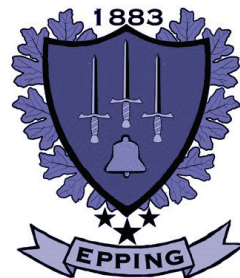


# SEACOAST

## SCHOOL OF TECHNOLOGY



COURSE DESCRIPTION GUIDE  
2020 -2022



WE are SST.



# OWN YOUR EDUCATION AT SST!

## Career and Technical Student Organizations (CTSO's)



All programs at SST are affiliated with a Career and Technical Student Organization. CTSO's allow you to make professional connections, attend leadership conferences, and compete against other high school students from around the state.

The Seacoast School of Technology offers elective coursework in cutting-edge technologies to enhance traditional high school curricula.

Spend 90-minutes of your school day on our state-of-the-art campus. Choose from twelve Career & Technical programs including:

Animal & Plant Science

Automotive Technologies

Biomedical Science & Technology

Building Construction Technologies

Careers in Education

Computer Science

Culinary Arts

Digital Media Arts

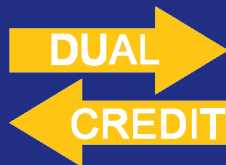
Health Science Technologies

Marketing Technologies

Pre-Engineering

Welding Technologies

## Earn College Credit



Nearly every SST program offers Dual Enrollment opportunities, enabling you to earn a real college transcript while still in high school. Over 75% of SST students continue their education after high school.

## Industry-Recognized Certifications



Become a more attractive applicant to employers and colleges by earning professional certifications. You will leave with proof that you are ready for the next step after high school.



## Portfolios

Create a portfolio to highlight your skills, accomplishments and aspirations. Bring this tool to a college interview or show it to a potential employer. Nothing is more compelling than having all of your credentials in one place.



All programs satisfy requirements for New Hampshire Scholars.



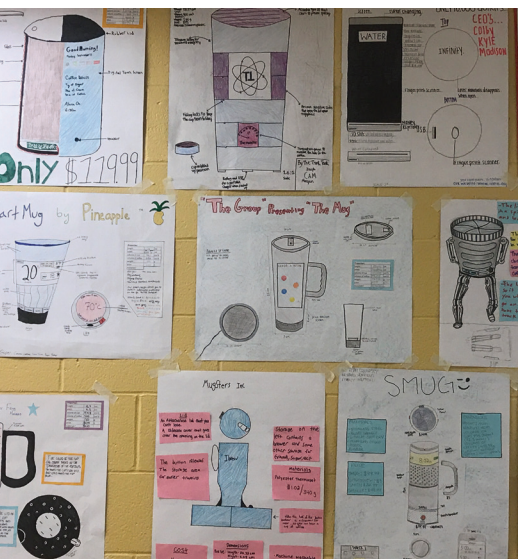
## Community Partners

Work with members of our Advisory Committees, people from business and industry, to earn relevant, marketable skills that employers are looking for. Never ask "why do I need to learn this?" again.

SST specializes in hands-on, project-based learning that takes you out of the typical classroom and gives you real-world experiences every day.

Epping - Exeter - Newmarket  
Raymond - Sanborn Regional - Winnacunnet



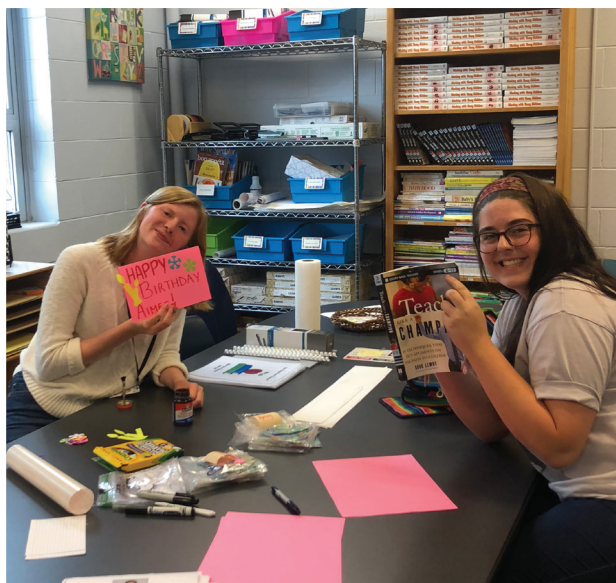


## Animal & Plant Science I

Do you love animals? Making things grow? Learn to expertly care for living things and prepare yourself for a career as a veterinarian, vet tech, barn/farm/greenhouse manager and many other careers working with animals and plants. You'll learn to care for and handle companion animals, recognize behavior, and begin on the road to veterinary care for both large and small animals. In addition, you will study aquariums allowing you to experience raising fish for fun or sale and aquaculture allowing you to gain hands-on experience raising food for consumption. [Prerequisite – Biology]

