selection of contemporary and classic literature and film. Additional texts include news articles, short stories and plays, podcasts and videos, and musical selections. Topics may include immigration, current and historic events, influential figures, themes of identity and power in the Americas, and music and art of the Hispanic world. Students commit to speaking Spanish only at this level.

Prerequisite: *Completion of Spanish III or IV with a grade of B or better or permission of the instructor.*

STEM

STEM is an acronym for an interdisciplinary approach to learning that integrates Science, Technology, Engineering, and Mathematics. It goes beyond memorization of facts to provide students with the opportunities for critical thinking, problem solving, and collaborative work.

The Science and Mathematics departments at Thetford Academy use a hands-on approach to education, one that allows students to collect, record, and analyze data and apply their knowledge and skills to real-world problem solving. Examples of this include VEX robotics, model bridge construction, use of data collection sensors, water quality monitoring, horticultural design, woodlot management, construction of physical models, statistical analysis, applied mathematics, development of apps for iOS, and business/actuarial analysis.

MATHEMATICS

The Mathematics Department offers a variety of courses, allowing all students to start at their present level of achievement and progress until they have mastered a basic level of competency in mathematics and achieved additional mathematical skills appropriate to their abilities and future educational or career plans. The curriculum of the department has been built with careful attention to both the most recent Common Core standards and the particular needs of Thetford Academy students. These two foci align closely with the Vermont Framework in curricular content and learning opportunities, particularly the standards for Mathematical Understanding, Problem-Solving, and Systems.

Graduation Requirements and Course Selection:

At least three credits of high school mathematics are required for graduation. Students are required to earn two credits of mathematics at Thetford Academy. This means that two years in a technical program with an embedded math credit may be counted as one mathematics credit for graduation. The needs of students in the Pre-Technical Program will be considered on a case-by-case basis.

Sequence of Courses in Mathematics:

Completed Courses	Possible Subsequent Courses
Mathematics	Mathematics II, Pre-Vocational Math
Mathematics II	Mathematics III or Pre-Algebra
Pre-Vocational Math	Mathematics III or Pre-Algebra
Mathematics III	Algebra I, Algebra I Honors
Pre-Algebra	Algebra I, Applied Mathematics, Algebra I Honors
Algebra I	Algebra II, Business Mathematics, Applied Mathematics, Geometry
Algebra I Honors	Algebra I, Algebra II, Business Mathematics, Geometry, Algebra II Honors
Algebra II	Geometry, Business Mathematics, Algebra II Honors, Precalculus, Statistics, Applied Mathematics
Algebra II Honors	Business Mathematics, Geometry, Algebra II, Precalculus, Statistics
Geometry	Algebra II, Business Mathematics, Statistics, Precalculus, Algebra II Honors
Statistics	Business Mathematics
Precalculus	Calculus, Business Mathematics, Statistics
Calculus	Business Mathematics, Statistics, Off-campus study (i.e. Dartmouth College course, dual-enrollment opportunity)

All students with interest or skill in mathematics should take two years of Algebra, one year of Geometry, and Advanced Mathematics. The Mathematics Department recommends Algebra I as one of the three required mathematics credits.

Course Credit Regulations:

Students who wish to take two mathematics courses in one school year may do so given the following criteria: they have met the prerequisite requirements for the second course and there is room available in the class. Students may sign up for one course in each semester, but may enroll only if the criteria above are met. If a course is offered at TA and a student takes an equivalent course elsewhere, the student must take the Thetford Academy math course exam(s) and receive at least 85% on the exam(s) to receive Thetford Academy credit. Students may also apply to take Calculus at Dartmouth College. This course is open to qualified students at no charge, and can be completed for either high school or college credit. Successful completion of Calculus at Thetford Academy is required.

