

NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

Agricultural Education

Grade: Grade 9 - 12

Course: Animal Science I

NCCTE.AA21 - Animal Science I

NCCTE.AA21.01.00 - Understand leadership opportunities in animal science.

NCCTE.AA21.01.01 - Understand organizations available for students in animal science.

NCCTE.AA21.01.02 - Understand parliamentary procedure abilities and public speaking skills.

NCCTE.AA21.02.00 - Understand careers in the animal science industry.

NCCTE.AA21.02.01 - Remember animal science careers.

NCCTE.AA21.02.02 - Understand the importance of SAE to work based learning.

NCCTE.AA21.03.00 - Remember terminology relevant to animal agriculture.

NCCTE.AA21.03.01 - Recall animal breed and sex terminology.

NCCTE.AA21.03.02 - Recall retail and wholesale cuts of meat.

NCCTE.AA21.04.00 - Understand agriculture animals

NCCTE.AA21.04.01 - Classify traits for selection of animals.

NCCTE.AA21.04.02 - Understand quality features of beef, pork and poultry.

NCCTE.AA21.05.00 - Understand the impact of animal agriculture.

NCCTE.AA21.05.01 - Explain the economic impact of animal agriculture.

NCCTE.AA21.05.02 - Understand the process for producing, breeding, and marketing agriculture animals.

NCCTE.AA21.06.00 - Understand animal management.

NCCTE.AA21.06.01 - Understand animal husbandry.

NCCTE.AA21.06.02 - Classify animal and financial records.

NCCTE.AA21.07.00 - Understand animal digestion.

NCCTE.AA21.07.01 - Classify animal feeds.

NCCTE.AA21.07.02 - Understand the digestive process.

NCCTE.AA21.08.00 - Understand animal reproduction.

NCCTE.AA21.08.01 - Understand animal reproduction and parturition.

NCCTE.AA21.08.02 - Understand genetics of animal breeding.

Course: Animal Science II

NCCTE.AA22 - Animal Science II

NCCTE.AA22.01.00 - Understand leadership qualities involved in successful employment.

NCCTE.AA22.01.01 - Understand leadership qualities and career building techniques desired by the animal science industry.

NCCTE.AA22.01.02 - Understand parliamentary procedure.

NCCTE.AA22.02.00 - Understand Supervised Agricultural Experience.

NCCTE.AA22.02.01 - Understand SAE components and application to work-based learning.

NCCTE.AA22.02.02 - Understand a financial statement.



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NCCTE.AA22.03.00 - Understand anatomy and physiology of agriculture animals.

NCCTE.AA22.03.01 - Classify anatomy of body systems.

NCCTE.AA22.03.02 - Summarize physiology of body systems.

NCCTE.AA22.04.00 - Understand reproductive and digestive physiology.

NCCTE.AA22.04.01 - Understand reproductive physiology.

NCCTE.AA22.04.02 - Understand digestive physiology.

NCCTE.AA22.05.00 - Understand management of agriculture animals.

NCCTE.AA22.05.01 - Classify animal housing, facilities, and waste management.

NCCTE.AA22.05.02 - Classify preventative maintenance and diseases.

NCCTE.AA22.05.03 - Exemplify reproductive management practices.

NCCTE.AA22.05.04 - Understand biotechnology in livestock production.

NCCTE.AA22.06.00 - Apply rations for livestock animals.

NCCTE.AA22.06.01 - Apply rations to agriculture animals.

NCCTE.AA22.06.02 - Exemplify feed additives and hormone implants.

NCCTE.AA22.07.00 - Evaluate agriculture animals.

NCCTE.AA22.07.01 - Critique agriculture animals.

NCCTE.AA22.07.02 - Interpret genetics.

NCCTE.AA22.07.03 - Apply the use of evaluation records.

NCCTE.AA22.08.00 - Understand the harvesting process for livestock.

NCCTE.AA22.08.01 - Understand food safety regulations.

NCCTE.AA22.08.02 - Understand the livestock and poultry harvesting process.

Course: Animal Science II - Small Animal

NCCTE.AA23 - Animal Science II - Small Animal

NCCTE.AA23.01.00 - Demonstrate leadership qualities through participation in the small animal care instructional program.

NCCTE.AA23.01.01 - Discuss leadership qualities desired by the small animal care industry.

NCCTE.AA23.01.02 - Use public speaking techniques to deliver a speech.

NCCTE.AA23.01.03 - Use Robert's Rules of Order to conduct an orderly transaction of business.

NCCTE.AA23.02.00 - Develop career objectives by implementing a Supervised Agricultural Experience Program.

NCCTE.AA23.02.01 - Explore types of SAE programs.

NCCTE.AA23.02.02 - Use an appropriate SAE record system to substantiate SAE activities.

NCCTE.AA23.03.00 - Discuss the importance of the small animal care industry.

NCCTE.AA23.03.01 - Discuss careers and skills needed for employment in the small animal care industry.

NCCTE.AA23.03.02 - Discuss medical terminology used by those working in the veterinary phase of the small animal industry.

NCCTE.AA23.04.00 - Explore social issues related to working with small animals.



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NCCTE.AA23.04.01 - Summarize animal rights and animal welfare.

NCCTE.AA23.04.02 - Demonstrate safe work habits and techniques used when working with animals.

NCCTE.AA23.05.00 - Discuss the role of major systems of small animals.

NCCTE.AA23.05.01 - Discuss the role of major body systems of small animals.

NCCTE.AA23.05.02 - Discuss the ways that disease processes affect major body systems.

NCCTE.AA23.06.00 - Examine the role of nutrition in the support of animal life.

NCCTE.AA23.06.01 - Discuss the nutritional requirements of small animals including deficiency symptoms and functions.

NCCTE.AA23.06.02 - Distinguish between feeding programs for small animals.

NCCTE.AA23.07.00 - Use information specific to each breed to select the best dog for a given use.

NCCTE.AA23.07.01 - Discuss the major breeds of dogs.

NCCTE.AA23.07.02 - Use care techniques that improve the well-being of dogs.

NCCTE.AA23.08.00 - Use information specific to each breed to select the best cat for a given use.

NCCTE.AA23.08.01 - Discuss the major breeds of cats.

NCCTE.AA23.08.02 - Use care techniques that improve the well-being of cats.

NCCTE.AA23.09.00 - Select the best pocket pet or bird for a given use.

NCCTE.AA23.09.01 - Discuss the major breeds of pocket pets and birds.

NCCTE.AA23.09.02 - Use care techniques that improve the well-being of pocket pets and birds.

NCCTE.AA23.10.00 - Select the best fish, amphibian, and reptile for a given use.

NCCTE.AA23.10.01 - Discuss the major breeds of fish and types of amphibians and reptiles.

NCCTE.AA23.10.02 - Use care techniques that improve the well-being of fish, amphibians, and reptiles.

Course: Equine Science I

NCCTE.2016.AA31 - Equine Science I

NCCTE.2016.AA31.01.00 - Understand leadership in agricultural education.

NCCTE.2016.AA31.01.01 - Investigate organizations related to the equine industry.

NCCTE.2016.AA31.01.02 - Demonstrate parliamentary procedure and public speaking skills.

NCCTE.2016.AA31.01.03 - Understand skills needed for employment and careers in the equine industry.

NCCTE.2016.AA31.02.00 - Understand the use of records in the equine industry.

NCCTE.2016.AA31.02.01 - Understand the Supervised Agricultural Experience component of the equine science class.

NCCTE.2016.AA31.02.02 - Understand methods of financial record keeping in an equine business.

NCCTE.2016.AA31.03.00 - Understand fundamentals of equine.

NCCTE.2016.AA31.03.01 - Understand nomenclature of equine and how equine are important.

NCCTE.2016.AA31.03.02 - Compare the advantages and disadvantages of operating an equine enterprise.



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NCCTE.2016.AA31.04.00 - Understand equine behavior as it relates to safety.

NCCTE.2016.AA31.04.01 - Understand factors that influence equine behavior.

NCCTE.2016.AA31.04.02 - Understand how to promote safe and rewarding horsemanship.

NCCTE.2016.AA31.05.00 - Understand equine anatomy.

NCCTE.2016.AA31.05.01 - Understand major external parts.

NCCTE.2016.AA31.05.02 - Understand the skeletal/muscular system of equine.

NCCTE.2016.AA31.05.03 - Understand the internal organs of equine.

NCCTE.2016.AA31.05.04 - Understand the digestive system of equine.

NCCTE.2016.AA31.06.00 - Apply equine maintenance.

NCCTE.2016.AA31.06.01 - Understand the benefits of a routine maintenance program.

NCCTE.2016.AA31.06.02 - Apply maintenance techniques to equine.

NCCTE.2016.AA31.07.00 - Apply skills for equine selection.

NCCTE.2016.AA31.07.01 - Understand skills necessary to make wise selection of equine.

NCCTE.2016.AA31.07.02 - Apply skills necessary to make wise selection of equine.

NCCTE.2016.AA31.08.00 - Apply tack and equipment skills to equine.

NCCTE.2016.AA31.08.01 - Apply the use of bits for equine.

NCCTE.2016.AA31.08.02 - Apply the use of bridles and halters on equine.

NCCTE.2016.AA31.08.03 - Apply saddles on equine.

NCCTE.2016.AA31.09.00 - Apply equitation techniques. (SUPPLEMENTAL)

NCCTE.2016.AA31.09.01 - Apply English equitation. (SUPPLEMENTAL)

NCCTE.2016.AA31.09.02 - Apply Western equitation. (SUPPLEMENTAL)

Course: Equine Science II

NCCTE.2016.AA32 - Equine Science II

NCCTE.2016.AA32.01.00 - Understand leadership qualities involved in successful employment.

NCCTE.2016.AA32.01.01 - Understand leadership qualities and career building techniques desired by the equine industry.

NCCTE.2016.AA32.01.02 - Understand parliamentary procedure.

NCCTE.2016.AA32.02.00 - Understand the Supervised Agricultural Experience component of the equine science program.

NCCTE.2016.AA32.02.01 - Understand SAE components and application to work-based learning.

NCCTE.2016.AA32.02.02 - Understand a financial statement.

NCCTE.2016.AA32.03.00 - Understand the physiology and functions of equine body systems.

NCCTE.2016.AA32.03.01 - Understand body surfaces, systems, and how they function.

NCCTE.2016.AA32.03.02 - Understand how four functional muscle groups affect equine movement and different gaits of equine.

NCCTE.2016.AA32.04.00 - Apply principles for selecting equine for the herd.

NCCTE.2016.AA32.04.01 - Understand how structure, body dimensions, and other factors influence usefulness, vigor, and longevity of equine.



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NCCTE.2016.AA32.04.02 - Apply principles to determine the age and weight of equine in relation to their usefulness, vigor, and longevity of equine.

NCCTE.2016.AA32.05.00 - Apply principles of nutrition and feed management.

NCCTE.2016.AA32.05.01 - Understand the major nutrient requirements of equine and the factors that affect them.

NCCTE.2016.AA32.05.02 - Understand the classes of feed for equine including forage, concentrates, additives, and supplements needed in the equine ration.

NCCTE.2016.AA32.05.03 - Apply principles to formulate a balanced ration for equine.

NCCTE.2016.AA32.06.00 - Apply principles of facility management

NCCTE.2016.AA32.06.01 - Understand the functions of equine housing and paddocks including fencing needs.

NCCTE.2016.AA32.06.02 - Apply principles of bedding and stall maintenance and waste management.

NCCTE.2016.AA32.07.00 - Apply principles of herd health management.

NCCTE.2016.AA32.07.01 - Apply techniques to test vital life signs and administer first aid in equine management.

NCCTE.2016.AA32.07.02 - Apply principles of dental and hoof care in equine management.

NCCTE.2016.AA32.07.03 - Apply principles of health management in diagnosing and treating internal parasites, external parasites, and diseases.

NCCTE.2016.AA32.08.00 - Understand principles of equine reproduction and genetics.

NCCTE.2016.AA32.08.01 - Understand the principles of equine reproduction management in relation to the mare, stallion, and foal.

NCCTE.2016.AA32.08.02 - Understand basic equine breeding techniques and the advantages of each.

NCCTE.2016.AA32.08.03 - Understand the role of genetics in determining age, coat color, and type of equine and how traits are transferred from one equine to another.

NCCTE.2016.AA32.09.00 - Apply principles of equine handling safety and training.

NCCTE.2016.AA32.09.01 - Apply principles to safely catch, halter, lead, tie, and restrain equine.

NCCTE.2016.AA32.09.02 - Apply principles to train foals, yearlings, and two-year olds.

NCCTE.2016.AA32.10.00 - Apply principles of equitation and showmanship.

NCCTE.2016.AA32.10.01 - Apply principles of bridling and saddling equine.

NCCTE.2016.AA32.10.02 - Apply principles to safely mount and ride equine for the designated gait.

NCCTE.2016.AA32.10.03 - Apply principles in judging halter and performance classes of equine, considering factors such as lameness, blemishes, conformation and other factors.

Course: Veterinary Assisting

NCCTE.AA41 - Veterinary Assisting

NCCTE.AA41.01.00 - Analyze proper usage of veterinary practice management procedures.



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NCCTE.AA41.01.02 - Analyze methods to correctly maintain veterinary medical records.

NCCTE.AA41.02.00 - Apply proper communication skills in a clinical setting.

NCCTE.AA41.02.01 - Implement the proper technique to schedule appointments and manage clients.

NCCTE.AA41.02.02 - Execute effective communication through written, verbal, and technological formats.

NCCTE.AA41.03.00 - Analyze the requirements for ethically and legally handling pharmaceuticals.

NCCTE.AA41.03.01 - Analyze the legal issues involving drugs in the workplace.

NCCTE.AA41.03.02 - Apply knowledge of pharmacy laws to properly fill prescriptions.

NCCTE.AA41.04.00 - Apply proper skills in laboratory procedures.

NCCTE.AA41.04.01 - Implement proper techniques for collection and analysis of laboratory samples .

NCCTE.AA41.04.02 - Execute proper record keeping for laboratory samples.

NCCTE.AA41.05.00 - Evaluate safe handling and safety techniques for patient management.

NCCTE.AA41.05.01 - Evaluate proper restraint techniques for each species.

NCCTE.AA41.05.02 - Evaluate proper safety protocol in a clinical setting.

NCCTE.AA41.06.00 - Analyze general anatomy and disease processes.

NCCTE.AA41.06.01 - Organize knowledge of structures of living organisms.

NCCTE.AA41.06.02 - Differentiate microbes and parasites to identify disease processes.

NCCTE.AA41.07.00 - Apply proper surgical preparation techniques.

NCCTE.AA41.07.01 - Implement techniques to prepare and monitor patients for surgery.

NCCTE.AA41.07.02 - Apply proper surgical instruments and sterilization protocol to prepare surgical packs.

NCCTE.AA41.08.00 - Apply facility maintenance and equipment cleanliness procedures.

NCCTE.AA41.08.01 - Execute Practice hospital maintenance and sanitation protocol of facilities.

NCCTE.AA41.08.02 - Implement aseptic technique to maintain equipment.

NCCTE.AA41.09.00 - Evaluate radiology procedures in the clinical setting.

NCCTE.AA41.09.01 - Critique the importance of safety protocol in the radiological suite.

NCCTE.AA41.09.02 - Apply radiology principles to properly develop and record patient studies.

Course: Natural Resources I

NCCTE.2018.AN51 - Natural Resources I

NCCTE.2018.AN51.01.00 - Understand leadership opportunities in natural resources.

NCCTE.2018.AN51.01.01 - Understand organizations available for students in natural resources.

NCCTE.2018.AN51.01.02 - Understand parliamentary procedure abilities and public speaking skills.

NCCTE.2018.AN51.02.00 - Understand careers in natural resources.

NCCTE.2018.AN51.02.01 - Understand skills needed for employment and careers in the natural resources industry.



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NCCTE.2018.AN51.02.02 - Understand the Supervised Agricultural Experience component of the natural resources class.

NCCTE.2018.AN51.03.00 - Understand information related to natural resources and conservation studies.

NCCTE.2018.AN51.03.01 - Remember the terms related to natural resources and conservation studies.

NCCTE.2018.AN51.03.02 - Understand the role of human population growth, demands, and effect on natural resources.

NCCTE.2018.AN51.04.00 - Understand information related to formation, contents, classification, and use of soil, water, and air.

NCCTE.2018.AN51.04.01 - Understand the contents of soil and demonstrate the ability to properly evaluate and classify soils.

NCCTE.2018.AN51.04.02 - Understand the cause and effects of soil erosion and conservation practices.

NCCTE.2018.AN51.04.03 - Understand the components of the water supply, water users, and water pollution.

NCCTE.2018.AN51.04.04 - Understand the components of the atmosphere, air quality, and air pollution.

NCCTE.2018.AN51.05.00 - Understand fish and wildlife habitats, game management practices, and other factors that affect fish and wildlife species.

NCCTE.2018.AN51.05.01 - Understand the components of freshwater fish habitats and species.

NCCTE.2018.AN51.05.02 - Understand the components of saltwater fish habitats and species.

NCCTE.2018.AN51.05.03 - Understand the habitat requirements and other factors that affect wildlife species.

NCCTE.2018.AN51.05.04 - Understand the qualities and characteristics of NC wildlife species.

NCCTE.2018.AN51.06.00 - Understand the role of forests, trees, and management techniques and their importance in the environment.

NCCTE.2018.AN51.06.01 - Understand the impact of forests, their products, and the parts of a tree and their functions.

NCCTE.2018.AN51.06.02 - Remember common NC trees based on physical characteristics.

NCCTE.2018.AN51.06.03 - Understand tree measurement techniques and skills that are used by professional foresters.

NCCTE.2018.AN51.06.04 - Understand harvest and reproduction techniques used in forestry to improve forest quality.

Course: Natural Resources II

NCCTE.2018.AN52 - Natural Resources II

NCCTE.2018.AN52.01.00 - Understand leadership opportunities in natural resources.

NCCTE.2018.AN52.01.01 - Understand organizations available for students in natural resources



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and the purpose of communication and public speaking techniques.

NCCTE.2018.AN52.01.02 - Understand the procedures used to conduct a business meeting and parliamentary abilities.

NCCTE.2018.AN52.02.00 - Understand financial records and work-based learning opportunities in natural resources.

NCCTE.2018.AN52.02.01 - Understand skills needed for keeping financial records in the natural resources industry.

NCCTE.2018.AN52.02.02 - Understand the Supervised Agricultural Experience component of the natural resources class.

NCCTE.2018.AN52.03.00 - Understand the role of forests, trees, and management techniques and their importance in the environment.

NCCTE.2018.AN52.03.01 - Remember identifying characteristics of NC trees and common forest pests.

NCCTE.2018.AN52.03.02 - Understand management practices used in forestry to improve forest quality.

NCCTE.2018.AN52.03.03 - Demonstrate harvesting skills that reflect management practices as recommended by the NCDNR.

NCCTE.2018.AN52.04.00 - Understand information related to the quality, properties, and use of soil and water.

NCCTE.2018.AN52.04.01 - Understand soil conservation management practices and techniques used to properly sample soils and evaluate test results.

NCCTE.2018.AN52.04.02 - Understand issues related to water pollution, quality, sampling, and identification of indicator species.

NCCTE.2018.AN52.05.00 - Understand identifying characteristics of wildlife, game management practices, and other factors that affect wildlife species.

NCCTE.2018.AN52.05.01 - Understand the role of game management practices and the interaction between animals and society.

NCCTE.2018.AN52.05.02 - Remember wildlife species based on physical characteristics.

NCCTE.2018.AN52.06.00 - Understand the factors involved in planning and establishing an aquaculture facility.

NCCTE.2018.AN52.06.01 - Understand the types of aquaculture facilities and potential products produced in an aquaculture operation.

NCCTE.2018.AN52.06.02 - Understand the operation methods and management considerations used with a variety of aquaculture production systems.

NCCTE.2018.AN52.07.00 - Understand information related to the principles of natural resources recreational opportunities.

NCCTE.2018.AN52.07.01 - Understand the basic procedures involved in camping.

NCCTE.2018.AN52.07.02 - Understand the principles of hunting and firearm safety.



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NCCTE.2018.AN52.07.03 - Understand the basic principles of freshwater fishing.

NCCTE.2018.AN52.08.00 - Understand the terms and concepts related to energy production, usage, and conservation.

NCCTE.2018.AN52.08.01 - Remember terms related to energy.

NCCTE.2018.AN52.08.02 - Understand the major sources of energy, ways to conserve energy, and emerging technologies.

Course: Horticulture I

NCCTE.AP41 - Horticulture I

NCCTE.AP41.01.00 - Examine leadership opportunities related to the horticulture industry.

NCCTE.AP41.01.01 - Discuss the organization available for students in horticulture.

NCCTE.AP41.01.02 - Demonstrate parliamentary procedures and public speaking used in horticulture business meetings.

NCCTE.AP41.02.00 - Examine careers related to horticulture.

NCCTE.AP41.02.01 - Discuss careers and skills necessary for employment in the horticulture industry.

NCCTE.AP41.02.02 - Implement an SAE.

NCCTE.AP41.03.00 - Summarize plant anatomy.

NCCTE.AP41.03.01 - Discuss biological terms used to describe plants.

NCCTE.AP41.03.02 - Discuss the anatomy and functions of plants.

NCCTE.AP41.03.03 - Discuss floriculture and landscape plants.

NCCTE.AP41.04.00 - Examine factors relating to plant growth and development.

NCCTE.AP41.04.01 - Explain the growth process of plants.

NCCTE.AP41.04.02 - Use sexual and asexual methods of propagation.

NCCTE.AP41.05.00 - Explain properties of soils.

NCCTE.AP41.05.01 - Discuss horticultural soils.

NCCTE.AP41.05.02 - Discuss the soil profile and soil sampling for surface and subsurface layers.

NCCTE.AP41.06.00 - Explain the role of nutrients and fertilizers.

NCCTE.AP41.06.01 - Discuss macro and micro nutrients and the role they play in plant deficiencies.

NCCTE.AP41.06.02 - Discuss the advantages and disadvantages of various fertilizers.

NCCTE.AP41.07.00 - Apply procedures to plant a garden.

NCCTE.AP41.07.01 - Plan a garden.

NCCTE.AP41.07.02 - Establish a garden.

NCCTE.AP41.08.00 - Compare distinguishing characteristics of pests.

NCCTE.AP41.08.01 - Discuss the anatomy and life cycle of pests.

NCCTE.AP41.08.02 - Discuss diseases and viruses.

NCCTE.AP41.09.00 - Explain Integrated Pest Management and pesticides.

NCCTE.AP41.09.01 - Discuss integrated pest management strategies.



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NCCTE.AP41.09.02 - Discuss key signal words and safety precautions on pesticide labels.

Course: Horticulture II

NCCTE.AP42 - Horticulture II

NCCTE.AP42.01.00 - Understand leadership qualities.

NCCTE.AP42.01.01 - Understand leadership qualities and career building techniques desired by the horticulture industry.

NCCTE.AP42.01.02 - Understand parliamentary procedure.

NCCTE.AP42.02.00 - Understand SAE.

NCCTE.AP42.02.01 - Understand SAE components and application to work-based learning.

NCCTE.AP42.02.02 - Understand a financial statement.

NCCTE.AP42.03.00 - Understand nursery management.

NCCTE.AP42.03.01 - Understand nursery structures, growing environments, and maintenance.

NCCTE.AP42.03.02 - Understand nursery production and marketing techniques.

NCCTE.AP42.04.00 - Understand greenhouse management.

NCCTE.AP42.04.01 - Remember greenhouse plants.

NCCTE.AP42.04.02 - Understand greenhouse structures, production, and maintenance.

NCCTE.AP42.05.00 - Understand landscape design.

NCCTE.AP42.05.01 - Remember nursery plants.

NCCTE.AP42.05.02 - Understand principles of landscape design techniques and maintenance.

NCCTE.AP42.06.00 - Understand turf.

NCCTE.AP42.06.01 - Remember North Carolina turf grass types.

NCCTE.AP42.06.02 - Understand principles of turf grass planting.

NCCTE.AP42.07.00 - Understand floral design.

NCCTE.AP42.07.01 - Remember floriculture plants.

NCCTE.AP42.07.02 - Understand principles of floral design techniques.

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.



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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.

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.



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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.

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.



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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.

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.



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Course: Horticulture II - Landscaping

NCCTE.AP44 - Horticulture II - Landscaping

NCCTE.AP44.01.00 - Understand leadership and employability skills in the landscape industry.

NCCTE.AP44.01.01 - Understand leadership and worked-based learning skills used in the landscape industry.

NCCTE.AP44.01.02 - Recognize professional organizations and certifications available to those employed in the landscape industry.

NCCTE.AP44.02.00 - Apply procedures to perform calculations and to market landscape enterprises.

NCCTE.AP44.02.01 - Apply procedures to perform calculations used in estimates and quotes.

NCCTE.AP44.02.02 - Understand characteristics of effective marketing.

NCCTE.AP44.03.00 - Understand the processes used to select plants in the landscape industry.

NCCTE.AP44.03.01 - Recognize plants based on use.

NCCTE.AP44.03.02 - Understand factors used to select plants.

NCCTE.AP44.04.00 - Apply procedures to develop plans, estimates, and quotes.

NCCTE.AP44.04.01 - Remember elements and principles of design, irrigation system components and measurements, and symbols used to develop landscape and irrigation plans.

NCCTE.AP44.04.02 - Apply procedures to develop landscape and irrigation plans.

NCCTE.AP44.04.03 - Remember key terms, abilities needed, and items included in estimates and quotes for landscape and/or irrigation plans.

NCCTE.AP44.05.00 - Apply procedures to install landscapes.

NCCTE.AP44.05.01 - Remember the uses for materials and hand tools used to install landscapes.

NCCTE.AP44.05.02 - Apply procedures to use equipment to install landscapes.

NCCTE.AP44.05.03 - Apply procedures to install turfgrass.

NCCTE.AP44.05.04 - Understand procedures used to plant, stake/guy, and mulch landscape plants.

NCCTE.AP44.05.05 - Apply procedures to incorporate hardscapes into landscapes.