## Animal & Plant Science II

Continue to build on your experience, knowledge and hands-on skills. You'll spend several months at a local horse barn studying equine science, learn more about greenhouse management, sustainable food production, aquaponics and hydroponics, landscape and floral design, animal nutrition and reproduction, and complete a week-long internship in an area of personal interest. Participation and competition in FFA events is strongly encouraged. [Prerequisite – Animal & Plant Science I]



"I have grown up in agriculture, but this program has taught me more than I thought possible. This past spring, I competed at FFA State Convention in prepared public speaking, employment skills, animal welfare display and extemporaneous speaking. I came in first at the Big E for horse judging and will be competing at Nationals in the fall!"





Dakota Hannemann



"SST has allowed me to explore the trades to help me decide which field is right for me. Completing two years of Automotive Technologies and one year of Welding Technologies will give me a huge competitive edge as I continue my training after high school and head into the workforce."

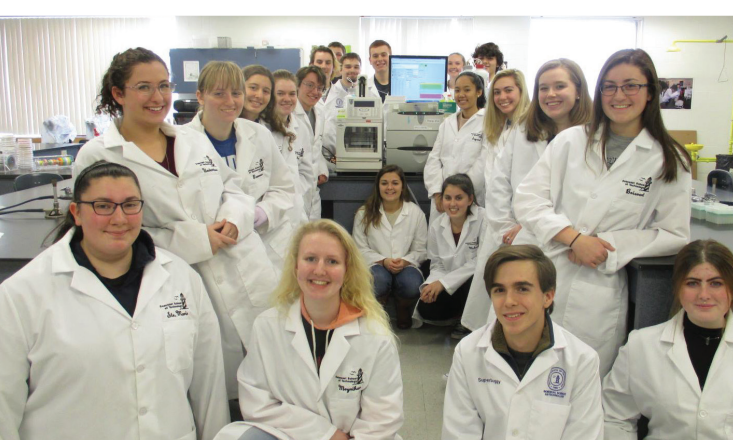


### Automotive Technologies I

Calling all gearheads! Using Snap-on hand tools and the same computer diagnostic equipment found in well-equipped dealerships, learn bumper-to-bumper automotive systems and their repair. Hone your skills by working on customer and donated vehicles in a live shop that includes 13 bays, a parts room, 8 lifts, an in-ground alignment system and much more. Students have the opportunity to interview for internships at local dealerships or independent facilities. This program is certified through the National Automotive Technicians Education Foundation (NATEF).

### Automotive Technologies II

Continue your automotive training by working in our live car repair and state inspection facility. Perform more complex repairs and tasks ranging from light mechanical, routine maintenance and parts ordering. You'll complete units on engine performance and diagnostics, suspension and steering, four-wheel alignment, earn your ASE Maintenance and Light Repair certification and position yourself for a career in the automotive industry. [Prerequisite – Automotive Technologies I]

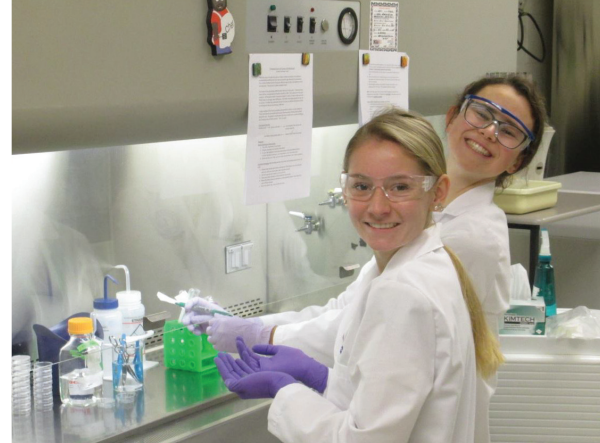


### Biomedical Science & Technology I

Working in a state-of-the-art lab, you will be on the cutting edge of science studying molecular genetics and genetic engineering, cancer biology, microbiology, immunology, bioinformatics, DNA sequencing, environmental and marine science and more. You will gain techniques and knowledge that will prepare you to pursue careers in medicine, genetics, pathology, forensics, molecular biology and many other science-related fields.

