

# NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

## Agricultural Education

**Grade:** Grade 9 - 12

**Course:** Horticulture II - Turfgrass Management

**NCCTE.AP43** - Horticulture II - Turfgrass Management

**NCCTE.AP43.01.00** - Examine leadership organizations as related to the turfgrass industry.

**NCCTE.AP43.01.01** - Access opportunities for leadership development in turfgrass industry organizations.

**NCCTE.AP43.01.02** - Examine the significance and meaning of ceremonies and traditions in agricultural organizations.

**NCCTE.AP43.02.00** - Demonstrate the process used in conducting business meetings in turfgrass management organizations.

**NCCTE.AP43.02.01** - Explain the role of parliamentary law in the conduction of business.

**NCCTE.AP43.02.02** - Demonstrate parliamentary abilities that would be used in a business meeting.

**NCCTE.AP43.03.00** - Apply appropriate techniques in public speaking.

**NCCTE.AP43.03.01** - Identify the parts of a speech.

**NCCTE.AP43.03.02** - Deliver a speech.

**NCCTE.AP43.03.03** - Identify the various components of the techniques involved in agricultural sales.

**NCCTE.AP43.03.04** - Demonstrate sales techniques with a 7 minute sales presentation on turfgrass products or services.

**NCCTE.AP43.04.00** - Examine the Supervised Agricultural Experience Component of the turfgrass management class.

**NCCTE.AP43.04.01** - Identify the component parts of the Supervised Agricultural Experience Record used in the Turfgrass Management class.

**NCCTE.AP43.04.02** - Correctly record entries in the SAE record.

**NCCTE.AP43.05.00** - Examine financial record-keeping systems used in the turfgrass industry.

**NCCTE.AP43.05.01** - Define the terminology used in the financial record-keeping systems, such as asset, liability, inventory, etc.

**NCCTE.AP43.05.02** - Correctly record entries in a financial record system.

**NCCTE.AP43.06.00** - Examine the principles of plant science as related to Turfgrass Management.

**NCCTE.AP43.06.01** - Examine the structure and function of the vegetative and reproductive parts of a plant, including a typical turfgrass plant.

**NCCTE.AP43.06.02** - Investigate the major factors such as light, moisture, temperature, and elements affecting plants, including turfgrass.

**NCCTE.AP43.07.00** - Examine the principles of pest management as related to Turfgrass Management.

**NCCTE.AP43.07.01** - Analyze information found on chemical pesticide labels.



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**NCCTE.AP43.07.02** - Compare Integrated Pest Management (IPM) and Best Turfgrass Management (BTM)

**NCCTE.AP43.08.00** - Explore the relationship of Turfgrass Management on Wildlife management practices.

**NCCTE.AP43.08.01** - Identify features of three different kinds of ecosystems.

**NCCTE.AP43.08.02** - Compare warm-blooded and cold-blooded animals.

**NCCTE.AP43.08.03** - Examine the implementation of a habitat improvement plan.

**NCCTE.AP43.09.00** - Explore the relationship of turfgrass management on water management practices.

**NCCTE.AP43.09.01** - Describe the four parts of a stream system.

**NCCTE.AP43.09.02** - Explain the Best Management Practices (BMP) to avoid polluting groundwater and streams.

**NCCTE.AP43.10.00** - Explore the relationship of turfgrass management on waste management practices.

**NCCTE.AP43.10.01** - Explain the carbon cycle.

**NCCTE.AP43.10.02** - Explain the processes that occur in a properly constructed compost pile.

**NCCTE.AP43.11.00** - Examine the distinguishing characteristics of landscape plants.

**NCCTE.AP43.11.01** - Determine landscape plants using vegetative clues, location, and the dichotomous key.

**NCCTE.AP43.11.02** - Analyze plant propagation methods including seeds and cuttings.

**NCCTE.AP43.12.00** - Compare fertilization and pruning techniques used on landscape plants.

**NCCTE.AP43.12.01** - Interpret fertilizer information as described on a fertilizer bag.

**NCCTE.AP43.12.02** - Execute proper pruning techniques on selected landscape plants.

**NCCTE.AP43.13.00** - Explore career opportunities in the lawn care and turf production industries.

**NCCTE.AP43.13.01** - Describe the scope and development of the turfgrass industry.

**NCCTE.AP43.13.02** - Describe the career opportunities available in the lawn care industry.

**NCCTE.AP43.14.00** - Analyze basic turfgrass growth and development.

**NCCTE.AP43.14.01** - Analyze warm and cool season turfgrass in comparison with southern, northern, and transition lawns.