NCCTE.AP44.06.00 - Apply procedures to maintain landscapes and landscape equipment.

NCCTE.AP44.06.01 - Apply procedures to prune, fertilize, and mulch landscape plants.

NCCTE.AP44.06.02 - Understand pests and their control in landscapes.

NCCTE.AP44.06.03 - Apply procedures to maintain turfgrass.

NCCTE.AP44.06.04 - Apply procedures to maintain landscape equipment and tools.

Course: Agricultural Mechanics I

NCCTE.2017.AS31 - Agricultural Mechanics I

NCCTE.2017.AS31.01.00 - Apply leadership in agricultural education.

NCCTE.2017.AS31.01.01 - Remember organizations related to the agricultural mechanics industry.

NCCTE.2017.AS31.01.02 - Apply parliamentary procedure and public speaking skills.

NCCTE.2017.AS31.01.03 - Understand skills needed for employment and careers in the



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agricultural mechanics industry.

NCCTE.2017.AS31.02.00 - Understand the use of records in the agricultural mechanics industry.

NCCTE.2017.AS31.02.01 - Understand the Supervised Agricultural Experience component of the agricultural mechanics program.

NCCTE.2017.AS31.02.02 - Understand methods of financial record keeping in an agricultural mechanics business.

NCCTE.2017.AS31.03.00 - Apply shop safety principles to work in an agricultural mechanics shop.

NCCTE.2017.AS31.03.01 - Understand OSHA safety rules, color coding, and personal and fire safety equipment and techniques in an agricultural mechanics shop.

NCCTE.2017.AS31.03.02 - Apply safe work practices when setting up, adjusting, using hand and power tools.

NCCTE.2017.AS31.04.00 - Apply construction principles in agricultural mechanics.

NCCTE.2017.AS31.04.01 - Understand the use of a builder's level, tripod, laser level and the 3-4-5 method to layout a building.

NCCTE.2017.AS31.04.02 - Apply drawings and symbols to develop a project plan and complete a bill of materials.

NCCTE.2017.AS31.04.03 - Understand the use of fasteners, hardware, and finishing materials in carpentry projects.

NCCTE.2017.AS31.04.04 - Understand framing terms to calculate and install floor, wall, and roofing materials.

NCCTE.2017.AS31.04.05 - Apply basics of layout and framing to construct and finish a shop project.

NCCTE.2017.AS31.04.06 - Apply electrical principles to calculate the cost of electricity needed in the agricultural mechanics setting.

NCCTE.2017.AS31.04.07 - Apply principles of electrical wiring to install branch circuits in a safe manner.

NCCTE.2017.AS31.04.08 - Apply principles of painting and preserving to finish wood and metal projects.

NCCTE.2017.AS31.04.09 - Understand principles and materials for constructing fences using various materials.

NCCTE.2017.AS31.05.00 - Apply principles of welding in the agricultural mechanics shop.

NCCTE.2017.AS31.05.01 - Understand principles for using arc welding equipment and materials for SMAW, GMAW and GTAW.

NCCTE.2017.AS31.05.02 - Apply welding skills to construct agricultural mechanics projects.

Course: Agricultural Mechanics II

NCCTE.2018.AS32 - Agricultural Mechanics II

NCCTE.2018.AS32.01.00 - Understand leadership qualities involved in successful employment.

NCCTE.2018.AS32.01.01 - Understand leadership qualities and career building techniques desired



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by the agricultural mechanics industry.

NCCTE.2018.AS32.01.02 - Understand parliamentary procedure.

NCCTE.2018.AS32.02.00 - Understand the Supervised Agricultural Experience component of the agricultural mechanics program.

NCCTE.2018.AS32.02.01 - Understand SAE components and application to work-based learning.

NCCTE.2018.AS32.02.02 - Understand a financial statement.

NCCTE.2018.AS32.03.00 - Apply shop safety skills in the agriculture shop.

NCCTE.2018.AS32.03.01 - Understand OSHA safety rules, color coding, and equipment safety in an agricultural mechanics shop.

NCCTE.2018.AS32.03.02 - Apply safety skills when practicing cold and hot metal skills..

NCCTE.2018.AS32.04.00 - Apply metal fabrication skills in the agricultural shop.

NCCTE.2018.AS32.04.01 - Apply proper procedures for using bolts, nuts, washers, screws, rivets.

NCCTE.2018.AS32.04.02 - Apply the proper use of metal fabrication equipment such as plasma cutters, chop saws, grinders, bandsaws, and CNC (Computer Numerical Control).

NCCTE.2018.AS32.04.03 - Apply proper procedures for using oxy-fuel equipment and materials for annealing, bending, brazing, soldering, tempering, hardening, cutting, and welding various materials.

NCCTE.2018.AS32.04.04 - Apply proper procedures for using arc welding equipment and materials for SMAW, GMAW and GTAW.

NCCTE.2018.AS32.04.05 - Apply metal fabrication skills to design plans, read symbols, and construct a project.

NCCTE.2018.AS32.05.00 - Apply the use of agricultural power in agricultural mechanics.

NCCTE.2018.AS32.05.01 - Understand principles of operation and troubleshooting techniques for air-cooled and water-cooled engines.

NCCTE.2018.AS32.05.02 - Apply preventative maintenance procedures to service small engine powered tools, equipment, tractors and attachments.

NCCTE.2018.AS32.05.03 - Apply principles and procedures for the safe use of tractors and power equipment.

NCCTE.2018.AS32.06.00 - Apply plumbing principles used in agricultural mechanics.

NCCTE.2018.AS32.06.01 - Understand plumbing principles and materials.

NCCTE.2018.AS32.06.02 - Apply proper safety and industry approved techniques to install plumbing materials.

NCCTE.2018.AS32.07.00 - Apply concrete and masonry principles to complete agricultural mechanics projects.

NCCTE.2018.AS32.07.01 - Understand concrete and masonry principles to construct masonry projects in agricultural mechanics.

NCCTE.2018.AS32.07.02 - Apply concrete and masonry principles to calculate materials needed and cost for a masonry project.



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NCCTE.2018.AS32.07.03 - Apply principles to construct a concrete/masonry project.

Course: Agricultural Mechanics II - Small Engines **Updated**

NCCTE.2020.AS33 - Agricultural Mechanics II - Small Engines

NCCTE.2020.AS33.01.00 - Apply Four Cycle Theory

NCCTE.2020.AS33.01.01 - Understand safety and tools used in the small-engines shop.

NCCTE.2020.AS33.01.02 - Understand the internal combustion engine

NCCTE.2020.AS33.01.03 - Apply knowledge of engine operation.

NCCTE.2020.AS33.02.00 - Apply compression theory and operation.

NCCTE.2020.AS33.02.01 - Understand compression components and fundamentals

NCCTE.2020.AS33.02.02 - Apply compression testing components related to valve seatment, rings, and measurement of compression

NCCTE.2020.AS33.03.00 - Apply ignition systems theory and operation.

NCCTE.2020.AS33.03.01 - Understand electrical theory, ignition testing and ignition systems components

NCCTE.2020.AS33.03.02 - Apply ignition testing procedures for servicing a Four Cycle engine

NCCTE.2020.AS33.04.00 - Apply fuel systems theory and operation

NCCTE.2020.AS33.04.01 - Understand fuels and carburetor operating systems.

NCCTE.2020.AS33.04.02 - Apply fuel testing and carburetor building techniques used in servicing a Four Cycle engine.

NCCTE.2020.AS33.05.00 - Apply governor systems theory and operation.

NCCTE.2020.AS33.05.01 - Understand types of governor systems, their function and adjustments.

NCCTE.2020.AS33.05.02 - Apply governor systems adjustments.

Course: Agriscience Applications

NCCTE.AU10 - Agriscience Applications

NCCTE.AU10.01.00 - Understand leadership opportunities and SAE related to the agriscience industry.

NCCTE.AU10.01.01 - Understand the history, opportunities, and structure of organizations related to the agriscience industry.

NCCTE.AU10.01.02 - Understand effective leadership and communication skills.

NCCTE.AU10.01.03 - Understand the importance of SAE to work-based learning.

NCCTE.AU10.02.00 - Understand global agriculture.

NCCTE.AU10.02.01 - Understand the history of global agriculture.

NCCTE.AU10.02.02 - Compare the current and future issues in global agriculture.

NCCTE.AU10.03.00 - Understand the plant industry.

NCCTE.AU10.03.01 - Remember careers in the plant industry.

NCCTE.AU10.03.02 - Understand biotechnology in the plant industry.

NCCTE.AU10.03.03 - Understand basic horticultural (ornamental, fruit, and vegetable) and



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agronomic principles and practices.

NCCTE.AU10.03.04 - Remember tools and their safety practices related to the plant industry.

NCCTE.AU10.04.00 - Understand the animal industry (large animal, equine, and aquaculture).

NCCTE.AU10.04.01 - Remember careers in the animal industry.

NCCTE.AU10.04.02 - Understand biotechnology in the animal industry.

NCCTE.AU10.04.03 - Understand basic animal principles and practices.

NCCTE.AU10.04.04 - Remember tools and their safety practices related to the animal industry.

NCCTE.AU10.05.00 - Understand the environmental science industry (water, soils, wildlife, and forestry).

NCCTE.AU10.05.01 - Remember careers in the environmental science industry.

NCCTE.AU10.05.02 - Understand biotechnology in the environmental science industry.

NCCTE.AU10.05.03 - Understand basic environmental principles and practices.

NCCTE.AU10.05.04 - Remember tools and their safety practices related to the environmental science industry.

NCCTE.AU10.06.00 - Understand the agricultural engineering industry.

NCCTE.AU10.06.01 - Remember careers in the agricultural mechanics industry.

NCCTE.AU10.06.02 - Understand basic agricultural engineering principles and practices.

NCCTE.AU10.06.03 - Remember tools and their safety practices related to the agricultural mechanics industry.

Course: Sustainable Agriculture Production I **New**

NCCTE.2020.AU21 - Sustainable Agriculture Production I

NCCTE.2020.AU21.01.00 - Apply procedures for leadership.

NCCTE.2020.AU21.01.01 - Define the leadership organizations available for students in sustainable agriculture production.

NCCTE.2020.AU21.01.02 - Compare the social, economic, and environmental context out of which sustainable agriculture originated.

NCCTE.2020.AU21.01.03 - Apply parliamentary procedure and public speaking skills.

NCCTE.2020.AU21.02.00 - Apply procedures to gain a career in sustainable agriculture.

NCCTE.2020.AU21.02.01 - Recognize opportunities for careers in the field of sustainable agriculture

NCCTE.2020.AU21.02.02 - Implement a SAE.

NCCTE.2020.AU21.03.00 - Apply soil conservation practices.

NCCTE.2020.AU21.03.01 - Understand basic properties and functions of agricultural soils.

NCCTE.2020.AU21.03.02 - Apply management techniques to improve soil health.

NCCTE.2020.AU21.04.00 - Introduction to Water Conservation

NCCTE.2020.AU21.04.01 - Explain methods of water conservation practices.

NCCTE.2020.AU21.04.02 - Utilize irrigation practices

NCCTE.2020.AU21.05.00 - Apply sustainable crop production practices.



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NCCTE.2020.AU21.05.01 - Compare important horticultural and agronomic crop systems in North Carolina.

NCCTE.2020.AU21.05.02 - Understand tools and techniques needed to cultivate horticultural and agronomic crops.

NCCTE.2020.AU21.05.03 - Apply methods of sustainable crop production.

NCCTE.2020.AU21.06.00 - Apply agroforestry practices.

NCCTE.2020.AU21.06.01 - Define the fundamental concepts of agroforestry.

NCCTE.2020.AU21.06.02 - Apply agroforestry management plans.

NCCTE.2020.AU21.07.00 - Understand animal husbandry in sustainable agriculture.

NCCTE.2020.AU21.07.01 - Explain how animals are selected and bred for sustainable production.

NCCTE.2020.AU21.07.02 - Compare the functions and sources of nutrients for agricultural animals.

NCCTE.2020.AU21.07.03 - Compare animal welfare and humane slaughter practices.

NCCTE.2020.AU21.08.00 - Apply Integrated Pest Management practices.

NCCTE.2020.AU21.08.01 - Identify insect pests, diseases, and weeds that are prominent in agricultural production systems in North Carolina.

NCCTE.2020.AU21.08.02 - Apply appropriate techniques and technologies to manage pests, diseases, and weeds in a sustainable agriculture system.

Course: Sustainable Agriculture Production II **New**

NCCTE.2020.AU22 - Sustainable Agriculture Production II

NCCTE.2020.AU22.01.00 - Understand leadership qualities needed for successful employment in sustainable agriculture.

NCCTE.2020.AU22.01.01 - Understand leadership qualities and career management skills needed in the field of sustainable agriculture.

NCCTE.2020.AU22.01.02 - Apply public speaking skills.

NCCTE.2020.AU22.01.03 - Apply parliamentary procedure skills.

NCCTE.2020.AU22.02.00 - Understand Supervised Agricultural Experience

NCCTE.2020.AU22.02.01 - Understand SAE components and applications to work based learning.

NCCTE.2020.AU22.02.02 - Understand financial statements and recordkeeping.

NCCTE.2020.AU22.02.03 - Implement a SAE.

NCCTE.2020.AU22.03.00 - Understand sustainable communities.

NCCTE.2020.AU22.03.01 - Understand local and regional food systems.

NCCTE.2020.AU22.03.02 - Understand how sustainable agriculture globally contributes to feeding a growing population.

NCCTE.2020.AU22.04.00 - Understand energy issues in sustainable agriculture production.

NCCTE.2020.AU22.04.01 - Understand renewable energy.

NCCTE.2020.AU22.04.02 - Understand energy efficiency and conservation in sustainable agriculture production.



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NCCTE.2020.AU22.04.03 - Apply energy efficiency and conservation in sustainable agriculture production.

NCCTE.2020.AU22.05.00 - Understand emerging technologies in 21st century agricultural production systems.

NCCTE.2020.AU22.05.01 - Understand precision agriculture.

NCCTE.2020.AU22.05.02 - Understand applications of biotechnology.

NCCTE.2020.AU22.05.03 - Understand breeding programs in agricultural production.

NCCTE.2020.AU22.06.00 - Understand food safety in sustainable agriculture production.

NCCTE.2020.AU22.06.01 - Understand Good Agricultural Practices (GAP) to ensure food safety standards for production, post-harvest handling, processing, and distribution.

NCCTE.2020.AU22.06.02 - Apply Good Agricultural Practices (GAP) to agricultural production.

NCCTE.2020.AU22.07.00 - Apply methods of sustainable agriculture to produce an agricultural commodity.

NCCTE.2020.AU22.07.01 - Understand apiculture

NCCTE.2020.AU22.07.02 - Understand aquaponic and hydroponic production.

NCCTE.2020.AU22.07.03 - Understand mushroom production.

NCCTE.2020.AU22.07.04 - Understand vermicomposting.

NCCTE.2020.AU22.07.05 - Apply methods of sustainable agriculture to produce an agricultural commodity.

NCCTE.2020.AU22.08.00 - Understand a marketing and business plan for a sustainable grower.

NCCTE.2020.AU22.08.01 - Understand a marketing plan for a sustainable grower.

NCCTE.2020.AU22.08.02 - Create a business plan for a sustainable grower.

Business, Finance, and Marketing Education

Grade: Grade 9 - 12

Course: Accounting I

NCCTE.2019.BA10 - Accounting I

NCCTE.2019.BA10.01.00 - Understand the purpose and tools of Accounting.

NCCTE.2019.BA10.01.01 - Understand the role of accounting in business operations.

NCCTE.2019.BA10.01.02 - Understand the forms of business ownership and types of business.

NCCTE.2019.BA10.01.03 - Understand spreadsheet basics.

NCCTE.2019.BA10.02.00 - Understand Accounting professionalism.

NCCTE.2019.BA10.02.01 - Understand Generally Accepted Accounting Principles.

NCCTE.2019.BA10.02.02 - Understand the AICPA Code of Professional Conduct and Ethics.

NCCTE.2019.BA10.03.00 - Understand fundamental Accounting concepts.

NCCTE.2019.BA10.03.01 - Understand the accounting equation, debits and credits.

NCCTE.2019.BA10.03.02 - Understand double-entry accounting journal entries.

NCCTE.2019.BA10.04.00 - Apply accounting procedures for journal entries.

NCCTE.2019.BA10.04.01 - Apply procedures to prepare and post journal entries for a service



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business.

NCCTE.2019.BA10.04.02 - Apply procedures to prepare and post journal entries for a merchandising business.

NCCTE.2019.BA10.04.03 - Apply accounting procedures to prepare worksheets and adjusting entries.

NCCTE.2019.BA10.04.04 - Apply accounting procedures to prepare financial statements.

NCCTE.2019.BA10.04.05 - Apply accounting procedures to prepare closing entries.

NCCTE.2019.BA10.05.00 - Apply accounting procedures to perform banking and payroll activities.

NCCTE.2019.BA10.05.01 - Apply procedures to reconcile a bank statement and prepare related journal entries.

NCCTE.2019.BA10.05.02 - Apply procedures to complete payroll records and prepare related journal entries.

NCCTE.2019.BA10.06.00 - Apply accounting procedures to perform specialized accounting activities.

NCCTE.2019.BA10.06.01 - Apply procedures to prepare journal entries for notes payable and notes receivable transactions.

NCCTE.2019.BA10.06.02 - Apply procedures to prepare journal entries for uncollectible accounts transactions.

NCCTE.2019.BA10.06.03 - Apply procedures to prepare journal entries for straight-line depreciation and disposal of plant assets.

Course: Accounting II

NCCTE.2019.BA20 - Accounting II

NCCTE.2019.BA20.01.00 - Apply accounting procedures for departmentalized business.

NCCTE.2019.BA20.01.01 - Remember the purpose and tools of Accounting.

NCCTE.2019.BA20.01.02 - Apply journal procedures in a departmentalized merchandising business.

NCCTE.2019.BA20.01.03 - Apply procedures to calculate gross profit, prepare a departmentalized worksheet, and prepare departmental margin statements.

NCCTE.2019.BA20.01.04 - Apply procedures to journalize adjusting and closing entries for a departmentalized merchandising business.

NCCTE.2019.BA20.02.00 - Apply inventory costing methods and specialized adjusting entries.

NCCTE.2019.BA20.02.01 - Understand inventory costing methods.

NCCTE.2019.BA20.02.02 - Apply inventory costing methods to calculate the value of inventory.

NCCTE.2019.BA20.02.03 - Apply procedures to create an Income Statement with Cost of Goods Sold.

NCCTE.2019.BA20.02.04 - Apply procedures for calculating and journalizing depreciation expense.

NCCTE.2019.BA20.02.05 - Apply procedures for calculating and journalizing accruals and deferrals.



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NCCTE.2019.BA20.03.00 - Apply accounting procedures for a corporation.

NCCTE.2019.BA20.03.01 - Apply procedures for the issuance of stocks and bonds.

NCCTE.2019.BA20.03.02 - Apply procedures for payment of dividends.

NCCTE.2019.BA20.03.03 - Apply procedures for preparing a statement of stockholders equity.

NCCTE.2019.BA20.04.00 - Analyze financial data to make managerial decisions.

NCCTE.2019.BA20.04.01 - Understand concepts and practices related to budgeting.

NCCTE.2019.BA20.04.02 - Apply procedures to calculate cost-volume-profit relationship indicators.

NCCTE.2019.BA20.04.03 - Apply procedures to calculate financial ratios.

NCCTE.2019.BA20.04.04 - Analyze financial indicators and ratios to make business decisions.

NCCTE.2019.BA20.05.00 - Apply concepts for cost accounting procedures.

NCCTE.2019.BA20.05.01 - Understand cost accounting concepts and practices for a manufacturing business.

NCCTE.2019.BA20.05.02 - Apply cost accounting procedures to journalize transactions for a manufacturing business.

NCCTE.2019.BA20.06.00 - Analyze financial statements for auditing purposes.

NCCTE.2019.BA20.06.01 - Understand purposeful auditing techniques.

NCCTE.2019.BA20.06.02 - Understand the Statement of Cash Flows.

Course: Business Law

NCCTE.BB30 - Business Law

NCCTE.BB30.01.00 - Understand the U.S. legal system.

NCCTE.BB30.01.01 - Understand ethics, sources of law, and legal systems.

NCCTE.BB30.01.02 - Understand court systems and trial procedures.

NCCTE.BB30.01.03 - Understand criminal and civil laws.

NCCTE.BB30.02.00 - Understand contract law.

NCCTE.BB30.02.01 - Understand elements and characteristics of a contract.

NCCTE.BB30.02.02 - Understand terminating, transferring, and breaching a contract.

NCCTE.BB30.03.00 - Understand employment, agency, environmental, energy, and intellectual property law.

NCCTE.BB30.03.01 - Understand employment law.

NCCTE.BB30.03.02 - Understand agency law.

NCCTE.BB30.03.03 - Remember environmental and energy law.

NCCTE.BB30.03.04 - Understand intellectual property law.

NCCTE.BB30.04.00 - Understand financial, credit, and bankruptcy law and insurance.

NCCTE.BB30.04.01 - Understand financial, credit, and bankruptcy law.

NCCTE.BB30.04.02 - Understand types of insurance.

NCCTE.BB30.05.00 - Understand domestic relations law and wills/estate planning.

NCCTE.BB30.05.01 - Understand domestic relations law.



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NCCTE.BB30.05.02 - Understand wills/estate planning.

NCCTE.BB30.06.00 - Understand sales, consumer, property, and cyber law.

NCCTE.BB30.06.01 - Understand sales and consumer law.

NCCTE.BB30.06.02 - Understand property law.

NCCTE.BB30.06.03 - Understand cyber law.

Course: Business Management I **Updated**

NCCTE.2020.BB40 - Business Management I

NCCTE.2020.BB40.01.00 - Understand the planning and organizing role of management

NCCTE.2020.BB40.01.01 - Discuss employment opportunities in business management and administration

NCCTE.2020.BB40.01.02 - Explain the concept of management

NCCTE.2020.BB40.01.03 - Discuss the nature of managerial planning

NCCTE.2020.BB40.01.04 - Explain managerial considerations in organizing

NCCTE.2020.BB40.01.05 - Explain the organizational design of business

NCCTE.2020.BB40.01.06 - Explain the nature of project management

NCCTE.2020.BB40.02.00 - Understand the staffing and directing role of management

NCCTE.2020.BB40.02.01 - Discuss the nature of human resources management

NCCTE.2020.BB40.02.02 - Describe managerial considerations in staffing

NCCTE.2020.BB40.02.03 - Discuss managerial considerations in directing

NCCTE.2020.BB40.02.04 - Orient new employees

NCCTE.2020.BB40.03.00 - Understand the relationship between customer service and business management

NCCTE.2020.BB40.03.01 - Discuss the nature of customer relationship management

NCCTE.2020.BB40.03.02 - Describe the use of technology in customer relationship management

NCCTE.2020.BB40.03.03 - Demonstrate a customer-service mindset

NCCTE.2020.BB40.03.04 - Interpret business policies to customers/clients

NCCTE.2020.BB40.03.05 - Adapt communication to the cultural and social differences among clients

NCCTE.2020.BB40.03.06 - Handle customer/client complaints

NCCTE.2020.BB40.03.07 - Identify company's brand promise

NCCTE.2020.BB40.03.08 - Describe the impact of a person's social media brand on the achievement of organizational objectives

Course: Business Management II **New**

NCCTE.2020.BB42 - Business Management II

NCCTE.2020.BB42.01.00 - Understand the controlling role of management

NCCTE.2020.BB42.01.01 - Describe the nature of managerial control

NCCTE.2020.BB42.01.02 - Explain the concept of productivity



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NCCTE.2020.BB42.01.03 - Explain the nature of quality management

NCCTE.2020.BB42.01.04 - Explain the nature of change management

NCCTE.2020.BB42.02.00 - Understand how managers manage supply chains and inventory

NCCTE.2020.BB42.02.01 - Explain the concept of supply chain

NCCTE.2020.BB42.02.02 - Discuss types of inventory

NCCTE.2020.BB42.02.03 - Maintain inventory of supplies

NCCTE.2020.BB42.03.00 - Understand how managers implement safety and security procedures to minimize chance for loss

NCCTE.2020.BB42.03.01 - Explain the nature of risk management

NCCTE.2020.BB42.03.02 - Determine the relationship between government and business

NCCTE.2020.BB42.03.03 - Maintain a safe work environment

NCCTE.2020.BB42.03.04 - Explain routine security precautions

NCCTE.2020.BB42.03.05 - Follow established security procedures/policies

NCCTE.2020.BB42.04.00 - Understand how managers protect company data, information, and knowledge

NCCTE.2020.BB42.04.01 - Discuss the nature of information management

NCCTE.2020.BB42.04.02 - Explain information privacy, security, and confidentiality considerations in business

NCCTE.2020.BB42.04.03 - Protect company information and intangibles

NCCTE.2020.BB42.04.04 - Maintain data security

NCCTE.2020.BB42.05.00 - Understand financial analysis and managing financial resources to ensure solvency

NCCTE.2020.BB42.05.01 - Describe the need for financial information

NCCTE.2020.BB42.05.02 - Describe the nature of budgets

NCCTE.2020.BB42.05.03 - Explain the role of managerial accounting techniques in business management

Course: Principles of Business and Finance

NCCTE.2016.BF10 - Principles of Business and Finance

NCCTE.2016.BF10.01.00 - Understand communication skills and customer relations.

NCCTE.2016.BF10.01.01 - Apply verbal skills to obtain and convey information. (CO:053, QS LAP 29) (CO:084) (CO:061) (CO:114)

NCCTE.2016.BF10.01.02 - Record information to maintain and present a report of business activity. (CO:085) (CO:086) (CO:087)

NCCTE.2016.BF10.01.03 - Write internal and external business correspondence to convey and obtain information effectively. (CO:016) (CO:088) (CO:089) (CO:090)

NCCTE.2016.BF10.01.04 - Foster positive relationships with customers to enhance company image. (CR:003, CR LAP 1)

NCCTE.2016.BF10.02.00 - Understand information management.