### Biomedical Science & Technology II

This capstone course is an in-depth exploration of emerging technologies and innovations within the scientific community. You will explore current biotechnological applications in medicine, agriculture, forensics and the environment. Topics include gene modification, protein microarrays, directed mutagenesis, bioinformatics, DNA sequencing and more. You will also have the opportunity to participate in advanced internships during the school year and perform original research. [Prerequisite – Biomedical Science & Technology I]



Benjamin Szaniawski



"Taking Biomedical Science & Technology was the best choice I made during my high school career. The people that I've met here are now my family. Plus, not only has the class deepened my love for science, but it also gave me more lab experience in two years than most kids ever see before college."

### Summer Research Internship

There are a limited number of internships available for qualified students, who will have the opportunity to work with scientists and engage in novel research at a local facility. [Prerequisites – Grade, competency attainment and attendance qualifications]





"SST has given me the opportunity to expand my skills in construction, as well as leadership skills I will need in the future. This class has allowed me to learn new things and expand my knowledge in a subject I have a passion for."



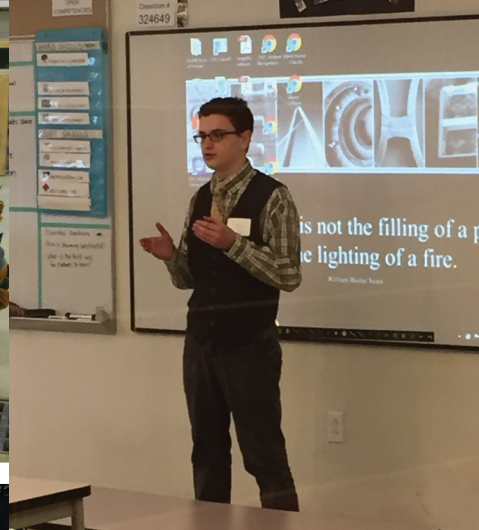
## Building Construction Technologies I

Are you the type of person who takes pride in being able to create things with your own two hands? Learn basic skills in carpentry, hand and power tool safety, framing, remodeling, materials usage, green building and much more. You'll perfect your skills by working on a variety of real construction and renovation projects in our local community, and by the end of the year you will have the know-how to make a building weathertight.

## Building Construction Technologies II

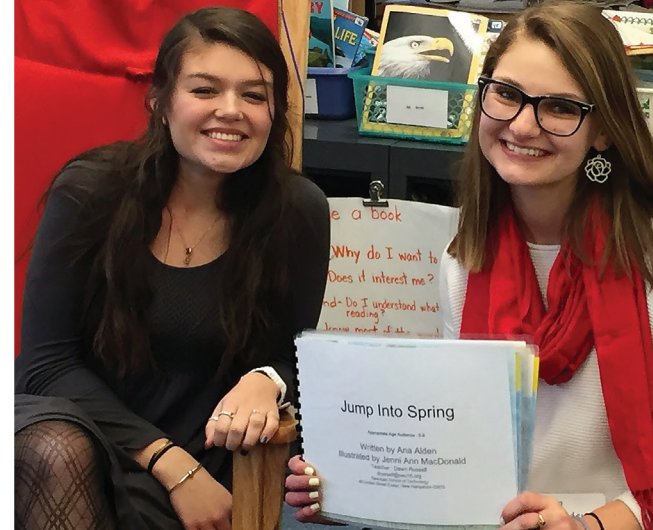
Continue to polish your technical building skills and examine topics such as energy efficiency, interior work and trim and blueprint reading. You'll put your knowledge to good use by building structures in the community such as homes, garages, sheds, additions and more. By the time you complete this program, you will be capable of doing all interior and exterior carpentry work on building projects large and small, and be ready to enter leadership programs for construction project managers.

[Prerequisite – Building Construction Technologies I]



## Careers in Education I

A program for those who want to work in a variety of educational roles ranging from pre-kindergarten, elementary, middle/high school, or even adult-ed teacher, to occupational/physical/speech & language therapist, school counselor, child psychologist, special educator, social worker, administrator and more. This writing-intensive program is the first step toward a career in the field of education. In addition to student-teaching in the Wright Start Preschool, job shadows, and guest speakers from a variety of education-related professions, you will also study theories of development and learning, foundations of education, classroom management, lesson planning and best instructional practices.



