

Create it...

Build it...

Research it...

Sell it...

Cook it...

Design it...

Weld it...

Teach it...

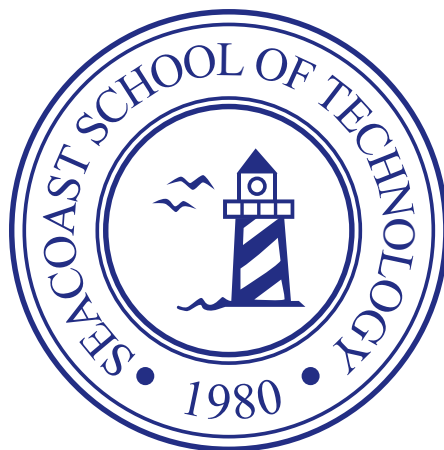
Diagnose it...

Fix it...

Code it...

Grow it...

...LIKE YOU OWN IT!



COURSE DESCRIPTION GUIDE  
2017 -2019

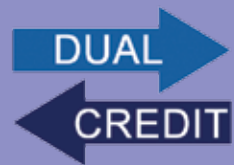
# OWN YOUR EDUCATION AT SST!

## Industry-Recognized Certifications



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

## 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.

## 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.

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



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

## 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.

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 and have the option of choosing from twelve Career and 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

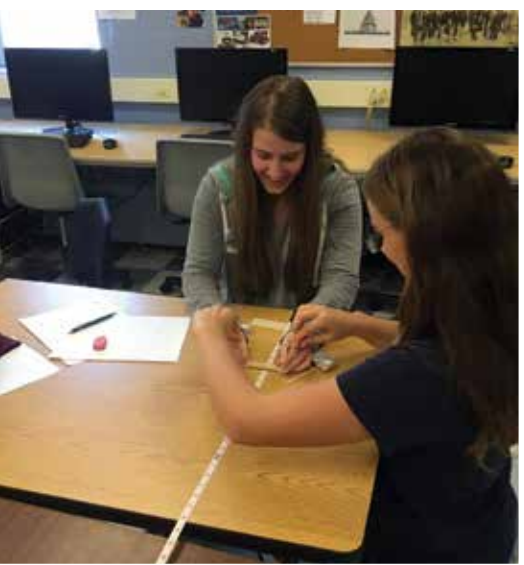
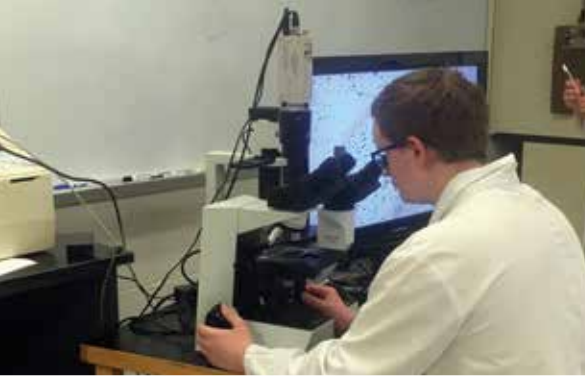
Welding Technologies



All programs satisfy requirements for New Hampshire Scholars

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, floral designer 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. You will study aquariums to allow you to experience not only pet shop management, but being a responsible pet owner. You will also study aquaculture to allow you to gain hands-on experience on raising food for consumption. *[Prerequisite – Biology]*

## Animal & Plant Science II

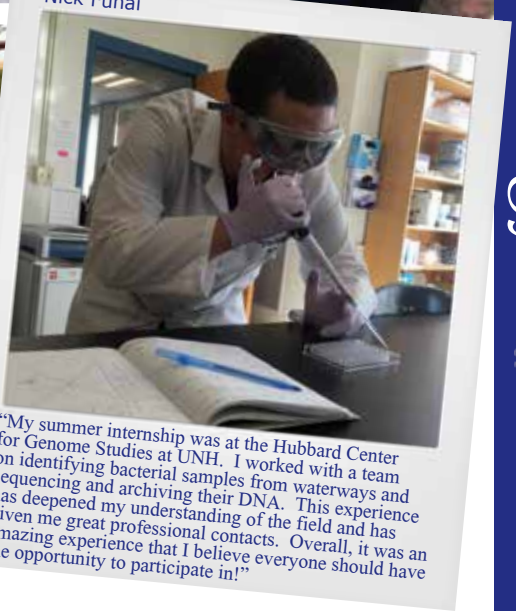
Continue to build on your experience, knowledge and hands-on skills. You'll spend several months at a local horse barn studying equine science, learn more about greenhouse management, nutrition and reproduction, and complete a week-long internship in an area of personal interest. Participation and competition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



Emilie Pomeroy

"I competed in marketing, dairy foods and environmental sciences at the state FFA convention. I also competed on a horse judging team and we won first in the state! Animal & Plant Science and the FFA have taught me so many life lessons that I will never forget."