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NCCTE.2016.BF10.02.01 - Use information literacy skills to increase workplace efficiency and effectiveness. (NF:077) (NF:078) (NF:079) (NF:079) (NF:080) (NF:081)

NCCTE.2016.BF10.02.02 - Acquire a foundational knowledge of information management to understand its nature and scope. (NF:110, NF LAP 3)

NCCTE.2016.BF10.02.03 - Utilize information-technology tools to management and perform work responsibilities. (SUPPLEMENTAL)

NCCTE.2016.BF10.03.00 - Understand professional development.

NCCTE.2016.BF10.03.01 - Acquire self-development skills to enhance relationships and improve efficiency in the work environment. (PD:018; PD LAP 16, QS LAP 22)

NCCTE.2016.BF10.03.02 - Utilize critical-thinking skills to determine best options/outcomes. (PD:126) (PD:017; PD LAP 10, QS LAP 2) (PD:077; PD LAP 17, QS LAP 26)

NCCTE.2016.BF10.03.03 - Participate in career-planning to enhance job-success potential. (SUPPLEMENTAL)

NCCTE.2016.BF10.03.04 - Implement job-seeking seeking skills to obtain employment. (SUPPLEMENTAL)

NCCTE.2016.BF10.03.05 - Utilize career-advancement activities to enhance professional development. (SUPPLEMENTAL)

NCCTE.2016.BF10.04.00 - Understand business operations management.

NCCTE.2016.BF10.04.01 - Adhere to health and safety regulations to support a safe work environment. (OP:004) (OP:005)

NCCTE.2016.BF10.04.02 - Implement purchasing activities to obtain business supplies, equipment and services. (OP:015, OP LAP 2) (OP:016) (OP:031)

NCCTE.2016.BF10.04.03 - Understand production's role and function in business to recognize its need in an organization. (OP:017, OP LAP 4)

NCCTE.2016.BF10.04.04 - Implement safety procedures to minimize loss. (SUPPLEMENTAL)

NCCTE.2016.BF10.04.05 - Implement security policies/procedures to minimize chance for loss. (SUPPLEMENTAL)

NCCTE.2016.BF10.05.00 - Understand economics.

NCCTE.2016.BF10.05.01 - Understand fundamental economic concepts to obtain a foundation for employment in business. (EC:003, EC LAP 14) (EC:001, EC LAP 6) (EC:004, EC LAP 13) (EC:005, EC LAP 11) (EC:006, EC LAP 12)

NCCTE.2016.BF10.05.02 - Understand economic systems to be able to recognize the environments in which businesses function. (EC:007, EC LAP 17) (EC:009, EC LAP 15) (EC:010, EC LAP 2) (EC:011, EC LAP 3) (EC:012, EC LAP 8)

NCCTE.2016.BF10.05.03 - Understand the nature of business to show its contributions to society. (EC:070, EC LAP 20) (EC:071, EC LAP 19) (EC:103, EC LAP 23) (EC:104, EC LAP 22) (EC:105, EC LAP 26) (EC:106, EC LAP 21) (EC:107, EC LAP 25)

NCCTE.2016.BF10.05.04 - Acquire knowledge of the impact of government on business activities



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to make informed economic decisions. (EC:008, EC LAP 16)

NCCTE.2016.BF10.05.05 - Analyze cost/profit relationships to guide business decision making. (EC:013, EC LAP 18)

NCCTE.2016.BF10.06.00 - Understand financial analysis.

NCCTE.2016.BF10.06.01 - Acquire a foundational knowledge of accounting to understand its nature and scope. (FI:085, FI LAP 5)

NCCTE.2016.BF10.06.02 - Acquire a foundational knowledge of finance to understand its nature and scope. (FI:354, FI LAP 7)

NCCTE.2016.BF10.07.00 - Understand marketing and business management.

NCCTE.2016.BF10.07.01 - Understand marketing's role and function in business to facilitate economic exchanges with customers. (MK:001, MK LAP 4)

NCCTE.2016.BF10.07.02 - Apply knowledge of business ownership to establish and continue business operations. (BL:003, BL LAP 1)

NCCTE.2016.BF10.07.03 - Recognize management's role to understand its contribution to business success. (SM:001, SM LAP 3)

NCCTE.2016.BF10.07.04 - Understand the role and function of human resources management to obtain a foundational understanding of its nature and scope. (SUPPLEMENTAL)

NCCTE.2016.BF10.07.05 - Understand operations' role and function in business to value its contributions to company. (SUPPLEMENTAL)

Course: Financial Planning I **New**

NCCTE.2020.BF21 - Financial Planning I

NCCTE.2020.BF21.01.00 - Understand the basics of finance.

NCCTE.2020.BF21.01.01 - Utilize time management skills to determine best options/outcomes.

NCCTE.2020.BF21.01.02 - Describe the need for financial information.

NCCTE.2020.BF21.01.03 - Explain the role of finance in business.

NCCTE.2020.BF21.01.04 - Describe the role of financial institutions.

NCCTE.2020.BF21.01.05 - Discuss employment opportunities in the finance industry (accounting).

NCCTE.2020.BF21.02.00 - Understand the basics of investing.

NCCTE.2020.BF21.02.01 - Explain types of financial markets (e.g., money market, capital market, insurance market, commodities markets, etc.).

NCCTE.2020.BF21.02.02 - Describe types of financial-services providers.

NCCTE.2020.BF21.02.03 - Describe types of retail/business banking products and services.

NCCTE.2020.BF21.02.04 - Explain types of investments.

NCCTE.2020.BF21.02.05 - Discuss employment opportunities in the finance industry.

NCCTE.2020.BF21.03.00 - Understand financial analysis.

NCCTE.2020.BF21.03.01 - Utilize sources of securities information to make informed financial decisions.

NCCTE.2020.BF21.03.02 - Acquire fundamental knowledge of investment analysis and selection



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to make prudent investment decisions.

NCCTE.2020.BF21.03.03 - Select investments to generate revenue for clients.

NCCTE.2020.BF21.03.04 - Acquire knowledge of securities products and benefits to support workplace activities.

NCCTE.2020.BF21.03.05 - Discuss employment opportunities in the finance industry (investment/securities).

NCCTE.2020.BF21.04.00 - Understand law and security measures in business.

NCCTE.2020.BF21.04.01 - Determine the relationship between government and business.

NCCTE.2020.BF21.04.02 - Discuss legal considerations in the finance industry.

NCCTE.2020.BF21.04.03 - Explain routine security precautions.

NCCTE.2020.BF21.04.04 - Follow established security procedures/policies.

NCCTE.2020.BF21.04.05 - Explain information privacy, data security, and confidentiality considerations in business.

NCCTE.2020.BF21.04.06 - Discuss employment opportunities in the finance industry (corporate finance).

NCCTE.2020.BF21.05.00 - Understand the impact of the economy on financial decisions

NCCTE.2020.BF21.05.01 - Understand economic indicators to recognize economic trends and conditions.

NCCTE.2020.BF21.05.02 - Understand financial markets to recognize their importance in business.

NCCTE.2020.BF21.05.03 - Determine global trade's impact on business decision-making to acquire insight into the global forces affecting business.

NCCTE.2020.BF21.05.04 - Explain causes of stock price fluctuations.

NCCTE.2020.BF21.05.05 - Discuss employment opportunities in the finance industry

Course: Financial Planning II **New**

NCCTE.2020.BF22 - Financial Planning II

NCCTE.2020.BF22.01.00 - Understand risk management and insurance.

NCCTE.2020.BF22.01.01 - Explain the nature of risk management.

NCCTE.2020.BF22.01.02 - Explain the role of ethics in risk management.

NCCTE.2020.BF22.01.03 - Discuss the legal considerations affecting risk management.

NCCTE.2020.BF22.01.04 - Describe the nature of the insurance industry.

NCCTE.2020.BF22.02.00 - Understand corporate governance.

NCCTE.2020.BF22.02.01 - Discuss the importance of corporate governance in business.

NCCTE.2020.BF22.02.02 - Describe the components of a well-governed company (e.g., board of directors, reporting, transparency, internal and external audit functions).

NCCTE.2020.BF22.02.03 - Ascertain employee's role in achieving governance objectives.

NCCTE.2020.BF22.02.04 - Identify the factors that impact governance structures.

NCCTE.2020.BF22.03.00 - Understand the role of accounting in business.



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NCCTE.2020.BF22.03.01 - Explain the concept of accounting.

NCCTE.2020.BF22.03.02 - Discuss the role of ethics in accounting.

NCCTE.2020.BF22.03.03 - Explain the nature of business plans.

NCCTE.2020.BF22.03.04 - Developing a business plan.

NCCTE.2020.BF22.03.05 - Explain legal considerations for accounting.

NCCTE.2020.BF22.04.00 - Understand finance and the global economy.

NCCTE.2020.BF22.04.01 - Describe factors that affect the business environment.

NCCTE.2020.BF22.04.02 - Discuss the nature of convergence/consolidation in the finance industry.

NCCTE.2020.BF22.04.03 - Discuss the global environment in which businesses operate.

NCCTE.2020.BF22.04.04 - Explain the nature and scope of financial globalization.

NCCTE.2020.BF22.04.05 - Describe the relationship between economic conditions and financial markets.

NCCTE.2020.BF22.05.00 - Understand financial legalities and compliance.

NCCTE.2020.BF22.05.01 - Describe the nature of taxes.

NCCTE.2020.BF22.05.02 - Discuss the effect of tax laws and regulations on financial transactions.

NCCTE.2020.BF22.05.03 - Discuss the nature, scope and technology of compliance in the finance industry.

NCCTE.2020.BF22.06.00 - Understand ethical leadership.

NCCTE.2020.BF22.06.01 - Describe the nature of ethics.

NCCTE.2020.BF22.06.02 - Demonstrate honesty and integrity.

NCCTE.2020.BF22.06.03 - Explain the concept of leadership.

NCCTE.2020.BF22.06.04 - Explain the nature of ethical leadership.

Course: Project Management I

NCCTE.2016.CS11 - Project Management I

NCCTE.2016.CS11.01.00 - Understand the Framework of Project Management

NCCTE.2016.CS11.01.01 - Structure of Project Management

NCCTE.2016.CS11.01.02 - Project Management Stakeholders

NCCTE.2016.CS11.01.03 - Project Management's Role in the Corporate Environment

NCCTE.2016.CS11.01.04 - Project Life Cycles and Phases

NCCTE.2016.CS11.02.00 - Understand Project Integration

NCCTE.2016.CS11.02.01 - Develop a project charter

NCCTE.2016.CS11.02.02 - Develop a project management plan

NCCTE.2016.CS11.02.03 - Manage, monitor and control project work

NCCTE.2016.CS11.02.04 - Perform Integrated Change Control

NCCTE.2016.CS11.02.05 - Close Project

NCCTE.2016.CS11.03.00 - Understand Scope Management

NCCTE.2016.CS11.03.01 - Collect requirements



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NCCTE.2016.CS11.03.02 - Define scope

NCCTE.2016.CS11.03.03 - Create Work Breakdown Structure

NCCTE.2016.CS11.03.04 - Validate and control scope

NCCTE.2016.CS11.03.05 - Validate and control scope

NCCTE.2016.CS11.04.00 - Understand Time Management

NCCTE.2016.CS11.04.01 - Define and sequence activities

NCCTE.2016.CS11.04.02 - Estimate Activity Resources and Durations

NCCTE.2016.CS11.04.03 - Develop and Control Schedules

NCCTE.2016.CS11.04.04 - Develop and Control Schedules

NCCTE.2016.CS11.05.00 - Understand Cost Management

NCCTE.2016.CS11.05.01 - Estimate costs and determine a budget

NCCTE.2016.CS11.05.02 - Control costs

NCCTE.2016.CS11.05.03 - Control costs

Course: Marketing Applications

NCCTE.MA52 - Marketing Applications

NCCTE.MA52.01.00 - Understand customer/client/business behavior and intermediate marketing planning.

NCCTE.MA52.01.01 - Understand marketing's role and function in business to facilitate economic exchanges with customers. (SUPPLEMENTAL)

NCCTE.MA52.01.02 - Utilize critical-thinking skills to determine best options/outcomes. (SUPPLEMENTAL)

NCCTE.MA52.01.03 - Acquire foundational knowledge of customer/client/business behavior to understand what motivates decision-making.

NCCTE.MA52.01.04 - Employ marketing-information to develop a marketing plan.

NCCTE.MA52.02.00 - Understand selling, financial analysis, and economics.

NCCTE.MA52.02.01 - Understand sales activities to show command of their nature and scope.

NCCTE.MA52.02.02 - Acquire a foundational knowledge of accounting to understand its nature and scope.

NCCTE.MA52.02.03 - Implement accounting procedures to track money flow and to determine financial status.

NCCTE.MA52.02.04 - Acquire knowledge of the impact of government on business activities to make informed economic decisions.

NCCTE.MA52.02.05 - Utilize critical-thinking skills to determine best options/outcomes. (SUPPLEMENTAL)

NCCTE.MA52.03.00 - Understand product/service management, emotional intelligence, financial analysis, selling, and customer relations.

NCCTE.MA52.03.01 - Generate product ideas to contribute to ongoing business success.

NCCTE.MA52.03.02 - Use communication skills to foster open, honest communications.



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NCCTE.MA52.03.03 - Use communication skills to influence others. (SUPPLEMENTAL)

NCCTE.MA52.03.04 - Write internal and external business correspondence to convey and obtain information effectively.

NCCTE.MA52.03.05 - Use communication skills to influence others. (SUPPLEMENTAL)

NCCTE.MA52.03.06 - Manage financial resources to ensure solvency.

NCCTE.MA52.03.07 - Interpret marketing information to test hypotheses and/or to resolve issues. (SUPPLEMENTAL)

NCCTE.MA52.03.08 - Acquire product knowledge to communicate product benefits and to ensure appropriateness of product for the customer.

NCCTE.MA52.03.09 - Understand the nature of customer relationship management to show its contributions to a company.

NCCTE.MA52.03.10 - Employ product-mix strategies to meet customer expectations.

NCCTE.MA52.03.11 - Position company to acquire desired business image.

NCCTE.MA52.04.00 - Understand channel management and selling.

NCCTE.MA52.04.01 - Manage channel activities to minimize costs and to determine distribution strategies.

NCCTE.MA52.04.02 - Understand sales processes and techniques to enhance customer relationships and to increase the likelihood of making sales.

NCCTE.MA52.04.03 - Perform pre-sales activities to facilitate sales presentation. (SUPPLEMENTAL)

NCCTE.MA52.04.04 - Employ sales processes and techniques to enhance customer relationships and to increase the likelihood of making sales.

NCCTE.MA52.04.05 - Employ sales processes and techniques to enhance customer relationships and to increase the likelihood of making sales. (SUPPLEMENTAL)

NCCTE.MA52.04.06 - Process the sale to complete the exchange. (SUPPLEMENTAL)

NCCTE.MA52.04.07 - Write internal and external business correspondence to convey and obtain information effectively. (SUPPLEMENTAL)

NCCTE.MA52.05.00 - Understand promotion, marketing-information management, and communication.

NCCTE.MA52.05.01 - Understand the use of an advertisement's components to communicate with targeted audiences.

NCCTE.MA52.05.02 - Manage stressful situations to minimize negative workplace interactions. (SUPPLEMENTAL)

NCCTE.MA52.05.03 - Understand the use of public-relations activities to communicate with targeted audiences. (SUPPLEMENTAL)

NCCTE.MA52.05.04 - Understand the use of trade shows/expositions to communicate with targeted audiences. (SUPPLEMENTAL)

NCCTE.MA52.05.05 - Manage promotional activities to maximize return on promotional efforts.

NCCTE.MA52.05.06 - Evaluate marketing research procedures and findings to assess their



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credibility.

NCCTE.MA52.05.07 - Write internal and external business correspondence to convey and obtain information effectively.

NCCTE.MA52.06.00 - Understand economics.

NCCTE.MA52.06.01 - Analyze cost/profit relationships to guide business decision-making. (SUPPLEMENTAL)

NCCTE.MA52.06.02 - Analyze cost/profit relationships to guide business decision-making.

NCCTE.MA52.06.03 - Understand economic indicators to recognize economic trends and conditions.

NCCTE.MA52.06.04 - Determine global trade's impact on business decision-making. (SUPPLEMENTAL)

Course: Entrepreneurship I **Updated**

NCCTE.2020.ME11 - Entrepreneurship I

NCCTE.2020.ME11.01.00 - Understand entrepreneurship, entrepreneurship discoveries, the entrepreneurial mindset, and business ethics in entrepreneurship.

NCCTE.2020.ME11.01.01 - Describe the nature of entrepreneurship (SP).

NCCTE.2020.ME11.01.02 - Explain career opportunities in entrepreneurship (CS).

NCCTE.2020.ME11.01.03 - Conduct self-assessment to determine entrepreneurial potential (CS).

NCCTE.2020.ME11.01.04 - Explain the nature of business ethics (SP).

NCCTE.2020.ME11.01.05 - Explain types of business ownership (CS).

NCCTE.2020.ME11.02.00 - Understand design thinking, the Lean Canvas Business Model, and feasibility of venture ideas.

NCCTE.2020.ME11.02.01 - Describe the design thinking process.

NCCTE.2020.ME11.02.02 - Determine the relationship between government and business (CS).

NCCTE.2020.ME11.02.03 - Conduct an environmental scan to obtain business information (SP).

NCCTE.2020.ME11.02.04 - Determine feasibility of venture ideas.

NCCTE.2020.ME11.02.05 - Understand Lean Canvas Business Model (LCBM).

NCCTE.2020.ME11.03.00 - Understand marketing strategies, unique value proposition, competitive advantage, and customer segments.

NCCTE.2020.ME11.03.01 - Explain the concept of marketing strategies (CS).

NCCTE.2020.ME11.03.02 - Identify company's unique value/selling proposition (MN).

NCCTE.2020.ME11.03.03 - Explain the concept of market and market identification (CS).

NCCTE.2020.ME11.04.00 - Understand channels of distribution and cost structure.

NCCTE.2020.ME11.04.01 - Explain the nature of channels of distribution (CS).

NCCTE.2020.ME11.04.02 - Explain the nature and scope of purchasing (CS).

NCCTE.2020.ME11.04.03 - Explain the concept of supply chain (CS).

NCCTE.2020.ME11.04.04 - Explain the nature of overhead/operating costs (SP).

NCCTE.2020.ME11.04.05 - Explain the concept of production (CS).



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NCCTE.2020.ME11.05.00 - Understand pricing, revenue streams, and key metrics.

NCCTE.2020.ME11.05.01 - Explain the nature and scope of the pricing function (SP).

NCCTE.2020.ME11.05.02 - Explain the nature of sales forecasts (SP).

NCCTE.2020.ME11.05.03 - Determine Revenue Streams.

NCCTE.2020.ME11.05.04 - Identify key metrics.

Course: Entrepreneurship II **Updated**

NCCTE.2020.ME12 - Entrepreneurship II

NCCTE.2020.ME12.01.00 - Understand business planning, business ethics, resources, and risks.

NCCTE.2020.ME12.01.01 - Explain the nature of business plans (MN).

NCCTE.2020.ME12.01.02 - Describe the use of business ethics in entrepreneurship (SP).

NCCTE.2020.ME12.01.03 - Describe external resources useful to entrepreneurs during concept development (ON).

NCCTE.2020.ME12.01.04 - Develop an organizational plan for human resources (MN).

NCCTE.2020.ME12.01.05 - Develop company's management plan (ON).

NCCTE.2020.ME12.01.06 - Explain the nature of risk management (SP).

NCCTE.2020.ME12.02.00 - Understand costs of starting up and running a business.

NCCTE.2020.ME12.02.01 - Assess start-up requirements.

NCCTE.2020.ME12.02.02 - Explain the nature of overhead/operating costs (SP).

NCCTE.2020.ME12.02.03 - Determine cost of product (breakeven, ROI, markup) (MN).

NCCTE.2020.ME12.02.04 - Calculate break-even point (MN).

NCCTE.2020.ME12.03.00 - Understand the impact of product, place, promotion, and pricing.

NCCTE.2020.ME12.03.01 - Plan product mix (MN).

NCCTE.2020.ME12.03.02 - Determine services to provide customers (MN).

NCCTE.2020.ME12.03.03 - Build product/service brand (MN).

NCCTE.2020.ME12.03.04 - Identify company's unique value/selling proposition (MN).

NCCTE.2020.ME12.03.05 - Select channels of distribution (MN).

NCCTE.2020.ME12.03.06 - Develop promotional plan for a business (MN).

NCCTE.2020.ME12.03.07 - Set prices (MN).

NCCTE.2020.ME12.04.00 - Understand marketing information to conduct analysis, identify market segments, and plan marketing activities.

NCCTE.2020.ME12.04.01 - Conduct market analysis (market size, area, potential, etc.) (MN).

NCCTE.2020.ME12.04.02 - Conduct competitive analysis (MN).

NCCTE.2020.ME12.04.03 - Identify market segments and select target market (MN).

NCCTE.2020.ME12.04.04 - Conduct Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis for use in the marketing planning process (MN).

NCCTE.2020.ME12.04.05 - Forecast sales for marketing plan (MN).

NCCTE.2020.ME12.04.06 - Develop marketing plan (MN).

NCCTE.2020.ME12.05.00 - Implement accounting procedures to track money flow and to determine



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financial status.

NCCTE.2020.ME12.05.01 - Describe the nature of income statements (SP).

NCCTE.2020.ME12.05.02 - Describe the nature of cash flow statements (SP).

NCCTE.2020.ME12.05.03 - Explain the nature of balance sheets (SP).

Course: Sports and Entertainment Marketing I

NCCTE.MH31 - Sports and Entertainment Marketing I

NCCTE.MH31.01.00 - Understand career planning, marketing, product management, selling, and promotion for the sport and event industries.

NCCTE.MH31.01.01 - Acquire information about the sport/event industry to aid in making career choices. (PD:115), (PD:107)

NCCTE.MH31.01.02 - Understand sport/event marketing

NCCTE.MH31.01.03 - Acquire information about the sport/event industry to aid in making career choices. (PD:051)

NCCTE.MH31.01.04 - Employ product mix strategies to meet customer expectations. (PM:079)

NCCTE.MH31.01.05 - Acquire product knowledge to communicate product benefits and to ensure appropriateness of product for the customer. (SE:188), (SE:209)

NCCTE.MH31.01.06 - Position product/services to acquire desired business image. (PM:141), (PM:139), (PM:140), (PM:142)

NCCTE.MH31.01.07 - Employ sales-promotion activities to inform or remind customers of business/product. (PR:175)

NCCTE.MH31.01.08 - Resolve conflicts with/for customers to encourage repeat business. (CR:009), (CR:010) (SUPPLEMENTAL)

NCCTE.MH31.01.09 - Process the sale to complete the exchange. (SE:461) (SUPPLEMENTAL)

NCCTE.MH31.01.10 - Employ sales-promotion activities to inform or remind customers of business/product. (PR:193), (PR:194)

NCCTE.MH31.02.00 - Understand marketing-information management for the sport and event industries.

NCCTE.MH31.02.01 - Implement organizational skills to improve efficiency and workflow. (OP:142), (OP:102) (SUPPLEMENTAL)

NCCTE.MH31.02.02 - Utilize project-management skills to improve workflow and minimize costs. (OP:001) (SUPPLEMENTAL)

NCCTE.MH31.02.03 - Acquire foundational knowledge of marketing-information management to understand its nature and scope. (IM:245)

NCCTE.MH31.02.04 - Understand data-collection methods to evaluate their appropriateness for the research problem/issue. (IM:246)

NCCTE.MH31.02.05 - Collect secondary marketing data to ensure accuracy and adequacy of information for decision-making. (IM:247), (IM:186), (IM:248)

NCCTE.MH31.02.06 - Understand data-collection methods to evaluate their appropriateness for



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

the research problem/issue. (IM:249)

NCCTE.MH31.03.00 - Understand marketing planning and promotion for the sport and event industries.

NCCTE.MH31.03.01 - Select target market appropriate for product/business to obtain the best return on marketing investment. (MP:037), (MP:038)

NCCTE.MH31.03.02 - Understand promotional channels used to communicate with targeted audiences. (PR:177)

NCCTE.MH31.03.03 - Understand the use of an advertisement's components to communicate with targeted audiences. (PR:014)

NCCTE.MH31.03.04 - Understand the use of direct marketing to attract attention and to build brand. (PR:164), (PR:301), (PR:240), (PR:276), (PR:299)

NCCTE.MH31.03.05 - Develop content for use in marketing communications to create interest in product/business/idea. (PR:163), (PR:179), (PR:122) (SUPPLEMENTAL)

NCCTE.MH31.03.06 - Understand the use of direct marketing to attract attention and to build brand. (PR:165)

NCCTE.MH31.03.07 - Develop content for use in marketing communications to create interest in product/business/idea. (PR:362), (PR:166)

NCCTE.MH31.03.08 - Manage media planning and placement to enhance return on marketing investment. (PR:180), (PR:009), (PR:010), (PR:181), (PR:104)

NCCTE.MH31.04.00 - Understand selling, promotion, product/service management and pricing for the sport and event industries.

NCCTE.MH31.04.01 - Employ sales processes and techniques to enhance customer relationships and to increase the likelihood of making sales. (SE:318)

NCCTE.MH31.04.02 - Employ sales-promotion activities to inform or remind customers of business/product. (PR:192)

NCCTE.MH31.04.03 - Utilize publicity to inform stakeholders of business activities. (PR:057), (PR:182), (PR:183), (PR:184), (PR:185), (PR:186) (SUPPLEMENTAL)

NCCTE.MH31.04.04 - Employ sales-promotion activities to inform or remind customers of business/product. (PR:142), (PR:191)

NCCTE.MH31.04.05 - Position company to acquire desired business image. (PM:144)

NCCTE.MH31.04.06 - Employ sales-promotion activities to inform or remind customers of business/product. (PR:189), (PR:190)

NCCTE.MH31.04.07 - Develop a foundational knowledge of pricing to understand its role in marketing. (PI:047), (PI:048)

NCCTE.MH31.04.08 - Employ sales-promotion activities to inform or remind customers of business/product. (PR:187), (PR:188)

NCCTE.MH31.04.09 - Perform pre-sales activities to facilitate sales presentation. (SE:315), (SE:067)



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NCCTE.MH31.04.10 - Employ sales processes and techniques to enhance customer relationships and to increase the likelihood of making sales. (SE:316), (SE:317)

Course: Sports and Entertainment Marketing II

NCCTE.MH32 - Sports and Entertainment Marketing II

NCCTE.MH32.01.00 - Understand product management, business law, economics, professional development, marketing-information management, information management, promotion, and selling for the sport and event industries.