## Careers in Education II

Continue to learn the craft of educating others. Coursework includes classroom management, curriculum development, differentiated instruction, best instructional practices and special education. Alongside advanced classroom instruction and teaching in the Wright Start Preschool, you will gain real-world experience in your preferred concentration area and create a professional teaching portfolio tailored to your specific goals. Internships are available for preschool, elementary, middle and high school, art/music/physical education, special education, physical/occupational/speech & language therapy and early childhood education administration. This course is an excellent opportunity to continue exploring education-related professions and decide which career path to pursue in college.

[Prerequisite – Careers in Education I]



## Computer Science I

(2 semester-based courses)

### Introduction to Computer Science

Utilizing the Python programming language, you will learn what it takes to write your own computer programs. With an emphasis on computational thinking and problem solving, develop the skills to find novel methods of finding problem solutions. This course will form the foundation for all future study in the field of Computer Science. [Offered semester 1]  
[Prerequisite – Algebra I with grade of “C” or better]

### C#

This course will provide you with an understanding of structured, procedural and event-driven programming. Develop techniques for problem solving through the application of a variety of programming techniques and gain experience in program planning, design and coding as you complete lab work and assignments. Plan, design, code and test a variety of computer programs including games, simulations and productivity applications. You will learn to use the Visual C# .NET programming language and integrated development environment. [Offered semester 2]  
[Prerequisite – Introduction to Computer Science]

## Computer Science II

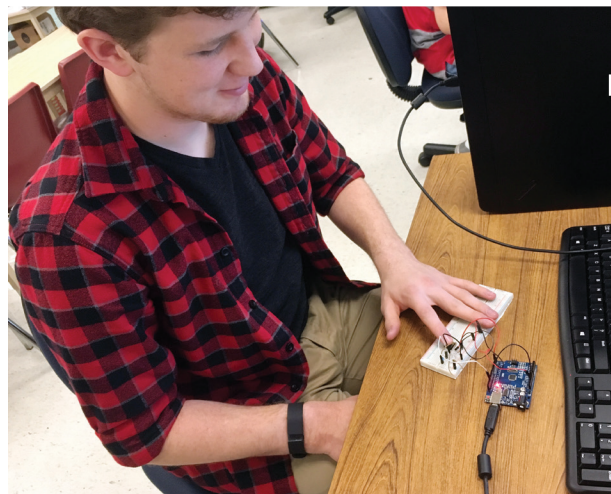
(2 semester-based courses)

### Java

The Java programming language is the major force behind the World Wide Web and can be found running on over 3 billion computational devices on the planet. The purpose of this course is to provide a solid foundation in the Java programming language, as well as further refine your knowledge of object-oriented design. Program planning, object-oriented design and Java language syntax will be emphasized. [Offered Semester 1]  
[Prerequisite – Introduction to Computer Science]

### C++

C++ is the industrial heart of the computer software industry and is the primary development tool used to create major applications used by millions of people every day in business productivity, as well as video games. This course will introduce you to the fundamentals of structured programming, the procedural aspects of the C++ programming language, object-oriented design and implementation, as well as an introduction to basic data structures. You will create programs to demonstrate the topics of program control, functions, arrays, pointers, classes and objects. Visual C++ will be used as the primary development tool; however, other environments may also be utilized. Emphasis will be placed on the creation of platform-independent applications in order for you to become familiar with the core features of the C++ language. [Offered Semester 2]  
[Prerequisite – Introduction to Computer Science]



Brooke Parsons & Madeline McCallister

“SST has opened doors to the computer science community for us. Through this program, we have made many valuable connections with corporations and professors. We are better equipped to work in the computer science industry.”



Michaela Sable



"I chose Culinary Arts because I have had an interest in cooking since I was a kid. Through this program, I got a great job and became a Kitchen Manager because of my experience. Not only have I gained great cooking experience, I also had the opportunity to make great friends that I might not have ever come across if it wasn't for this program."

## Culinary Arts I

If you're interested in learning the introductory skills for a career in the world of Culinary Arts and Restaurant Management, look no further! With daily hands-on activities and training, you'll soon be able to produce perfect knife cuts and cook restaurant quality meals from scratch. You will learn the importance of food basics, savory cooking and baking, knife skills, sanitation, nutrition and developing your palate while exploring regional cuisines. This course will also emphasize the appropriate standard of behavior and uniform that is set by culinary professionals.



