TOMORROW’S CONNECTICUT TECHNICAL HIGH SCHOOL SYSTEM STRATEGIC ACTION PLAN 2014 – 2017
“EDUCATION IS THE MOST POWERFUL WEAPON WHICH YOU CAN USE TO CHANGE THE WORLD.”

– Nelson Mandela

The Connecticut Technical High School System continues to be a leading force in the state providing a unique and rigorous learning environment that focuses on both academic and career technical education and meets the needs of Connecticut’s employers.
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LEADERSHIP BOARD MEMBERS

STATE OF CONNECTICUT
Dannel P. Malloy
Governor

STATE BOARD OF EDUCATION
Allan B. Taylor
Chairperson
Theresa Hopkins-Staten
Vice Chairperson
Charles A. Jaskiewicz III
Terry H. Jones
Estela Lopez
Patricia Keavney-Maruca
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Ex Officio
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John Barrasso
Executive Vice President, Mechanical Contractors Assoc.
Sharon Palmer
Commissioner, Department of Labor
Stephan Bundschu
Vice President Trumpf, Inc.
Catherine Smith
Commissioner, Department of Economic and Community Development
Karen Eichstaedt
Vice President of Human Resources
United Community and Family Services
Patricia Keavney-Maruca
Current State Board of Education member
Matthew Nemerson
President and Chief Executive Officer,
Connecticut Technology Council
Fitz Walker
President and Chief Executive Officer,
Bartron Medical Imaging

COMMISSIONER OF EDUCATION
Stefan Pryor

CTHSS BOARD MEMBERS
Robert J. Trefry
Chairperson, Former Chief Executive Officer of Bridgeport Hospital

CONNECTICUT TECHNICAL HIGH SCHOOL SYSTEM
SUPERINTENDENT OF SCHOOLS
Dr. Nivea L. Torres
VISION
Tomorrow’s Framework emphasizes three areas: Academic, Structural and Economic. The goal is to articulate a strategic plan of action that builds upon existing district infrastructures, identifies the changes necessary to fully implement a college and career ready curriculum, and expands opportunities for all CTHSS learners.

Dr. Nivea L. Torres

– Dr. Nivea L. Torres, Superintendent of Schools
Connecticut Technical High School System

Tomorrow’s Framework will clearly define the paradigm shift that is required to revitalize the district and to propel its practices to encourage innovation among CTHSS learners, teachers, school leaders, business/industry partners and families.

Robert J. Trefry

– Robert J. Trefry, Chairperson
Connecticut Technical High School System Board
The mission of the Connecticut Technical High School System is to provide a world-class, unique and rigorous learning environment for high school students and adult learners that:

- Ensures both student academic success and career technical education mastery, as well as promotes enthusiasm for lifelong learning;
- Prepares students for post-secondary education, including apprenticeships and immediate productive employment;
- Engages regional, state, national and international employers and industries in a vibrant collaboration to respond to current, emerging and changing global workforce needs and expectations; and
- Pursues and participates in global partnerships that provide CTHSS students with international exposure and experience.
The Connecticut Technical High School System
2012-2013 graduation rate

96.3%

10.8% higher than the 2012-2013 state average

Source: CSDE Report/Public School Information System.

SCHOOLS AND LOCATIONS

1. A.I. Prince Technical High School
   Hartford

2. Bristol Technical Education Center
   Bristol

3. Bullard-Havens Technical High School
   Bridgeport

4. CT Aero Tech School for Aviation Maintenance Technicians
   Hartford

5. E.C. Goodwin Technical High School
   New Britain

6. Eli Whitney Technical High School
   Hamden

7. Ella T. Grasso Technical High School
   Groton

8. Emmett O’Brien Technical High School
   Ansonia

9. Harvard H. Ellis Technical High School
   Danielson

10. H.C. Wilcox Technical High School
    Meriden

11. Henry Abbott Technical High School
    Danbury

12. Howell Cheney Technical High School
    Manchester

13. J.M. Wright Technical High School
    Stamford

14. Norwich Technical High School
    Norwich

15. Oliver Wolcott Technical High School
    Torrington

16. Platt Technical High School
    Milford

17. Stratford School for Aviation Maintenance Technicians
    Stratford

18. Vinal Technical High School
    Middletown

19. W.F. Kaynor Technical High School
    Waterbury

20. Windham Technical High School
    Willimantic
The core mission of the CTHSS is to provide world-class career technical and academic education in preparation for careers in business and industry.