NCCTE.MH32.01.01 - Position product/services to acquire desired business image. (PM:143)

NCCTE.MH32.01.02 - Acquire knowledge of commerce laws and regulations to continue business operations. (BL:058)

NCCTE.MH32.01.03 - Analyze cost/profit relationships to guide business decision-making. (EC:053)

NCCTE.MH32.01.04 - Acquire information about the sport/event industry to aid in making career choices. (PD:279)

NCCTE.MH32.01.05 - Determine global trade's impact on business decision-making. (EC:059)

NCCTE.MH32.01.06 - Collect secondary marketing data to ensure accuracy and adequacy of information for decision making. (IM:187)

NCCTE.MH32.01.07 - Utilize information-technology tools to manage and perform work responsibilities. (NF:185)

NCCTE.MH32.01.08 - Interpret marketing information to test hypotheses and/or to resolve issues. (IM:191)

NCCTE.MH32.01.09 - Acquire information to guide business decision-making. (NF:065)

NCCTE.MH32.01.10 - Report findings to communicate research information to others. (IM:192), (IM:193)

NCCTE.MH32.01.11 - Manage promotional activities to maximize return on promotional investments. (PR:155)

NCCTE.MH32.01.12 - Perform pre-sales activities to facilitate sales presentation. (SE:324)

NCCTE.MH32.01.13 - Conduct post-sales follow-up activities to foster ongoing relationships with customers. (SE:325)

NCCTE.MH32.01.14 - Employ sales processes and techniques to enhance customer relationships and to increase the likelihood of making sales. (SE:319), (SE:321)

NCCTE.MH32.01.15 - Manage promotional activities to maximize return on promotional investments. (PR:211)

NCCTE.MH32.02.00 - Understand selling, promotion, and marketing-information management for the sport and event industries.

NCCTE.MH32.02.01 - Employ sales processes and techniques to enhance customer relationships and to increase the likelihood of making sales. (SE:322)

NCCTE.MH32.02.02 - Manage promotional activities to maximize return on promotional investments. (PR:212)



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NCCTE.MH32.02.03 - Employ sales processes and techniques to enhance customer relationships and to increase the likelihood of making sales. (SE:348), (SE:323)

NCCTE.MH32.02.04 - Conduct post-sales follow-up activities to foster ongoing relationships with customers. (SE:326)

NCCTE.MH32.02.05 - Utilize publicity/public-relations activities to create goodwill with stakeholders. (PR:136), (PR:195)

NCCTE.MH32.02.06 - Employ sales-promotion activities to inform or remind customers of business/product. (PR:198), (PR:199), (PR:213), (PR:214)

NCCTE.MH32.02.07 - Position products/services to acquire desired business image. (PR:151), (PR:153)

NCCTE.MH32.02.08 - Work with advertising agency to create marketing communications. (PR:081)

NCCTE.MH32.02.09 - Manage promotional activities to maximize return on promotional investments. (PR:210), (PR:098), (PR:076), (PR:209)

NCCTE.MH32.03.00 - Understand customer relationships, quality assurance, pricing, product/service management, and financial analysis for the sport and event industries.

NCCTE.MH32.03.01 - Acquire product knowledge to communicate product benefits and to ensure appropriateness of product for the customer. (SE:314)

NCCTE.MH32.03.02 - Understand operation's role and function in business to value its contributions to a company. (OP:343)

NCCTE.MH32.03.03 - Employ pricing strategies to determine prices. (PI:049), (PI:006), (PI:046), (PI:033)

NCCTE.MH32.03.04 - Employ product-mix strategies to meet customer expectations. (PM:166), (PM:148), (PM:149)

NCCTE.MH32.03.05 - Employ sales processes and techniques to enhance customer relationships and to increase the likelihood of making sales. (SE:320)

NCCTE.MH32.03.06 - Employ product-mix strategies to meet customer expectations. (PM:086), (PM:147)

NCCTE.MH32.03.07 - Control sales activities to meet sales goals/objectives. (SE:327)

NCCTE.MH32.03.08 - Identify potential business threats and opportunities to protect a business's financial well-being. (FI:596), (FI:597)

NCCTE.MH32.03.09 - Implement quality assurance processes to minimize potential loss. (OP:345), (OP:093)

NCCTE.MH32.03.10 - Employ product-mix strategies to meet customer expectations. (PM:150)

NCCTE.MH32.04.00 - Understand business decision making and marketing planning for the sport and event industries.

NCCTE.MH32.04.01 - Acquire foundational knowledge of marketing-information management to understand its nature and scope. (IM:182), (IM:252)

NCCTE.MH32.04.02 - Acquire information to guide business decision making. (NF:187)



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.MH32.04.03 - Apply quality assurances to enhance product/service offerings. (PM:146)

NCCTE.MH32.04.04 - Select target market appropriate for product/business to obtain the best return on marketing investment (ROMI). (MP:036), (MP:005)

NCCTE.MH32.04.05 - Employ marketing-information to develop a marketing plan. (MP:009), (MP:010), (MP:012), (MP:014), (MP:018)

NCCTE.MH32.04.06 - Assess marketing strategies to improve return on marketing investment (ROMI). (MP:022)

Course: Hospitality and Tourism

NCCTE.2015.MH42 - Hospitality and Tourism

NCCTE.2015.MH42.01.00 - Understand the complexity of hospitality and tourism destinations.

NCCTE.2015.MH42.01.01 - Identify career opportunities in the hospitality and tourism industry.

NCCTE.2015.MH42.01.02 - Understand the types and interrelationships of hospitality and tourism destinations.

NCCTE.2015.MH42.01.03 - Understand how inter-organizational systems operations impact products and services offered at hospitality and tourism destinations.

NCCTE.2015.MH42.02.00 - Apply procedures for maximizing on resources at hospitality and tourism destinations.

NCCTE.2015.MH42.02.01 - Understand the impact of the hospitality and tourism destinations on an economy.

NCCTE.2015.MH42.02.02 - Understand forecasting skills to identify potential cost and profit for hospitality and tourism destinations.

NCCTE.2015.MH42.02.03 - Apply skills to manage plans and budgets to accomplish goals and objectives of hospitality and tourism destinations.

NCCTE.2015.MH42.03.00 - Understand hospitality marketing.

NCCTE.2015.MH42.03.01 - Understand categories and motivation of travelers and tourists.

NCCTE.2015.MH42.03.02 - Understand how cultural diversity impacts products and services offered by hospitality and tourism destinations.

NCCTE.2015.MH42.03.03 - Understand how geography impacts hospitality and tourism destinations.

NCCTE.2015.MH42.03.04 - Understand destination marketing strategies.

NCCTE.2015.MH42.04.00 - Understand the impact of customer service at hospitality and tourism destinations.

NCCTE.2015.MH42.04.01 - Understand customer service skills to ensure guest and customer satisfaction at hospitality and tourism destinations.

NCCTE.2015.MH42.04.02 - Understand fostering relationships with clientele for the hospitality and tourism destinations.

NCCTE.2015.MH42.05.00 - Understand safety and security and legal and ethical responsibilities at hospitality and tourism destinations.



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NCCTE.2015.MH42.05.01 - Understand rules and laws designed to promote safety and security at hospitality and tourism destinations.

NCCTE.2015.MH42.05.02 - Understand ethical and legal implications for guest, customer, and employee conduct at hospitality and tourism destinations.

Course: Fashion Merchandising

NCCTE.2015.MI21 - Fashion Merchandising

NCCTE.2015.MI21.01.00 - Understand the fundamentals of the fashion industry.

NCCTE.2015.MI21.01.01 - Understand the progression of fashion.

NCCTE.2015.MI21.01.02 - Understand the basics of textile fabrics and finishes.

NCCTE.2015.MI21.01.03 - Understand the categories of fashion merchandise.

NCCTE.2015.MI21.02.00 - Understand the fashion merchandising process.

NCCTE.2015.MI21.02.01 - Understand the role of distribution in the fashion industry.

NCCTE.2015.MI21.02.02 - Understand the preparation of fashion merchandise buying plans.

NCCTE.2015.MI21.02.03 - Understand fashion merchandise buying.

NCCTE.2015.MI21.02.04 - Understand the global nature of fashion.

NCCTE.2015.MI21.03.00 - Understand fashion trends and forecasting.

NCCTE.2015.MI21.03.01 - Understand the use of data in fashion forecasting.

NCCTE.2015.MI21.03.02 - Understand the use of technologies in fashion merchandising and marketing.

NCCTE.2015.MI21.04.00 - Understand the marketing of fashion.

NCCTE.2015.MI21.04.01 - Understand the fashion retail elements of marketing.

NCCTE.2015.MI21.04.02 - Understand pricing strategies in the fashion industry.

NCCTE.2015.MI21.05.00 - Understand the selling of fashion.

NCCTE.2015.MI21.05.01 - Understand the impact of customer service in the fashion industry.

NCCTE.2015.MI21.05.02 - Understand retail selling processes the fashion industry.

NCCTE.2015.MI21.06.00 - Understand the promotion of a fashion image.

NCCTE.2015.MI21.06.01 - Understand the promotional messaging of fashion.

NCCTE.2015.MI21.06.02 - Understand visual merchandising and display techniques of fashion.

NCCTE.2015.MI21.06.03 - Understand promoting a fashion image through special events.

NCCTE.2015.MI21.06.04 - Understand the steps of fashion promotion.

Course: Sales | **New**

NCCTE.2020.MI31 - Sales I

NCCTE.2020.MI31.01.00 - Understand employment opportunities, effective communication, personal branding, and emerging trends in selling.

NCCTE.2020.MI31.01.01 - Explain employment opportunities in professional selling.

NCCTE.2020.MI31.01.02 - Explain the nature of effective communication.

NCCTE.2020.MI31.01.03 - Understand the importance of personal branding to the selling process



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.MI31.01.04 - Identify emerging trends for use in selling

NCCTE.2020.MI31.02.00 - Understand the nature and scope of selling, customer relationships, the selling process, and the company's image and brand

NCCTE.2020.MI31.02.01 - Explain the nature and scope of the selling function.

NCCTE.2020.MI31.02.02 - Explain the role of customer service as a component of selling relationships.

NCCTE.2020.MI31.02.03 - Understand how to handle customer/client complaints and difficult customers.

NCCTE.2020.MI31.02.04 - Explain key factors in building a clientele.

NCCTE.2020.MI31.02.05 - Explain the selling process.

NCCTE.2020.MI31.02.06 - Identify and determine how to reinforce a company's brand promise.

NCCTE.2020.MI31.02.07 - Explain the use of brand names in selling.

NCCTE.2020.MI31.03.00 - Understand communications channels and the use of technology in selling.

NCCTE.2020.MI31.03.01 - Identify communications channels used in sales promotion.

NCCTE.2020.MI31.03.02 - Describe the use and impact of technology in the selling function.

NCCTE.2020.MI31.04.00 - Understand how to acquire product knowledge to communicate product benefits and to ensure appropriateness of product for the customer.

NCCTE.2020.MI31.04.01 - Acquire product information for use in selling.

NCCTE.2020.MI31.04.02 - Identify product features and benefits.

NCCTE.2020.MI31.04.03 - Recommend specific product.

NCCTE.2020.MI31.05.00 - Understand the role of purchasing agent, the buying behaviors of the customer, and data used in making selling decisions

NCCTE.2020.MI31.05.01 - Understand the role of the purchasing agent.

NCCTE.2020.MI31.05.02 - Explain factors that influence customer buying behavior.

NCCTE.2020.MI31.05.03 - Identify data monitored for marketing decision making.

Course: Sales II **New**

NCCTE.2020.MI32 - Sales II

NCCTE.2020.MI32.01.00 - Understand sales processes and techniques to enhance customer relationships and to increase the likelihood of making sales.

NCCTE.2020.MI32.01.01 - Establish relationship with customer/client.

NCCTE.2020.MI32.01.02 - Determine prospect's buying motives for use in selling.

NCCTE.2020.MI32.01.03 - Determine customer/client needs.

NCCTE.2020.MI32.01.04 - Assess prospect's needs in relation to product offering.

NCCTE.2020.MI32.01.05 - Respond appropriately to prospect's individual personality type.

NCCTE.2020.MI32.01.06 - Propose solution to prospect's needs/challenges (sales talk, sales proposal presentation).

NCCTE.2020.MI32.01.07 - Facilitate prospect's buying decisions.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.MI32.01.08 - Convert customer/client objections into selling points.Â

NCCTE.2020.MI32.01.09 - Demonstrate good/service.

NCCTE.2020.MI32.01.10 - Demonstrate suggestion selling.

NCCTE.2020.MI32.01.11 - Negotiate sales terms/agreement.

NCCTE.2020.MI32.01.12 - Close the sale.

NCCTE.2020.MI32.02.00 - Understand pre-sales activities used to facilitate sales presentations.

NCCTE.2020.MI32.02.01 - Conduct pre-visit research (e.g., customer's markets/products, customer's competitors, and competitors' offerings).Â

NCCTE.2020.MI32.02.02 - Prospect for customers.Â

NCCTE.2020.MI32.02.03 - Conduct preliminary customer/client qualification.Â

NCCTE.2020.MI32.02.04 - Determine sales strategies.

NCCTE.2020.MI32.02.05 - Explain the use of marketing-research information in professional selling.

NCCTE.2020.MI32.02.06 - Prepare for sales presentations.

NCCTE.2020.MI32.03.00 - Understand post-sales follow-up activities to foster ongoing relationships with customers.

NCCTE.2020.MI32.03.01 - Plan follow-up strategies for use in selling.

NCCTE.2020.MI32.03.02 - Prepare sales reports.

NCCTE.2020.MI32.03.03 - Conduct self-assessment of sales performance.

NCCTE.2020.MI32.03.04 - Gather customer/client feedback to improve service.

NCCTE.2020.MI32.03.05 - Provide post-sales service.

NCCTE.2020.MI32.04.00 - Understand legal and ethical considerations, regulations, and selling policies.

NCCTE.2020.MI32.04.01 - Explain legal and ethical considerations in selling.

NCCTE.2020.MI32.04.02 - Describe the nature of selling regulations and policies.

Course: Multichannel Merchandising **Updated**

NCCTE.2020.MI42 - Multichannel Merchandising

NCCTE.2020.MI42.01.00 - Understand the impact of ethical behavior in the merchandising industry.

NCCTE.2020.MI42.01.01 - Understand the nature of personal and business ethics.

NCCTE.2020.MI42.01.02 - Understand the role of ethics for employees and managers in the workplace.

NCCTE.2020.MI42.02.00 - Understand merchandising operational and management procedures.

NCCTE.2020.MI42.02.01 - Understand management functions, styles, and levels used in merchandising operations.

NCCTE.2020.MI42.02.02 - Understand operational procedures in merchandising.

NCCTE.2020.MI42.02.03 - Understand entrepreneurial concepts involved in merchandising.

NCCTE.2020.MI42.03.00 - Understand multichannel retailing.

NCCTE.2020.MI42.03.01 - Understand trends in retail.



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NCCTE.2020.MI42.03.02 - Understand E-tailing operations.

NCCTE.2020.MI42.04.00 - Understand promotional procedures for merchandise marketing.

NCCTE.2020.MI42.04.01 - Understand components of a merchandising promotion plan.

NCCTE.2020.MI42.04.02 - Understand promotional procedures for special events and products.

NCCTE.2020.MI42.04.03 - Understand visual merchandising techniques.

NCCTE.2020.MI42.05.00 - Apply the principles of merchandise buying and selling.

NCCTE.2020.MI42.05.01 - Understand wholesale buying as it relates to the retail industry.

NCCTE.2020.MI42.05.02 - Understand the role of the consumer in the retail industry.

NCCTE.2020.MI42.05.03 - Apply effective selling techniques.

NCCTE.2020.MI42.06.00 - Understand the Lean Canvas Business Model.

NCCTE.2020.MI42.06.01 - Understand components of the Lean Canvas Business Model.

NCCTE.2020.MI42.06.02 - Understand interrelationships of the components of the Lean Canvas Business Model.

Course: Marketing **Updated**

NCCTE.2020.MM51 - Marketing

NCCTE.2020.MM51.01.00 - Understand marketing, marketing functions, marketing mix components (4 P's), marketing strategies and tactics, target market identification, segmentation, the need for marketing research and data, and career opportunities in marketing.

NCCTE.2020.MM51.01.01 - Explain marketing and its importance in a global economy

NCCTE.2020.MM51.01.02 - Describe marketing functions and related activities

NCCTE.2020.MM51.01.03 - Explain employment opportunities in marketing

NCCTE.2020.MM51.01.04 - Explain the concept of marketing strategies

NCCTE.2020.MM51.01.05 - Explain the concept of market and market identification

NCCTE.2020.MM51.01.06 - Describe the need for marketing data

NCCTE.2020.MM51.02.00 - Understand product/service management, branding, product life cycles, new product development, marketing of services, product positioning and the technological, legal, and ethical components of product/service management.

NCCTE.2020.MM51.02.01 - Explain the nature and scope of the product/service management function.

NCCTE.2020.MM51.02.02 - Explain the concept of product mix.

NCCTE.2020.MM51.02.03 - Identify the impact of product life cycles on marketing decisions

NCCTE.2020.MM51.02.04 - Explain business ethics and describe the use of technology in product/service management.

NCCTE.2020.MM51.03.00 - Understand promotion and types of promotion including selling and the technological, legal, and ethical components of promotion.

NCCTE.2020.MM51.03.01 - Explain the role of promotion as a marketing function

NCCTE.2020.MM51.03.02 - Explain the types of promotion

NCCTE.2020.MM51.03.03 - Identify the elements of the promotional mix.



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NCCTE.2020.MM51.03.04 - Explain the nature and scope of the selling function

NCCTE.2020.MM51.03.05 - Explain the role of customer service as a component of selling relationships

NCCTE.2020.MM51.03.06 - Explain the selling process

NCCTE.2020.MM51.04.00 - Understand pricing and factors affecting pricing decisions including technological, ethical and legal considerations.

NCCTE.2020.MM51.04.01 - Explain the nature and scope of the pricing function

NCCTE.2020.MM51.04.02 - Describe the role of business ethics and legal considerations in pricing

NCCTE.2020.MM51.04.03 - Explain factors affecting pricing decisions

NCCTE.2020.MM51.05.00 - Understand channels of distribution and supply chain management and the technological, legal, and ethical components of channel management.

NCCTE.2020.MM51.05.01 - Explain the nature of channels of distribution

NCCTE.2020.MM51.05.02 - Explain the nature and scope of channel management

NCCTE.2020.MM51.05.03 - Describe the use of technology in the channel management function

Career Development Education

Grade: Grade 9 - 12

Course: Career Management

NCCTE.2015.CC45 - Career Management

NCCTE.2015.CC45.01.00 - Understand Personal Social Development.

NCCTE.2015.CC45.01.01 - Develop understanding of yourself to build and maintain a positive self-concept.

NCCTE.2015.CC45.01.02 - Develop positive interpersonal skills including respect for diversity.

NCCTE.2015.CC45.01.03 - Integrate growth and change into your career development.

NCCTE.2015.CC45.01.04 - Balance personal, leisure, community, learner, family, and work roles.

NCCTE.2015.CC45.02.00 - Understand Educational Achievement and Lifelong Learning.

NCCTE.2015.CC45.02.01 - Attain educational achievement and performance levels needed to reach personal and career goals.

NCCTE.2015.CC45.02.02 - Participate in ongoing, lifelong learning experiences to enhance your ability to function effectively in a diverse and changing economy.

NCCTE.2015.CC45.03.00 - Understand Career Management.

NCCTE.2015.CC45.03.01 - Create and manage a career plan that meets your career goals.

NCCTE.2015.CC45.03.02 - Use a process of decision-making as one component of career development.

NCCTE.2015.CC45.03.03 - Use accurate, current, and unbiased career information during career planning and management.

NCCTE.2015.CC45.03.04 - Master academic, occupational, and general employability skills in order to obtain, create, maintain, and/or advance your employment.

NCCTE.2015.CC45.03.05 - Integrate changing employment trends, societal needs, and economic



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conditions into a career plan.

Computer Science and Information Technology Education

Grade: Grade 9 - 12

Course: Cybersecurity Essentials **New**

NCCTE.2020.BC10 - Cybersecurity Essentials

NCCTE.2020.BC10.01.00 - Understand the foundations of cybersecurity.

NCCTE.2020.BC10.01.01 - Identify the cybersecurity landscape and how vulnerabilities impact enterprise level IT infrastructure systems.

NCCTE.2020.BC10.01.02 - Identify the roles performed by major threat actors in modern cyberattacks and their primary motivations.

NCCTE.2020.BC10.01.03 - Compare various cyberattack types and techniques.

NCCTE.2020.BC10.01.04 - Explain how DDOS, Wifi exploits, and advanced threat actions are used to perform cyberattacks.

NCCTE.2020.BC10.01.05 - Compare compliance and security.

NCCTE.2020.BC10.01.06 - Identify the fundamentals of perimeter-based and Zero Trust network security models.

NCCTE.2020.BC10.01.07 - Explain how virtualized data center security differs from physical data center security.

NCCTE.2020.BC10.01.08 - Explain cloud computing security and how it impacts organizational networks.

NCCTE.2020.BC10.01.09 - Compare various network security devices.

NCCTE.2020.BC10.02.00 - Understand the cybersecurity gateway.

NCCTE.2020.BC10.02.01 - Demonstrate knowledge of interconnected technology in daily communication.

NCCTE.2020.BC10.02.02 - Identify systems that need protection.

NCCTE.2020.BC10.02.03 - Examine cybersecurity landscape environments, attack threat vectors, exposure vulnerabilities, and risk factors.

NCCTE.2020.BC10.02.04 - Demonstrate knowledge of physical, logical, and virtual addressing using subnet mask schemes.

NCCTE.2020.BC10.02.05 - Explain the TCP/IP Model and correctly identify the functions of the specific layers including packet encapsulation and lifecycle.

NCCTE.2020.BC10.02.06 - Understand common use of cloud, virtualization, storage, backup, and recovery procedures.

NCCTE.2020.BC10.02.07 - Apply knowledge and skills to plan, design, implement, troubleshoot, and maintain network infrastructure environments.

NCCTE.2020.BC10.03.00 - Understand cybersecurity essentials.

NCCTE.2020.BC10.03.01 - Formulate an industry-standard design to protect infrastructure against cybersecurity threats.



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NCCTE.2020.BC10.03.02 - Apply advanced filtering methodologies to protect against all known and unknown attack vectors.

NCCTE.2020.BC10.03.03 - Understand the basics of cryptography.

NCCTE.2020.BC10.03.04 - Demonstrate the ability to assess and harden endpoints based on security policies.

NCCTE.2020.BC10.03.05 - Identify uses of advanced malware research and analysis to provide enhanced protection for enterprise networks.

NCCTE.2020.BC10.03.06 - Understand mobile and cloud-based connection technologies.

Course: Foundations of Information Technology

NCCTE.BI10 - Foundations of Information Technology

NCCTE.BI10.01.00 - Understand Information Technology career pathways and foundation skills.

NCCTE.BI10.01.01 - Understand information technologies and related career pathways.

NCCTE.BI10.01.02 - Understand career and workplace expectations.

NCCTE.BI10.02.00 - Understand the Information Support and Services pathway.

NCCTE.BI10.02.01 - Understand how computing devices work.

NCCTE.BI10.02.02 - Understand basic troubleshooting of hardware and software.

NCCTE.BI10.02.03 - Explore advanced concepts in Information Support and Services.

NCCTE.BI10.03.00 - Understand the Network Systems pathway.

NCCTE.BI10.03.01 - Understand the physical components of a network.

NCCTE.BI10.03.02 - Understand network management.

NCCTE.BI10.03.03 - Explore advanced concepts in network systems.

NCCTE.BI10.04.00 - Understand the Web and Digital Communications pathway.

NCCTE.BI10.04.01 - Understand how multimedia is used on the Web.

NCCTE.BI10.04.02 - Understand how webpages are created and used.

NCCTE.BI10.04.03 - Explore advanced concepts in web development.

NCCTE.BI10.05.00 - Understand the Programming and Software Development pathway.

NCCTE.BI10.05.01 - Understand software types and uses.

NCCTE.BI10.05.02 - Understand beginning programming concepts.

NCCTE.BI10.05.03 - Explore advanced concepts in Programming and Software Development.

NCCTE.BI10.06.00 - Understand the evolution of information technology and career options in Information Technology.

NCCTE.BI10.06.01 - Understand the evolution of information technology.

NCCTE.BI10.06.02 - Understand careers in information technology.

Course: CompTIA IT Fundamentals **Updated**

NCCTE.2020.BI12 - CompTIA IT Fundamentals

NCCTE.2020.BI12.01.00 - Understand computing basics and computer hardware.

NCCTE.2020.BI12.01.01 - Understand computing basics.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.BI12.01.02 - Identify the types of computing devices.

NCCTE.2020.BI12.01.03 - Identify internal computer system components.

NCCTE.2020.BI12.01.04 - Identify common computer connector types.

NCCTE.2020.BI12.01.05 - Identify common peripheral devices.

NCCTE.2020.BI12.01.06 - Understand safety issues and environmental concepts in computing.

NCCTE.2020.BI12.01.07 - Understand the value of data and information.

NCCTE.2020.BI12.01.08 - Understand information technology career pathways. (Supplemental)

NCCTE.2020.BI12.02.00 - Understand computer software and software development concepts.

NCCTE.2020.BI12.02.01 - Understand types of software and their uses.

NCCTE.2020.BI12.02.02 - Understand working with files, folders, and applications.

NCCTE.2020.BI12.02.03 - Identify programming language categories.