MathMathematics Book I

Grade 7-8 | Required

MathMathematics Book I uses discovery-based problem solving in the study of such topics as sequences; points, lines, and rays; classifying triangles; rounding; order of operations; polygons; line symmetry; reducing fractions; using a part to find a whole; adding, subtracting, multiplying, and dividing decimals; Venn diagrams; metric and English length and mass; percent; line and bar plots; mean, median and mode; stem and leaf plots; probability; divisibility; adding, subtracting, multiplying, and dividing fractions and mixed numbers; writing expressions and equations; ratios and rates; scatter plots; and proportions.

MathMathematics Book II

Grade 7-8 | Required

MathMathematics Book II continues the series of discovery based problem solving to study more topics such as line and bar graphs; sequences; exponents, squares and cubes; probability; order of operations; angles; coordinate graphing; adding, subtracting, multiplying and dividing integers; modeling functions, solving equations; prime

factorization; adding subtracting, multiplying and dividing fractions, mixed numbers and decimals; factor trees; scientific notation; metric conversions; rotational symmetry; ratios and proportions; box and whisker plots; percents; areas of polygons and circles; multistage probability; square roots; surface area and volume of prisms; scale drawings; similar figures; angles formed by transversals; volume of cylinders; percent change; units of capacity; solving inequalities; circle graphs; quadrilaterals, counting principle; and volume of pyramids.

MathThematics Book III *Grade 7–8 | Required*

MathThematics Book III builds on the discovery-based problem solving and critical thinking done in Books I and II, preparing students for Algebra I or Algebra I Honors. Topics include perimeter, area, volume; probability; proportions and percent; solving equations with fractions and decimals; adding, subtracting, multiplying and dividing fractions and decimals; linear equations; Pythagorean Theorem; symmetry; number theory, combinations, permutations; tangents; and exponential functions.

Prerequisite: Successful completion (C+ or above) of *MathThematics Book II* or equivalent basic skills class or permission of the instructor.

Math Concepts, Levels 1 or 2 *Grade 9–12 | Credit: 1*

Math Concepts, Levels 1 or 2, is a small-group, highly individualized class, with a curriculum designed for students who need specifically-designed instruction in the foundations of mathematics.

Prerequisite: *High School Students Only—* Placement in this course requires consultation with a school counselor and the math department instructors.

Consumer Math *Grade 11–12 | Credit: 1*

Consumer Math is a small-group, highly-individualized class focusing on daily life skills such as balancing checkbooks, shopping for groceries, understanding product discounts, and managing expenses. Seniors have found this course especially helpful for practice in multiplication, division, decimals, fractions, and graph interpretation.

Prerequisite: Placement in this course requires consultation with a school counselor and the math department instructors.

Pre-Algebra *Grade 9–10 | Credit: 1*

Pre-Algebra bridges the gap between basic mathematical functions and algebraic thinking. The focus is on building a strong foundation as students prepare to move forward to Algebra I, Algebra 1 Honors, Applied Mathematics, or Business Math. Topics include evaluating expressions, fractions, ratios, proportions, percents, and introductory geometry. The main area of focus is solving one variable equations and graphing linear equations. Students need a firm grasp of integer and basic operations to be successful in this course.

Prerequisite: Successful completion (C+ or above) of *MathThematics Book II* or equivalent, or permission of the instructor.

Algebra I *Grade 8 | Instructor permission required* *Grade 9–12 | Credit: 1*

Algebraic thinking is the stepping stone to higher level mathematics. The course begins with a thorough review of the concepts essential to success in Algebra—the order of operations, operations with signed numbers, and the distributive property—and moves on to solving and graphing (both on paper and using calculators), linear and quadratic equations and inequalities. In addition, students study factoring, simplifying and manipulating rational expressions, and linear functions. These concepts are learned by students working together to discover these relationships.

Prerequisite: Successful completion (B- or above) of *Math-Thematics Book III* or *Pre-Algebra*, or permission of the instructor.