The CTHSS provides a healthy, safe and supportive environment in which students pursue their college and career pathways while developing leadership skills essential for their success.

The CTHSS strives to recruit, retain and advance students and staff of all backgrounds who share a wide range of perspectives and who contribute to the system’s core mission of creating a talented and diverse workforce for the state of Connecticut.

The CTHSS will focus on attracting students who have an interest, affinity and aptitude for careers in business and industry.

The CTHSS program offerings will lead to a career in business and industry or post-secondary learning pathways in a high-demand job, which results in a high living wage.

The CTHSS will work closely with the Board of Regents and establish partnerships that create a clear and integrated pathway for students through post-secondary education, leading to licensure, certifications or degrees.

CTHSS students will graduate with a strong academic background and the technological, problem-solving, team-building, communication and competitive skills required for success in life and careers.

The CTHSS will be aligned with and responsive to the needs of employers and the economic development priorities of the state through the development of corporate partnerships.

CTHSS graduates will be academically prepared, so they have the option to attend college immediately after graduation or at some time in the future.
The core of the CTHSS education is STEM (Science, Technology, Engineering and Mathematics). All students will receive a relevant integrated education that connects science, technology, engineering and math to every area of learning as it pertains to every curriculum in all career clusters.

In order to respond to employer needs and to provide adult learning opportunities, the CTHSS will develop additional career technical education programs for committed adult students.

In order to provide learning opportunities for a wider population of high school students, the CTHSS will develop opportunities, including alternative part-time career technical education (CTE) programs for committed high school students who do not meet the current entrance requirements for traditional CTHSS enrollment.

The recruitment, retention and professional development of highly talented and skilled administrators, teachers, consultants and staff is the cornerstone of student success and the CTHSS being able to meet its goals. Assuring this requires continuous professional learning options, including coaching, mentoring, modeling and providing adequate resources, materials and equipment.

The CTHSS will increase its visibility and be recognized nationally and internationally for its high-quality and innovative programs, along with its outstanding graduates. Relationships will be established locally, regionally, nationally and globally with employers, governmental agencies and other partners.
TOMORROW’S FRAMEWORK IS ORGANIZED INTO THREE SECTIONS:
4 GOALS

3 YEARS
**Tomorrow’s Framework** defines the important work that we will undertake over the next three years. These core goals are the driving force behind our commitment to make our vision a reality: To become the best career technical education system in America.

1. **Enhanced Employer Engagement and Alignment with Industry Needs**
2. **Alignment between K-12, Post-secondary and Adult Programs**
3. **Flexibility, Responsiveness and Innovation**
4. **Professional Capital**
Partner with business and industry to develop career technical education programs that provide CTHSS students with the skills and work habits to be successful in a dynamic 21st Century work environment.

<table>
<thead>
<tr>
<th>FRAMEWORK FOR SUCCESS</th>
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<tbody>
<tr>
<td><strong>1.1 Partner with business and industry.</strong></td>
</tr>
<tr>
<td>Develop partnerships with business and industry for all career pathways.</td>
</tr>
<tr>
<td>Establish business/industry advisory committees for all career pathways.</td>
</tr>
<tr>
<td>Expand partnerships with business/industry to provide educational production work, work-based learning and job shadowing.</td>
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<tr>
<td>Hire additional Deans of Students to oversee the work-based learning programs.</td>
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</tbody>
</table>
### FRAMEWORK FOR SUCCESS

