PROGRAM OF STUDIES

SALEM CTE
CAREER & TECHNICAL EDUCATION CENTER

PROGRAM OF STUDIES
Greetings,

Thank you for taking the time to consider a Salem CTE Program. Many are quick to dismiss CTE programs with the belief that they are only for students who are not interested in attending college after high school. The reality is that the majority of our CTE students do go on to attend 2 and 4-year colleges, enroll in apprenticeship programs, or earn industry certificates. In today’s high tech economy, a high school diploma simply isn’t enough. Students will require some form of post-secondary training to earn a competitive wage. Employers continually tell me that they are looking for students who have a strong work ethic, will show up to work on time and possess collaborative and critical thinking skills. These are the skills that set us apart from your typical academic course. In CTE we emulate a work environment while fostering skills of work-readiness, collaboration, critical thinking, creative thought and communication skills. This is accomplished through a project-based curriculum coupled with work-based learning experiences such as working in the Salem AutoTech shop, serving lunch in the Three Seasons Restaurant, managing the Devil’s Den Café, doing ride time on the Salem Fire Department’s Ambulance, attending clinical rotations at Northeast Rehabilitation Hospital, or working on a carpentry project for a Salem home owner. These are just a few examples of the hands-on experiences our students have as CTE students.

So some will ask, why should I take a CTE program, what are the benefits? They include:

- You will have an opportunity to learn skills and train on high tech, state-of-the-art equipment.
- You can leave high school with a marketable skill set.
- The typical high school student leaves high school with a solid academic education and diploma while a CTE student leaves high school with all that and a marketable skill set or a jumpstart on and a strong understanding of their chosen career pathway.
- CTE students are part of a cohort of like-minded peers, focused on learning a trade or education or pursuing a common major of study.
- CTE students give back to their community. Many are involved in career and technical student organizations (CTOs) and participate in community service projects and fundraising such as Skills, USA, FBLA, HOSA, Holiday Helpings.
- CTE has something for students of all abilities, ambitions and aspirations.

We hope you will consider enrolling in a CTE program.

Sincerely,

Chris Dodge, Director

MESSAGE FROM AN ALUM

“My TV & Media classes, internships and independent learning opportunities helped me get ahead in my career. I am now working in the field right out of high school and that’s amazing to me.”

-Diana Demers, 2013

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This two-year program is designed to train students for a career in the automotive repair industry. Students perform services on vehicles in a hands-on curriculum to gain the experience and knowledge necessary to move directly into the field as an entry-level technician or transition into a two-year post-secondary program.

WHAT’S NEW AT SALEM CTE?

The start of the 2018 school year will see the completion of 3 years of renovation and reconstruction of the Salem CTE Center. All of our programs have been completely rebuild or renovated and will include:

- New automotive shop: Includes a new state-of-the-art alignment lift and machine, industry standard Hunter alignment, dry machine and road force balancing equipment.
- Engineering suite: Includes a CAD/CAM Lab, engineering work lab and a fabrication laboratory equipped with CNC mill and lathe, laser cutter, welding booth, CNC-driven Plasma cutter and table, 3D printing, and other metal and fabrication tools.
- State of the art nurse and simulation lab: Includes two simulation mannequins where students can practice their skills for patient assessment, treatment and care.
- New TV and media production suite: Includes a classroom, editing lab, soundproof editing room, control room and a production studio.
- New biomechanical science lab: Equipped with amazing equipment for carrying out advanced biomechanical and biotechnology techniques and processes such as protein production and purification, DNA extraction and microbiology techniques.
- New cosmetology salon and classrooms: Students will learn hair cutting and styling techniques, how to do pedicures and nail services, and facial techniques. Students earn apprentice hours toward their cosmetology license.
- New culinary arts kitchen and restaurant: This new state of the art kitchen, and restaurant facility will provide students with the opportunity to learn culinary techniques as well as restaurant and banquet management.
- New carpentry and construction lab and build space: Students learn residential carpentry techniques and systems while completing both pre-fab and on-site projects.
- A new computer science and technology lab and data center: This facility will provide students with the opportunity to learn computer science and technology and serve as the environment for teaching a variety of technology courses.
- Teacher preparation classroom: This new classroom will serve as the “home base” for the teacher preparation program which combines classroom and field experience in a variety of school settings.
- A business and marketing store and café: For fostering a collaborative approach to business education and operation of the school-based enterprise.