Algebra I—Honors Course *Grade 9–11 | Credit: 1*

The idea of the variable is central to the study of Algebra I Honors. Developing an understanding of how to use variable expressions, equations, and inequalities to represent the world around us, how to manipulate these expressions, and how to graph them are the underlying themes of the class. To this end, students enrolling in Algebra I Honors should be capable of abstract thinking; not only have they thoroughly mastered the basic computational skills of mathematics, but they are ready and able to think critically about what they are doing and, more importantly, why. Students are expected to be familiar with

concepts essential to success in Algebra: the order of operations, operations with signed numbers, and the distributive property. The essentials of the course include: solving and graphing linear and quadratic equations and inequalities, factoring, simplifying and manipulating rational expressions, linear functions, and simplifying and manipulating square roots of real numbers.

Prerequisite: High level of success (A- or above) in *MathThematics Book III* or equivalent

Algebra II *Grade 9–12 | Credit: 1*

In this course, students study sequences, describing data using statistics, linear models and systems, and functions, relations, and transformations. Problem solving and group work make up a large portion of the course. This course is designed for students who wish to develop their mathematical intuition by seeing how math works in real-life situations. It is excellent preparation for the social sciences such as psychology or sociology, and students would be well prepared to continue their study of math by enrolling next in the Statistics course.

Prerequisite: Successful completion (B- or above) of *Algebra I* or permission of the instructor.

Note: Students must take *Algebra II Honors* before enrolling in *Precalculus*.

Algebra II—Honors Course *Grade 10–12 | Credit: 1*

Students in Algebra II Honors are expected to have very strong Algebra I skills, and, ideally, enjoy math. Excellent factoring skills are a must. Algebra II Honors is designed for advanced mathematics students to prepare them for STEM careers. Students are asked to think critically all the time by explaining, justifying, verifying, interpreting, drawing, and labeling mathematical relationships. Algebra II includes study in matrices, trigonometry, functions, and square roots of both real and imaginary numbers. Graphing various forms of equations and inequalities is an integral part of this course.

Prerequisite: Successful completion (A- or above) of *Algebra I Honors* or permission of the instructor.

Geometry

Grade 9–12 | Credit: 1

Geometry covers similarity, congruence, basic trigonometry, properties of geometric figures, transformations, and the geometry of solids. This course is discovery-based and focuses on applications. This course includes an ‘embedded honors’ option for students to pursue.

Prerequisite: Successful completion (B or above) of Algebra I Honors, Algebra I, Algebra II Honors or Algebra II, or permission of the instructor.

Applied Mathematics

Grade 11–12 | Credit: 1

This course surveys various mathematical contexts through the lens of everyday use. Topics may include carpentry, home budgeting, the mathematics of voting, the geometry of art, and automotive applications. Applied Math is offered for students who have not yet taken Algebra I or Algebra I Honors.

Prerequisite: Successful completion of Pre-Algebra or permission of the instructor.

Personal Finance

Grade 11–12 | Credit: 1

This course reviews basic mathematical skills needed for common practical problems that students may encounter in the business world. Topics include: financial record-keeping; unit cost comparisons; types of wage payments—deductions and benefits; taxes—personal, property, social security, and Medicare; personal loans; personal saving and investing options; insurance—auto, life, property, health, and disability; household and travel expenses; and an introduction to establishing a small business.

Statistics

Grade 11–12 | Credit: 1

Statistical analysis is the basis of many areas of study. Most college-level students will study some level of statistics to prepare them for their future careers. This course provides a good background preparation for that study. Students learn about data collecting techniques, data analysis, measures of central tendency, and probability. Computer applications and calculators are used throughout the course.

Prerequisite: Successful completion (C+ or above) of Algebra II and Geometry, or permission of the instructor.

Precalculus—Honors Course

Grade 11–12 | Credit: 1

This course provides preparation for calculus by detailed study of the elementary functions. Topics include a brief review of algebra, introduction to functions and their algebraic properties, and in-depth analysis of a variety of elementary functions. Trigonometric, exponential, logarithmic and polynomial functions are included, with other topics selected by the instructor.