**NCCTE.AP43.14.02** - Analyze specific fertilizers used exclusively for golf courses and other sports fields.

**NCCTE.AP43.15.00** - Examine basic lawn care practices.

**NCCTE.AP43.15.01** - List the steps necessary for establishing or renovating a lawn.

**NCCTE.AP43.15.02** - Determine the benefits of mowing, fertilizing, watering, and controlling soil compaction and thatch build-up in lawns.

**NCCTE.AP43.16.00** - Examine weed, disease, and insect control as it applies to lawn care and turf production.

**NCCTE.AP43.16.01** - Investigate lawn weeds and the proper methods of control.



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**NCCTE.AP43.16.02** - Investigate lawn diseases and insects and their proper methods of control.

**NCCTE.AP43.17.00** - Examine Turf Production

**NCCTE.AP43.17.01** - Describe the steps of normal sod production.

**NCCTE.AP43.17.02** - Describe the scope, size, and main areas of turfgrass seed production.

**NCCTE.AP43.17.03** - Establish an area of turfgrass by using seeds, sod, plugs, and sprigs.

**NCCTE.AP43.18.00** - Explore career opportunities in the golf course industry.

**NCCTE.AP43.18.01** - Describe the scope and development of the golf course industry.

**NCCTE.AP43.18.02** - Compare the career opportunities and skills needed in golf course management.

**NCCTE.AP43.19.00** - Examine basic golf course maintenance practices.

**NCCTE.AP43.19.01** - Describe the various areas of a golf course, including tees, fairways, putting greens, roughs, bunkers, and hazards.

**NCCTE.AP43.19.02** - Determine the practices and benefits of mowing, fertilizing, irrigating, cultivating, and regulating golf courses.

**NCCTE.AP43.19.03** - Cut a cuphole for flag placement.

**NCCTE.AP43.20.00** - Examine golf course pests and their control.

**NCCTE.AP43.20.01** - Investigate golf course diseases, weeds, and insect pests.

**NCCTE.AP43.20.02** - List the advantages of Integrated Pest Management (IPM) in golf course management.

**NCCTE.AP43.21.00** - Explore career opportunities and management practices in the sports turf industry.

**NCCTE.AP43.21.01** - Compare the career opportunities and skills needed in sports field management.

**NCCTE.AP43.21.02** - Explain the various types of sports fields and their features.

**NCCTE.AP43.21.03** - Describe the 5 major turfgrasses used for sports fields and their characteristics.

**NCCTE.AP43.21.04** - Layout and prepare various sports fields.

**NCCTE.AP43.22.00** - Examine basic sports turf irrigation practices.

**NCCTE.AP43.22.01** - Determine the layout of a sport turf site and the type of system and equipment needed to properly water it.

**NCCTE.AP43.22.02** - Analyze the electrical, plumbing, controller, and valve systems for an irrigation system used for the sports turf industry.

**NCCTE.AP43.23.00** - Compare small gasoline and diesel engines used for turf.

**NCCTE.AP43.23.01** - Identify the basic components of a small gasoline engine used on turf.

**NCCTE.AP43.23.02** - Describe the differences between fuels and lubricants used in turf diesel and gasoline engines.

**NCCTE.AP43.23.03** - Perform various maintenance procedures on small engines.

**NCCTE.AP43.24.00** - Examine reel type and rotary mowers used on turf.



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**NCCTE.AP43.24.01** - Service various reel type and rotary mowers and where they are used on the golf course.

**NCCTE.AP43.24.02** - Demonstrate the proper use of hand tools used to maintain mowers.

**NCCTE.AP43.24.03** - Demonstrate the proper use of a weedeater.

**NCCTE.AP43.25.00** - Use a boom sprayer properly.

**NCCTE.AP43.25.01** - Identify the basic components of a boom sprayer.

**NCCTE.AP43.25.02** - Calibrate a boom sprayer properly.

**NCCTE.AP43.25.03** - Calibrate a hand sprayer properly.

**NCCTE.AP43.26.00** - Examine the recruiting and people skills needed in the turf industry.

**NCCTE.AP43.26.01** - Write a job announcement for an opening on a golf course.

**NCCTE.AP43.26.02** - Describe the techniques used to motivate a turf maintenance crew.

**NCCTE.AP43.27.00** - Examine the financial and interviewing skills needed in the turf industry.

**NCCTE.AP43.27.01** - Identify the major expenses in golf course management.

**NCCTE.AP43.27.02** - Write a resume for a turf industry career.

