

TECHNOLOGY / SCHOOL TO CAREER

Every student will eventually enter the world of work. After high school, all students will choose to pursue an entry-level position in the workplace or secure additional skills and education by attending a technical school, two-year college or a four-year college. Preparing all students to compete and perform in the real world is essential. The School to Career initiative provides the core proficiencies and academic competencies necessary for students to succeed in our globally competitive world. The School to Career vision is that this will be achieved through career-based learning experiences along with applied academics and increased emphasis on comprehensive career exploration.

The School to Career initiative is designed, through integration with academic subjects, to include all academic areas (K-12). Specifically within the high school setting, STC currently encompasses three academic fields: Business, Family and Consumer Science, and Applied Technology. The program of study for each of these disciplines is provided below.

Additional School-to-Career options to meet the .5 School-to-Career requirement for graduation:
<i>For a student who will have met the following conditions:</i>
<ul style="list-style-type: none"> • Successfully completed 19 credits upon entering senior year • Completed 0.5 credits of a computer course • Completed 0.5 credits in the School-to-Career courses
<i>The following courses will fulfill the remaining School-to-Career requirement beyond the traditional areas of Business, Applied Technology, and Family and Consumer Science:</i>
Art Major, Commercial Art
Concert Choir, Chamber Chorus, Jazz Band
Journalism, Creative Writing
Calculus AP, Programming Languages, JAVA Programming
AP Biology, AP Chemistry, AP Physics (after completion of the 3 Science credit requirement)
AP European History (after completion of the 3 Social Studies credit requirement)
Philosophy, Psychology, Con Law, Government, Child Psychology
2 nd year of a World Language for a student who has completed the 3 rd year of a first World Language

BUSINESS

The National Standards for Business Education states:

“Students who elect to study business may do so for a variety of reasons. They may be interested in business education because they want to learn about investments, develop computer skills, or understand how economic principles apply to life. They may study business because they intend to go to work immediately after graduating from high school or a community college. Some study business to learn the basics of entrepreneurship so they can start their own business. Still others may have decided that pursuing a college degree in business is their goal... All students need to have a general understanding of how the American economy operates and the role business plays in the country’s and their own economic well-being. Since all students will become participants in the economic system, it is important that they all understand the basic rules.”

The content area of the business education program of study provides for the success for all students, no matter what their ultimate goals in life may be. No student can function successfully in today’s society and escape the need for the lifelong lessons that are taught in the business education curriculum. Students who study business education will have increased opportunities to succeed in whatever field they may choose to pursue.

HOUSE CONSTRUCTION [E]**CRS H6667****GRADES 11-12 CR ½****S**

This course will offer the student the opportunity to become acquainted with the operations of house construction. The student will become familiar with the reading and designing of house plans (the course could be interrelated with a CAD program on house design). Students will become familiar with construction safety and acquainted with OSHA. Students would be introduced to the understanding of framing layout and construction. Students will learn to identify and use field related equipment and materials. Students will learn to relate to local and national building codes. *Prerequisite: a passing grade of C or better in Intro to Wood Technology and a competent understanding of reading the tape measure.*

FAMILY AND CONSUMER SCIENCES

INTRODUCTION TO FOODS AND NUTRITION [E] CRS H6671 GRADES 10-12 CR ½**S**

This course will introduce students to the role of food in their life and the effects their daily food choices have on their health. They will discover that what they read or hear about food and nutrition is not always true. Students will learn to make effective use of resources when planning a kitchen, buying and caring for equipment and appliances, and purchasing and storing food. Students will also develop fundamental skills they need to plan meals, follow recipes, work safely and efficiently in a kitchen or foods lab, and serve meals attractively.