NCCTE.2020.BI12.02.04 - Understand programming organizational techniques and interpret logic.

NCCTE.2020.BI12.02.05 - Understand the purpose and use of programming concepts.

NCCTE.2020.BI12.03.00 - Understand computer workstation setup and issue troubleshooting.

NCCTE.2020.BI12.03.01 - Identify the steps to set up a basic computer workstation.

NCCTE.2020.BI12.03.02 - Understand how to back up and restore data.

NCCTE.2020.BI12.03.03 - Understand troubleshooting hardware and software.

NCCTE.2020.BI12.03.04 - Identify the factors that influence the computer purchasing decision making process. (supplemental)

NCCTE.2020.BI12.04.00 - Understand networking.

NCCTE.2020.BI12.04.01 - Understand network characteristics, data sharing, and storage methods.

NCCTE.2020.BI12.04.02 - Understand how to install and configure a SOHO router.

NCCTE.2020.BI12.05.00 - Understand wireless technology and mobile devices.

NCCTE.2020.BI12.05.01 - Understand how to configure wireless devices.

NCCTE.2020.BI12.05.02 - Understand the basics of using wireless devices.

NCCTE.2020.BI12.06.00 - Understand computer security.

NCCTE.2020.BI12.06.01 - Identify the types of computer security threats.

NCCTE.2020.BI12.06.02 - Understand computer user account settings to secure computing devices.

NCCTE.2020.BI12.06.03 - Identify secure web browsing practices.

NCCTE.2020.BI12.07.00 - Understand database fundamentals

NCCTE.2020.BI12.07.01 - Understand database concepts and the purpose of a database.

NCCTE.2020.BI12.07.02 - Identify various database structures.

NCCTE.2020.BI12.07.03 - Understand methods used to interface with databases.

Course: App Development with Swift, Level 1 **New**

NCCTE.2020.BL53 - App Development with Swift - Level 1

NCCTE.2020.BL53.01.00 - Understand App Development with Swift (Unit 1).



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.BL53.01.01 - Demonstrate the basics of data, operators, and control flow in Swift.

NCCTE.2020.BL53.01.02 - Explain documentation, debugging, Xcode, building and running an app, and the Interface Builder.

NCCTE.2020.BL53.01.03 - Construct a simple flashlight app, Light, a guided project.

NCCTE.2020.BL53.02.00 - Understand the UIKit (Unit 2)

NCCTE.2020.BL53.02.01 - Explain Swift strings, functions, structures, collections, and loops.

NCCTE.2020.BL53.02.02 - Demonstrate the UIKit and how to display data using Auto Layout and stack views.

NCCTE.2020.BL53.02.03 - Build a word-guessing game app in the guided project, Apple Pie.

NCCTE.2020.BL53.03.00 - Understand navigation and workflows (Unit 3).

NCCTE.2020.BL53.03.01 - Outline simple workflows and navigation hierarchies using navigation controllers, tab bar controllers, and segue.

NCCTE.2020.BL53.03.02 - Explain optionals and enumerations.

NCCTE.2020.BL53.03.03 - guided project, Personality Quiz, a personalized survey that reveals a fun response to the user

NCCTE.2020.BL53.04.00 - Understand Tables and Persistence (Unit 4).

NCCTE.2020.BL53.04.01 - Students find out about scroll views, table views, and building complex input screens.

NCCTE.2020.BL53.04.02 - Explore how to save data, share data to other apps, and work with images in the user's photo library.

NCCTE.2020.BL53.04.03 - Apply new skills in the guided project, List, a task-tracking app that allows the user to add, edit, and delete items in a familiar tablebased interface.

NCCTE.2020.BL53.05.00 - Understand how to work with the web.

NCCTE.2020.BL53.05.01 - Explain animations, concurrency, and working with the web.

NCCTE.2020.BL53.05.02 - Apply new skills in guided project, Restaurant, a customizable menu app that displays the available dishes from a restaurant and allows the user to submit an order.

NCCTE.2020.BL53.06.00 - Create prototype and plan project for new app.

NCCTE.2020.BL53.06.01 - Design, prototype, and architect new and unique app projects.

Course: Microsoft Word and PowerPoint **Updated**

NCCTE.2020.BM10 - Microsoft Word and PowerPoint

NCCTE.2020.BM10.01.00 - Understand basic and intermediate word processing software skills.

NCCTE.2020.BM10.01.01 - Managing documents and options.

NCCTE.2020.BM10.01.02 - Managing edits and document layouts.

NCCTE.2020.BM10.01.03 - Working with objects.

NCCTE.2020.BM10.01.04 - Inserting and managing tables and lists.

NCCTE.2020.BM10.01.05 - Managing references and finalizing documents.

NCCTE.2020.BM10.02.00 - Understand advanced word processing software skills.

NCCTE.2020.BM10.02.01 - Updating Word settings.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.BM10.02.02 - Modifying and creating document styles and templates.

NCCTE.2020.BM10.02.03 - Creating reusable content and custom design elements.

NCCTE.2020.BM10.02.04 - Creating reference tables and restricting editing.

NCCTE.2020.BM10.02.05 - Managing document content.

NCCTE.2020.BM10.02.06 - Creating and managing macros.

NCCTE.2020.BM10.02.07 - Managing customer lists and creating mailings.

NCCTE.2020.BM10.03.00 - Understand basic and intermediate presentation software skills.

NCCTE.2020.BM10.03.01 - Introducing the PowerPoint fundamentals.

NCCTE.2020.BM10.03.02 - Managing content on slides.

NCCTE.2020.BM10.03.03 - Adding visuals to presentations.

NCCTE.2020.BM10.03.04 - Working with advanced visuals.

NCCTE.2020.BM10.03.05 - Organizing and printing presentations.

NCCTE.2020.BM10.03.06 - Configuring slideshows.

NCCTE.2020.BM10.03.07 - Managing slide masters and presentation settings.

Course: Microsoft Excel **Updated**

NCCTE.2020.BM20 - Microsoft Excel

NCCTE.2020.BM20.01.00 - Understand basic and intermediate spreadsheet software skills.

NCCTE.2020.BM20.01.01 - Introduction to Excel fundamentals.

NCCTE.2020.BM20.01.02 - Managing worksheets and workbooks.

NCCTE.2020.BM20.01.03 - Formatting cells.

NCCTE.2020.BM20.01.04 - Managing tables and range data.

NCCTE.2020.BM20.01.05 - Using formulas and functions.

NCCTE.2020.BM20.01.06 - Getting and transforming data.

NCCTE.2020.BM20.01.07 - Visualizing data.

NCCTE.2020.BM20.01.08 - Preparing to print and checking for issues.

NCCTE.2020.BM20.02.00 - Understand the advanced spreadsheet software skills.

NCCTE.2020.BM20.02.01 - Managing and formatting data.

NCCTE.2020.BM20.02.02 - Using advanced formulas.

NCCTE.2020.BM20.02.03 - Validating and auditing data.

NCCTE.2020.BM20.02.04 - Analyzing data.

NCCTE.2020.BM20.02.05 - Using simple macros.

NCCTE.2020.BM20.02.06 - Using Microsoft PivotTables and Microsoft PivotCharts.

NCCTE.2020.BM20.02.07 - Collaborating with other people.

Course: Microsoft Access **New**

NCCTE.2020.BM40 - Microsoft Access

NCCTE.2020.BM40.01.00 - Understand what a database is and how it can be used in business

NCCTE.2020.BM40.01.01 - Understand core database concepts



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.BM40.01.02 - Create database objects

NCCTE.2020.BM40.01.03 - Manipulating data

NCCTE.2020.BM40.01.04 - Understanding data storage

NCCTE.2020.BM40.01.05 - Administering a database

NCCTE.2020.BM40.02.00 - Understand basic database software skills using Microsoft Access 2016.

NCCTE.2020.BM40.02.01 - Database Essentials

NCCTE.2020.BM40.02.02 - Creating Database Tables

NCCTE.2020.BM40.02.03 - Working with Tables and Database Records

NCCTE.2020.BM40.02.04 - Modifying Tables and Fields

NCCTE.2020.BM40.02.05 - Creating Forms

NCCTE.2020.BM40.02.06 - Creating Reports

NCCTE.2020.BM40.02.07 - Creating and Modifying Queries

NCCTE.2020.BM40.02.08 - Using Controls in Reports and Forms

NCCTE.2020.BM40.03.00 - Understand advanced database software skills using Microsoft Access 2016.

NCCTE.2020.BM40.03.01 - Advanced Tables

NCCTE.2020.BM40.03.02 - Advanced Forms

NCCTE.2020.BM40.03.03 - Advanced Reports

NCCTE.2020.BM40.03.04 - Advanced Queries

NCCTE.2020.BM40.03.05 - Displaying and Sharing Data

Course: Network Administration I **Updated**

NCCTE.2020.BN20 - Network Administration I

NCCTE.2020.BN20.01.00 - Understand networking concepts.

NCCTE.2020.BN20.01.01 - Explain the purposes and uses of ports and protocols.

NCCTE.2020.BN20.01.02 - Explain devices, applications, protocols, and services at their appropriate OSI layers.

NCCTE.2020.BN20.01.03 - Explain the concepts and characteristics of routing and switching.

NCCTE.2020.BN20.01.04 - Configure the appropriate IP addressing components.

NCCTE.2020.BN20.01.05 - Compare the characteristics of network topologies, types, and technologies.

NCCTE.2020.BN20.01.06 - Implement the appropriate wireless technologies and configurations.

NCCTE.2020.BN20.01.07 - Summarize cloud concepts and their purposes.

NCCTE.2020.BN20.01.08 - Explain the functions of network services.

NCCTE.2020.BN20.02.00 - Understand infrastructure.

NCCTE.2020.BN20.02.01 - Deploy the appropriate cabling solution.

NCCTE.2020.BN20.02.02 - Identify the appropriate placement of networking devices on a network and install and configure them.

NCCTE.2020.BN20.02.03 - Explain the purposes and use cases for advanced networking devices.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.BN20.02.04 - Explain the purposes of virtualization and network storage technologies.

NCCTE.2020.BN20.02.05 - Compare WAN technologies.

NCCTE.2020.BN20.03.00 - Understand network operations.

NCCTE.2020.BN20.03.01 - Use appropriate documentation and diagrams to manage the network.

NCCTE.2020.BN20.03.02 - Compare business continuity and disaster recovery concepts.

NCCTE.2020.BN20.03.03 - Explain common scanning, monitoring and patching processes and summarize their expected outputs.

NCCTE.2020.BN20.03.04 - Use remote access methods.

NCCTE.2020.BN20.03.05 - Identify policies and best practices.

Course: Network Administration II **Updated**

NCCTE.2020.BN22 - Network Administration II

NCCTE.2020.BN22.01.00 - Understand network security.

NCCTE.2020.BN22.01.01 - Understand the purposes of physical security devices.

NCCTE.2020.BN22.01.02 - Explain authentication and access controls.

NCCTE.2020.BN22.01.03 - Secure a basic wireless network.

NCCTE.2020.BN22.01.04 - Understand common networking attacks.

NCCTE.2020.BN22.01.05 - Implement network device hardening.

NCCTE.2020.BN22.01.06 - Explain common mitigation techniques and their purposes.

NCCTE.2020.BN22.02.00 - Understand network troubleshooting and tools.

NCCTE.2020.BN22.02.01 - Explain the network troubleshooting methodology.

NCCTE.2020.BN22.02.02 - Use the appropriate tool.

NCCTE.2020.BN22.02.03 - Troubleshoot common wired connectivity and performances issues.

NCCTE.2020.BN22.02.04 - Troubleshoot common wireless connectivity and performance issues.

NCCTE.2020.BN22.02.05 - Troubleshoot common network service issues.

Course: Network Security I **New**

NCCTE.2020.BN31 - Network Security I

NCCTE.2020.BN31.01.00 - Understand threats, attacks and vulnerabilities.

NCCTE.2020.BN31.01.01 - Analyze indicators of compromise and determine the type of malware.

NCCTE.2020.BN31.01.02 - Compare types of attacks.

NCCTE.2020.BN31.01.03 - Explain threat actor types and attributes.

NCCTE.2020.BN31.01.04 - Explain penetration testing concepts.

NCCTE.2020.BN31.01.05 - Explain vulnerability scanning concepts.

NCCTE.2020.BN31.01.06 - Explain the impact associated with types of vulnerabilities.

NCCTE.2020.BN31.02.00 - Understand technologies and tools.

NCCTE.2020.BN31.02.01 - Install and configure network components, both hardware and software based, to support organizational security.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.BN31.02.02 - Use appropriate software tools to assess the security posture of an organization.

NCCTE.2020.BN31.02.03 - Troubleshoot common security issues.

NCCTE.2020.BN31.02.04 - Analyze and interpret output from security technologies.

NCCTE.2020.BN31.02.05 - Deploy mobile devices securely.

NCCTE.2020.BN31.02.06 - Implement secure protocols.

NCCTE.2020.BN31.03.00 - Understand architecture and design.

NCCTE.2020.BN31.03.01 - Explain use cases and purpose for frameworks, best practices and secure configuration guides.

NCCTE.2020.BN31.03.02 - Implement secure network architecture concepts.

NCCTE.2020.BN31.03.03 - Implement secure systems design.

NCCTE.2020.BN31.03.04 - Explain the importance of secure staging deployment concepts.

NCCTE.2020.BN31.03.05 - Explain the security implications of embedded systems.

NCCTE.2020.BN31.03.06 - Understand secure application development and deployment concepts.

NCCTE.2020.BN31.03.07 - Understand cloud and virtualization concepts.

NCCTE.2020.BN31.03.08 - Explain how resiliency and automation strategies reduce risk.

NCCTE.2020.BN31.03.09 - Explain the importance of physical security controls.

Course: Network Security II **New**

NCCTE.2020.BN32 - Network Security II

NCCTE.2020.BN32.01.00 - Understand identity and access management.

NCCTE.2020.BN32.01.01 - Compare identity and access management concepts

NCCTE.2020.BN32.01.02 - Install and configure identity and access services.

NCCTE.2020.BN32.01.03 - Implement identity and access management controls.

NCCTE.2020.BN32.01.04 - Differentiate common account management practices.

NCCTE.2020.BN32.02.00 - Understand risk management

NCCTE.2020.BN32.02.01 - Explain the importance of policies, plans, and procedures related to organizational security.

NCCTE.2020.BN32.02.02 - Summarize business impact analysis concepts.

NCCTE.2020.BN32.02.03 - Explain risk management processes and concepts.

NCCTE.2020.BN32.02.04 - Follow incident response procedures.

NCCTE.2020.BN32.02.05 - Summarize basic concepts of forensics.

NCCTE.2020.BN32.02.06 - Explain disaster recovery and continuity of operation concepts.

NCCTE.2020.BN32.02.07 - Compare various types of controls.

NCCTE.2020.BN32.02.08 - Carry out data security and privacy practices.

NCCTE.2020.BN32.03.00 - Understand Cryptography and PKI.

NCCTE.2020.BN32.03.01 - Compare basic concepts of cryptography.

NCCTE.2020.BN32.03.02 - Explain cryptography algorithms and their basic characteristics.

NCCTE.2020.BN32.03.03 - Install and configure wireless security settings.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.BN32.03.04 - Implement public key infrastructure.Â

Course: Introduction to Computer Science **Updated**

NCCTE.2020.BP01 - Introduction to Computer Science

NCCTE.2020.BP01.01.00 - Understand basic coding and computer science using MakeCode.

NCCTE.2020.BP01.01.01 - Making

NCCTE.2020.BP01.01.02 - Algorithms

NCCTE.2020.BP01.01.03 - Variables

NCCTE.2020.BP01.01.04 - Conditionals

NCCTE.2020.BP01.01.05 - Iteration

NCCTE.2020.BP01.01.06 - Coordinate Grid System

NCCTE.2020.BP01.01.07 - Booleans

NCCTE.2020.BP01.01.08 - Bits, Bytes, and Binary

NCCTE.2020.BP01.01.09 - Radio

NCCTE.2020.BP01.01.10 - Arrays

Course: Python Programming I **New**

NCCTE.2020.BP14 - Python Programming I

NCCTE.2020.BP14.01.00 - Understand Python language basics.

NCCTE.2020.BP14.01.01 - Python and Jupyter Basics

NCCTE.2020.BP14.01.02 - Functions

NCCTE.2020.BP14.01.03 - Conditionals

NCCTE.2020.BP14.01.04 - Nesting and Loops

NCCTE.2020.BP14.02.00 - Understand Python data structures.

NCCTE.2020.BP14.02.01 - Sequence Indexes

NCCTE.2020.BP14.02.02 - Sequence Manipulation

NCCTE.2020.BP14.02.03 - Sequence Iteration

NCCTE.2020.BP14.02.04 - Working with Files

NCCTE.2020.BP14.03.00 - Understand how to use Python to develop sustainable code.

NCCTE.2020.BP14.03.01 - Python Modules

NCCTE.2020.BP14.03.02 - More-Powerful Statements

NCCTE.2020.BP14.03.03 - Methods and Structures for Robust Code

NCCTE.2020.BP14.03.04 - Proper Functions

Course: Python Programming II **New**

NCCTE.2020.BP16 - Python Programming II

NCCTE.2020.BP16.01.00 - Understand the basic methods of formatting and outputting data.

NCCTE.2020.BP16.01.01 - Introduce the concept of variables and variable naming conventions.

NCCTE.2020.BP16.01.02 - Present the assignment operator, along with the rules governing the building of expressions.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.BP16.01.03 - Introduce the inputting and converting of data.

NCCTE.2020.BP16.02.00 - Understand Boolean values to compare difference values and control the execution paths.

NCCTE.2020.BP16.02.01 - Introduce the utilization of loops (while and for) and how to control their behavior using the break and continue instructions.

NCCTE.2020.BP16.02.02 - Present the difference between logical and bitwise operations.

NCCTE.2020.BP16.02.03 - Acquaint the student with the concept of lists and list processing, including the iteration provided by the for loop, and slicing.

NCCTE.2020.BP16.02.04 - Explain the idea of multi-dimensional arrays.

NCCTE.2020.BP16.03.00 - Apply the definition and use of functions.

NCCTE.2020.BP16.03.01 - Present the concept of passing arguments in different ways and setting their default values along with the mechanisms of returning the function's results.

NCCTE.2020.BP16.03.02 - Explain name scope issues.

NCCTE.2020.BP16.03.03 - Introduce new data aggregates - tuples and dictionaries - and show their role in data processing.

NCCTE.2020.BP16.04.00 - Utilize python modules.

NCCTE.2020.BP16.04.01 - Present the way in which modules are coupled together to make packages.

NCCTE.2020.BP16.04.02 - Acquaint the student with the concept of an exception and Python's implementation of it, including the try-except instruction, with its applications, and the raise instruction.

NCCTE.2020.BP16.04.03 - Introduce strings and their specific methods, together with their similarities and differences compared to lists.

NCCTE.2020.BP16.05.00 - Apply the fundamentals of OOP (Object Oriented Programming).

NCCTE.2020.BP16.05.01 - Present the standard objective features: inheritance, abstraction, encapsulation, and polymorphism, along with Python-specific issues like instance vs. classvariables, and Python's implementation of inheritance.

NCCTE.2020.BP16.05.02 - Familiarize the student with Python's generators (the yield instruction) and closures (the lambda keyword).

NCCTE.2020.BP16.05.03 - Demonstrate the means Python developers can use to process (create, read, and write) files.

NCCTE.2020.BP16.06.00 - Understand the meaning and impact of Digital Transformation.

NCCTE.2020.BP16.06.01 - Explain how digital transformation affects business, industry, and our daily lives.

NCCTE.2020.BP16.06.02 - Configure an IoT device to connect to the network.

NCCTE.2020.BP16.07.00 - Apply basic programming to support IoT devices.

NCCTE.2020.BP16.07.01 - Use Python to create programs that accept user input and read and write to external files.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.BP16.07.02 - Explain prototyping and its purpose.

NCCTE.2020.BP16.08.00 - Understand how data provides value to digital business and society and the benefits of automation in the digitized world.

NCCTE.2020.BP16.08.01 - Explain the concept of Big Data.

NCCTE.2020.BP16.08.02 - Explain how digitization allows business processes to embrace automation.

NCCTE.2020.BP16.09.00 - Understand the need for enhanced security in the digitized world and opportunities provided by digital transformation.

NCCTE.2020.BP16.09.01 - Explain why security is important in the digitized world..

NCCTE.2020.BP16.09.02 - Explain the challenges and opportunities that exist in the digitized world.

Course: SAS Programming I

NCCTE.BP20 - SAS Programming I

NCCTE.BP20.01.00 - Apply SAS Base programming concepts.

NCCTE.BP20.01.01 - Apply basic Base procedures to access libraries and enhance readability.

NCCTE.BP20.01.02 - Apply editing and debugging techniques to programming procedures.

NCCTE.BP20.01.03 - Apply DATA STEP programming to create and debug data sets.

NCCTE.BP20.01.04 - Apply an understanding of the fundamentals of SAS Syntax and rules of SAS programming to successfully run a program.

NCCTE.BP20.02.00 - Apply techniques to create basic and advanced reports.

NCCTE.BP20.02.01 - Apply PROC PRINT with options to create basic reports.

NCCTE.BP20.02.02 - Apply PROC FORMAT, PROC REPORT, PROC MEANS, PROC SORT AND PROC FREQ to generate advanced reports.

NCCTE.BP20.02.03 - Utilize Output Delivery System.

NCCTE.BP20.03.00 - Apply advanced programming techniques to manipulate data sets.

NCCTE.BP20.03.01 - Apply decision structure methods to conditionally assign values when creating and managing variables.

NCCTE.BP20.03.02 - Apply modifying options to manipulate output.

NCCTE.BP20.03.03 - Apply advanced programming methods to combine and manipulate data sets.

NCCTE.BP20.04.00 - Apply advanced programming techniques to manipulate data.

NCCTE.BP20.04.01 - Apply functions to manipulate and convert data.

NCCTE.BP20.04.02 - Apply iterative processing and SAS arrays.

NCCTE.BP20.05.00 - Apply advanced techniques to read data into SAS and manipulate records.

NCCTE.BP20.05.01 - Apply SAS programming methods to read and handle standard and non-standard numeric data as well as standard and non-standard fixed-field data.

NCCTE.BP20.05.02 - Apply SAS formats and informats to handle SAS date and time values.

NCCTE.BP20.05.03 - Apply advanced SAS programming methods to read multiple records



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

sequentially and non-sequentially to create a single record as well as to create multiple observations from a single record.

NCCTE.BP20.05.04 - Apply advanced SAS programming procedures to read hierarchical files.

Course: Computer Science I **New**

NCCTE.2020.BP41 - Computer Science I

NCCTE.2020.BP41.01.00 - Understand the internet.

NCCTE.2020.BP41.01.01 - Representing and Transmitting Info

NCCTE.2020.BP41.01.02 - Inventing the Internet

NCCTE.2020.BP41.02.00 - Understand Digital information.

NCCTE.2020.BP41.02.01 - Bytes and file sized

NCCTE.2020.BP41.02.02 - Text Compression

NCCTE.2020.BP41.02.03 - Encoding B&W Images

NCCTE.2020.BP41.02.04 - Encoding Color Images

NCCTE.2020.BP41.02.05 - Lossy Compression and File Forms

NCCTE.2020.BP41.02.06 - Rapid Research - Format Showdown

NCCTE.2020.BP41.03.00 - Understand Intro to Programming and Algorithms.

NCCTE.2020.BP41.03.01 - The Need for Programming Languages

NCCTE.2020.BP41.03.02 - The Need for Algorithms

NCCTE.2020.BP41.03.03 - Creativity in Algorithms

NCCTE.2020.BP41.03.04 - Using Simple Commands

NCCTE.2020.BP41.03.05 - Creating Functions

NCCTE.2020.BP41.03.06 - Functions and top-Down Design

NCCTE.2020.BP41.03.07 - APIs and Function Parameters

NCCTE.2020.BP41.03.08 - Creating Functions with Parameters

NCCTE.2020.BP41.03.09 - Looping and Random Numbers

NCCTE.2020.BP41.03.10 - Practice PT - Design a Digital Scene

NCCTE.2020.BP41.04.00 - Understand Big Data and Privacy.

NCCTE.2020.BP41.04.01 - What is Big Data

NCCTE.2020.BP41.04.02 - Finding Trends with Visualizations

NCCTE.2020.BP41.04.03 - Check Your Assumptions

NCCTE.2020.BP41.04.04 - Rapid Research - Data Innovations

NCCTE.2020.BP41.04.05 - Identifying People with Data

NCCTE.2020.BP41.05.00 - Understand Building Apps.

NCCTE.2020.BP41.05.01 - Event-Driven Programming

NCCTE.2020.BP41.05.02 - Programming with Data Structures

NCCTE.2020.BP41.06.00 - Understand Data Tools.

NCCTE.2020.BP41.06.01 - Intro to Data

NCCTE.2020.BP41.06.02 - Good and Bad Data Visualizations



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.BP41.06.03 - Making Data Visualizations

NCCTE.2020.BP41.06.04 - Discover a Data Story

NCCTE.2020.BP41.06.05 - Cleaning Data

NCCTE.2020.BP41.06.06 - Creating Summary Tables

Course: Computer Science II **New**

NCCTE.2020.BP42 - Computer Science II

NCCTE.2020.BP42.01.00 - Understand Introduction to Programming.

NCCTE.2020.BP42.01.01 - Getting Started with Snap!

NCCTE.2020.BP42.01.02 - Gossip and Greet

NCCTE.2020.BP42.01.03 - Modest Art with Polygons

NCCTE.2020.BP42.01.04 - Protecting Your Privacy

NCCTE.2020.BP42.01.05 - Follow the Leader

NCCTE.2020.BP42.01.06 - Projects (Supplemental)

NCCTE.2020.BP42.02.00 - Understand Abstraction.

NCCTE.2020.BP42.02.01 - Improving Games by Using Variables

NCCTE.2020.BP42.02.02 - Making Art by Using Data Structures

NCCTE.2020.BP42.02.03 - Making Decisions by Using Predicates

NCCTE.2020.BP42.02.04 - Dealing with Complexity

NCCTE.2020.BP42.02.05 - Copyrights

NCCTE.2020.BP42.02.06 - Projects (Supplemental)

NCCTE.2020.BP42.03.00 - Understand Data Processing and Lists.