Shaunia Donahue

"This program has made me realize that I can do anything I set my mind to. My classmates were very welcoming and thought it was cool to have a girl in the auto shop. Because of SST I have a job in the field to help start my career. Taking a class here was the best decision I could have made for my future."



### Automotive Technologies I

Calling all gearheads! Using Snap-on hand tools and the same computer diagnostic equipment found in well-equipped car repair facilities, 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. Selected students have the opportunity for internships at a local dealership or repair facility. 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, cancer biology, microbiology and more. You will gain techniques and knowledge that will prepare you to pursue careers in medicine, genetics, pathology, forensics and other science-related fields.

### Summer Research Internship

After successful completion of Biomedical Science & Technology I, select students have the opportunity to work with scientists and engage in novel research at a local facility. You will conduct independent research under the supervision of a mentor, engage in weekly assignments, and produce a scientific research paper and poster. As a capstone experience, you will compete in a local Exposition during your senior year. There are a limited number of internships available for qualified students. [Prerequisites - Successful completion of Biomedical Science & Technology I, enrollment in Biomedical Science & Technology II and grade, competency attainment and attendance qualifications]

### Biomedical Science & Technology II

This capstone course is an in-depth exploration in emerging technologies and innovations within the scientific community. You will explore current biotechnological applications in medicine, agriculture, forensics and the environment. Covered 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]

Nick Funai  
"My summer internship was at the Hubbard Center for Genome Studies at UNH. I worked with a team on identifying bacterial samples from waterways and archiving their DNA. This experience has deepened my understanding of the field and has given me great professional contacts. Overall, it was an amazing experience that I believe everyone should have the opportunity to participate in!"





NH Scholars STEM

# Building Construction Technologies



Alex Anderson

"SST has given me so many opportunities by providing a class that has helped me pave the way to my career path. I have been on many job shadows to work with students of all ages in the community, as well as an internship with a local elementary school art teacher. It's such an amazing class, and there's a great feeling of community with my fellow classmates and teachers."

## 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, blueprint reading and drafting using AutoCAD. You'll put your knowledge to good use by building structures in the community such as homes, garages, sheds 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]



Jocelyn Rizzo

"After completing year one of Building Construction Technologies, I decided to also take the first year of Pre-Engineering to learn as much as I could before going to college for architecture and construction management. Taking both programs is really preparing me for a future in residential construction."



## Careers in Education I

A program for those who want to work in a variety of educational roles. Whether you plan to work with children of any age, teenagers or adults, this writing-intensive program is the first step toward a career in the field of education. In addition to teaching in the Wright Start Preschool and job shadows in a variety of settings, you will also study theories of development and learning, foundations of education, classroom management, lesson planning and methods of instruction.

## Careers in Education II

Continue to learn the craft of educating others. Alongside advanced classroom instruction and working in the Wright Start Preschool, you will gain real-world experience with your preferred concentration area and create a professional teaching portfolio tailored to your specific goals. Internships are available for preschool, elementary, middle, high school, special education, physical or occupational therapy or counseling.

[Prerequisite – Careers in Education I]



# Careers in Education



NH Scholars Social Science & STEM

## 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)

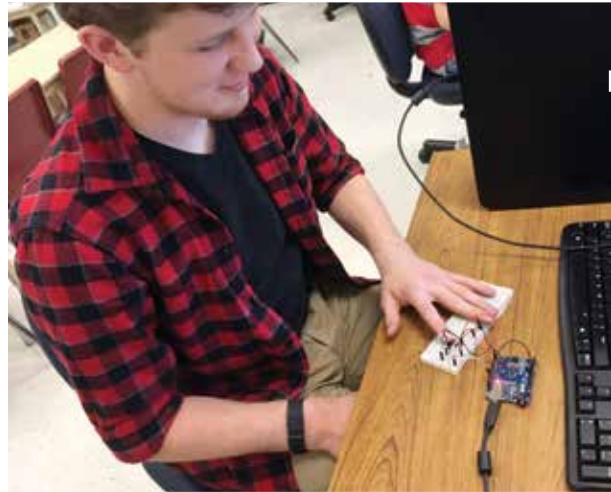
### Java

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 major 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]



AJ Johnson

“Before coming to SST, I had never thought about a career working with computers. I was amazed to find out how many jobs are available in the field of computer science. This program has opened my eyes to the possibilities of my future in the computer science world.”