BAKE SHOP [E]**CRS H6675****GRADES 10-12 CR 1/2****S**

Topics covered in this laboratory course will include yeast and quick breads, pies and pastries, cakes, frosting and decorating, cookies and candy. Students will also be involved in preparing baked goods for serving and selling in the Coffee Café. Students will have the opportunity to reinforce management skills, review nutrition information, expand on principles of food preparation and apply skills learned from the introductory food course. *Prerequisite: passing grade in Introduction to Foods and Nutrition.*

MULTICULTURAL FOODS [E]**CRS H6677****GRADES 10-12 CR ½****S**

This laboratory course features foods and customs of many countries. Students will learn how the food customs have been influenced by the geography and culture of each country. In this course students will compare the food traditions of various cultures and regions with respect to food choices and life styles, nutrition, how food is prepared, and ways of serving and eating food. Students will also explore creative ways to further develop the food and nutrition skills they have gained in other Family and Consumer classes. *Prerequisite: Passing grade in Introduction to Foods and Nutrition*

CULINARY ARTS [E]**CRS H6673****GRADES 10-12 CR 1/2****S**

Students in this course will develop competencies to run a specialty coffee café. Students will examine career issues, food preparation, sanitation, nutrition, and attractive presentations of a variety of meal options. Other topics include customer service, cost control, and management and safety issues. This course may be repeated for credit with permission of the teachers. *Prerequisite: Passing grade in Introduction to Foods and Nutrition*

FASHION DESIGN 1 [E]**CRS H6679****GRADES 10-12 CR 1/2****S**

This clothing class will use the sewing machine to create garments influenced by today's fashion styles and trends. Students will explore textiles from fiber to fabrics, wardrobe planning using the principles of design and color, and general construction techniques in the assembling of clothing projects. Emphasis will be on basic sewing skills including the correct use of the sewing machine, serger, and other tools.

ADV FASHION DESIGN [E]**CRS H6681****GRADES 10-12 CR ½****S**

The content of this course builds on the skill acquired in Fashion Design. Greater depth in the study of design principles and sewing techniques is provided. In this course a student interested in a career within the fashion industry can explore the complete field of clothing and textiles. The emphasis will be on more advanced clothing construction techniques. The most up-to-date sewing techniques will be stressed to achieve a professional looking garment. *Prerequisite: Passing grade in Fashion Design 1.*

ECONOMICS ADVANCED PLACEMENT CRS H6625 GRADE 11, 12 CR 1 Y

This course will focus on an in-depth understanding of microeconomics. Students will study the concepts in opportunity cost, trade-offs, production possibility curve, and other analytical examples. The course will consider how different types of economies determine which goods and services to produce, how to produce them, and to whom to distribute them. Other basic concepts that are explored include the functions performed by an economic system and the way the tools of supply and demand can be used to analyze a market economy. Students who select AP Economics must take the AP tests in Microeconomic. *Prerequisite: Grade of B or better in Algebra I CP and in grade 10 English CP.*

INTRODUCTION TO ECONOMICS CRS H6627 GRADES 10-12 CR ½ S

This course will introduce students to the principles of economics beginning with some of the broad issues and concepts that make up the field of economics. Beginning with some basic definitions, the course builds to introduce economic systems and the concept of scarcity and wants and how these impact economies. It also places some of its focus on the US economy in general and the Federal Reserve Bank in particular. Students will be exposed to the basic economic problem, consumer choice, the Laws of Supply and Demand, productivity, inflation, and the key elements of US Economic Performance. This course will introduce students to the world of money by learning about their financial opportunities and responsibilities. Students will also learn the consequences of mismanaged finances. This course may be useful to students who wish to take Advanced Placement Economics. *Prerequisite: Passing Grade in Math 1 or Algebra 1.*

MARINE CORPS JUNIOR ROTC

MARINE CORPS JUNIOR ROTC CRS H6697 GRADES 9-12CR1 Y

MC JR Advanced ROTC CRS H6698 GRADES 10-12CR1 Y

TECHNOLOGY

MICROSOFT OFFICE APPLICATIONS CRS H6601 GRADE 9 CR 1/2 S

Microsoft Office Applications is a suggested course for all freshmen; especially recommended for those students who are interested in the Business Academy. Students will be introduced to basic information about how computers work and how software operates. Students will learn foundational software programs (word processing, spreadsheets, presentations and desktop publishing), file management, software integration, and the responsible use of the Internet for research. The theme of career exploration will guide several course projects. This class will emphasize project-based learning and the successful completion of a portfolio by students. If a student is planning on entering the Business Academy they should have a grade of C or better.