Prerequisite: Successful completion (B or above) of Algebra II Honors and Geometry, or permission of the Algebra II instructor.

Calculus—Honors Course

Grade 11–12 | Credit: 1

This course is an entry-level survey of the topics of the calculus of one variable, and includes applications from both differential and integral calculus. While emphasis is on skills, the course also covers the theoretical foundations of these topics. Applications include those standard to the course as well as those that the instructor feels meet the future interests of the class members.

Prerequisite: Successful completion (B or above) of Precalculus or permission of Precalculus instructor. Note that if Precalculus is not taken at Thetford Academy, a placement test will be required before a student may enroll in Calculus.

SCIENCE

The Science Department introduces and develops student awareness of physical, life, and chemical sciences. This is a major responsibility as students become more aware of the ever-changing roles of science and technology in today’s society. With this awareness, students should be able to:

- Acquire, classify, and utilize scientific knowledge;
- Understand basic scientific methods and principles;
- Understand and apply safe lab techniques;
- Demonstrate proper use and care of laboratory equipment; and;
- Be environmentally aware.

To fulfill the Science diploma requirements of Thetford Academy, a student must complete three credits of coursework from the Science Department, including Conceptual Physical Science and Biology.

SCIENCE REQUIRED COURSES

Introduction to Laboratory Science

Grade 7 | Required

This course introduces students to laboratory science through a variety of subjects. In physical science, students explore the properties of matter, with an emphasis on making accurate metric measurements. Study includes: designing experiments, collecting and recording data, interpreting results, and communicating findings using scientific writing. A meteorology unit builds upon this work and provides an opportunity to apply these physical science concepts in new ways. In life science, the course reviews cell structure and function and introduces the use of microscopes. This course will meet outside at least one day per week.

The Flow of Matter and Energy through the Biosphere

Grade 8 | Required

This course examines the transfer of matter and energy through ecosystems, both in the field and in the laboratory. Students explore the ecological structure and composition of a nearby forest and pond ecosystem and delve into the complex dynamics of the biotic and abiotic world, including food webs, nutrient cycles, and species interactions. The physical earth section explores rocks and minerals, the processes that shape the planet, and the geologic history of the earth. Students examine the physical aspects of energy and matter transfer, and the topics of magnetism, electricity, and the nature of light. Finally, students will study botany, focusing on plant parts and their functions.

Conceptual Physical Science

Grade 9 (Required) | Credit: 1

This course is a laboratory-based introduction to the physical sciences with an emphasis on proper laboratory safety and procedures. Topics in physics and chemistry include motion, energy, force, work, heat, and states of matter, as well as the structure of the atom, chemical bonding, and the periodic table of the elements. This course also includes a unit on astronomy, giving students the opportunity to better understand the earth’s (and their own) place in the universe. In addition to individual and group research projects and labs, students are challenged to complete engineering projects. This course includes an ‘embedded honors’ option for students to pursue.

Essentials of Biology: An Introduction to the Science of Life

Grade 10 (Required) | Credit: 1

Are viruses alive? If human mass is mostly bacterial cells, who is running the show? If the mushroom on the forest floor is not a fungus organism, what is? This introductory course answers these and other questions and helps students relate modern biology to our ever-changing world. Topics of study include ecology, cell biology, biochemistry, genetics, evolution, and classification. The course includes a variety of labs and hands-on field explorations designed to further understanding of the scientific method. This course includes an ‘embedded honors’ option for students to pursue.

SCIENCE ELECTIVE COURSES

Astronomy

Grade 10–12 | Credit: ½

What makes a star shine? How long will the sun keep shining? What are black holes and how can they form? Astronomy is a general introduction to contemporary astronomy that includes how stars form and how they end their existence. The course gives special attention to the historical roots of astronomy and the exciting discoveries of the past few years. Students learn how pulsars and black holes result from the evolution of normal, massive stars, and how giant holes are at the center of galaxies and quasars. Astronomy students explore the solar system and constellations and learn to find their way around the sky. In labs, students explore concepts discussed in class.

