



CAREER AND TECHNICAL EDUCATION

# CONSTRUCTION TRADES

## **CTE COURSE SYLLABUS**

Connect with WSWHE BOCES





# CONSTRUCTION TRADES

**Course Description:** Construction Trades is a two-year program offered to students at both the F. Donald Myers and Southern Adirondack Education Centers. We currently use the trade curriculum developed by the Residential Construction Academy, which was created by the construction industry across the country. The program provides students with basic knowledge of tools, methods, and materials used in the construction industry. Emphasis is placed on construction theory as well as related math and ELA. Students will be educated about the tools, materials, technologies, and techniques currently used in the field. Practical experiences make a difference with employers and colleges. Students will be working on-site constructing a modular house, performing community service, and will work on a variety of small construction projects each year.

**Prerequisites:** Construction Trades students will be out in the environment (weather) and on their feet for long periods of the time. This course also involves intense physical activity therefore students should be in good physical condition. Students should also have a good working knowledge of Math I and English.

**1 Year/2 Years:** 2 Years

**Location:** F. Donald Myers & Southern Adirondack Education Centers

**Course Objective:** Students will be prepared for employment in the construction field through the application of workplace skills such as teamwork, problem solving, decision making, and time management. Students will acquire the skills and knowledge required to work safely in the construction field. Students are also prepared for and encouraged to pursue further education at community colleges, apprenticeship programs, and industry sponsored training programs.

- Course Topic Outline:**
- Introduction and Orientation
  - Construction Math
  - Introduction to Blueprints
  - Floor Systems
  - Wall (wood/steel) and Ceiling Framing
  - Windows and Exterior Doors
  - Exterior Finishing
  - Thermal and Moisture Protection
  - Basic Safety
  - Introduction to Hand Tools
  - Power Hand and Stationary Tools (lab and theory)
  - Building Plans and Codes
  - Wood Building Materials, Fasteners, and Adhesives
  - Roof Framing/Roofing Applications
  - Site Layout One (Distance Measuring and Leveling)
  - Interior Finishing
  - Basic Stair Layout
  - Basic Employability Skills

**Student Requirements:** Students will be tested at the end of each completed chapter of the RCA curriculum. In order for the student to gain national recognition he/she must obtain at least 70% or better on the testing.

**Textbooks/ Materials Resources:** The Construction Trades program works from a number of texts and other reference materials from the Residential Construction Academy Series in addition to other professional literature and product information. Professional Development Program is adopted from SkillsUSA.

**Assessments/ Technical Assessments:** The students are assessed daily on laboratory work, exams and quizzes, as well as a two-part final exam. The technical assessment exam is based on the RCA core and level-one written and performance examination as well as the production of a portfolio.

# The future of career success starts here.

**Grading System:** Quizzes 10-40 points | Projects 50-100 points | In-Class Assignments 10-40 points | Tests 50-100 points | Homework/Journal 5-15 points

**Attendance & Class Participation:** The WSWHE BOCES has an attendance policy that requires students to miss no more than 18 days across the school year. For those times when it is necessary to be absent, a written note from the parent/guardian will be expected the next class day. Regular attendance is a necessary requirement in the learning process. Students will be responsible to bring to guidance any absentee slips reporting why they were absent. It will also be the students' responsibility to retrieve any make-up work for time missed out of class. Make up work will be due back to the instructor no later than three days after receiving it. A student who arrives to class any more than three minutes after the start may be considered tardy. Three occasions being tardy from class will result in disciplinary action. When a student misses class without permission, it is considered an illegal absence and will result in disciplinary action. Please note that scholarships are based in part upon excellent attendance.

**Activities/Labs/Projects/Clinics:** Construction Trades is a class with 100% participation in the SkillsUSA organization. The students will be involved in fund raising projects throughout the year. Students will also be building their work portfolio throughout the year to use to obtain gainful employment.

**Student Provided Material List:** For the safety of the student and their peers students are to supply themselves, Leather Work Boots (steel toe optional), Safety Glasses (Goggles or Prescription Safety Glasses if needed). Students are required to adorn work boots, long work pants and safety glasses in the laboratory, as well as, hard hats whenever any project or task is being performed overhead.