<table>
<thead>
<tr>
<th>1.2 Develop dynamic, career technical education programs.</th>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
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</thead>
<tbody>
<tr>
<td>Align CTHSS’s career technical education curricula to state, national and industry standards.</td>
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<tr>
<td>Prepare graduates for success in a 21st Century dynamic work environment by implementing career guidance and career education as a graduation requirement for all CTHSS students.</td>
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<table>
<thead>
<tr>
<th>1.3 Develop a clearly articulated career technical education program review process.</th>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop and consistently implement a process to identify new technologies responsive to labor market needs in accordance with CT General Statutes Section 10-951(b) and (c).</td>
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<tr>
<td>Review CTE enrollment with consultants, school principals and advisory boards on an annual basis to make programmatic recommendations to the CTHSS board.</td>
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<tr>
<td>Implement an Enrollment and Retention Success Plan.</td>
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<thead>
<tr>
<th>1.4 Respond to the changing needs of business/industry.</th>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>In accordance with CT General Statutes Section 10-95h, review the Department of Labor projections and the Department of Economic Development strategic goals on an annual basis to determine state workforce needs.</td>
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<tr>
<td>Increase the number of business/industry-recognized portable, stackable credentials that lead to employment and post-secondary education.</td>
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<tr>
<td>Respond to current workforce needs in Connecticut by expanding CTE programs in advanced manufacturing, welding, information systems technology, electro-mechanical and health technology.</td>
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<thead>
<tr>
<th>1.5 Stay current with the emerging technology and STEM demands of college and work environments.</th>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
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</thead>
<tbody>
<tr>
<td>Embed innovative and common technology across all academic and CTE program areas.</td>
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<tr>
<td>Require all school personnel and students to demonstrate proficiency in technology applications as outlined in the CTHSS Technology Plan.</td>
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<tr>
<td>Connect science, technology, engineering and math (STEM) to every content area through the curriculum review process.</td>
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</table>
Create an alignment between K-12, Post-secondary and Adult Programs to provide a continuum of educational services resulting in readiness for career and college.

GOAL 2

FRAMEWORK FOR SUCCESS

2.1 Articulate the alignment of Connecticut’s K-8 education with CTHSS career technical education.

<table>
<thead>
<tr>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
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<tbody>
<tr>
<td>Expand extended hours programming (summer TechnoCamp, after school programs etc.)</td>
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<tr>
<td>Expand partnerships with elementary and middle schools to create opportunities for students to pursue career technical education within the CTHSS.</td>
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<tr>
<td>Establish CTE programs for students who are not enrolled in the comprehensive four-year CTHSS program through a “Pre-Technology” after-school program.</td>
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</table>

2.2 Establish a uniform 9-14 system.

Create a system-wide articulation between the Connecticut Board of Regents and the CTHSS that capitalizes on shared facilities, equipment, curricula and programming.
<table>
<thead>
<tr>
<th>2.3 Expand CTHSS adult CTE programs to align with the state’s workforce needs.</th>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
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</thead>
<tbody>
<tr>
<td>Reinstate the adult CTE education infrastructure to support advancements in statewide programming.</td>
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<tr>
<td>Collaborate with the Department of Labor and Department of Economic Development to create new adult programs.</td>
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<tr>
<td>Establish adult CTE programs including apprenticeships for veterans, displaced workers and other identified populations by creating a second wave of instruction (evening programs).</td>
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<tr>
<td>Conduct a feasibility study for additional education centers across the state (Bristol model) that would support enrollment demands and workforce development.</td>
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<tr>
<th>2.4 Refine the district's admissions policy.</th>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
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<tbody>
<tr>
<td>Establish an admissions process that attracts and enrolls an academic and culturally diverse group of aspiring or highly attaining students.</td>
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<tr>
<td>Incorporate entrance aptitude battery assessments to measure prospective CTHSS learners' abilities and help predict future academic and CTE success.</td>
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</table>

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<thead>
<tr>
<th>2.5 Develop a post-graduate survey to track college and career alumni data.</th>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
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</thead>
<tbody>
<tr>
<td>Partner with the Board of Regents to create a survey that tracks students' future career pathways.</td>
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<tr>
<td>Review student outcomes (completion rates, placement rates and state licensing examination outcomes) on an annual basis.</td>
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<tr>
<th>2.6 Implement Blended Learning for advanced study beyond credit recovery and alternative education programs.</th>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
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<tr>
<td>Provide multiple e-learning opportunities for students to apply technology skills across all subject areas.</td>
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<tr>
<td>Give students access to online learning and the ability to earn high school and/or college credit online.</td>
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<tr>
<th>2.7 Bolster existing partnerships with institutions of Higher Education.</th>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop 9-14 career pathways to provide CTHSS students with industry-recognized, stackable, portable and accredited post-secondary degrees and certificates.</td>
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<tr>
<td>Create dual enrollment opportunities for CTHSS students in 2- or 4-year higher education institutions such as the Early College Experience Program.</td>
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<tr>
<td>Expand dual enrollment course offerings with the Board of Regents.</td>
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Transform the CTHSS with innovative program designs that are responsive to Connecticut’s workforce needs, thus positioning the system as a leading force in career technical education.
**FRAMEWORK FOR SUCCESS**