NCCTE.2020.BP42.03.01 - Contact Lists

NCCTE.2020.BP42.03.02 - Tic-Tac-Toe

NCCTE.2020.BP42.03.03 - Robots and Artificial Intelligence

NCCTE.2020.BP42.03.04 - Building Data Visualization Tools

NCCTE.2020.BP42.03.05 - Big Data

NCCTE.2020.BP42.03.06 - Projects (Supplemental)

NCCTE.2020.BP42.04.00 - Understand How the Internet Works.

NCCTE.2020.BP42.04.01 - Reliable Communication

NCCTE.2020.BP42.04.02 - Communication Protocols

NCCTE.2020.BP42.04.03 - Cybersecurity

NCCTE.2020.BP42.04.04 - Community and Online Interactions

NCCTE.2020.BP42.04.05 - Computers and Work

NCCTE.2020.BP42.04.06 - Explore PT Prep

NCCTE.2020.BP42.05.00 - Understand Algorithms and Simulations

NCCTE.2020.BP42.05.01 - Search Algorithms

NCCTE.2020.BP42.05.02 - Models and Simulations

NCCTE.2020.BP42.05.03 - Timing Experiments



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.BP42.05.04 - Unsolvable and undecidable Problems

NCCTE.2020.BP42.05.05 - Computing in War

NCCTE.2020.BP42.05.06 - Projects (Supplemental)

NCCTE.2020.BP42.05.07 - Create PT Prep

Course: Network Engineering Technology I **Updated**

NCCTE.2020.II11 - Cisco Network Engineering Technology I

NCCTE.2020.II11.01.00 - Explain the advances in modern network technologies.

NCCTE.2020.II11.02.00 - Apply procedures to implement initial settings including passwords, IP addressing, and default gateway parameters on a network switch and end devices.

NCCTE.2020.II11.03.00 - Explain how network protocols enable devices to access local and remote network resources.

NCCTE.2020.II11.04.00 - Explain how physical layer protocols, services, and network media support communications across data networks.

NCCTE.2020.II11.05.00 - Understand how to calculate numbers between decimal, binary, and hexadecimal systems.

NCCTE.2020.II11.06.00 - Explain how media access control in the data link layer supports communication across networks.

NCCTE.2020.II11.07.00 - Explain how Ethernet operates in a switched network.

NCCTE.2020.II11.08.00 - Explain how routers use network layer protocols and services to enable end-to-end connectivity.

NCCTE.2020.II11.09.00 - Explain how ARP and ND enable communication on a network.

NCCTE.2020.II11.10.00 - Apply procedures to implement initial settings on a router and end devices.

NCCTE.2020.II11.11.00 - Understand how to calculate an IPv4 subnetting scheme to efficiently segment a network.

NCCTE.2020.II11.12.00 - Apply procedures to implement an IPv6 addressing scheme.

NCCTE.2020.II11.13.00 - Understand the various tools used to test network connectivity.

NCCTE.2020.II11.14.00 - Understand how to compare the operations of transport layer protocols in supporting end to end communication.

NCCTE.2020.II11.15.00 - Explain the operation of application layer protocols in providing support to end-user applications.

NCCTE.2020.II11.16.00 - Understand how to configure switches and routers with device hardening features to enhance security.

NCCTE.2020.II11.17.00 - Apply procedures to implement a network design for a small network to include a router, a switch, and end devices.

Course: Network Engineering Technology II **Updated**

NCCTE.2020.II12 - Cisco Network Engineering Tech II

NCCTE.2020.II12.01.00 - Apply procedures to configure devices by using security best practices.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

- NCCTE.2020.II12.02.00** - Understand how Layer 2 switches forward data.
- NCCTE.2020.II12.03.00** - Apply procedures to implement VLANs and trunking in a switched network.
- NCCTE.2020.II12.04.00** - Apply procedures to troubleshoot inter-VLAN routing on Layer 3 devices.
- NCCTE.2020.II12.05.00** - Understand how STP enables redundancy in a Layer 2 network.
- NCCTE.2020.II12.06.00** - Apply procedures to troubleshoot EtherChannel on switched links.
- NCCTE.2020.II12.07.00** - Apply procedures to implement DHCPv4 to operate across multiple LANs.
- NCCTE.2020.II12.08.00** - Apply procedures to configure dynamic address allocation in IPv6 networks.
- NCCTE.2020.II12.09.00** - Understand how FHRPs provide default gateway services in a redundant network.
- NCCTE.2020.II12.10.00** - Understand how vulnerabilities compromise LAN security.
- NCCTE.2020.II12.11.00** - Apply procedures to implement switch security to mitigate LAN attacks.
- NCCTE.2020.II12.12.00** - Understand how WLANs enable network connectivity.
- NCCTE.2020.II12.13.00** - Apply procedures to implement a WLAN using a wireless router and WLC.
- NCCTE.2020.II12.14.00** - Understand how routers use information in packets to make forwarding decisions.
- NCCTE.2020.II12.15.00** - Apply procedures to configure IPv4 and IPv6 static routes.
- NCCTE.2020.II12.16.00** - Apply procedures to troubleshoot static and default route configurations.
- NCCTE.2020.II12.17.00** - Identify Cisco equipment and related hardware.
- NCCTE.2020.II12.18.00** - Understand Cisco IOS software operation.
- NCCTE.2020.II12.19.00** - Understand general networking knowledge.
- NCCTE.2020.II12.20.00** - Understand service-related knowledge

Course: Computer Engineering Technology I **Updated**

NCCTE.2020.II21 - Computer Engineering Technology I

- NCCTE.2020.II21.01.00** - Understand mobile devices.
 - NCCTE.2020.II21.01.01** - Install and configure laptop hardware and components.
 - NCCTE.2020.II21.01.02** - Install components within the display of a laptop.
 - NCCTE.2020.II21.01.03** - Use appropriate laptop features.
 - NCCTE.2020.II21.01.04** - Compare characteristics of various types of other mobile devices.
 - NCCTE.2020.II21.01.05** - Connect and configure accessories and ports of other mobile devices.
 - NCCTE.2020.II21.01.06** - Configure basic mobile device network connectivity and application support.
 - NCCTE.2020.II21.01.07** - Use methods to perform mobile device synchronization.
- NCCTE.2020.II21.02.00** - Understand networking.
 - NCCTE.2020.II21.02.01** - Compare TCP and UDP ports, protocols, and their purposes.
 - NCCTE.2020.II21.02.02** - Compare common networking hardware devices.
 - NCCTE.2020.II21.02.03** - Install and configure a basic wired/wireless SOHO network.
 - NCCTE.2020.II21.02.04** - Compare wireless networking protocols.
 - NCCTE.2020.II21.02.05** - Summarize the properties and purposes of services provided by



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

networked hosts.

NCCTE.2020.II21.02.06 - Explain common network configuration concepts.

NCCTE.2020.II21.02.07 - Compare Internet connection types, network types, and their features.

NCCTE.2020.II21.02.08 - Use appropriate networking tools.

NCCTE.2020.II21.03.00 - Understand hardware.

NCCTE.2020.II21.03.01 - Explain basic cable types, features, and their purposes.

NCCTE.2020.II21.03.02 - Identify common connectivity types.

NCCTE.2020.II21.03.03 - Install RAM types.

NCCTE.2020.II21.03.04 - Select, install and configure storage devices.

NCCTE.2020.II21.03.05 - Install and configure motherboards, CPUs, and add-on cards.

NCCTE.2020.II21.03.06 - Explain the purposes and uses of various peripheral types.

NCCTE.2020.II21.03.07 - Summarize power supply types and features.

NCCTE.2020.II21.03.08 - Select and configure appropriate components for a custom PC configuration to meet customer specifications or needs.

NCCTE.2020.II21.03.09 - Install and configure common devices.

NCCTE.2020.II21.03.10 - Configure SOHO multifunction devices, printers and settings.

NCCTE.2020.II21.03.11 - Install and maintain various print technologies.

NCCTE.2020.II21.04.00 - Understand virtualization and cloud computing.

NCCTE.2020.II21.04.01 - Compare cloud computing concepts.

NCCTE.2020.II21.04.02 - Set up and configure client-side virtualization.

NCCTE.2020.II21.05.00 - Understand hardware and network troubleshooting.

NCCTE.2020.II21.05.01 - Use the best practice methodology to resolve problems.

NCCTE.2020.II21.05.02 - Troubleshoot problems related to motherboards, RAM, CPUs, and power.

NCCTE.2020.II21.05.03 - Troubleshoot hard drives and RAID arrays.

NCCTE.2020.II21.05.04 - Troubleshoot video, projector, and display issues.

NCCTE.2020.II21.05.05 - Troubleshoot common mobile device issues while adhering to the appropriate procedures.

NCCTE.2020.II21.05.06 - Troubleshoot printers.

NCCTE.2020.II21.05.07 - Troubleshoot common wired and wireless network problems.

Course: Computer Engineering Technology II **Updated**

NCCTE.2020.II22 - Computer Engineering Technology II

NCCTE.2020.II22.01.00 - Understand operating systems

NCCTE.2020.II22.01.01 - Compare common operating system types and their purposes.

NCCTE.2020.II22.01.02 - Compare features of Microsoft Windows versions.

NCCTE.2020.II22.01.03 - Summarize general OS installation considerations and upgrade methods.

NCCTE.2020.II22.01.04 - Use appropriate Microsoft command line tools.

NCCTE.2020.II22.01.05 - Use Microsoft operating system features and tools.

NCCTE.2020.II22.01.06 - Use Microsoft Windows control panel utilities.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.II22.01.07 - Summarize application installation and configuration concepts.

NCCTE.2020.II22.01.08 - Configure Microsoft Windows networking on a client or desktop.

NCCTE.2020.II22.01.09 - Use features and tools of the Mac OS and Linux client or desktop operating systems.

NCCTE.2020.II22.02.00 - Understand security.

NCCTE.2020.II22.02.01 - Summarize the importance of physical security measures.

NCCTE.2020.II22.02.02 - Explain logical security concepts.

NCCTE.2020.II22.02.03 - Compare wireless security protocols and authentication methods.

NCCTE.2020.II22.02.04 - Detect, remove, and prevent malware using appropriate tools and methods.

NCCTE.2020.II22.02.05 - Compare social engineering, threats, and vulnerabilities.

NCCTE.2020.II22.02.06 - Compare Microsoft Windows OS security settings.

NCCTE.2020.II22.02.07 - Implement security best practices to secure a workstation.

NCCTE.2020.II22.02.08 - Implement methods for securing mobile devices.

NCCTE.2020.II22.02.09 - Implement appropriate data destruction and disposal methods.

NCCTE.2020.II22.02.10 - Configure security on SOHO wireless and wired networks.

NCCTE.2020.II22.03.00 - Understand software troubleshooting.

NCCTE.2020.II22.03.01 - Troubleshoot Microsoft Windows OS problems.

NCCTE.2020.II22.03.02 - Troubleshoot and resolve PC security issues.

NCCTE.2020.II22.03.03 - Use best practice procedures for malware removal.

NCCTE.2020.II22.03.04 - Troubleshoot mobile OS and application issues.

NCCTE.2020.II22.03.05 - Troubleshoot mobile OS and application security issues.

NCCTE.2020.II22.04.00 - Understand operational procedures.

NCCTE.2020.II22.04.01 - Compare best practices associated with types of documentation.

NCCTE.2020.II22.04.02 - Implement basic change management best practices.

NCCTE.2020.II22.04.03 - Implement basic disaster prevention and recovery methods.

NCCTE.2020.II22.04.04 - Explain common safety procedures.

NCCTE.2020.II22.04.05 - Explain environmental impacts and appropriate controls.

NCCTE.2020.II22.04.06 - Explain the processes for addressing prohibited content activity, privacy licensing, and policy concepts.

NCCTE.2020.II22.04.07 - Use proper communication techniques and professionalism.

NCCTE.2020.II22.04.08 - Identify the basics of scripting.

NCCTE.2020.II22.04.09 - Use remote access technologies.

Course: Adobe Visual Design

NCCTE.2016.II31 - Adobe Visual Design

NCCTE.2016.II31.01.00 - Apply procedures to use Adobe Photoshop for visual communications.

NCCTE.2016.II31.01.01 - Understand project requirements using photographs.

NCCTE.2016.II31.01.02 - Understand Digital Images.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2016.II31.01.03 - Understand Adobe Photoshop CC interface.

NCCTE.2016.II31.01.04 - Apply procedures to create images using Adobe Photoshop CC.

NCCTE.2016.II31.01.05 - Apply procedures to publish digital images using Adobe Photoshop CC.

NCCTE.2016.II31.02.00 - Apply procedures to use Adobe Illustrator for visual communications.

NCCTE.2016.II31.02.01 - Understand project requirements for vector graphics.

NCCTE.2016.II31.02.02 - Understand digital graphics and illustrations.

NCCTE.2016.II31.02.03 - Understand Adobe Illustrator CC interface.

NCCTE.2016.II31.02.04 - Apply procedures to create digital graphics and illustrations using Adobe Illustrator CC.

NCCTE.2016.II31.02.05 - Apply procedures to archive, export, and publish graphics using Adobe Illustrator CC.

NCCTE.2016.II31.03.00 - Apply procedures to use Adobe InDesign for visual communications.

NCCTE.2016.II31.03.01 - Understand project requirements for graphic layouts.

NCCTE.2016.II31.03.02 - Understand print and digital media publications using Adobe InDesign CC.

NCCTE.2016.II31.03.03 - Understand Adobe InDesign CC interface.

NCCTE.2016.II31.03.04 - Apply procedures to create print and digital media publications using Adobe InDesign CC.

NCCTE.2016.II31.03.05 - Apply procedures to publish, export, and archive page layouts using Adobe InDesign CC.

Course: Adobe Digital Design

NCCTE.2016.II32 - Adobe Digital Design

NCCTE.2016.II32.01.00 - Understand project requirements for web development.

NCCTE.2016.II32.02.00 - Understand Web authoring.

NCCTE.2016.II32.03.00 - Understand the Adobe Dreamweaver CC interface.

NCCTE.2016.II32.04.00 - Apply procedures for Web authoring using Adobe Dreamweaver CC.

NCCTE.2016.II32.05.00 - Apply procedures to test, publish, and maintain Web content using Adobe Dreamweaver CC.

Course: Adobe Video Design **Updated**

NCCTE.2020.II33 - Adobe Video Design

NCCTE.2020.II33.01.00 - Understand project requirements for video projects

NCCTE.2020.II33.01.01 - Identify the purpose, audience, and audience needs for preparing video.

NCCTE.2020.II33.01.02 - Summarize how digital video professionals make decisions about the type of content to include in a project, including considerations such as copyright, audience needs, permissions, and licensing.

NCCTE.2020.II33.01.03 - Demonstrate knowledge of project management tasks and responsibilities.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.II33.01.04 - Communicate with others (such as peers and clients) about editing plans.

NCCTE.2020.II33.02.00 - Understand digital video

NCCTE.2020.II33.02.01 - Understand key terminology related to digital video

NCCTE.2020.II33.02.02 - Demonstrate knowledge of basic principles and best practices employed in the digital video industry

NCCTE.2020.II33.02.03 - Demonstrate knowledge of how to use transitions and effects to enhance video content

NCCTE.2020.II33.02.04 - Demonstrate knowledge of using audio to enhance video content

NCCTE.2020.II33.02.05 - Demonstrate knowledge of using still images to enhance video content.

NCCTE.2020.II33.03.00 - Understanding the Adobe Premiere Pro interface

NCCTE.2020.II33.03.01 - Identify elements of the Premiere Pro user interface, and demonstrate knowledge of their functions.

NCCTE.2020.II33.03.02 - Define the functions of commonly used tools, including the Selection, Track Selection, Ripple Edit, Rolling Edit, Rate Stretch, Pen, Razor, Slide, Slip, Hand, and Zoom tools.

NCCTE.2020.II33.03.03 - Navigate, organize, and customize the workspace.

NCCTE.2020.II33.04.00 - Apply procedures to edit a video sequence with Adobe Premiere

NCCTE.2020.II33.04.01 - Create a new project

NCCTE.2020.II33.04.02 - Import media assets (video, image, and audio files).

NCCTE.2020.II33.04.03 - Demonstrate knowledge of how to set up and navigate a video sequence in Premiere Pro.

NCCTE.2020.II33.04.04 - Organize and manage video clips in a sequence

NCCTE.2020.II33.04.05 - Trim clips

NCCTE.2020.II33.04.06 - Manage sound in a video sequence

NCCTE.2020.II33.04.07 - Manage superimposed text and shapes in a video sequence.

NCCTE.2020.II33.04.08 - Add and manage effects and transitions in a video sequence

NCCTE.2020.II33.05.00 - Apply procedures to export a video with Adobe Premiere

NCCTE.2020.II33.05.01 - Demonstrate knowledge of export options for video

NCCTE.2020.II33.05.02 - Demonstrate knowledge of how to export video from Adobe Premiere

Course: Digital Design and Animation I **Updated**

NCCTE.2020.TS24 - Digital Design and Animation I

NCCTE.2020.TS24.01.00 - Understand digital design production.

NCCTE.2020.TS24.01.01 - Remember the history and careers of digital design and modeling.

NCCTE.2020.TS24.01.02 - Remember hardware and software used in digital design.

NCCTE.2020.TS24.01.03 - Understand intellectual property guidelines in digital design.

NCCTE.2020.TS24.02.00 - Apply procedures to produce 2D graphics.

NCCTE.2020.TS24.02.01 - Apply vector image production methods.

NCCTE.2020.TS24.02.02 - Apply bitmap editing and production methods.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.TS24.03.00 - Understand digital design techniques.

NCCTE.2020.TS24.03.01 - Understand design pipeline.

NCCTE.2020.TS24.03.02 - Understand elements and principles of digital design.

NCCTE.2020.TS24.03.03 - Understand color theory in digital design.

NCCTE.2020.TS24.03.04 - Understand composition techniques.

NCCTE.2020.TS24.04.00 - Apply procedures to produce digital audio and video.

NCCTE.2020.TS24.04.01 - Apply procedures to edit and produce digital audio and video.

NCCTE.2020.TS24.04.02 - Apply digital effects to audio and video.

NCCTE.2020.TS24.04.03 - Apply procedures to animate graphics.

NCCTE.2020.TS24.05.00 - Apply procedures to produce 3D graphics.

NCCTE.2020.TS24.05.01 - Understand transformations in Cartesian space.

NCCTE.2020.TS24.05.02 - Apply procedures to render 3D models, scenes and animations.

Course: Digital Design and Animation II **New**

NCCTE.2020.TS25 - Digital Design and Animation II

NCCTE.2020.TS25.01.00 - Understand portfolio development and professionalism.

NCCTE.2020.TS25.01.01 - Understand how to document the design process and articulate an artistic point of view..

NCCTE.2020.TS25.01.02 - Understand personal and professional presentation.

NCCTE.2020.TS25.02.00 - Understand modeling concepts.

NCCTE.2020.TS25.02.01 - Apply vector image production methods.

NCCTE.2020.TS25.02.02 - Apply bitmap editing and production methods.

NCCTE.2020.TS25.02.03 - Understand parametric modeling concepts.

NCCTE.2020.TS25.02.04 - Understand 3D simulations, particle systems and forces.

NCCTE.2020.TS25.03.00 - Understand materials, shaders and rendering.

NCCTE.2020.TS25.03.01 - Remember the basic functions of the material editor.

NCCTE.2020.TS25.03.02 - Understand and differentiate between materials, maps, textures, and shaders.

NCCTE.2020.TS25.03.03 - Understand UVW mapping.

NCCTE.2020.TS25.03.04 - Understand rendering and render settings.

NCCTE.2020.TS25.04.00 - Apply 3D lights and their application.

NCCTE.2020.TS25.04.01 - Understand types of lights.

NCCTE.2020.TS25.04.02 - Understand light settings.

NCCTE.2020.TS25.04.03 - Understand shadow settings.

NCCTE.2020.TS25.04.04 - Apply artistic lighting techniques.

NCCTE.2020.TS25.05.00 - Apply basic cameras and settings.

NCCTE.2020.TS25.05.01 - Understand physical cameras and their settings and usage.

NCCTE.2020.TS25.05.02 - Understand various camera movements and composition.

NCCTE.2020.TS25.05.03 - Apply animated camera movements to a scene.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.TS25.06.00 - Apply basic rigging and animation techniques.

NCCTE.2020.TS25.06.01 - Understand keyframing and interpolation.

NCCTE.2020.TS25.06.02 - Understand playback and timeline settings.

NCCTE.2020.TS25.06.03 - Understand animation constraints and helpers.

NCCTE.2020.TS25.06.04 - Understand object linking and hierarchy.

NCCTE.2020.TS25.06.05 - Understand how to create and modify bipeds.

NCCTE.2020.TS25.06.06 - Apply advanced animation and modeling techniques to produce an 30 second animated short.

Course: Game Art and Design **Updated**

NCCTE.2020.TS31 - Game Art and Design

NCCTE.2020.TS31.01.00 - Understand history careers and ethics in gaming.

NCCTE.2020.TS31.01.01 - Understand skills and careers to work in the gaming industry.

NCCTE.2020.TS31.01.02 - Recall the history of games and the game industry

NCCTE.2020.TS31.01.03 - Understand rating systems and ethics in the gaming industry

NCCTE.2020.TS31.02.00 - Understand the elements of game theory

NCCTE.2020.TS31.02.01 - Understand player experience

NCCTE.2020.TS31.02.02 - Classify game elements

NCCTE.2020.TS31.02.03 - Categorize games by interaction, objectives and genres

NCCTE.2020.TS31.03.00 - Apply pre-production techniques to plan game prototypes

NCCTE.2020.TS31.03.01 - Summarize the development process of game design

NCCTE.2020.TS31.03.02 - Apply game conceptualization methods including brainstorming, sketching, and storyboarding.

NCCTE.2020.TS31.03.03 - Execute a game design document

NCCTE.2020.TS31.03.04 - Apply procedures to produce an original game prototype

NCCTE.2020.TS31.03.05 - Outline level layouts to plan and populate games

NCCTE.2020.TS31.03.06 - Evaluate the prototype using game design parameters

NCCTE.2020.TS31.04.00 - Apply procedures to develop a game

NCCTE.2020.TS31.04.01 - Recognize a basic game engine interface and correct terminology sketching, and storyboarding.

NCCTE.2020.TS31.04.02 - Demonstrate creation of game assets and game engine elements

NCCTE.2020.TS31.04.03 - Produce original game environments and levels

NCCTE.2020.TS31.04.04 - Produce an original game using existing game theory and design

NCCTE.2020.TS31.05.00 - Apply post-production techniques to evaluate video games

NCCTE.2020.TS31.05.01 - Organize and produce a game design portfolio

NCCTE.2020.TS31.05.02 - Evaluate original games using game theory and quality assurance principles



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

Course: Advanced Game Art and Design **Updated**

NCCTE.2020.TS32 - Advanced Game Art and Design

NCCTE.2020.TS32.01.00 - Understand career practices related to the game Industry

NCCTE.2020.TS32.01.01 - Recognize careers related to the game industry

NCCTE.2020.TS32.01.02 - Understand legal issues in game design

NCCTE.2020.TS32.01.03 - Summarize global game market dynamics and regulations

NCCTE.2020.TS32.01.04 - Understand Serious Games

NCCTE.2020.TS32.02.00 - Implement production management in game design

NCCTE.2020.TS32.02.01 - Preproduction: Understand Game User Interfaces

NCCTE.2020.TS32.02.02 - Preproduction: Categorize Choices and Convexit

NCCTE.2020.TS32.02.03 - Production: Analyze game Production

NCCTE.2020.TS32.03.00 - Execute audio and video techniques

NCCTE.2020.TS32.03.01 - Summarize advanced interactive storytelling and character development

NCCTE.2020.TS32.03.02 - Excecute video editing techniques

NCCTE.2020.TS32.03.03 - Understand sound theory in game design

NCCTE.2020.TS32.03.04 - Execute appropriate audio to an existing scene

NCCTE.2020.TS32.04.00 - Execute advanced visual design

NCCTE.2020.TS32.04.01 - Execute advanced 3D modeling techniques

NCCTE.2020.TS32.04.02 - Execute advanced 3D characters and environments

NCCTE.2020.TS32.04.03 - Understand 3D texturing

NCCTE.2020.TS32.05.00 - Create scenses using a 3D game engine

NCCTE.2020.TS32.05.01 - Classify existing 3D game engines

NCCTE.2020.TS32.05.02 - Analyze the basic mechanics of a selected 3D game engine

NCCTE.2020.TS32.05.03 - Create sample levels and actions

NCCTE.2020.TS32.05.04 - Create an original 3D game using existing game theory and design

NCCTE.2020.TS32.05.05 - Critique 3D games

NCCTE.2020.TS32.06.00 - Explain the steps of game marketing

NCCTE.2020.TS32.06.01 - Summarize the basics of game marketing

NCCTE.2020.TS32.06.02 - Create a game portfolio

Family And Consumer Sciences Education

Grade: Grade 9 - 12

Course: Apparel and Textile Production I

NCCTE.2015.FA31 - Apparel and Textile Production I

NCCTE.2015.FA31.01.00 - Understand the apparel industry and design

NCCTE.2015.FA31.01.01 - Remember the apparel industry

NCCTE.2015.FA31.01.02 - Understand apparel design

NCCTE.2015.FA31.02.00 - Understand textiles



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NCCTE.2015.FA31.02.01 - Understand fibers, fabrics, and finishes

NCCTE.2015.FA31.02.02 - Understand care of textile products

NCCTE.2015.FA31.03.00 - Understand apparel engineering

NCCTE.2015.FA31.03.01 - Understand body measurements, sizing and patterns

NCCTE.2015.FA31.03.02 - Understand tools and equipment

NCCTE.2015.FA31.03.03 - Understand engineering and construction

Course: Apparel and Textile Production II

NCCTE.2015.FA32 - Apparel and Textile Production II

NCCTE.2015.FA32.01.00 - Understand engineering, technical design and textile science in the apparel and textile industry.