Advanced Biology—Honors Course

Grade 11–12 | Credit: 1

Advanced Biology immerses students in study of the biological processes that control and regulate all life. Looking at DNA as life’s “blueprint,” students explore DNA’s role and use as a delivery device for the biological information that drives evolution, as well as its role in medicine, industry, and forensic science. Students engage in a series of labs and independent projects to prepare themselves for college-level work in science, biology, or a health-related field of study.

Prerequisite: *Essentials of Biology* or permission of the instructor.

Chemistry I: The Study of Matter

Grade 11–12 | Credit: 1

Chemistry is the study of matter and its changes. In this class, students learn how all matter in the known universe is simply a combination of 92 fundamental elements and how they themselves, and all that sustains them, are made of those elements. To understand this, students study the building blocks of matter, how humans have come to understand them, and how science may be harnessed to predict their interactions and create new forms of matter. Chemistry is a compelling tale about how humans have come to make sense of the natural world. This course provides students with the language, information and ideas needed to understand that story, which is still being written.

Prerequisite: *Essentials of Biology* (concurrent enrollment permitted), *Algebra 1*, or *Algebra I Honors*. Note that *Chemistry I* is not intensely mathematical; students continuing in *Advanced Chemistry* should choose challenging mathematics courses that develop math problem-solving skills.

Advanced Chemistry—Honors Course

Grade 11–12 | Credit: 1

Students delve into the part of chemistry involving calculating amounts—how much solid is produced? How much heat is given off? Students learn to write chemical formulas and reactions, examine reactions of gases, analyze how fast reactions proceed and look at a special class of reactions that go forward and backward at the same time. Advanced Chemistry is the essential next step for those students who wish to take a Chemistry course in college for a career in medicine or another STEM field. This course, along with Chemistry 1, is a good preparation for the SAT II test in chemistry.

Recommended preparation: *Chemistry I* with a grade of B or better. *Algebra II* and other ongoing preparation in mathematics are recommended.

Anatomy and Physiology

Grade 11–12 | Credit: 1

The human body is a finely tuned, resilient, and adaptive machine. Anatomy and Physiology is an exploration of the inner workings of the body in health and disease. By exploring the healthy function of organ systems, students learn how and why things go wrong—that is, when illness or injury occurs. This course covers organ systems including the Circulatory/ Respiratory,

Digestive, Musculoskeletal, Integumentary, Nervous, Endocrine, Reproductive, and Immune, with a focus on understanding how the various systems work together to maintain homeostasis.

Environmental Science: Global Concerns / Local Impacts

Grade 11–12 | Credit: 1

Environmental degradation on a local, state, and global level may be among the most serious crises of our times. This course on a nearby ecosystem—the Zebedee Wetland—broadens student understanding of limnology (fresh water aquatics), soil biology, air quality, biotic and abiotic factors in these ecosystems, as well as the impacts of human activity and development on watershed ecosystems. Students engage in on-site data collection to analyze and assess the current health of the wetlands. Topics covered include terrestrial and fresh water ecosystems, air quality and pollution, geology, biochemistry of soils, and current global issues.

Forestry

Grade 11–12 | Credit: 1

In Forestry, students study the forest as a biological community, covering ecological concepts such as energy flow, forest nutrition, nutrient cycling and decomposition, and the interrelationships between trees and other organisms comprising the community. Students examine the concepts of disturbance, succession, population dynamics, biological and ecosystem diversity, and wildlife habitat management. Students also study ecologically based manipulations of forests to achieve desired management objectives; develop and apply silvicultural prescriptions to timber and non-timber forest benefits; and learn about soil, forest health, and biodiversity.

Horticulture

Grade 11–12 | Credit: 1

This is an introductory course in basic horticulture designed for the student who enjoys watching things grow. The course covers methods and principles of organic gardening, plant propagation, and greenhouse management. It will also instruct students in the proper use of fertilizer; biological control of plant pests; small fruit gardening; lawn and turf grass management; vegetable, herb, and flower

gardening; and landscape and garden design. This is a practical, hands-on class that will benefit any future homeowner as well as the student seeking further employment in the horticulture field.