**Industry Certification:** One or two year completion certificate in Construction Trades. Fork lift truck operators/drivers license. OSHA 10 hour occupational safety certificate. HBI/NAHB certifications following successful completion and achieving at least 70% on the technical assessment

**Articulation Agreements:** Each Career and Technical Education (CTE) program is geared to ready students for the world of work and for the rigors of post-secondary coursework. To that end, each program has worked with area colleges to obtain articulation agreements that allow for advanced standing or the issuance of credit to those CTE students meeting all program requirements and articulation agreement standards. The colleges WSWHE BOCES has an articulation agreement with are:

- › Alfred State College
- › Fulton-Montgomery Community College
- › SUNY Delhi

**Related Careers/ Post-Secondary Training:** Construction Business Owner, Construction Manager, Site Supervisor, Site Foreman, Construction Site Laborer, Cost Estimator, Boilermakers, Brick Mason, Stonemason, Carpenter, Carpenters' Helper, Flooring Installer & Finisher, Cement Mason, Construction & Building Inspector, Construction Equipment Operator, Crane Operator, Laborer, Drywall Installer & Finisher, Electrician, Elevator Installer & Maintenance Repair, Hazardous Waste & Materials Removal Worker, Insulation Worker, Painter & Paper Hanger, Pipefitter, Plumber, Steamfitter, Plasterer, Heating Ventilation A/C & Refrigeration worker, Roofer, Sheet Metal Worker, Structural & Reinforcing Iron and Metal Worker

**ELA/Math Credit  
Integrated Academic  
Overview:**

Each CTE program offered at the WSWHE BOCES has five (5) major curriculum elements that students will acquire over a one year or two year period. Two (2) of the five (5) curriculum elements include English Language Arts and Mathematics. These program elements are taught using a co-teaching model, which teams the CTE subject experts and certified English and Math instructors. Topics in English and Math are tied to specific business and industry course content, which illustrates to students how academic material and business knowledge and skill relate to one another. English and Math elements are taught at the commencement level and meet NYS Standards for students to obtain one (1) credit for each over a two-year period. Program specifics are as follows:

Commencement Level Math. . . . . 54 hours/yr  
English Language Arts. . . . . 54 hours/yr  
1 credit = 108 hours

**Career & Financial  
Management Credit  
Overview:**

Each CTE program offered at the WSWHE BOCES offers a Career & Financial Management credit to all students who successfully complete a CTE program. This curriculum element is comprised of two major parts; (A) Introduction to Occupations and (B) Nature of Industry. Part A is delivered through integrated class assignments, while Part B is automatically delivered due to the nature of CTE.

**Student Affiliated  
Organization:**

There are many different student affiliated organizations that the students have the opportunity to be involved with, including: SkillsUSA, Student Council, National Technical Honor Society, and Key Club.

**National Technical Honor  
Society Nomination  
Requirements:**

Students may be eligible.

**WBL Experiences/  
Requirements:**

Each CTE program has a Work-Based Learning experience. This means that all students prior to the end of the second year are given the opportunity to be exposed to the operation of a business and specific job duties related to careers in their CTE area. This internship is designed to connect the skills and knowledge learned in the CTE classroom with the real world requirements of a business. Students must demonstrate good attendance, attitude, internship records, and work ethics, as well as respect for others and property

The Washington-Saratoga-Warren-Hamilton-Essex BOCES does not discriminate in its programs and activities, including employment and admission as applicable, on the basis of actual or perceived race, color, creed, sex, sexual orientation, national origin, religion, age, economic status, marital status, veterans' status, political affiliation, domestic victim status, use of a guide dog, hearing dog or service dog, disability, or other classifications protected under federal or state law, and provides equal access to the Boy Scouts and other designated youth groups. The designated district compliance officer(s) will coordinate compliance with the nondiscrimination requirements of Title VI and Title VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, the Americans with Disabilities Act of 1990, as amended, the Boy Scouts of America Equal Access Act, and the New York State Human Rights Law. The BOCES Civil Rights Compliance Officer is: Turina Parker, Washington-Saratoga-Warren-Hamilton-Essex BOCES, 267 Ballard Road, Suite 5, Wilton, NY 12831. phone: (518) 581-3716, email: [tuparker@wsweboces.org](mailto:tuparker@wsweboces.org). Complaints may also be filed with the Office for Civil Rights, New York Office, U.S. Department of Education, 32 Old Slip, 26th Floor, New York, NY 10005- 2500, phone (646) 428-3800, fax (646) 428-3843, email: [OCR.NewYork@ed.gov](mailto:OCR.NewYork@ed.gov).