NCCTE.2015.FA32.01.01 - Understand engineering and technical design.

NCCTE.2015.FA32.01.02 - Understand textile science.

NCCTE.2015.FA32.02.00 - Understand construction in the apparel and textile industry.

NCCTE.2015.FA32.02.01 - Understand product construction.

NCCTE.2015.FA32.02.02 - Understand global production and manufacturing.

NCCTE.2015.FA32.03.00 - Understand the apparel and textile market.

NCCTE.2015.FA32.03.01 - Understand marketing mix.

NCCTE.2015.FA32.03.02 - Understand market research.

NCCTE.2015.FA32.04.00 - Understand the global markets.

NCCTE.2015.FA32.04.01 - Understand product labeling guidelines.

NCCTE.2015.FA32.04.02 - Understand the buyer's market.

Course: Principles of Family and Human Services

NCCTE.2016.FC11 - Principles of Family and Human Services

NCCTE.2016.FC11.01.00 - Understand the human services field.

NCCTE.2016.FC11.01.01 - Remember key leaders and career pathways within the human services field.

NCCTE.2016.FC11.01.02 - Understand diversity, delivery systems, and service populations in family and human services.

NCCTE.2016.FC11.01.03 - Understand leadership skills to empower individuals and build effective teams.

NCCTE.2016.FC11.02.00 - Understand skills needed for personal and professional success.

NCCTE.2016.FC11.02.01 - Understand strategies that promote growth and development across the lifespan.

NCCTE.2016.FC11.02.02 - Understand leadership skills to empower individuals and build effective teams.

NCCTE.2016.FC11.02.03 - Understand financial literacy skills to manage resources and achieve goals.



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NCCTE.2016.FC11.02.04 - Understand housing and apparel design, selection, and management to achieve optimal wellbeing.

NCCTE.2016.FC11.03.00 - Understand life literacy and management.

NCCTE.2016.FC11.03.01 - Understand food management principles, issues, and practices that face individuals, families, and communities.

NCCTE.2016.FC11.03.02 - Understand financial literacy skills to manage resources and achieve goals.

NCCTE.2016.FC11.03.03 - Understand housing and apparel design, selection, and management to achieve optimal wellbeing.

NCCTE.2016.FC11.03.04 - Remember the resources and support services available to protect children, families, and older adults.

NCCTE.2016.FC11.04.00 - Understand individual, family, and community systems.

NCCTE.2016.FC11.04.01 - Understand foundations of individual development and family life.

NCCTE.2016.FC11.04.02 - Understanding parenting and support services for children and older adults.

NCCTE.2016.FC11.04.03 - Apply community development principles to positively affect change.

NCCTE.2016.FC11.05.00 - Understand the human services field.

NCCTE.2016.FC11.05.02 - Understand human services delivery systems and service populations.

NCCTE.2016.FC11.06.00 - Understand professional skills needed in the human services field.

NCCTE.2016.FC11.06.01 - Understand customer-client relationships to improve effectiveness and image of the organization.

NCCTE.2016.FC11.06.02 - Remember information management skills to work effectively and efficiently.

NCCTE.2016.FC11.06.03 - Understand professional development skills needed for success in the human services field.

Course: Counseling and Mental Health I **New**

NCCTE.2020.FC13 - Counseling and Mental Health I

NCCTE.2020.FC13.01.00 - Analyze self awareness and management techniques.

NCCTE.2020.FC13.01.01 - Understand personal needs and characteristics for interpersonal relationships.

NCCTE.2020.FC13.01.02 - Understand the effects of different types of interpersonal relationships on personal development.

NCCTE.2020.FC13.01.03 - Understand strategies to promote physical, emotional, intellectual, and social development.

NCCTE.2020.FC13.01.04 - Understand strategies for making responsible decisions.

NCCTE.2020.FC13.01.05 - Analyze the effects of diverse perspectives, needs, and characteristics of individual and families.

NCCTE.2020.FC13.02.00 - Understand strategies to manage interpersonal relationships.



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NCCTE.2020.FC13.02.01 - Understand the functions and expectations of various types of relationships.

NCCTE.2020.FC13.02.02 - Understand the processes for building and maintaining interpersonal relationships.

NCCTE.2020.FC13.02.03 - Understand communication skills that contribute to positive relationships.

NCCTE.2020.FC13.02.04 - Understand management strategies for various types of interpersonal relationships across the lifespan.

NCCTE.2020.FC13.03.00 - Analyze the family life cycle.

NCCTE.2020.FC13.03.01 - Understand the effects of family as a system on individuals and society.

NCCTE.2020.FC13.03.02 - Understand the effects of various stages of the family life cycle on interpersonal relationships.

NCCTE.2020.FC13.03.03 - Understand the management of resources to meet individual and family goals across the lifespan.

NCCTE.2020.FC13.03.04 - Analyze the impact of conditions that influence the well-being of individuals and families.

NCCTE.2020.FC13.03.05 - Analyze services for individuals and families with a variety of conditions that their well-being.

NCCTE.2020.FC13.04.00 - Apply career literacy skills.

NCCTE.2020.FC13.04.01 - Understand career paths within counseling and mental health.

NCCTE.2020.FC13.04.02 - Apply teamwork and leadership skills in the family, workplace, and community.

NCCTE.2020.FC13.04.03 - Understand effective conflict prevention and management techniques.

NCCTE.2020.FC13.04.04 - Understand the effect of personal interests, abilities, goals, and priorities on career choice.

NCCTE.2020.FC13.04.05 - Understand how to utilize transferable knowledge, attitudes, and technical and employability skills in school, community, and workplace settings.

Course: Counseling and Mental Health II **New**

NCCTE.2020.FC14 - Counseling and Mental Health II

NCCTE.2020.FC14.01.00 - Understand the counseling and mental health field.

NCCTE.2020.FC14.01.01 - Understand the stigma related to mental health.

NCCTE.2020.FC14.01.02 - Remember the history of mental health theories and research.

NCCTE.2020.FC14.01.03 - Understand career paths, credentials, and licenses in social work and counseling and mental health.

NCCTE.2020.FC14.01.04 - Understand how employability skills and career decision affect quality of life.

NCCTE.2020.FC14.01.05 - Understand professional behaviors, ethics, and laws in providing



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counseling and mental health.

NCCTE.2020.FC14.02.00 - Understand how the human brain functions.

NCCTE.2020.FC14.02.01 - Remember how the brain and nervous system function.

NCCTE.2020.FC14.02.02 - Understand how mental health affects wellness across the lifespan.

NCCTE.2020.FC14.02.03 - Understand the development of emotional literacy.

NCCTE.2020.FC14.02.04 - Understand effective practices for building positive mental health.

NCCTE.2020.FC14.03.00 - Evaluate mental health theories and treatments.

NCCTE.2020.FC14.03.01 - Understand theories of mental health development.

NCCTE.2020.FC14.03.02 - Analyze treatment options for mental health related services.

NCCTE.2020.FC14.03.03 - Analyze the effect of technology on mental health research and treatment delivery.

NCCTE.2020.FC14.03.04 - Evaluate positive and strengths-based psychology.

NCCTE.2020.FC14.04.00 - Analyze mental disorders.

NCCTE.2020.FC14.04.01 - Understand the major classifications of mental health disorders.

NCCTE.2020.FC14.04.02 - Analyze how mental health disorders are assessed and diagnosed.

NCCTE.2020.FC14.04.03 - Analyze specific mental disorders and their affect across the lifespan.

NCCTE.2020.FC14.04.04 - Analyze substance abuse related disorders.

NCCTE.2020.FC14.05.00 - Evaluate social awareness issues related to teen violence.

NCCTE.2020.FC14.05.01 - Understand the cycle of abuse.

NCCTE.2020.FC14.05.02 - Analyze the signs and effect of child abuse, domestic abuse, and dating violence.

NCCTE.2020.FC14.05.03 - Analyze the effect of bullying on adolescent development.

NCCTE.2020.FC14.05.04 - Evaluate the impact of suicide on individual and family lives.

Course: Early Childhood Education I

NCCTE.FE11 - Early Childhood Education I

NCCTE.FE11.01.00 - Understand factors related to personal growth.

NCCTE.FE11.01.01 - Classify character traits and their influence on personal growth.

NCCTE.FE11.01.02 - Understand the habits of successful people and strategies for personal growth.

NCCTE.FE11.02.00 - Understand factors related to the professional growth of early childhood professionals.

NCCTE.FE11.02.01 - Understand skills needed by early childhood professionals.

NCCTE.FE11.02.02 - Interpret responsibilities of early childhood professionals.

NCCTE.FE11.03.00 - Understand observation and teaching methods used in early childhood education.

NCCTE.FE11.03.01 - Understand how to select and use observation methods.

NCCTE.FE11.03.02 - Understand how to select and use teaching methods.

NCCTE.FE11.04.00 - Understand principles and domains of child development, developmental



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characteristics of children, and theories of child development.

NCCTE.FE11.04.01 - Exemplify principles and domains of child development.

NCCTE.FE11.04.02 - Understand developmental characteristics of children.

NCCTE.FE11.04.03 - Interpret theories of child development.

NCCTE.FE11.05.00 - Apply developmentally appropriate activities for children from birth to age five.

NCCTE.FE11.05.01 - Classify developmentally appropriate activities for infants and toddlers within domains of child development.

NCCTE.FE11.05.02 - Apply developmentally appropriate reading activities for children three to five.

NCCTE.FE11.06.00 - Evaluate developmentally appropriate activities and programs for preschool and school-age children.

NCCTE.FE11.06.01 - Exemplify developmentally appropriate activities in specific areas of learning for children three to eight.

NCCTE.FE11.06.02 - Evaluate developmentally appropriate programs for school-age children.

NCCTE.FE11.07.00 - Understand techniques for communicating expectations, setting limits, and guiding behavior.

NCCTE.FE11.07.01 - Understand techniques for communicating expectations and setting limits.

NCCTE.FE11.07.02 - Understand techniques for guiding behavior.

NCCTE.FE11.08.00 - Apply policies and procedures to maintain a healthy, safe environment for children.

NCCTE.FE11.08.01 - Understand health and safety policies for early childhood settings.

NCCTE.FE11.08.02 - Apply emergency procedures in early childhood settings.

NCCTE.FE11.09.00 - Understand the history of early childhood education.

NCCTE.FE11.09.01 - Recognize the contributions of leaders in the history of early childhood education.

NCCTE.FE11.09.02 - Explain the influence of historical events on early childhood-related programs and initiatives and their impact on early childhood education.

NCCTE.FE11.10.00 - Understand career trends, opportunities, and options in early childhood education.

NCCTE.FE11.10.01 - Understand career trends and opportunities in early childhood education.

NCCTE.FE11.10.02 - Understand benefits and limitations of work and education options.

Course: Early Childhood Education II

NCCTE.FE12 - Early Childhood Education II

NCCTE.FE12.01.00 - Understand goals and strategies for planning and managing early childhood programs.

NCCTE.FE12.01.01 - Compare program goals and types of early childhood programs.

NCCTE.FE12.01.02 - Exemplify strategies for forming positive relationships with parents.

NCCTE.FE12.02.00 - Understand licensing requirements and staffing strategies for early childhood



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programs.

NCCTE.FE12.02.01 - Interpret licensing requirements for early childhood programs.

NCCTE.FE12.02.02 - Understand strategies for staffing early childhood programs.

NCCTE.FE12.03.00 - Analyze early childhood curricula based on developmentally appropriate practice.

NCCTE.FE12.03.01 - Understand developmentally appropriate practice and factors to consider for developmentally appropriate curricula.

NCCTE.FE12.03.02 - Exemplify curriculum activities that are developmentally appropriate and accommodate multiple intelligences.

NCCTE.FE12.03.03 - Organize a thematic curriculum that is developmentally appropriate.

NCCTE.FE12.04.00 - Create elements of early childhood environments based on developmentally appropriate practice.

NCCTE.FE12.04.01 - Exemplify elements of developmentally appropriate environments in indoor and outdoor early childhood settings and criteria for their selection.

NCCTE.FE12.04.02 - Produce an item for early childhood environments based on standards for developmental appropriateness.

NCCTE.FE12.04.03 - Organize developmentally appropriate learning centers for early childhood environments.

NCCTE.FE12.05.00 - Apply procedures and strategies for working with special groups of children.

NCCTE.FE12.05.01 - Apply procedures for infant care.

NCCTE.FE12.05.02 - Understand strategies for working with children with special needs.

NCCTE.FE12.06.00 - Understand strategies for handling guidance issues.

NCCTE.FE12.06.01 - Explain causes of behavior problems in children and strategies to prevent them.

NCCTE.FE12.06.02 - Infer response strategies for behavior problems.

NCCTE.FE12.07.00 - Understand issues affecting the development of children.

NCCTE.FE12.07.01 - Understand nutritional issues that affect development of children.

NCCTE.FE12.07.02 - Infer appropriate responses to signs and symptoms of child abuse and neglect.

NCCTE.FE12.08.00 - Understand educational and personal preparation and strategies for obtaining and maintaining employment in early childhood careers.

NCCTE.FE12.08.01 - Exemplify strategies for continuing education, balancing roles, and managing stress.

NCCTE.FE12.08.02 - Exemplify strategies for obtaining employment in early childhood careers.

NCCTE.FE12.09.00 - Evaluate written and oral presentation skills used in early childhood professional settings.

NCCTE.FE12.09.01 - Classify components of an early childhood professional portfolio.

NCCTE.FE12.09.02 - Evaluate oral presentation skills used in early childhood professional settings.



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Course: Teaching as a Profession I **New**

NCCTE.2020.FE21 - Teaching as a Profession I

NCCTE.2020.FE21.01.00 - Understand the advantages and challenges, expectations, and roles of teachers, and the characteristics of collaboration.

NCCTE.2020.FE21.01.01 - Understand the advantages and challenges of being a teacher. (Unit 1)

NCCTE.2020.FE21.01.02 - Understand the expectations of the teacher as a member of the school community. (Units 1 and 5)

NCCTE.2020.FE21.01.03 - Compare the various roles of birth to grade 12 (BK - 12) teachers. (Unit 1)

NCCTE.2020.FE21.01.04 - Identify the characteristics of collaboration within the school community. (Unit 3)

NCCTE.2020.FE21.02.00 - Understand philosophies of education, leadership in the classroom, strategies used to develop positive learning environments, and the importance of professional ethics in education.

NCCTE.2020.FE21.02.01 - Identify major philosophies of education. (Unit 1)

NCCTE.2020.FE21.02.02 - Compare personal beliefs to the formal philosophies of education (Unit 1).

NCCTE.2020.FE21.02.03 - Examine behaviors teachers exhibit when demonstrating leadership in the classroom. (Unit 5)

NCCTE.2020.FE21.02.04 - Compare strategies teachers use to develop positive learning environments. (Unit 3)

NCCTE.2020.FE21.02.05 - Explain the importance of professional ethics in education (i.e. honesty, integrity, fair treatment, respect for others). (Unit 5)

NCCTE.2020.FE21.03.00 - Understand significant events that have shaped education, how different school structures have evolved, and the changing role of federal, state, and local government in education.

NCCTE.2020.FE21.03.01 - Recall events that influenced the development of education in the U.S (Units 1 and 2)

NCCTE.2020.FE21.03.02 - Compare how different school structures have evolved (e.g. traditional, charter, private, magnet, etc.) (Unit 1)

NCCTE.2020.FE21.03.03 - Examine significant events that have shaped education. (Unit 2)

NCCTE.2020.FE21.03.04 - Examine the changing roles of federal, state, and local government in education. (Unit 2)

NCCTE.2020.FE21.04.00 - Understand NCSCOS, curriculum frameworks, effective teaching practices, strategies and methods to meet different learning needs, and fundamentals of child development.

NCCTE.2020.FE21.04.01 - Identify structure of NCSCOS. (Unit 3)

NCCTE.2020.FE21.04.02 - Compare various curriculum frameworks and how they connect across grade levels and content areas. (Unit 3)



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NCCTE.2020.FE21.04.03 - Explore elements of effective practices in teaching (i.e. Universal Design for Learning, specially designed instruction) (Unit 4)

NCCTE.2020.FE21.04.04 - Identify and compare appropriate strategies and methods to meet different learning needs. (i.e. evidence-based and high-leverage practices) (Unit 4)

NCCTE.2020.FE21.04.05 - Understand fundamentals of child development. (Unit 3)

NCCTE.2020.FE21.05.00 - Understand diversity, advocacy, student needs based on cultural, racial, ethnic, gender-related, religious or socioeconomic factors, recommended practices for diverse children and youth, formative and summative assessments, data use to inform instructional decisions, and required documents used in public schools that supports individual student needs.

NCCTE.2020.FE21.05.01 - Summarize the role and importance of diversity in education and communities. (Units 1, 2, 4, and 5)

NCCTE.2020.FE21.05.02 - Describe appropriate advocacy for students, schools and community. (Unit 5)

NCCTE.2020.FE21.05.03 - Understand varying student needs based on cultural, racial, ethnic, gender-related, religious or socioeconomic factors. (Units 2, 4 and 5)

NCCTE.2020.FE21.05.04 - Explore recommended practices such as prevention, intervention, and communication strategies for diverse children and youth. (Units 2 and 4)

NCCTE.2020.FE21.05.05 - Identify the importance of formative and summative assessment and how data is used to inform instructional decisions. (Units 3 and 4)

NCCTE.2020.FE21.05.06 - Identify required documents used in public schools that supports individual student needs (i.e.: Individual Educational Programs (IEPs), Section 504 Plans, MTSS, Intervention Plans, and Behavior Intervention Plans). (Unit 2)

Course: Teaching as a Profession II **New**

NCCTE.2020.FE22 - Teaching as a Profession II

NCCTE.2020.FE22.01.00 - Understand the importance of collaboration, litigation and legislation, and the teacher's role in creating a foundation of access to education for all students.

NCCTE.2020.FE22.01.01 - Develop a personal philosophy of education and vision of teacher as leader in a diverse society. (Unit 5)

NCCTE.2020.FE22.01.02 - Discuss the importance of collaboration with students, families, and communities. (Unit 6)

NCCTE.2020.FE22.01.03 - Critique the teacher's role as a leader in the classroom, school, and community. (Unit 6)

NCCTE.2020.FE22.01.04 - Determine the role of policy, advocacy, and community services in the education of culturally and linguistically diverse students and students with exceptionalities. (Units 1 and 6)

NCCTE.2020.FE22.01.05 - Categorize opportunities and organizations that can support advocacy for students, families, and communities. (Unit 6)

NCCTE.2020.FE22.02.00 - Understand events that have shaped the educational experiences of



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special populations, and the role of the school and teacher in meeting a variety of needs of those populations.

NCCTE.2020.FE22.02.01 - Discuss significant political and legal events that have influenced the educational experiences and opportunities of special populations. (Unit 1)

NCCTE.2020.FE22.02.02 - Discuss significant historical and social events that have influenced the educational experiences and opportunities of special populations. (Unit 1)

NCCTE.2020.FE22.02.03 - Critique various philosophies of education. (Unit 5)

NCCTE.2020.FE22.02.04 - Describe concepts and practices for inclusion of students with exceptionalities. (Unit 3)

NCCTE.2020.FE22.02.05 - Describe concepts and practices for culturally responsive instruction. (Unit 3)

NCCTE.2020.FE22.03.00 - Understand different school structures, legal and financial influences, and the role of educational philosophies in shaping the practice of teaching.

NCCTE.2020.FE22.03.01 - Compare and contrast different school structures (e.g., charter, private, magnet, lab schools, etc.) Explain the legal and financial influences on education. (Unit 5)

NCCTE.2020.FE22.03.02 - Evaluate the role of educational philosophies and ethics in shaping curriculum and instruction. (Unit 5)

NCCTE.2020.FE22.03.03 - Analyze the concept of least dangerous assumptions and the influence of expectations in learning outcomes for diverse learners. (Unit 3)

NCCTE.2020.FE22.03.04 - Develop a personal philosophy of education and vision of teacher as leader in a diverse society. (Unit 6)

NCCTE.2020.FE22.04.00 - Understand the ways in which technology supports student access and teaching quality.

NCCTE.2020.FE22.04.01 - Explore appropriate hardware and software to support diverse learning needs. (Unit 4)

NCCTE.2020.FE22.04.02 - Demonstrate how integrated technologies can enhance student learning for individual, group and whole class instruction. (Unit 4)

NCCTE.2020.FE22.04.03 - Examine the alignment of IEP goals, 504 plans, and other personal education plans to the NCSCOS. (Unit 2)

NCCTE.2020.FE22.04.04 - Discuss the role of critical literacy in developing, delivering, and evaluating curriculum and instruction. (Unit 3)

NCCTE.2020.FE22.04.05 - Demonstrate how specific hardware and software can enhance the learning for special needs children. (Unit 4)

NCCTE.2020.FE22.04.06 - Evaluate appropriate curriculum and technology for Pre K - 12 students. (Unit 4)

NCCTE.2020.FE22.05.00 - Understand various school models and systems, intervention and strategies, and practices designed to meet the needs of diverse students.

NCCTE.2020.FE22.05.01 - Understand documents used in public schools and examine the



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purpose of each (i.e., Title I documentation, PEPs, 504 plans, Individual Educational Programs (IEPs). (Unit 2)

NCCTE.2020.FE22.05.02 - Analyze use of systems in schools that support struggling learners and learners from diverse backgrounds including multi-tiered systems of support, response to intervention, positive behavior intervention support, support for English Language Learners, and culturally responsive instruction. (Unit 2)

NCCTE.2020.FE22.05.03 - Demonstrate application of general interventions and appropriate strategies for all learners as well as specially designed instruction for individual learners. (Unit 3)

NCCTE.2020.FE22.05.04 - Apply promising practices in instruction including culturally responsive instruction, Universal Design for Learning, differentiated instruction, evidence-based, research based, specially designed instruction (SDI), and High Leverage Practices for students of all abilities. (Unit 3)

Course: Child Development

NCCTE.FE60 - Parenting and Child Development

NCCTE.FE60.01.00 - Understand the parenthood decision.

NCCTE.FE60.01.01 - Understand readiness characteristics and factors that should be considered before becoming a parent.

NCCTE.FE60.01.02 - Understand teen sexuality, teen pregnancy, and responsible decisions about abstinence versus sexual activity.

NCCTE.FE60.01.03 - Understand family planning issues.

NCCTE.FE60.02.00 - Understand child care issues.

NCCTE.FE60.02.01 - Understand factors to consider when selecting child care programs

NCCTE.FE60.02.02 - Understand ways to provide a safe, secure environment for children.

NCCTE.FE60.02.03 - Understand careers in child care and education.

NCCTE.FE60.03.00 - Understand prenatal development and the components of a healthy pregnancy and delivery.

NCCTE.FE60.03.01 - Understand environmental and hereditary influences on prenatal development and long-term effects on health of children.

NCCTE.FE60.03.02 - Remember the prenatal development of baby from conception to birth and the changes a mother experiences during pregnancy.

NCCTE.FE60.03.03 - Understand components of a healthy pregnancy and delivery.

NCCTE.FE60.04.00 - Understand development and care of the infant from birth through twelve months.

NCCTE.FE60.04.01 - Understand physical development and care of the infant.

NCCTE.FE60.04.02 - Compare emotional and social development of the infant.

NCCTE.FE60.04.03 - Understand brain, cognitive, and language development of the infant.

NCCTE.FE60.04.04 - Understand the challenges of parenting infants.

NCCTE.FE60.05.00 - Understand development and care of the toddler.



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NCCTE.FE60.05.01 - Understand physical and cognitive development and recommended care of the toddler.

NCCTE.FE60.05.02 - Understand emotional and social development of toddlers.

NCCTE.FE60.05.03 - Exemplify parenting styles and methods for guiding toddlers.

NCCTE.FE60.06.00 - Understand development and care of children from ages three through six.

NCCTE.FE60.06.01 - Understand the physical, emotional, and social development and care of children ages three through six.

NCCTE.FE60.06.02 - Understand the cognitive and moral development of children ages three through six.

NCCTE.FE60.06.03 - Exemplify methods for guiding children ages three through six.

Course: Culinary Arts and Hospitality I **New**

NCCTE.2020.FH10 - Culinary Arts and Hospitality I

NCCTE.2020.FH10.01.00 - Understand components of professional practice in the food service industry.

NCCTE.2020.FH10.01.01 - Remember components of professional development in the hospitality and food service industry.

NCCTE.2020.FH10.01.02 - Remember commercial safety protocols.

NCCTE.2020.FH10.01.03 - Understand food protection management.

NCCTE.2020.FH10.02.00 - Understand basic food preparation

NCCTE.2020.FH10.02.01 - Remember commercial food service equipment and procedures for its use.

NCCTE.2020.FH10.02.02 - Apply basic kitchen math operations and mise en place to standardized recipes.

NCCTE.2020.FH10.02.03 - Understand sensory evaluation

NCCTE.2020.FH10.02.04 - Understand stock and soup preparation.

NCCTE.2020.FH10.02.05 - Understand breakfast cookery skills.

NCCTE.2020.FH10.03.00 - Understand basic garde manger.

NCCTE.2020.FH10.03.01 - Remember garde manger fundamentals.

NCCTE.2020.FH10.03.02 - Understand preparation of salads and dressings.

NCCTE.2020.FH10.03.03 - Understand preparation of sandwiches.

NCCTE.2020.FH10.03.04 - Understand preparation of canapés, hors d'oeuvres, appetizers, and decorative displays .

NCCTE.2020.FH10.04.00 - Understand basic baking

NCCTE.2020.FH10.04.01 - Remember fundamentals of baking.

NCCTE.2020.FH10.04.02 - Understand preparation of quick breads, cookies, and bars.

NCCTE.2020.FH10.05.00 - Understand basic food service operations.

NCCTE.2020.FH10.05.01 - Understand dining room service

NCCTE.2020.FH10.05.02 - Understand environmental sustainability



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Course: Culinary Arts and Hospitality II App **New**

NCCTE.2020.FH11 - Culinary Arts and Hospitality II App

NCCTE.2020.FH11.01.00 - Apply professional practice in the school-based restaurant.