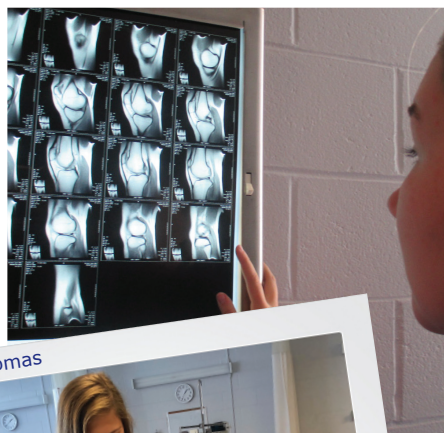
## Culinary Arts II

Expand on your cooking and baking skills while exploring the cooking techniques and cultural aspects of global cuisines! You will learn advanced techniques, such as smoking, pickling and meat fabrication, in addition to the managerial side of a restaurant - from food cost to purchasing, ServSafe to menu writing and event planning to training.

[Prerequisite – Culinary Arts I]







"Two years at SST has given me the opportunity and confidence to explore the health career I want to pursue. I have also earned 11 college credits at a minimal cost. The first year I earned 3 credits in Exercise Science and this year I will earn 5 credits for my LNA internship and 3 credits in Medical Terminology."

## Health Science Technologies II

Dive deeper into the complexities of the human body by completing units on CPR and the cardiorespiratory, gastrointestinal, reproductive, endocrine and nervous systems. In addition to classroom and lab work on the SST campus, you will gain real-world experience through a ten-week internship at a local healthcare facility. Additionally, select students will have the opportunity to earn their Licensed Nursing Assistant (LNA) Certificate.

[Prerequisite – Health Science Technologies I]

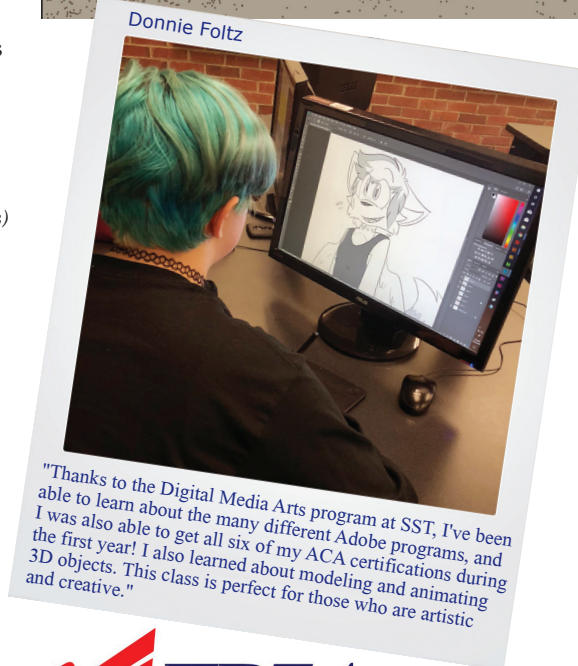


## Health Science Technologies I

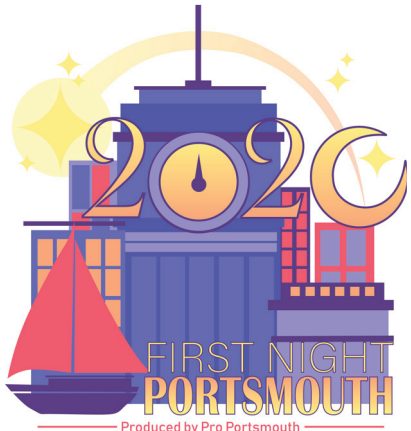
If you're thinking about any career in the health field, like becoming a doctor, nurse, physical therapist, dentist or even an EMT, then this course is for you. Learn about the human body and help people get and stay healthy. You will earn your First Aid certification while exploring human anatomy and physiology, medical terminology, safety, and legal and ethical issues within the health fields. [Prerequisite – Biology]



Donnie Foltz



"Thanks to the Digital Media Arts program at SST, I've been able to learn about the many different Adobe programs, and I was also able to get all six of my ACA certifications during the first year! I also learned about modeling and animating 3D objects. This class is perfect for those who are artistic and creative."



## Digital Media Arts I – (2 semester-based courses)

### Graphic Design

The art class of the new millennium... If you're an artist and you want to harness the power of creativity, then this course is for you. Backed with a strong influence from the fine arts, this course focuses on the concepts of good design and uses computer software such as Adobe Photoshop, Illustrator and InDesign to foster student creativity.

[Offered semester 1]

### Animation

Breathe life into your artwork and make your creations come alive! Utilizing computer programs from Autodesk and Adobe, you will learn how to transform two-dimensional artwork into three-dimensional, digitally-animated models.