Physics: Mechanics

Grade 11–12 | Credit: 1

If something moves, it is studied—falling objects, wind and water currents acting on ships and airplanes, and kids on a merry-go-round. What makes something start or stop moving? A force. Forces acting through distance and time lead to a study of energy. A good background in algebra and basic trigonometry is helpful, and students should expect to read at least two books. A project on a topic relating to new technology is often a feature of this course.

Prerequisite: *Algebra II and Geometry or the equivalent. While little mathematics is required in this course beyond what is learned in Algebra I and Geometry, students with greater preparation in mathematics find physics problems far easier to approach.*

Physics: Waves, Light, Electricity, and Magnetism

Grade 11–12 | Credit: 1

A bobbing spring or swinging pendulum begins a study of waves, which leads to a study of sound, including the basics of music and musical instruments. Practical uses of light reflection and refraction leads to a study of mirrors and lenses. Finally, we study DC electric circuits, which usually involves some kind of group project. As in the mechanics course, students should expect to read at least two books.

Prerequisite: *Algebra II and Geometry or the equivalent. While little mathematics is required in this course beyond what is learned in Algebra I and Geometry, students with greater preparation in mathematics find physics problems far easier to approach.*

ENGINEERING AND TECHNOLOGY

Computers are available in a variety of locations on campus in a networked system that provides all students with email accounts and internet access under a Responsible Use Policy. Computer skills instruction is offered to students in grades 7 and 8, with the expectation that students will demonstrate proficiency before entering high school.

Middle School Digital Literacy

Grade 7 | Required

In Digital Literacy, students explore what it means to be a digital citizen, expand their understanding of how digital networks and computers operate, and practice using digital tools to learn and create. The class is designed to help students become capable and thoughtful users of technology. Students will find out how long it takes a web packet to travel from Los Angeles to London, make a plan for combatting cyberbullying, and learn how to spot an online scam. They'll discuss subjects such as what information should be kept private and explore some of the ways online companies use data you give them. Once a week, students will spend the class creating with technology: building websites, editing images, creating 3-D models, coding games, animating movies, and more.

Internet and Society

Grade 9–12 | Credit: 1

Through an exploration of issues such as digital piracy, online privacy, hacking, fake news, lolcats, and viral videos, students will examine what it means to live in the internet age. Students in this course will develop critical thinking skills alongside digital and information literacy skills and have the freedom to study subjects that interest them, e.g. website development, bitcoin, or the impact of cell phones on teens. The course allows students to take a “beginner,” “intermediate,” or “expert” path through the class, and by the end of the course, all students will have gained a better understanding of the internet and its impact on society. Daily access to the internet is generally required to complete assignments, but students without internet at home can work with the instructor to plan for access.

Introduction to Computer Science

Grade 9–12 | Credit: 1

Computer Science drives much of the 21st century economy, from the software running on your phone when you text your friend, to the programs that help your car's fuel economy and stability, to programs that decide what to suggest you buy when you visit amazon.com. How do they work? How can you write your own programs? How can you manage information or machines? In this course, students learn to design and write computer programs that solve problems in many different fields. Computer science is not

a math class; there are no formulas to memorize, and if you forget something, you can look it up. Learning computer science involves using some fairly simple tools to build amazing things.

Robotics

Grade 7–8 | Elective Rotation

Grade 9–12 | Credit: ½

Robots are machines that do the things computer programs tell them to do. There are many kinds of robots, and in this course students begin with a simple \$100 robot, Sphero, a ball with a robot trapped inside of it. How do robots work? To answer that, students will try building a more mechanical robot, Meccanoid, a four-foot tall human-like robot that follows voice commands. Along with a very inexpensive Arduino computer, students will take apart Meccanoid and experiment by taking control of his arms and head in ways far more interesting than the designers intended. The only prerequisites are that you are curious and willing to experiment and learn using computers and machines.