WHAT WILL YOU LEARN?

- Shop safety and operations
- Front-end alignment
- Engine components
- Steering and suspension
- Brake systems
- Vehicle safety inspections
- Cooling and heating systems
- Electrical diagnosis and repair
- Scan tool use
- SP2 safety certification
- Valvoline Oil certification
- Student-level ASE certification
- College credit through Manchester Community College

WHAT’S NEW AT SALEM CTE?

- The National Institute for Automotive Service Excellence (ASE) recognizes the Salem Automotive Technology program as a certified training program and it has achieved National Automotive Technicians Education Foundation (NATEF) Certification. Automotive Technology 2 students are eligible for student-level ASE Certification and have the opportunity to compete in Skills USA competitions.
Biomedical Science is a two-year, laboratory-based program that introduces students to techniques employed in the biomedical and biotechnology industry while also teaching and reinforcing the skills required to be a successful laboratory technician in any scientific field.

WHAT YOU WILL LEARN
- The role of biotechnology in society including the risks and benefits.
- Lab techniques in DNA manipulation, cell culture, protein purification, drug discovery, and bioinformatics.
- Advanced techniques in recombinant DNA technology, protein production, purification, DNA ‘barcoding’, and plant and animal cell culture.
- Microbiology procedures and techniques such as aseptic technique, growing cultures, preparing media, molecular genetics, microbial diagnosis, and virology.

College credit available through Great Bay Community College.

CAREER OPPORTUNITIES
- Medicine, genetics, biotechnology, laboratory technician, pharmaceuticals, biochemistry, biotechnological engineer, forensic scientist, researcher.

Business Pathway is a project-based business program that develops students’ understanding and skills in a broad range of business-related areas as business, law, economics, financial analysis, human resources management, information management, marketing, and operations. Students participate in real-world projects while developing technology, communication, collaboration, and critical thinking skills. These projects in business management and entrepreneurship prepare students for entry-level positions and provide a foundation for further education.

WHAT YOU WILL LEARN
- Business operation and management
- College-level accounting
- Business law

College credit available through Manchester Community College, which may be transferred to a four-year college.

CAREER OPPORTUNITIES
- Accountant, controller, sales, payroll manager, purchasing manager, business manager, financial analyst, financial advisor.

DID YOU KNOW?
According to a Brookings Institution study, STEM jobs—those requiring a science, technology, engineering, or math-related degree—not only account for more than 30% of all jobs in the United States, but many of them pay wages close to double the U.S. average.

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The Carpentry & Construction program is designed to prepare students for employment or advanced training in the construction industry. The program includes a blend of classroom theory and on-site, hands-on construction projects that teach basic building systems and techniques. Emphasis is placed on workplace and tool safety instruction.

WHAT YOU WILL LEARN
- Tool selection and usage
- Plan reading and layout
- Footings and foundations
- Roof and wall systems
- Roofing and framing
- Insulation and siding systems
- Vehicle installation
- Flooring
- Finish work

CREDITS + CERTIFICATIONS
- OSHA 10 hour card

CAREER OPPORTUNITIES
- Architect, engineer, commercial construction worker, carpenter, plumber, electrician, mason, contractor, building inspector,
- Computer programmer, data analyst, software developer, network engineer, software engineer, cyber security analyst.