[Offered semester 2]

## Digital Media Arts II – (2 semester-based courses)

### Web Design

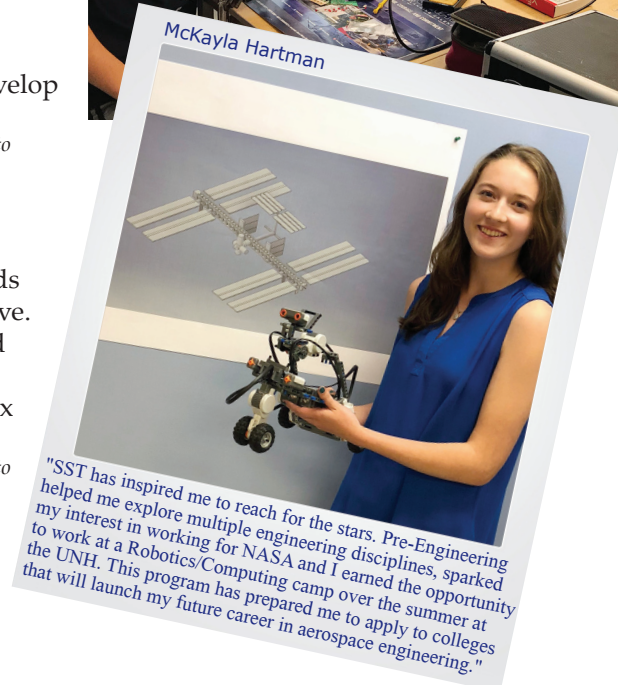
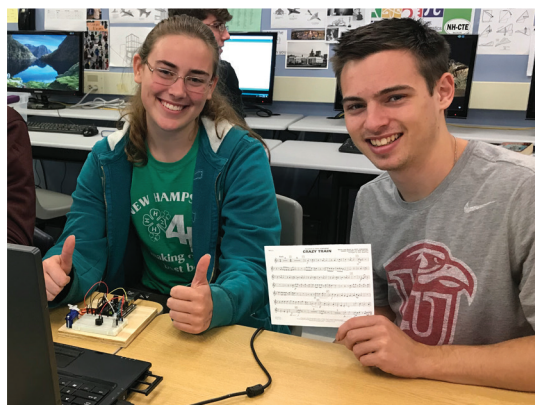
Design your own web pages using the same techniques as professional graphic designers and web developers. Using Cascading Style Sheets (CSS) and the Adobe Design Premium Suite, you'll learn best practices in designing for the web and sharpen your skills by creating multiple web pages on topics of your choice. [Offered semester 1]

### Video Production

Learn how to operate all of the equipment in a cutting-edge video production studio that includes a green screen, high-definition cameras, sound and lighting control room and much more. You will film, edit, and produce videos for both personal and commercial purposes using the editing software Premiere and After Effects.

[Offered semester 2]





## Pre-Engineering I – (2 semester-based courses)

### Introduction to Engineering Design

Want to find out how to turn your innovative ideas into reality? Engineers are involved in everything that has ever been designed, built or manufactured. In this course, you will learn about the varied roles engineers play in our society, discover new career paths and possibilities, and develop engineering knowledge and skills, such as creating models and prototypes (physical and virtual).

[Offered semester 1] [Prerequisite – Algebra I]

### Principles of Engineering

Make the leap from dreamer to doer! Engineers serve society by using engineering principles to develop solutions to technical problems and explore multiple manufacturing processes and technology systems. Come and participate in compelling, real-world challenges that will help you become a better collaborator and thinker.

[Offered semester 2] [Prerequisite – Algebra I]

## Pre-Engineering II – (2 semester-based courses)

### Digital Electronics

Investigate how machines think and work! Using applied logic, you will learn about electronics and digital systems, explore engineering design, build circuits and develop electronics troubleshooting techniques.

[Offered semester 1] [Prerequisite – Either Introduction to Engineering Design or Principles of Engineering]

### Civil Engineering & Architecture

Study the way that man-made structures such as buildings, dams, bridges and roads affect our environment and the way we live. Through a series of hands-on projects and guest speakers with expertise in a variety of topics, you will learn about the complex infrastructure that makes society work.