<table>
<thead>
<tr>
<th>3.1 Position the CTHSS as a leading force in career technical education.</th>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner with career networks and national organizations that promote a vision for the United States as a global competitor.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Increase district leadership participation in national conferences and organizations.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.2 Present the CTHSS as the pipeline for workforce development in the state.</th>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish a public relations and marketing campaign highlighting CTHSS accomplishments and core mission.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Use social media as a platform to establish communication with business/industry as a forum to expand partnerships with job services.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>3.3 Develop curricula that focuses on student learning goals through a blended learning model.</th>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transition to a digital, one-to-one environment for student academic success.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Remove barriers of cycles and grade levels so students can create personalized learning environments by piloting a new mathematics competency-based model.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tbody>
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<thead>
<tr>
<th>3.4 Revise CTE program model.</th>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adopt an interdisciplinary approach through the implementation of a “Career Academies” model piloted at J.M. Wright Technical High School.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Create student success portfolios that indicate the vast number of employment opportunities within each career cluster and highlight project-based learning experiences.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
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<thead>
<tr>
<th>3.5 Prepare students for emerging employment opportunities in “green careers”.</th>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase the knowledge and awareness of clean energy and energy efficient technologies and its benefits.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Recognize construction trades as building and sustainable construction technologies to better align with current energy efficiency partnerships and investments.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Expand Project Learning Tree (PLT) and promote personal responsibility for improving the environment.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tbody>
</table>
Invest in the development of faculty and staff to support the system’s core mission.
### FRAMEWORK FOR SUCCESS

#### 4.1 Provide ongoing professional learning opportunities for new teachers and administrators as part of the induction process.

- Foster professional learning communities at the school and district level.
- Institute a fall and spring new teacher orientation program that highlights key district initiatives.
- Create personalized learning environments for teachers and staff using online management systems.

#### 4.2 Create a CTHSS Human Resources Division that addresses the system’s unique staffing needs.

- Hire a Human Resources Manager that oversees the system’s 2,300-plus workforce.
- Regularly monitor the staffing of programs and services.
- Create budget expansion requests that are in direct alignment to the strategic plan goals and the system’s institutional, health and safety needs.
- Create an aligned talent management system that recruits, hires, develops and evaluates highly effective and diverse staff members and educators.
- Collaborate with the community colleges and other state universities to foster opportunities for student teacher internships that could potentially create a talented and expanded applicant pool.

#### 4.3 Implement a Teacher Evaluation and Support Program to increase educator effectiveness and student achievement.

- Implement *Learning Focused Conversations* (Lipton, Wellman 2013) as a model for collaboration and collegiality that leads to professional growth.
- Provide on-going professional learning around the CTHSS Teacher Evaluation and Support Program for new teachers and administrators.
- Implement the CTHSS Improvement and Remediation Plan to strengthen teacher practice.
Beyond demonstrating mastery of core academic skills and knowledge in English Language Arts (ELA) and Mathematics, the district has identified target indicators as measures of career readiness and preparation. The target indicators delineated on the next page represent a progression of career-related experiences and performances in subject areas over the course of a student’s career in the CTHSS.

**COLLEGE AND CAREER READINESS**

means that a high school graduate has the ELA and mathematics knowledge and skills necessary to qualify for and succeed in:

- Entry-level, credit-bearing courses without the need for remedial course work; and
- Post-secondary job training and/or education necessary for his/her chosen career pathway.
**READINESS CONTINUUM**


---

**LIFE Ready**

> **WORK Ready**

Meets basic expectations regarding workplace behavior and demeanor

**INDICATOR OF ACHIEVEMENT:**

Number of students participating in a Work Based Learning (WBL) program.

> **JOB Ready**

Possesses specific knowledge necessary to begin an entry-level position

**INDICATOR OF ACHIEVEMENT:**

Number of students who have obtained industry recognized portable, stackable credentials.