Carpentry & Construction

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- Computer programmer, data analyst, software developer, network engineer, software engineer, cyber security analyst.
COSMETOLOGY

Cosmetology is the newest program offered at the Salem CTE where a brand new salon and classroom have been constructed. Cosmetology is a high demand area with a strong employment outlook. The State of New Hampshire requires 1500 hours of education and clinical experience for licensing. Through partnerships with post-secondary cosmetology schools, students can earn up to 300 clinical hours over the 2 year CTE program. Students should have strong communication skills as this is a very social environment.

WHAT YOU WILL LEARN

- Hair cutting and styling techniques
- Hair coloring
- Nail techniques
- Facial and pedicures
- Salon operation

COLLEGE CREDITS

Up to 300 apprentice hours can be applied to cosmetology school.

CAREER OPPORTUNITIES

Cosmetologist, barber, esthetician, nail technician, makeup artist, entrepreneur.

CULINARY ARTS

The Culinary Arts program is an ideal choice for anyone who loves to cook and wants a broad—yet thorough—background in the culinary arts. This highly hands-on program is designed to provide students with the knowledge and skills required to secure employment in the food service and hospitality industry or advanced study at a culinary institute or college.

WHAT YOU WILL LEARN

- Safety and sanitation
- Knife skills
- Introduction to baking and pastry
- Handling and preparation of meat, poultry, and seafood
- Soup, sauces, and salads
- Breakfast items
- Table service
- Cost control
- Stocks, pilaf, and sauté
- Restaurant operations
- ServeSafe Certification

COLLEGE CREDITS

College credit through Lakes Region Community College.

CAREER OPPORTUNITIES

Executive chef, pastry chef, sous chef, catering, food and beverage manager, restaurant manager/owner.
Students in the Engineering program engage in a blend of academic units combined with design challenges where they learn to work as a team. This is a unique opportunity to apply engineering, science, math, and technology to solve complex, open-ended problems in a real-world context. Students have the opportunity to work in a new fabrication laboratory where they can build prototypes of their design ideas. Technologies include: 3D printing, laser cutting, CNC plasma cutting, milling and lathing and welding.

WHAT YOU WILL LEARN
- Advanced features of the Microsoft Office suite.
- Adobe InDesign, desktop publishing, including page layout and design.
- Adobe Photoshop, photos and image editing.
- Adobe Illustrator, creation of vector graphics.
- Adobe Premiere, video editing.
- Adobe Dreamweaver, web design.

CAREER OPPORTUNITIES
Graphic designer, web designer, art director, multimedia/animation, management specialist, art production manager.

DIGITAL GRAPHIC APPLICATIONS
The digital graphics application program provides students with a diverse exposure to multiple digital media types and digital graphics layout and design. A strong focus is on learning and applying Adobe Creative Cloud applications including Illustrator, Photoshop, InDesign, Dreamweaver. Premiere and After Effects. Students will work in a creative, project-based environment learning skills such as page layout, web design, app design, animation and video editing.

WHAT YOU WILL LEARN
- Advanced features of the Microsoft Office suite.
- Adobe InDesign: desktop publishing, including page layout and design.
- Adobe Photoshop: photos and image editing.
- Adobe Illustrator: creation of vector graphics.
- Adobe Premiere: video editing.
- Adobe Dreamweaver: web design.

CAREER OPPORTUNITIES
Graphic designer, web designer, art director, multimedia/animation, management specialist, art production manager.

CAREER OPPORTUNITIES
Engineering (chemical, mechanical, civil, automotive, robotics, aerospace, etc.), physics, product design, manufacturing.
HEALTH SCIENCE TECHNOLOGY

Health Science Technology is an academically rigorous and physically demanding program that emphasizes teamwork, interpersonal relationships, and the effective communication skills necessary to work in a healthcare setting. This outstanding program will prepare you for a variety of healthcare jobs.