[Offered semester 2] [Prerequisite – Either Introduction to Engineering Design or Principles of Engineering]



## Marketing Technologies II

You'll complete an individualized curriculum that is tailored to your personal business interests and aspirations. Recent areas of specialization include business management, sports and entertainment management, hospitality, fashion, event planning, advertising, entrepreneurship, business law, international business and finance. You'll also work on real-life projects in the community, including planning and running the Small Business Showcase with the Exeter Area and Hampton Area Chambers of Commerce.

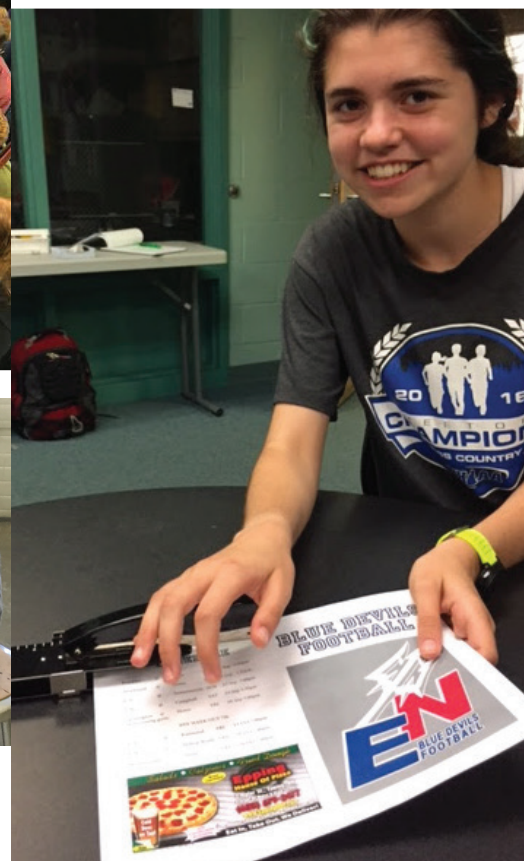
[Prerequisite- Marketing Technologies I]



## Marketing Technologies I

Want to be your own boss? Marketing Technologies introduces the processes and strategies involved in transferring business products or services to a consumer. Through interactive discussions and projects, the course's main focus is on analyzing the marketing mix, it's interrelationships and how it is used in the marketing process. This course has a strong emphasis on business conduct, speaking and presentation skills. Some topics of study are: entrepreneurship, management, sport and entertainment marketing, fashion merchandising, e-commerce, hospitality and tourism and international studies. You'll develop your own business and learn how to market it, as well as operate the Upper Deck, SST's school store.





Greyson Tilbury

"I feel like this program has changed my attitude about school and what I want to do with my future. This class has shown me that I can pursue welding after high school and as a career, and that's what I want to do."



American Welding Society

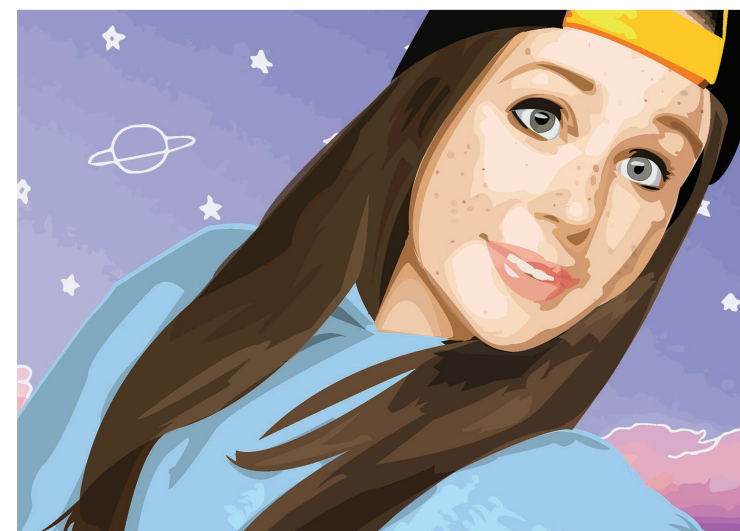
## Welding Technologies I

If you're scared of melting metal, flying sparks, or holding torches in your hands that are hotter than the surface of the sun, then Welding Technologies is probably not for you. Still interested? You'll learn the basic techniques of STICK, MIG, TIG, plasma, brazing, soldering, blueprint reading and electricity. This program is ideal for students interested in the metal trades including welding and machining, as well as artists who want to work with metal.

## Welding Technologies II

Enhance your welding skills by working with different alloys like aluminum and stainless steel, learning different techniques and welding positions, performing actual jobs of metal fabrication, manufacturing, repair and CNC Plasma. At the completion of this course, you will have earned your OSHA (Occupational Safety & Health) training certificate and have enough skills and experience to take your certification tests in SMAW (STICK), GMAW (MIG) and GTAW (TIG) welding.