OFFICE ADMINISTRATION 1 [E] CRS H6607 GRADES 10-12 CR ½ S

Office Administration I is designed to incorporate the technical and procedural aspects of careers in office management. This class will include such skills as keyboard skills, business correspondence and communications, database, presentations, spreadsheets, proofreading and editing in an office setting. (1/2 year Business Academy sophomore or student body elective) *Prerequisite: Computer 1 (Crs 601) Grade of C or better*

WEB SITE DESIGN [E] CRS H6636 GRADES 9-12 CR 1/2 S

Students who want to learn the basics of web site design will like this course. Students are first introduced to basic HTML coding. They will code a number of web pages and learn how to save, edit, and preview the coded web page as well as to add images, links, and other web elements to a page. Students will then learn how to use Macromedia Fireworks to create web elements such as buttons, banners, menus and graphics as well as how to edit photographs and code all these web elements into their web pages. Web pages will be enhanced using Macromedia Dreamweaver and students will design a final web page and learn to upload it to a server. *Recommended: Successful completion of Microsoft Office Applications (Crs H6601) with a Grade of C or better*

ADVANCED WEBSITE DESIGN (E)**CRS H6633****GRADES 10-12 CR 1/2****S**

Advanced Web Design will follow the latest standards of Web Design - the additions to the many web formatting and programming languages as presented in w3schools.com (the World Wide Web consortium web site). Students will become aware of the issues surrounding real world website design and maintenance including, but not limited, to HTML advances, browser scripting, xml, server scripting and web services and building. Cascading Style Sheets (CSS) will be employed in real world web applications. JavaScript is a dynamic scripting language which will be introduced and used to enhance the dynamic aspect of the student web pages. Multimedia will be created and embedded. The ability to edit and manipulate graphics will be extended image editing software. This class is recommended for the student pursuing computer technology at the secondary level and may be taken again for credit with the teacher's recommendation. *Prerequisite is successful completion of Web Site Design with c or better.*

FLASH CARTOON CHARACTER DEVELOPMENT AND ANIMATION [E]**CRS H6634****GRADES 10-12****CR 1/2****S**

Macromedia Flash is a versatile tool that can be used to perform a variety of tasks including animation and cartooning. Flash animation simplifies the way animation is done in a way anyone can do it. Students will be introduced to the Flash interface and Flash features. They will learn to draw with Flash and turn their drawings into animations and/or cartoons. Students will learn how to draw shapes such as head/hand/eye as well as how to shade. Student will also learn how to trace and shade objects to create a more dimensional cartoon. *Recommended: successful completion of Computer One (Crs H6601)*

FLASH GAMING [E]**CRS H6635****GRADES 10-12****CR 1/2****S**

Adobe Flash can perform many tasks such as drawing, animation, and web site design. It can also be used as a game development platform. Game design requires a lot of planning and students will also be introduced to some terminology and some basic scripting using Flash Action Scripts. Students will use these scripts to create mouse movement and keyboard movement. They will also use more complicated scripts to create games such as "Shoot the Dragon," "The Psychic Game," and other simple games. Students can expand on their scripts to enhance their games. This is not a programming class. Students can succeed in this class with just a prior knowledge of Flash. *Prerequisite: Adobe—Animation and Cartooning (Crs H6634) with a C or better*

MULTIMEDIA FUSION GAME DEVELOPMENT [E] CRS H6636 GRADES 11-12 CR 1/2**S**

This class is designed for students who love video games or even like them! Students can learn how to create amazing games easily without the need for programming languages. Students will learn how to add and run game characters using space bar, mouse, or keyboard; how to make their character jump and shoot. They will also create interesting backgrounds and scrolling backgrounds for their games; add sound; add enemies; keep score and high score; keep track of lives and many other game features. They will create games such as Last Pursuit (Car Racing), Future Tennis, and a Robin Hood Platform Game. They will also be given the opportunity to design their own game.