> **CAREER Ready**

Possesses knowledge and learning skills necessary to succeed in a certificate program

**INDICATOR OF ACHIEVEMENT:**

Number of graduates completing dual enrollment courses at community colleges or state universities.

> **COLLEGE Ready**

Is prepared to succeed in general education courses

**INDICATOR OF ACHIEVEMENT:**

Number of students who have enrolled in post-secondary education with no need for remediation in English or Mathematics.
The CTHSS is committed to offering innovative programs and academic tracks to stay globally competitive.

> CENTERS OF EXCELLENCE

- Develop a new regional education center (Bristol Model) in the next five years that addresses the growing demand for career and technical education programs in the state.

> EARLY COLLEGE EXPERIENCE

- Create 9-14 career pathways that transition CTHSS students into the state’s community colleges, and 2- and 4-year universities.
- Develop a strong career counseling program that provides students and parents with ongoing career planning.

> FLEXIBLE ACADEMIC TRADE TRACK

- Transition to a more personalized learning environment for students through 1:1 computing and competency based instruction.
- Institute Career Academies that allow for more opportunities for interdisciplinary learning while specializing in nationally-recognized technology.

> COMMUNITY/FAMILY ENGAGEMENT

- Develop a strong school compact that includes all parents, teachers, and students working together to provide the support needed to reach and exceed grade-level standards.
> TECHNOLOGY

- Our district boasts a rich technology landscape where students have access to electronic devices throughout the day to perform tasks, complete assignments and assessments related to their academic and trade areas.
- To advance our district’s platform to individualized learning will require strategic refinements to our existing program structures by redesigning schedules and programs to support a more flexible and personal approach for CTHSS students.
- The CTHSS continues to advance its technological vision in supporting a one-to-one learning model over the next three years CTHSS students will be provided with a digital device upon acceptance to our technical high schools.
- Our goal is to provide the latest technologies in our CTE areas to adequately prepare CTHSS students for the world of work or to pursue their post-secondary aspirations.

STEM

The CTHSS defines STEM as an education pathway of excellence for all of its students in every technology. The acronym (STEM) relates to a mindset; a “best teaching practice” incorporating problem solving, project-based learning and critical thinking. It is not intended to be a specific course, curriculum or add-on, but what is achieved on a daily basis. All students will receive a relevant integrated education, which connects science, technology, engineering and math to every area of learning as it pertains to every curriculum in each career cluster.
**AGRICULTURE, FOOD AND NATURAL RESOURCES**
- Bioscience and Environmental Technology

**ARCHITECTURE AND CONSTRUCTION**
- Sustainable Architecture
- Carpentry
- Electrical
- Facilities Management
- Heating, Ventilation and Air Conditioning (HVAC)
- Masonry
- Plumbing and Heating
- Plumbing, Heating and Cooling

**ARTS, AUDIO/VIDEO TECHNOLOGY AND COMMUNICATIONS**
- Digital Media
- Sound Production Technology

**HEALTH SCIENCE**
- Health Technology
- Biotechnology

**HOSPITALITY AND TOURISM**
- Culinary Arts
- Tourism, Hospitality and Guest Services Management

**HUMAN SERVICES**
- Early Care and Education
- Hairdressing

**CONNECTICUT TECHNICAL HIGH SCHOOL SYSTEM**
TRANSPORTATION, DISTRIBUTION AND LOGISTICS
- Automotive Collision, Repair and Refinishing
- Automotive Technology
- Diesel and Heavy-Duty Equipment Repair

SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM)
- Pre-Electrical Engineering and Applied Electronics Technology

MARKETING, SALES AND SERVICE
- Marketing, Management and Entrepreneurship

MANUFACTURING
- Automated Manufacturing Technology
- Computer-Aided Drafting and Design (CADD)
- Electromechanical Technology
- Manufacturing Technology
- Welding and Metal Fabrication

INFORMATION TECHNOLOGY
- Electronics Technology
- Graphics Technology
- Information Systems Technology
CTHSS FULL-TIME
ADULT PROGRAMS
- Licensed Practical Nurse
- Certified Nurse Assistant
- Surgical Technician
- Dental Assistant
- Medical Assistant
- Aviation Maintenance Technician
- Automotive Technology
- Culinary Arts
- Electronics Technology
- Heat, Ventilation, Air Conditioning
- Manufacturing Technology
- Welding & Metal Fabrication
The *Connecticut Technical High School System* has developed a *Capital Improvement Plan* that promotes a healthy and safe school environment, provides state-of-the-art facilities and equipment and responds to Connecticut’s industry needs while addressing projected student demand.
1. Emmett O’Brien Technical High School
   Estimated cost $94 million
   (Spring 2014-Summer 2017)