[Prerequisite - Welding Technologies I]





"This class is the most amazing thing that has happened to me at school."

"SST promotes hands-on learning and real-life experiences."

"Best. Decision. Ever."

"SST has helped me to grow as an individual and encouraged me to take advantage of many incredible opportunities."

"There is something for everyone, no matter where you want to go in life."

"Nothing has prepared me more for the future."

"Little did I know that this class would change a lot in my life."

"It has prepared me perfectly for the job I have in line after high school."

"SST has taught me many very useful skills that I will be able to use in the working world."

"I don't think I could be where I am today without SST."

"It's a privilege to go here."

"Without getting this type of education, I would not know what I wanted to do."

"My experience here will help me outside the classroom."

"SST has allowed me to receive real-world, hands-on experience in what I am passionate about."

"For the past two years, it has been my favorite part of every day."

"SST has been a positive, life-changing experience that has helped me decide my career path."

"I have been given numerous opportunities to help better myself and the community."

"Every day is a new day, and you never know what you will learn."

"SST has helped me become responsible and independent."

"SST was my favorite part of my high school experience."

"I loved it and I don't want to leave."

"SST has helped me find my passion and is the reason I am where I am today."

"This school will prepare you for whatever career you choose to pursue."

# HOW IT WORKS

Though the first year of an SST program is typically done in your junior year, sophomores are now eligible to apply on a space-available basis. You must reapply to take the second year of the program. Admission is not guaranteed for either the first or second year of the program.

Three separate sessions run each day:

## AM Session

**7:42-9:12 a.m.**

First-year students  
from Exeter,  
Newmarket and  
Raymond

## MID Session

**9:30-11:00 a.m.**

First-year students  
from Epping, Exeter,  
Sanborn Regional  
and Winnacunnet

## PM Session

**12:20-1:50 p.m.**

All second-year  
students

# HOW TO APPLY

To apply to the Seacoast School of Technology, please visit the website below to fill out our online application.

**[www.SeacoastTech.com](http://www.SeacoastTech.com)**

For more information about how completing a program at SST can enhance your academic and professional credentials and help you jump-start your life after high school, contact the Seacoast School of Technology directly at [SST@SeacoastTech.com](mailto:SST@SeacoastTech.com), or 603-775-8461.

The Seacoast School of Technology offers career & technical education programs that are designed to prepare youth for a broad range of employment and further education and are offered under the guidance of certified teachers. The following is a list of programs being offered and the criteria for admission. Pre-Engineering, grades 9-12, prerequisite – algebra 1. The following programs are available to students in grades 11-12: Animal & Plant Science, prerequisite – biology; Automotive Technologies; Biomedical Science & Technology; Building Construction Technologies; Careers in Education; Computer Science, prerequisite – algebra 1 with grade of "C" or better; Culinary Arts; Digital Media Arts; Health Science Technologies, prerequisite – biology; Marketing Technologies; Welding Technologies. Students in grade 10 are eligible on a space-available basis.

SAU #16 does not discriminate in the administration of its admissions and educational programs, activities or employment practice on the basis of race, color, religion, national origin, age, sex, handicap, sexual orientation or marital status. This statement is a reflection of the mission of SAU #16 and refers to, but is not limited to, the provisions of the following laws: Title VI & VII of the Civil Rights Act of 1964; The Age Discrimination Act of 1967; Title IX of the Educational Amendments of 1972; Section 504 of the Rehabilitation Act of 1973; The Americans with Disabilities Act of 1975; NH Law Against Discrimination (RSA 354-A) and State Rule: Ed. 303.01 (i),(j),(k). Inquiries regarding discrimination may be directed to: Ellen Riiska, SAU #16, Student Services Administrator, 30 Linden Street, Exeter, NH 03833 - Telephone: 603-775-8426. The printing of this publication was funded through the Carl D. Perkins Career & Technical Education Improvement Act of 2006.



Animal & Plant Science

Automotive Technologies

Biomedical Science & Technology

Building Construction Technologies

Careers in Education

Computer Science



603•775•8461

40 Linden Street, Exeter, NH 03833

[www.SeacoastTech.com](http://www.SeacoastTech.com)

Culinary Arts

Digital Media Arts

Health Science Technologies

Marketing Technologies

Pre-Engineering

Welding Technologies



*Printed on Recycled Paper*