STUDIO TV PRODUCTION**CRS6640****GRADES 10-12 CR 1/2****S**

In this course students will learn how to effectively produce television programming in the studio. Students will experience the steps that are needed to develop a television production from the basics of camera operation, sound and film editing, and the lighting of sets. Students will understand the five basic areas of TV Production that are needed to complete a TV segment: producing, directing, filming, scripting and editing.

TV PRODUCTION [E]**CRS H6637****GRADES 11-12 CR 1/2****S**

TV Production introduces students to the wide spectrum of information and learning available through the use of television production. Students will use digital video cameras to capture images and sound and use Macintosh computers for video and audio editing. Students will experience the steps that are needed to develop a television production from the basics of camera operation, sound and film editing, and the lighting of sets. Each student will understand the five basic areas of TV Production that are needed to complete a TV segment: producing, directing, filming, scripting and editing. Students' projects will take place in studio and on location. Advanced students will participate in the creation of a video yearbook.

ADVANCED TV PRODUCTION [E] CRS H6638 GRADES 11-12 CR 1/2 S

Through exploring basic ideas of video, some students find it necessary to continue in the exploration of more challenging TV and film concepts. Students will use digital video cameras to capture images and sound and use Macintosh computers for video and audio editing. Through this course, students will explore more advanced technical and creative skills within a studio and on location. The course requires working both in group and individual situations in the production of quality video segments for cable-cast. Show formats will also be explored as students will be responsible for a long-term group production that will be produced solely by Advanced TV students. TV Production may be elected two times for credit. *Prerequisite: Grade of C- or better in either Studio TV Production or TV Production.*

FILM STUDY WORKSHOP [E] CRS H6639 GRADES 11-12 CR 1/2 S

Film Study Workshop is a serious, challenging, and critical investigation of films from different Hollywood eras. Students will learn the basic principles of characterization, dramatic structure, and scene writing through film analysis exercises and developing their own original feature film script from idea, outline to first act. This class is also designed to study the approaches taken by film directors and writers in creating fine arts productions. Films viewed range from the silent era to contemporary times with their roles, themes, viewpoints, and impact on society emphasized. Research in themes, film genres, production companies, techniques, and classic film figures will also be required. Film Study Workshop may be elected two times for credit. *Prerequisite: C or better in both Introduction and Advanced TV Production.*

CAD (COMPUTER AIDED DESIGN) 1 (E) CRS H6651 GRADES 9-12 CR 1/2 S

Students will use open source software to create three dimensional drawings of a multitude of objects. Starting from drawing a simple shed the student will design increasingly more complex objects, learn how to combine objects to make working prototypes. Standards of the 21st century engineering/ design room will be presented and students will collaborate on developing complex drawings. We will be using Google Sketch extensively as we show the evolution of software from AutoCAD to today. This class is intended for the student pursuing engineering, architectural, design, construction or three dimensional art programs at the secondary level.

ADVANCED CAD (E) CRS H6653 GRADES 10-12 CR1/2 S

This class builds on CAD I with students using the tools and time to develop independent projects. Some ideas could be the mapping of significant Haverhill sites for uploading to Google Earth. Some students make design custom homes or office spaces. Other students use the facilities to design bridges. What ever is in your mind can be put down on the machine – one step closer to reality. This class is intended for the student. *Prerequisite is successful completion of CAD I with B or better.*