## Culinary Arts I

This course encompasses the basic fundamental principles for a career in Culinary Arts. Each topic will be discussed and practiced in detail. You will learn the importance of food basics, savory cooking and baking, knife skills, sanitation, nutrition and educating your palate. This course will also emphasize the appropriate standard of behavior and uniform that is set by culinary professionals.



Jonathan Sidman

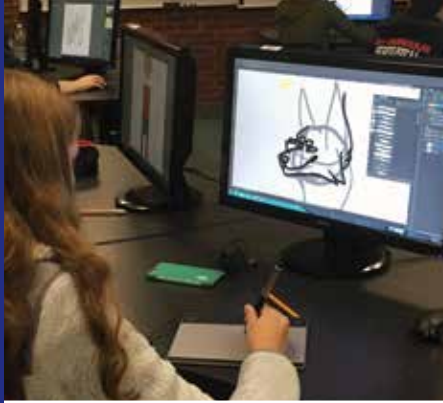
“I applied to SST to help me pursue a career in hospitality and restaurant management. This program has expanded my knowledge of the field and really prepared me for studying Culinary Arts in college. I feel that the skills I have learned in this class will give me a leg up on my future classmates and in the industry.”



## Culinary Arts II

Expand on your cooking and baking skills while exploring the cooking techniques and cultural aspects of American and International cuisines. You will also learn to perform all duties of a live, licensed restaurant including menu preparation, cost analysis, food service, ServSafe procedures and kitchen, dining room and restaurant management.

[Prerequisite – Culinary Arts I]



## 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]



Katherine Callahan



"In my two years at SST, I accomplished more than I could have ever imagined. I was accepted to attend a summer arts program at NYU, became a member of FBLA and earned an Adobe certification. I have also been given the opportunity to enhance my communication skills and gain close friends and life-changing experiences that I will be able to use in my future career."



## 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]



## 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]



Cameron Flanagan



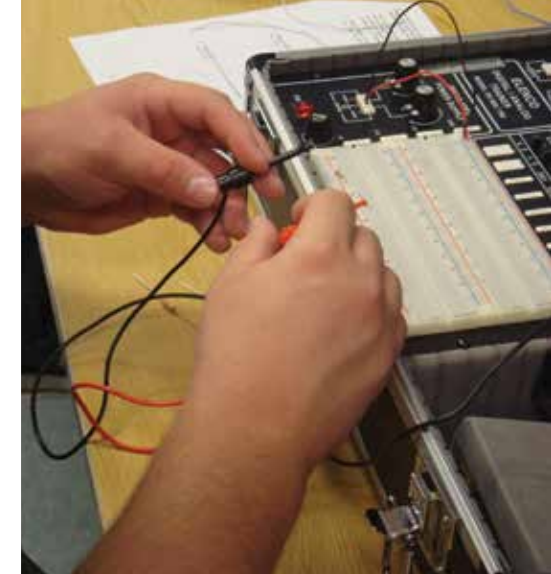
"I took the first year of this program as a college course and received three college credits for Exercise Science. I will also be doing an internship with a physical therapist to give me more experience in the field. SST has helped me to pursue my dreams and goals for my future career. If you have any interest in the health field, I would urge you to consider this class."

## 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]





Sydney Bolton

"I decided to come to SST because I had heard about the great career opportunities that it could provide me, but what I found was something more. I have made amazing new friends and have come to think of SST as more of a family that makes me excited to come to school each day."



Marketing Technologies I

Want to be your own boss? Have a great idea for a new business or product that will revolutionize the way people live? Learn about a career in the business world by studying entrepreneurship, management, sports and entertainment marketing, fashion-merchandising, e-commerce, hospitality and tourism, and the impact of social media on today's marketing campaigns. You'll create and develop your own product and learn how to market it to the world, as well as help operate the Upper Deck, SST's school store.