Cybersecurity

Grade 11–12 | Credit: See below

Hackers are working 24/7 to get your data. They want your bank accounts, your passwords, they want access to your computer and your network. They bankrupt companies and get employees fired. They try to change the results of national elections. They want to shut down power grids. It's a war out there, and cybersecurity experts are in high demand all across the world to fight back.

Are you interested in joining the effort to protect your personal, local, state, and national security? Cybersecurity 1 is your first step in learning how.

In this course you will learn how to protect vulnerable information. You will learn how to protect your own data and the data of the business you own or work for, by learning about and creating systems that ensure that hackers can't get your data.

Cybersecurity 1 introduces the tools and concepts of cybersecurity and encourages students to create solutions that allow people to share computing resources while protecting privacy. This course raises students' knowledge of and commitment to ethical computing behavior. It also aims to develop students' skills as consumers,

friends, citizens, and employees who can effectively contribute to communities with a dependable cyber-infrastructure that moves and processes information safely.

Note: *Participating students will receive one elective credit and one-half Technology credit.*

STEM Internship with Hypertherm and Fujifilm Dimatix

Grade 9–12 | Credit: See below

The STEM Internship is available by application process to all Thetford Academy juniors and seniors. This course explores career readiness and employment opportunities in the Upper Valley. This unique and innovative learning experience takes place on both Fujifilm and Hypertherm campuses. Participating students will receive one Math credit, one-half Science credit, and one-half Elective credit. Students gain competency in industry safety standards and an understanding of the skills needed for successful employment. Students acquire hands-on experience in all aspects of business, including history, marketing, assembly, accounting, engineering, and research and development. Through this diverse experience, students develop perspective and have the opportunity to discover the benefits and challenges faced by businesses. Interested students should see their school counselor for more information.

Note: *Participating students will receive one Math credit, one-half Science credit, and one-half Elective credit.*

Wellness and Outdoor Education

PHYSICAL EDUCATION, HEALTH, AND WELLNESS

Thetford Academy offers exciting physical education experiences through a wide variety of activities. These units challenge the individual to master fundamental motor skills; develop coordination and overall fitness; maintain or increase positive attitudes toward peer groups; practice social skills necessary for participating in individual and team activities; demonstrate physical skills based on observation and listening to instructions; understand physical, mental, and emotional health; and increase knowledge and skills to maintain a healthy lifestyle.

MIDDLE SCHOOL REQUIRED COURSES

Physical Education and Health 7 *Grade 7 | Required*

In Physical Education students participate in the following activities with an emphasis on learning basic skills: soccer, field hockey, flag football, basketball, tumbling, bowling, scurry hockey, square dancing, floor hockey, vaulting, sledding, snow shoeing, cooperative games/new games, softball, and volleyball. A three-week unit of health education includes an overview of important health related topics, specifically studying the social drugs: caffeine, tobacco, and alcohol. In addition to learning about the effects of these substances on the body, students will develop skills to make responsible decisions using a program called Life Skills.

Physical Education and Health 8 *Grade 8 | Required*

The students participate in the same activities in Physical Education that they did in the 7th grade, with continued emphasis placed on individual skill development. A four-week program in health education teaches human sexuality using the program Reducing the Risk: Building Skills to Prevent Pregnancy, STDs & HIV. Emphasis will also be placed on developing one's self-esteem, improving interpersonal skills, and learning to make responsible decisions to develop a healthy lifestyle.

HIGH SCHOOL REQUIRED COURSES

Physical Education 9 *Grade 9 (Required) | Credit: ½*

Physical education activities are offered with an emphasis on skill and knowledge of rules: field hockey, flag football, archery, aerobics, soccer, track and field, lacrosse, team handball, new games, sledding, snow-shoeing, ultimate frisbee, floor hockey, basketball, badminton, softball, volleyball, weightlifting, and personal fitness.