2. Platt Technical High School
   Estimated cost $124 million
   (Spring 2017-Summer 2020)

3. Ella T. Grasso Southeastern Technical High School
   Estimated cost $135 million
   (Spring 2017-Summer 2020)

4. Bullard-Havens Technical High School
   Estimated cost $70 million
   (Spring 2018-Summer 2021)

5. Vinal Technical High School
   Estimated cost $140 million
   (Spring 2018-Summer 2021)

6. Oliver Wolcott Technical High School
   Estimated cost $140 million
   (Spring 2018-Summer 2021)

7. Bristol Technical Education Center
   Estimated cost $50 million
   (Spring 2019-Summer 2021)

8. Stratford School for Aviation Maintenance Technicians
   Estimated cost $25 million
   (Spring 2019-Summer 2021)

9. Windham Technical High School
   Estimated cost $150 million
   (Spring 2018-Summer 2022)
The Connecticut Technical High School System, in partnership with Energize Connecticut, has developed the nation’s first green construction learning laboratories for CTE high school students. The E-House initiative is jointly funded by the Connecticut Energy Efficiency Fund and the Clean Energy – Finance and Investment Authority (CEFIA) – a quasi-public state agency, is administered by Connecticut Light & Power and The United Illuminating Company.

The goal of this initiative is to have an E-House at each of Connecticut’s 17 technical high schools by the end of 2015. Each E-House incorporates weatherization and energy efficiency labs, as well as solar photovoltaic and solar thermal systems into the construction of the 16 foot by 20 foot structures.

The E-House is part of the state’s technical high school system’s ‘green’ approach to provide clean energy curriculum and hands-on experience for its architectural, carpentry, electrical and plumbing departments’ faculty and students.

The goals of the project are the following:
- Increase in the knowledge and awareness of clean energy and energy efficiency technologies, as well as their benefits to society among CT Technical High School faculty and students.
- Provide professional development to CTE teachers in the renewable energy technologies of solar PV and solar thermal.
- Prepare students for emerging employment opportunities in renewable energy and energy efficiency fields.

“This initiative is a great example of Connecticut leading the way to help spur job growth in the fields of energy efficiency and renewable energy, which are emergent industries. Our students graduate with the necessary skills and knowledge to attain these green jobs post-graduation or continue their studies in a relevant field.”

– Dr. Nivea L. Torres, Superintendent of Schools, Connecticut Technical High School System
TOMORROW’S ECONOMIC FRAMEWORK
ECOnOMIC FRAMEWORK
THE CONNECTICUT LANDSCAPE

MANUFACTURING IN CONNECTICUT

Connecticut manufacturers produce $24 billion in total output. 4,700 manufacturing firms in Connecticut. 166,000 total Connecticut manufacturing employees.

The CTHSS reviews local, national and global workforce needs and responds with EDUCATED, TALENTED and EXPERIENCED GRADUATES.

CONNECTICUT 2010-2020 JOB PROJECTIONS

<table>
<thead>
<tr>
<th>Sector</th>
<th>2010 Jobs</th>
<th>2020 Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information</td>
<td>36,860</td>
<td>36,860</td>
</tr>
<tr>
<td>Transportation and Warehousing</td>
<td>3,260</td>
<td>5,260</td>
</tr>
<tr>
<td>Education Services</td>
<td>30,860</td>
<td>30,860</td>
</tr>
<tr>
<td>Construction</td>
<td>9,860</td>
<td>16,860</td>
</tr>
<tr>
<td>Accommodation and Food Services</td>
<td>19,060</td>
<td>19,060</td>
</tr>
<tr>
<td>Professional, Scientific, and Technical Services</td>
<td>14,960</td>
<td>14,960</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>16,960</td>
<td>20,960</td>
</tr>
<tr>
<td>Healthcare and Social Assistance</td>
<td>149,130</td>
<td>280,000</td>
</tr>
</tbody>
</table>

