



CAREER AND TECHNICAL EDUCATION

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Environmental Conservation & Forestry

16/17

CTE is a Division of the WSWHE BOCES

CTE COURSE SYLLABUS

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Environmental Conservation & Forestry



Course Description:	A two-year program that aligns with the Society of American Foresters Programs in Forest Technology standards and procedures. The program emphasizes forest ecology and silviculture, forest management, woods safety, forest land usage, forest protection, fish and wildlife management, forest recreation, trends in urban forestry, and current and emerging environmental conservation issues. Students spend time outdoors in "land labs." These labs enable students to participate in approved projects that put theory into practice. There are a number of different types of land labs from entrepreneurial endeavors to community service projects.
Prerequisites:	Students will be in an outdoor environment 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. An understanding of math, English, science, keyboarding and basic computer technology is recommended.
1 year/2 years:	The Environmental Conservation & Forestry course is a two-year course of study.
Location:	F. Donald Myers Education Center, Southern Adirondack Education Center
Course Objectives:	Environmental Conservation & Forestry is designed to operate using the Best Management Practices of the industry. Students address environmental concerns, productivity issues, and progressively build competencies in both knowledge and skill. Students will be prepared for workplace skills such as team-work, problem solving, decision making, and time management and will acquire the skills necessary to work safely in the conservation field. Students will also experience the outdoors in all types of weather conditions. They should also expect that diversified instructional strategies will be used to prepare them to be competent and flexible in their work environment.
Course Topic Outline:	<p>The Environmental Conservation & Forestry curriculum is aligned with the Society of American Foresters curriculum. Topics include:</p> <ul style="list-style-type: none">Introduction and OrientationIntroduction to ForestryForest ManagementForest Ecology & SilvicultureAmerican Red Cross First Aid CPR & AEDChainsaw Operation, Safety & MaintenanceTimber Harvesting & ReforestationMeasurements of Forest ResourcesGeneral MechanicsLand NavigationSoil & Water ConservationForest ProtectionArboriculture/Urban TreeFish & WildlifeForest RecreationIndustrial Lift truck OperationCommercial Driver's License CLASS B

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Textbooks/ Material Resources:	<p>At the beginning of each unit, each student is given reference sheets, safety materials (including OSHA regulations), work sheets and unit content information. In addition, owners manuals (QDMA Skidder, 450H Dozer), and reference guides are used.</p> <p><i>Textbook/Field Guides:</i></p> <ul style="list-style-type: none">› Introduction to Forest Science› Wildlife & Natural Resource Management› Fish & Wildlife (Principles of Zoology & Ecology)› Science of Earth Systems› Forestry Handbook› Know Your Trees (CCE field guide) <p><i>NYS Logger Training Booklets:</i></p> <ul style="list-style-type: none">› Forest Ecology and Silviculture› BMP for water quality› Logger's Safety Field Guide, New York Fatality Assessment and Control Evaluation Program (NYFACE) <p><i>Websites:</i></p> <p>New York State Department of Environmental Conservation, Cornell Cooperative Extension, US Forest Service, New York Forest Owners Association, American Tree farm System, Empire State Forest Products Association, International Society of Arboriculture, NYS Arborists Quality Deer Management Association, Trout in the Classroom</p>
Assessments/ Technical Assessments:	<p>Students are assessed daily on classroom attendance, participation, laboratory work, exams and quizzes, as well as a two-part final exam. The students are also required to complete a portfolio. The technical assessment exam is based on the National Occupational Competency Testing Institute (NOCTI), written and performance examinations in "Forest Products and Processing".</p>
Grading System:	<p>Quizzes 15% Projects 40% In-Class Assignments 20% Tests 20% Homework/Journal 5%</p>
Attendance & Class Participation:	<p>The WSWHE BOCES has an attendance policy that requires students to miss no more than 18 days across the school year. For those times it is necessary to be absent, a written note from the parent/guardian will be expected the next class day. Students will be responsible to bring to guidance any absentee slips reporting why they were absent. Environmental Conservation & Forestry is a hands-on course. Some make up assignments are available to do for homework. They are due in one week after the absence. A student who arrives to class 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.</p>
Activities/Labs/ Projects/clinics:	<p>Students work on community projects throughout the year at numerous recreation and nature trail sites. Myers Center students also participate in the management of approximately 200 acres of Saratoga County Reforestation Land in Wilton and Northumberland and work at the New York State Tree Nursery in the fall and spring. Southern Adirondack Education Center students work on projects in Washington and Warren Counties providing various environmental services to both public and private sectors of the communities.</p>
Student Provided Material List:	<p>Three ring-binder for portfolio, steel-toe boots, work gloves, ANSI Z89.1 approved forestry helmet with face and ear protection</p>
Industrial Certifications:	<p>Upon completion of the two year Environmental Conservation and Forestry program students will have had the opportunity to receive the following certifications/licenses:</p> <ul style="list-style-type: none">› First Aid/CPR/AED› New York Trained Logger Certification<ul style="list-style-type: none">› Forest Ecology & Silviculture› Best Management Practices for Water Quality› Invasive Forest Pest› Safety and Hazard Avoidance› Industrial Lift Truck Certification› Commercial Driver's License (CDL-B)› American Red Cross First Aid, CPR & AED

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. Articulation agreements allow for advanced standing or the issuance of credit to those students meeting all program requirements and articulation agreement standards. The college WSWHE BOCES has an articulation agreement with is: › Paul Smith's College
Related Careers/Post-Secondary Training:	Entry-level position in forestry/urban tree/logging industry, equipment operator, commercial truck driver, consultant forester, conservation officer, forest ranger, park ranger, wildlife technician, soil & water specialist, surveying aid, environmental scientist, or natural resource educator
ELA/Math Credit Integrated Academic Overview:	Each Career and Technical Education (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 <i>1 credit = 108 hours</i>
Career & Financial Management Credit Overview	Each Career and Technical Education (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 Organizations:	FFA, SkillsUSA
NTHS Nominations Requirements:	› Maintain a cumulative CTE average of 92% or higher based upon 1st & 2nd quarter grades. › Maintain a record of excellent attendance in CTE (9 days per year). › Plan to pursue a career in their field of training. › Maintain an outstanding record of employability skills as judged by the CTE instructor. › Nomination by the CTE instructor with no reservations. › Instructor nomination must include a yes answer to the following characteristics established by the national office: follows instructions, safety conscious, works well with others, is dependable, trustworthy, responsible, honest, takes pride in work, exhibits a good attitude, exhibits leadership, exhibits good citizenship.
WBL Experiences/ Requirements:	Each Career and Technical Education (CTE) program has a Work-Based Learning experience more commonly referred to as an internship. 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 employment and admission to programs and activities 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 officers 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 Compliance Officers are: Donna J. Wisenburn, Director of Human Resource Services or Timothy G. Place, Deputy District Superintendent, Washington-Saratoga-Warren-Hamilton-Essex BOCES, 1153 Burgoyne Avenue, Suite 2, Fort Edward, NY 12828, phone (518) 581-3310 or 746-3310. 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.