WHAT YOU WILL LEARN
- Anatomy and physiology
- Medical terminology
- Gown, glove and hand washing techniques
- Basic patient care techniques
- Patient observation and documentation
- Safety issues and infection control
- Vision and hearing testing
- Taking vital signs (temperature, pulse, respiration and blood pressure)
- How to perform an EKG

CREDITS + CERTIFICATIONS
- Three college credits in medical terminology from Manchester Community College
- American Heart Association CPR Certification
- Upon successful completion of the EMT or NA program, and the corresponding state licensing exam, licensing will occur

CAIRER OPPORTUNITIES
- Physician, nurse, EMT, physician assistant, occupational or physical therapist, pharmacist

MARKETING & SALES

In the Marketing & Sales program, students develop the skills to analyze the techniques businesses use to influence consumers’ buying decisions. As a result, students make the transition from thinking like a consumer to thinking like a marketer. The marketing program is designed to provide hands-on experiences in both the classroom and in a school-based enterprise.

WHAT YOU WILL LEARN
- Market research
- Marketing communications
- Consumer behavior
- Product planning
- Visual merchandising and pricing
- Advertising and promotion
- Media planning
- Sales strategies

CREDITS + CERTIFICATIONS
- Three college credits from Manchester Community College

MEMBERSHIP OPPORTUNITY
- Students have the opportunity to participate in FBLA

CAREER OPPORTUNITIES
- Advertising, public relations, sales, media buying, brand management, market research
The Teacher Preparation program provides first-hand experience for students who are interested in careers within the field of education. Students become skilled at teaching children of various levels and abilities while learning about the pedagogy and skills necessary for success in this career field. Throughout this two-year program, students learn school education theory and teaching strategies as well as observing and interning in classrooms of various grade levels.

WHAT YOU WILL LEARN
- Education theory related to teaching across multiple age levels.
- Designing and implementing curriculum.
- Developing critical thinking skills in learners.
- Assessing learners.
- Planning and supervising the operation of the school routine.

COLLEGE CREDITS
Students are eligible to earn 10 college credits from Southern NH University.

CAREER OPPORTUNITIES
Teacher, special education teacher, school counselor, speech or occupational therapist.

TELEVISION & MEDIA PRODUCTION
Students experience both the creative and technical aspects of video production through the Television & Media Production program. This highly hands-on, project-oriented program teaches a multitude of skills and techniques that rivals many college programs. Students work independently and in crews producing, writing, directing, and editing their own projects as well as school district activities for Salem’s Channel SLC 6.

WHAT YOU WILL LEARN
- Principles of story development, script writing, and storyboarding.
- Set design.
- Camera set-up and operation.
- Audio mixing, lighting and switching.
- How to use cutting-edge software applications for video and audio post-production.

COLLEGE CREDITS
College Credits are available through Great Bay Community College.

CAREER OPPORTUNITIES
Video, TV or film producer, production assistant, video editor, camera operator.
The Salem Career and Technical Education (CTE) Center is located at Salem High School: 44 Geremonty Drive, Salem, NH 03079.

WHO CAN ATTEND?
If you are a student at either Pelham, Pinkerton, Salem, Timberlane or Windham High School, you are eligible to attend Salem CTE.

HOW WILL I GET THERE?
If you are not a student at Salem High School, bus transportation is provided. If needed, self-transportation will be reimbursed.

WHAT’S THE BENEFIT?
Salem CTE programs prepare you with a college prep education as well as the real-world skills that will allow you to graduate from high school with more than just a high school diploma. You will have gained an academic foundation plus the work and technical skills needed to prepare you for the next step—whether a career or college.

HOW MUCH DOES IT COST?
Salem CTE is a free program. There is no cost for tuition or transportation.

HOW DO I APPLY?
Visit www.salemcte.com to download an application.

ARE YOU READY TO LEARN WHAT YOU LOVE?

MESSAGE FROM AN ALUM
“...taught me more than just repair skills—it taught me a lot of life lessons and the importance of planning my future.”

-Garret Houle, Automotive Technician
The CTE experience I had in the health professions program was profoundly meaningful to my career path. The thorough courses and dedicated teachers enabled students to truly engage in the learning materials and apply knowledge and skills in college and beyond.

- Jessica Sexton '08