Health *Grade 9 (Required) | Credit: ½*

In Health 9, students are challenged to consider the physical and emotional consequences of sexual activity using class activities, literature, and class discussions. Information concerning birth control and sexually transmitted diseases is presented to facilitate a thorough understanding of responsible sexual health choices.

Students are given the responsibility of a RealCare Baby®—a baby simulator that requires parental care. In addition to sexual health, students are challenged to consider the physical, emotional, and intellectual consequences of substance use, as well as identify risk factors for addiction. Information about the acute and chronic effects of specific drugs, alcohol, and tobacco is presented. Additional topics for class discussion include addiction, family relationships, legal considerations, and life goals.

PHYSICAL EDUCATION ELECTIVE COURSES

Physical Education 10-12 *Grade 10-12 | Credit: ½*

Physical education activities are a continuation from ninth grade. Students will be given the opportunity to expand their knowledge of rules and individual skill development in the following activities: field hockey, flag football, archery, aerobics, soccer, track and field, lacrosse, team handball, new games, sledding, snow-shoeing, ultimate frisbee, floor hockey, basketball, badminton, softball, volleyball, weightlifting, and personal fitness. New activities may also be added.

Aerobic Fitness *Grade 10-12 | Credit: ½*

In this course, students utilize the Thetford Academy fitness room to create individual plans to increase muscle strength, cardiovascular endurance, flexibility, coordination, and agility.

Students are taught the proper techniques for using free weights, developing a weight training program, and reducing the risk of injuries. The course also provides opportunities for student athletes to train for a specific sport, allowing them to perform at an optimal level.

Student Leadership in Physical Education (PE Aide) *Grade 11-12 | Credit: 1*

Students in this course assist Physical Education teachers in leading PE activities for younger classes. As leaders, they help provide more individualized instruction than the younger students could experience without them. The student leaders are required to be present at class every day and to help out whenever and wherever they can. They improve their own skills by having to analyze them as they teach others.

Prerequisite: Recommendation of the instructor. Yoga for Strength, Focus, and Wellbeing *Grade 9-12 | Credit: ½*

Finding personal balance in a busy life is important for everyone. The practice of yoga can be a powerful tool every student can learn and practice as a lifelong skill that can help a person achieve this balance during the school day and beyond. The word yoga means "union" and refers to the integration of the whole person, physical and mental, with the goal of wellbeing. This course focuses on learning the asanas (physical practice) of Hatha Yoga as a means for students to develop a stronger, more flexible body while learning and practicing breathing and relaxation techniques designed to teach students to manage stress. An important aspect of the course is proper alignment, modified based on individual need.

Outdoor Education

Outdoor Leadership

Grade 7–8 | Elective Rotation

In this course, students learn basic outdoor skills including: reading maps, navigating with a compass, building shelters and fires, outdoor cooking, knot tying, knife safety, basic first aid, trail improvement, and risk management. Some reading is required. The course is designed to support middle school students in the development and application of leadership and teamwork skills.

Throughout the course, students learn and practice positive group interaction, respect, inclusiveness, preparedness, and informed, thoughtful decision-making.

Environmental Studies and Outdoor Education

Grade 9–12 | Credit: See below

Environmental Studies and Outdoor Education is a half-day, interdisciplinary course covering a wide range of important environmental topics. The course takes advantage of Thetford Academy's vast natural resources to engage students in hands-on, outdoor learning and scientific exploration. Students in the course will develop strong ecologic literacy and an understanding of their role in—and connection to—the natural world.

Students in Environmental Studies will use field experiments and independent study to take a deeper look at the natural history, ecology, and biologic processes of our local, regional, and global environment.

Note: *The course involves embedded work in English and Science over two semesters (four blocks). Students will earn two Science credits, one English credit, and one elective credit. Students can enroll for one semester and receive one Science credit, one-half English credit, and one-half elective credit. Sophomore students who enroll for the whole school year will receive Biology credit.*