PROJECTED INCREASE IN CONNECTICUT JOBS FROM 2010 TO 2020

<table>
<thead>
<tr>
<th>Sector</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation and Warehousing</td>
<td>2,470</td>
</tr>
<tr>
<td>Information</td>
<td>4,520</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>6,820</td>
</tr>
<tr>
<td>Accommodation and Food Services</td>
<td>9,880</td>
</tr>
<tr>
<td>Construction</td>
<td>12,180</td>
</tr>
<tr>
<td>Education Services</td>
<td>15,280</td>
</tr>
<tr>
<td>Professional, Scientific, and Technical Services</td>
<td>22,930</td>
</tr>
<tr>
<td>Healthcare and Social Assistance</td>
<td>46,620</td>
</tr>
</tbody>
</table>

Source: Georgetown University Studies
As the needs of the workforce change, the CTHSS will prepare students for jobs projected to increase in upcoming years. We continue to update our Career/Technical Education Program Expansion Plan to include the latest industries and to answer the growing need for jobs in clean energy, healthcare and manufacturing. The charts to the right show the growth industries in CT and how the CTHSS is responding to these trends.

**CONNECTICUT RANKS**

9TH IN THE WORLD FOR MANUFACTURING PRODUCTIVITY


3RD IN THE WORLD FOR THE MOST EDUCATED WORKFORCE

CAREER/TECHNICAL EDUCATION PROGRAM EXPANSION PLAN
NEW TRADES

2014-15
- HEALTH TECH
  Henry Abbott Technical High School
- INFORMATION SYSTEMS
  E.C. Goodwin Technical High School

2015-16
- BIOENVIRONMENTAL
  A.I. Prince Technical High School
- BIO-TECHNOLOGY
  Norwich Technical High School
- INFORMATION SYSTEMS
  W.F. Kaynor Technical High School and Eli Whitney Technical High School
- MANUFACTURING
  Bullard-Havens Technical High School
- MECHATRONICS
  E.C. Goodwin Technical High School
- WELDING
  Ella T. Grasso Technical High School

2016-17
- HEALTH TECH
  Bullard-Havens Technical High School and A.I. Prince Technical High School

CAPACITY PROJECTIONS WITH NEW TRADES ADDED*

*Projected numbers do not include additional capacity from Wright Tech reopening or adult students.
THE CTHSS RESPONDS TO THE GROWING MANUFACTURING INDUSTRY WITH:

- Nationally-recognized credentials within the precision machining industry;
- A coalition of manufacturing partners in Connecticut; and
- Five-year, $10 million manufacturing expansion plan.
HOW DO WE MEASURE SUCCESS?
NIMS (NATIONAL INSTITUTE FOR METALWORKING SKILLS)

• The NIMS credentialing program requires that the candidates meet both performance and theory requirements.
• Both the performance and knowledge examinations are industry-designed and industry-piloted.

SINCE 2012, APPROXIMATELY 40% OF THE GRADUATING SENIORS ENTERED FULL- OR PART-TIME EMPLOYMENT IN THE MANUFACTURING TECHNOLOGY FIELD AND 38% ARE ATTENDING A 2- OR 4-YEAR COLLEGE.
FINLAND –
**CREATION OF FLEXIBLE ACADEMIC TRACK:**
Include a more focused instructional approach through Career Academies to allow for inter-disciplinary partnerships.

SWITZERLAND –
**REVAMP CAREER COUNSELING PROGRAM:**
Include career guidance and career education as graduation requirements for all CTHSS students.

GERMANY –
**DEVELOPMENT OF A DUAL APPRENTICESHIP PROGRAM:**
Capitalize on existing Work Based Learning Program to create a more extensive experience for students that balances academics with career training.
MULTIPLE PLAYERS WITH DIVERSE PERSPECTIVES

OPPORTUNITIES ARE LIMITLESS, OFFERING A VARIETY OF CAREER OPTIONS
The CTHSS is a viable educational model that is committed to developing responsible citizens, problem-solvers, team players and skilled young men and women who will thrive and grow here in the state of Connecticut.
As a catalyst for innovation, CTHSS engages with local and global employers and has the flexibility to respond with the skilled, experienced graduates they need. **With your help, the Connecticut Technical High School System can continue to adapt and run efficiently as a stronghold for Connecticut’s future.**
cttech.org