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]

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

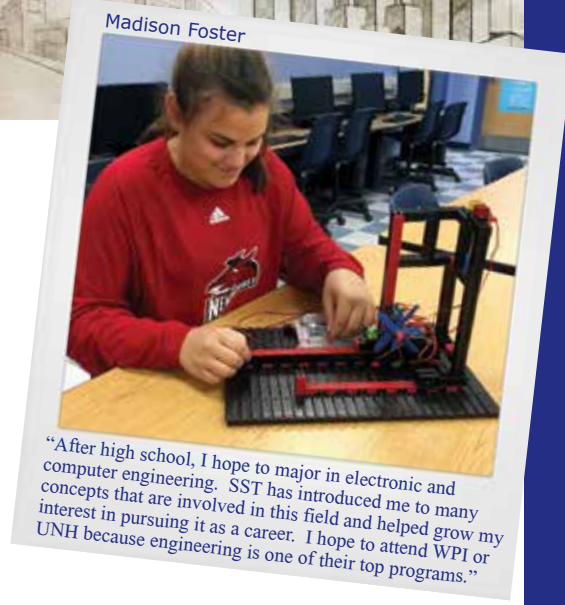
**Introduction to Engineering Design**  
Engineers are involved in everything that has ever been designed, built or manufactured. Learn how to create and read technical drawings and find out how to turn your ideas into reality. [Prerequisite - Algebra I] [Offered semester 1]

**Principles of Engineering**  
Engineers serve society by designing and constructing everything around us. In this course, you will apply the principles of engineering to develop solutions to technical problems and explore multiple technology systems and manufacturing processes. [Prerequisite - Algebra I] [Offered semester 2]

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]



Madison Foster

"After high school, I hope to major in electronic and computer engineering. SST has introduced me to many concepts that are involved in this field and helped grow my interest in pursuing it as a career. I hope to attend WPI or UNH because engineering is one of their top programs."

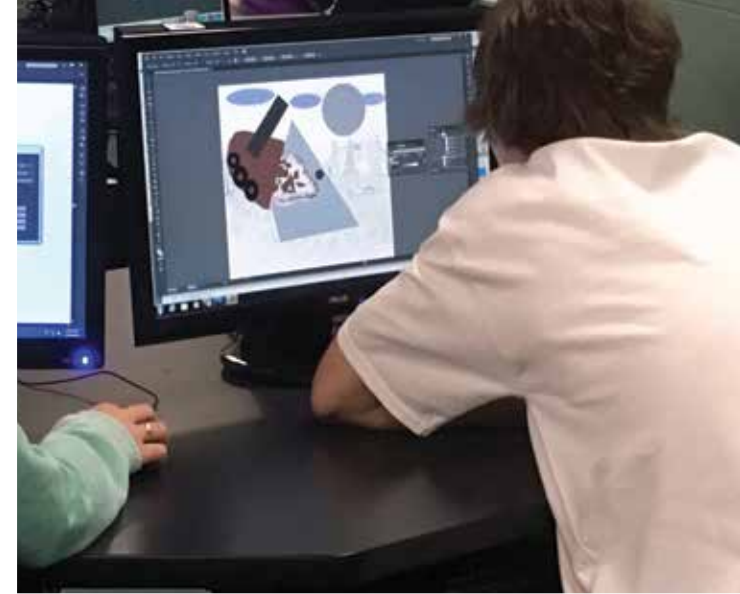






NH Scholars STEM

# Welding Technologies



## 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 Health & Safety) training certificate and have enough skills and experience to take your certification tests in GMAW (MIG), SMAW (Stick) and GTAW (TIG) welding. [Prerequisite - Welding Technologies I]



Nick Magliaro

"I really enjoy all of the projects, making new things and working with electricity in a real weld shop. This program has made so many opportunities and resources available to me that now I know I want welding to be my career."



# HOW IT WORKS

The first year of an SST program is typically done in your junior year, and you must reapply to take the second-year of the program as a senior. Admission is not guaranteed for either the first or second year of the program.

Please see your counselor 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.

Three separate sessions are run every day:

|                    |               |   |
|--------------------|---------------|---|
| <b>AM Session</b>  | 7:42-9:12 AM  | First-year students from Exeter, Newmarket and Raymond                    |
| <b>MID Session</b> | 9:30-11:00 AM | First-year students from Epping, Exeter, Sanborn Regional and Winnacunnet |
| <b>PM Session</b>  | 12:20-1:50 PM | 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, speak with your counselor or 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 and 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.

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.

“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.”

AT SST

YOU OWN YOUR EDUCATION

Animal & Plant Science

Automotive Technologies

Biomedical Science & Technology

Building Construction Technologies

Careers in Education

Computer Science

Culinary Arts

Digital Media Arts

Health Science Technologies

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Welding Technologies

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

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