NCCTE.2020.FH11.01.01 - Understand components of professional development in the hospitality and food service industry. (SUPPLEMENTAL)

NCCTE.2020.FH11.01.02 - Apply commercial safety protocols.

NCCTE.2020.FH11.01.03 - Apply food protection management.

NCCTE.2020.FH11.02.00 - Apply basic food preparation skills in the school-based restaurant.

NCCTE.2020.FH11.02.01 - Apply knowledge of commercial food service equipment and procedures for its use.

NCCTE.2020.FH11.02.02 - Apply basic kitchen math operations and mise en place to standardized recipes.

NCCTE.2020.FH11.02.03 - Apply sensory evaluation skills.

NCCTE.2020.FH11.02.04 - Apply methods for stock and soup preparation.

NCCTE.2020.FH11.02.05 - Apply breakfast cookery skills.

NCCTE.2020.FH11.03.00 - Apply basic garde manger skills in the school-based restaurant.

NCCTE.2020.FH11.03.01 - Understand garde manger fundamentals.

NCCTE.2020.FH11.03.02 - Apply methods for the preparation of salads and dressings.

NCCTE.2020.FH11.03.03 - Apply methods for the preparation of sandwiches.

NCCTE.2020.FH11.03.04 - Apply methods for the preparation of canapés, hors d'oeuvres, appetizers, and decorative displays.

NCCTE.2020.FH11.04.00 - Apply basic baking in the school-based restaurant.

NCCTE.2020.FH11.04.01 - Understand fundamentals of baking.

NCCTE.2020.FH11.04.02 - Apply methods for the preparation of quick breads, cookies, and bars.

NCCTE.2020.FH11.05.00 - Apply basic food service operations in the school-based restaurant.

NCCTE.2020.FH11.05.01 - Apply dining room service skills.

NCCTE.2020.FH11.05.02 - Apply strategies for environmental sustainability. (SUPPLEMENTAL)

Course: Culinary Arts and Hospitality II Int **New**

NCCTE.2020.FH12 - Culinary Arts and Hospitality II Internship

NCCTE.2020.FH12.01.00 - Apply professional practice in the school-based restaurant.

NCCTE.2020.FH12.01.01 - Understand components of professional development in the hospitality and food service industry. (SUPPLEMENTAL)

NCCTE.2020.FH12.01.02 - Apply commercial safety protocols.

NCCTE.2020.FH12.01.03 - Apply food protection management.

NCCTE.2020.FH12.02.00 - Apply basic food preparation skills in the school-based restaurant.

NCCTE.2020.FH12.02.01 - Apply knowledge of commercial food service equipment and procedures for its use.

NCCTE.2020.FH12.02.02 - Apply basic kitchen math operations and mise en place to standardized



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

recipes.

NCCTE.2020.FH12.02.03 - Apply sensory evaluation skills.

NCCTE.2020.FH12.02.04 - Apply methods for stock and soup preparation.

NCCTE.2020.FH12.02.05 - Apply breakfast cookery skills.

NCCTE.2020.FH12.03.00 - Apply basic garde manger skills in the school-based restaurant.

NCCTE.2020.FH12.03.01 - Understand garde manger fundamentals.

NCCTE.2020.FH12.03.02 - Apply methods for the preparation of salads and dressings.

NCCTE.2020.FH12.03.03 - Apply methods for the preparation of sandwiches.

NCCTE.2020.FH12.03.04 - Apply methods for the preparation of canapés, hors d'oeuvres, appetizers, and decorative displays.

NCCTE.2020.FH12.04.00 - Apply basic baking in the school-based restaurant.

NCCTE.2020.FH12.04.01 - Understand fundamentals of baking.

NCCTE.2020.FH12.04.02 - Apply methods for the preparation of quick breads, cookies, and bars.

NCCTE.2020.FH12.05.00 - Apply basic food service operations in the school-based restaurant.

NCCTE.2020.FH12.05.01 - Apply dining room service skills.

NCCTE.2020.FH12.05.02 - Apply strategies for environmental sustainability. (SUPPLEMENTAL)

Course: Culinary Arts and Hospitality III **New**

NCCTE.2020.FH13 - Culinary Arts and Hospitality III

NCCTE.2020.FH13.01.00 - Understand advanced food service operations.

NCCTE.2020.FH13.01.01 - Understand human relations management.

NCCTE.2020.FH13.01.02 - Understand menu planning and nutrition

NCCTE.2020.FH13.01.03 - Understand purchasing, receiving, and business math.

NCCTE.2020.FH13.02.00 - Understand advanced food preparation.

NCCTE.2020.FH13.02.01 - Understand preparation of sauces.

NCCTE.2020.FH13.02.02 - Understand moist heat methods.

NCCTE.2020.FH13.02.03 - Understand dry heat methods.

NCCTE.2020.FH13.02.04 - Understand combination cooking methods.

NCCTE.2020.FH13.03.00 - Understand advanced garde manger.

NCCTE.2020.FH13.03.01 - Understand food preservation methods.

NCCTE.2020.FH13.03.02 - Understand forcemeats and aspics.

NCCTE.2020.FH13.03.03 - Understand cheese.

NCCTE.2020.FH13.04.00 - Understand advanced baking and pastry.

NCCTE.2020.FH13.04.01 - Understand preparation of breads and yeast products.

NCCTE.2020.FH13.04.02 - Understand preparation of pies and tarts.

NCCTE.2020.FH13.04.03 - Understand preparation of cakes and icings.

NCCTE.2020.FH13.04.04 - Understand preparation of custards, creams, and sauces.

NCCTE.2020.FH13.04.05 - Understand preparation of assorted pastries.



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Course: Culinary Arts and Hospitality IV App **New**

NCCTE.2020.FH14 - Culinary Arts and Hospitality IV App

NCCTE.2020.FH14.01.00 - Apply advanced food service operations in the school-based restaurant.

NCCTE.2020.FH14.01.01 - Evaluate skills needed for human relations management.

NCCTE.2020.FH14.01.02 - Apply menu planning skills and knowledge of nutrition.

NCCTE.2020.FH14.01.03 - Apply strategies for purchasing, receiving, and business math concepts.

NCCTE.2020.FH14.02.00 - Apply advanced food preparation methods in the school-based restaurant.

NCCTE.2020.FH14.02.01 - Apply methods for the preparation of sauces.

NCCTE.2020.FH14.02.02 - Apply moist heat cooking methods.

NCCTE.2020.FH14.02.03 - Apply dry heat cooking methods.

NCCTE.2020.FH14.02.04 - Apply combination cooking methods.

NCCTE.2020.FH14.03.00 - Apply advanced garde manger in the school-based restaurant.

NCCTE.2020.FH14.03.01 - Apply food preservation methods. (SUPPLEMENTAL)

NCCTE.2020.FH14.03.02 - Apply methods for the preparation of forcemeats and aspics. (SUPPLEMENTAL)

NCCTE.2020.FH14.03.03 - Analyze cheese and its contributions to meals.

NCCTE.2020.FH14.04.00 - Apply advanced baking and pastry in the school-based restaurant.

NCCTE.2020.FH14.04.01 - Apply methods for the preparation of breads and yeast products.

NCCTE.2020.FH14.04.02 - Apply methods for the preparation preparation of pies and tarts.

NCCTE.2020.FH14.04.03 - Apply methods for the preparation preparation of cakes and icings.

NCCTE.2020.FH14.04.04 - Apply methods for the preparation preparation of custards, creams, and sauces.

NCCTE.2020.FH14.04.05 - Apply methods for the preparation preparation of assorted pastries.

Course: Interior Design I

NCCTE.2018.FI51 -

NCCTE.2018.FI51.01.00 - Understand the value of interior design to society.

NCCTE.2018.FI51.01.01 - Remember the interior design profession and the design process.

NCCTE.2018.FI51.01.02 - Understand design thinking.

NCCTE.2018.FI51.01.03 - Understand factors that impact design in the pre-design and programming phase of the design process.

NCCTE.2018.FI51.02.00 - Understand design language.

NCCTE.2018.FI51.02.01 - Understand color basics and color theory.

NCCTE.2018.FI51.02.02 - Understand elements and principles of design.

NCCTE.2018.FI51.03.00 - Understand schematic design.

NCCTE.2018.FI51.03.01 - Remember architectural basics.

NCCTE.2018.FI51.03.02 - Understand hand drawing skills and digital design tools.

NCCTE.2018.FI51.03.03 - Understand space planning.



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NCCTE.2018.FI51.03.04 - Understand materials and finishes for residential design.

NCCTE.2018.FI51.04.00 - Understand aspects of well-designed interiors.

NCCTE.2018.FI51.04.01 - Understand design communication techniques.

NCCTE.2018.FI51.04.02 - Understand interior design concepts, skills, and processes to solve design problems.

Course: Interior Design II **Updated**

NCCTE.2020.FI52 - Interior Design II

NCCTE.2020.FI52.01.00 - Understand career preparation.

NCCTE.2020.FI52.01.01 - Identify professional practices.

NCCTE.2020.FI52.01.02 - Develop a career portfolio to communicate knowledge and skills in interior design.

NCCTE.2020.FI52.01.03 - Remember budgeting for interior resources.

NCCTE.2020.FI52.02.00 - Understand historical architecture.

NCCTE.2020.FI52.02.01 - Remember historical architecture.

NCCTE.2020.FI52.02.02 - Reconstruct historical architecture.

NCCTE.2020.FI52.03.00 - Understand design and development of furnishings throughout history.

NCCTE.2020.FI52.03.01 - Remember period styles of furniture.

NCCTE.2020.FI52.03.02 - Understand selection, functions, and care of furniture.

NCCTE.2020.FI52.03.03 - Remember textiles in interior applications.

NCCTE.2020.FI52.03.04 - Arrange furniture in a space plan.

NCCTE.2020.FI52.04.00 - Understand lighting and accessory use in interior applications.

NCCTE.2020.FI52.04.01 - Understand lighting functions, types, and distribution, and types of fixtures.

NCCTE.2020.FI52.04.02 - Remember types, selection, and arrangement of accessories.

NCCTE.2020.FI52.05.00 - Understand design practices in residential and commercial interiors.

NCCTE.2020.FI52.05.01 - Understand space planning in commercial interiors.

NCCTE.2020.FI52.05.02 - Remember laws, public policies, and regulations impacting interior design.

NCCTE.2020.FI52.05.03 - Demonstrate designing for various needs.

NCCTE.2020.FI52.06.00 - Apply decision making, design knowledge and skills to communicate design ideas.

NCCTE.2020.FI52.06.01 - Apply interior design knowledge and skills to create a complete design project.

NCCTE.2020.FI52.06.02 - Apply procedures to plan and perform a professional presentation.

Course: Interior Applications **Updated**

NCCTE.2020.FI53 - Interior Digital Applications

NCCTE.2020.FI53.01.00 - Understand architecture and construction components.



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NCCTE.2020.FI53.01.01 - Remember factors affecting architecture and the housing industry.

NCCTE.2020.FI53.01.02 - Understand components of construction.

NCCTE.2020.FI53.02.00 - Apply procedures to create floor plans.

NCCTE.2020.FI53.02.01 - Remember BIM Revit Architecture software tools.

NCCTE.2020.FI53.02.02 - Draft an interior space to scale using architectural symbols.

NCCTE.2020.FI53.02.03 - Apply space planning with reference to furniture placement, traffic flow, building codes, and universal design guidelines.

NCCTE.2020.FI53.02.04 - Apply procedures to draw and annotate a residential floor plan using 3D CAD, BIM Revit Architecture software.

NCCTE.2020.FI53.03.00 - Apply lighting components.

NCCTE.2020.FI53.03.01 - Identify the types of lamp families.

NCCTE.2020.FI53.03.02 - Classify the major categories of luminaires and types of lighting fixtures used in interior design.

NCCTE.2020.FI53.03.03 - Apply lighting fixtures to create a reflected ceiling plan using 3D CAD, BIM Revit Architecture software.

NCCTE.2020.FI53.04.00 - Apply procedures for drawing view types and rendering techniques.

NCCTE.2020.FI53.04.01 - Apply construction drawing view types.

NCCTE.2020.FI53.04.02 - Apply rendering techniques using 3D CAD, BIM Revit Architecture software.

NCCTE.2020.FI53.05.00 - Apply procedures to complete a residential construction documents (CD) set.

NCCTE.2020.FI53.05.01 - Apply key components/sheets needed for a construction documents (CD) set.

NCCTE.2020.FI53.05.02 - Apply procedures to complete a residential construction documents set using 3D CAD, BIM Revit Architecture software.

NCCTE.2020.FI53.06.00 - Apply interior design knowledge and skills.

Course: Food and Nutrition I

NCCTE.2018.FN41 - Food I

NCCTE.2018.FN41.01.00 - Understand the relationship between food choices and health.

NCCTE.2018.FN41.01.01 - Remember influences on food choices.

NCCTE.2018.FN41.01.02 - Understand guidelines for healthy eating.

NCCTE.2018.FN41.02.00 - Understand fundamentals of food preparation.

NCCTE.2018.FN41.02.01 - Understand kitchen safety.

NCCTE.2018.FN41.02.02 - Understand safe food handling procedures.

NCCTE.2018.FN41.02.03 - Remember equipment and procedures for its use and care.

NCCTE.2018.FN41.02.04 - Remember measuring, cutting/preparation, mixing, and cooking/cleaning terms.

NCCTE.2018.FN41.02.05 - Remember recipe parts, sources, and adjustments.



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NCCTE.2018.FN41.02.06 - Understand processes and benefits of a work plan and teamwork for preparing healthy foods.

NCCTE.2018.FN41.03.00 - Understand procedures, nutrition, and cooking methods in food preparation.

NCCTE.2018.FN41.03.01 - Understand procedures, nutrition, and cooking methods in fruit and vegetable preparation.

NCCTE.2018.FN41.03.02 - Understand procedures, nutrition, and cooking methods in dairy preparation.

NCCTE.2018.FN41.03.03 - Understand procedures, nutrition, and cooking methods in grain preparation.

NCCTE.2018.FN41.03.04 - Understand procedures, nutrition, and cooking methods in protein preparation.

NCCTE.2018.FN41.04.00 - Understand procedures, equipment, and techniques applied to baking production.

NCCTE.2018.FN41.04.01 - Understand procedures to prepare quick bread products.

NCCTE.2018.FN41.04.02 - Understand procedures to prepare yeast bread products.

NCCTE.2018.FN41.04.03 - Understand procedures to prepare cakes and frostings.
(SUPPLEMENTAL)

NCCTE.2018.FN41.05.00 - Understand the principles of etiquette for meal service.

NCCTE.2018.FN41.05.01 - Understand the principles of basic table setting and meal service.

NCCTE.2018.FN41.05.02 - Understand the principles of table manners.

NCCTE.2018.FN41.06.00 - Apply methods for meal planning and preparation.

NCCTE.2018.FN41.06.01 - Understand strategies in meal planning.

NCCTE.2018.FN41.06.02 - Understand strategies of selecting and storing food.

NCCTE.2018.FN41.06.03 - Apply methods to prepare healthy meals.

Course: Food and Nutrition II

NCCTE.2018.FN42 - Foods II - Enterprise

NCCTE.2018.FN42.01.00 - Understand food and nutrition careers and food safety management.

NCCTE.2018.FN42.01.01 - Remember food and nutrition career pathways and the lean canvas model for entrepreneurship.*

NCCTE.2018.FN42.01.02 - Understand causes of foodborne illness.

NCCTE.2018.FN42.01.03 - Understand purchasing and receiving protocols for food safety.

NCCTE.2018.FN42.01.04 - Understand contributing factors to foodborne illness.

NCCTE.2018.FN42.01.05 - Understand safe facilities, pest management and contamination.

NCCTE.2018.FN42.01.06 - Understand food safety management.

NCCTE.2018.FN42.02.00 - Understand nutrition principles and applications.

NCCTE.2018.FN42.02.01 - Understand nutrients and their role in healthy food preparation.

NCCTE.2018.FN42.02.02 - Understand meal planning and food preparation for different stages of



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the life cycle.

NCCTE.2018.FN42.02.03 - Understand meal planning and food preparation for special diets.

NCCTE.2018.FN42.02.04 - Understand sports nutrition and meal planning and food preparation for athletes.

NCCTE.2018.FN42.03.00 - Understand local, national, and global foodways.

NCCTE.2018.FN42.03.01 - Understand food systems and local food.

NCCTE.2018.FN42.03.02 - Understand global cuisines and preparation methods.

NCCTE.2018.FN42.04.00 - Analyze food and nutrition opportunities to meet the needs of customer-clients.

NCCTE.2018.FN42.04.01 - Analyze recipes to modify cooking techniques and ingredients to develop a healthy and well-balanced menu.

NCCTE.2018.FN42.04.02 - Analyze startup processes for ventures in food and nutrition.*

Course: Food Science and Technology

NCCTE.FN43 - Foods II - Technology

NCCTE.FN43.01.00 - Understand food analysis.

NCCTE.FN43.01.01 - Understand objective methods in a food analysis laboratory.

NCCTE.FN43.01.02 - Understand subjective methods in a food analysis laboratory.

NCCTE.FN43.02.00 - Understand the physical and chemical properties of food.

NCCTE.FN43.02.01 - Understand changes to physical properties of food.

NCCTE.FN43.02.02 - Understand the changes to the chemical properties of food.

NCCTE.FN43.03.00 - Understand the functions of food constituents.

NCCTE.FN43.03.01 - Understand the functions of water in food.

NCCTE.FN43.03.02 - Understand the functions of nutrients in food.

NCCTE.FN43.03.03 - Understand the functions of enzymes and phytochemicals.

NCCTE.FN43.04.00 - Understand food additives and food substitutes.

NCCTE.FN43.04.01 - Understand food additives and food substitutes.

NCCTE.FN43.04.02 - Understand government regulations related to food additives and food substitutes.

NCCTE.FN43.05.00 - Understand how microorganisms affect food quality and safety.

NCCTE.FN43.05.01 - Understand microorganisms associated with food quality and safety.

NCCTE.FN43.05.02 - Understand fermentation and its influence on food quality and safety.

NCCTE.FN43.06.00 - Understand non-microbial food hazards and allergen labeling

NCCTE.FN43.06.01 - Understand non-microbial food hazards and allergen labeling.

NCCTE.FN43.06.02 - Understand ways to control common food hazards.

NCCTE.FN43.07.00 - Understand food production systems.

NCCTE.FN43.07.01 - Understand "farm to table" as related to food production.

NCCTE.FN43.07.02 - Compare organically produced foods to conventionally produced foods.

NCCTE.FN43.08.00 - Understand the impact of biotechnology on the food industry.



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NCCTE.FN43.08.01 - Understand how biotechnology affects the quality and safety of food.

NCCTE.FN43.08.02 - Understand the ethical issues of biotechnology and its use in the food industry.

NCCTE.FN43.09.00 - Apply procedures to get a new food product to market.

NCCTE.FN43.09.01 - Understand the types of preservation methods used in food product development.

NCCTE.FN43.09.02 - Classify food packaging procedures used in product development.

NCCTE.FN43.09.03 - Implement steps to get a new food product to market.

Health Sciences Education

Grade: Grade 9 - 12

Course: Biomedical Technology

NCCTE.2016.HB11 - Biomedical Technology I

NCCTE.2016.HB11.01.00 - Understand biomedical research.

NCCTE.2016.HB11.02.00 - Understand the use and care of animals in biomedical research.

NCCTE.2016.HB11.03.00 - Understand the challenges to biomedical research.

NCCTE.2016.HB11.04.00 - Understand Cell Biology and Cancer.

NCCTE.2016.HB11.05.00 - Understand Emerging and Re-emerging Infectious Diseases.

NCCTE.2016.HB11.06.00 - Understand Pathology and Forensic Science.

Course: Pharmacy Technician

NCCTE.2017.HH32 - Pharmacy Technician

NCCTE.2017.HH32.01.00 - Understand pharmacology for technicians.

NCCTE.2017.HH32.02.00 - Understand pharmacy law and regulations.

NCCTE.2017.HH32.03.00 - Apply sterile and non-sterile compounding.

NCCTE.2017.HH32.04.00 - Understand medication safety.

NCCTE.2017.HH32.05.00 - Understand pharmacy quality assurance.

NCCTE.2017.HH32.06.00 - Apply medication order entry and fill process.

NCCTE.2017.HH32.07.00 - Apply pharmacy inventory management.

NCCTE.2017.HH32.08.00 - Apply pharmacy billing and reimbursement.

NCCTE.2017.HH32.09.00 - Understand pharmacy information systems usage and application.

Course: Nursing Fundamentals and Non-Practicum **New**

NCCTE.2020.HN42 - Nursing Fundamentals and NonPracticum

NCCTE.2020.HN42.01.00 - Understand the role, function, legal and ethical responsibilities of the nurse aide within the healthcare system.

NCCTE.2020.HN42.01.01 - Understand healthcare facilities and organization structure.

NCCTE.2020.HN42.01.02 - Understand nurse aide range of function as a member of the healthcare team.

NCCTE.2020.HN42.01.03 - Understand residents' rights, advocacy and grievance procedures.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.HN42.02.00 - Understand communication skills, interpersonal skills, and physical care skills that promote mental health and meet social and special needs of residents in long term care.

NCCTE.2020.HN42.02.01 - Understand communication and interpersonal skills needed to provide resident care and relate to team members.

NCCTE.2020.HN42.02.02 - Understand nurse aide observations, recording and reporting.

NCCTE.2020.HN42.02.03 - Understand basic human needs and nurse aide guidelines in meeting those needs.

NCCTE.2020.HN42.02.04 - Understand the dying process and needs of the resident nearing the end of life.

NCCTE.2020.HN42.03.00 - Understand infection control, safety and emergency skills within the nurse aide range of function.

NCCTE.2020.HN42.03.01 - Understand infection control within nurse aide range of function.

NCCTE.2020.HN42.03.02 - Understand safety and emergency care skills within nurse aide range of function.

NCCTE.2020.HN42.04.00 - Understand nurse aide skills related to residents' vital functions and movement.

NCCTE.2020.HN42.04.01 - Understand vital signs, height and weight measurement skills.

NCCTE.2020.HN42.04.02 - Understand the nurse aide's range of function in rehabilitative/restorative and maintenance care

NCCTE.2020.HN42.05.00 - Understand nurse aide skills related to residents' hygiene, grooming, skin integrity, and living environment needs.

NCCTE.2020.HN42.05.01 - Understand nurse aide skills needed for residents' hygiene and grooming.

NCCTE.2020.HN42.05.02 - Understand nurse aide skills needed to promote skin integrity.

NCCTE.2020.HN42.05.03 - Understand the nurse aide role in creating a safe and clean environment that fosters resident independence, contentment and self-esteem.

NCCTE.2020.HN42.06.00 - Understand nurse aide skills needed to provide for residents' nutrition, hydration, and elimination needs.

NCCTE.2020.HN42.06.01 - Understand nurse aide skills needed to meet the nutritional and hydration needs of residents.

NCCTE.2020.HN42.06.02 - Understand nurse aide skills needed to care for residents' elimination and urination needs

NCCTE.2020.HN42.07.00 - Apply nurse aide skills by completing a independent assignment.

Course: Nursing Fundamentals and Practicum **Updated**

NCCTE.2020.HN43 - Nursing Fundamentals and Practicum

NCCTE.2020.HN43.01.00 - Understand the role, function, legal and ethical responsibilities of the nurse aide within the healthcare system.

NCCTE.2020.HN43.01.01 - Understand healthcare facilities and organization structure.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.HN43.01.02 - Understand nurse aide range of function as a member of the healthcare team.

NCCTE.2020.HN43.01.03 - Understand residents' rights, advocacy and grievance procedures.

NCCTE.2020.HN43.02.00 - Understand communication skills, interpersonal skills, and physical care skills that promote mental health and meet social and special needs of residents in long term care.

NCCTE.2020.HN43.02.01 - Understand communication and interpersonal skills needed to provide resident care and relate to team members.

NCCTE.2020.HN43.02.02 - Understand nurse aide observations, recording and reporting.

NCCTE.2020.HN43.02.03 - Understand basic human needs and nurse aide guidelines in meeting those needs.

NCCTE.2020.HN43.02.04 - Understand the dying process and needs of the resident nearing the end of life.

NCCTE.2020.HN43.03.00 - Understand infection control, safety and emergency skills within the nurse aide range of function.

NCCTE.2020.HN43.03.01 - Understand infection control within nurse aide range of function.

NCCTE.2020.HN43.03.02 - Understand safety and emergency care skills within nurse aide range of function.

NCCTE.2020.HN43.04.00 - Understand nurse aide skills related to residents' vital functions and movement.

NCCTE.2020.HN43.04.01 - Understand vital signs, height and weight measurement skills.

NCCTE.2020.HN43.04.02 - Understand the nurse aide's range of function in rehabilitative/restorative and maintenance care

NCCTE.2020.HN43.05.00 - Understand nurse aide skills related to residents' hygiene, grooming, skin integrity, and living environment needs.

NCCTE.2020.HN43.05.01 - Understand nurse aide skills needed for residents' hygiene and grooming.

NCCTE.2020.HN43.05.02 - Understand nurse aide skills needed to promote skin integrity.

NCCTE.2020.HN43.05.03 - Understand the nurse aide role in creating a safe and clean environment that fosters resident independence, contentment and self-esteem.

NCCTE.2020.HN43.06.00 - Understand nurse aide skills needed to provide for residents' nutrition, hydration, and elimination needs.

NCCTE.2020.HN43.06.01 - Understand nurse aide skills needed to meet the nutritional and hydration needs of residents.

NCCTE.2020.HN43.06.02 - Understand nurse aide skills needed to care for residents' elimination and urination needs

NCCTE.2020.HN43.07.00 - Apply nurse aide skills by providing hands on resident care during a 40 hour (minimum) clinical experience in an approved long term care facility.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

Course: Fundamentals of Gerontology

NCCTE.HN44 - Fundamentals of Gerontology

NCCTE.HN44.01.00 - Understand geriatric resident care interaction/person centered care and stress management for nurse aides.

NCCTE.HN44.01.01 - Introduction to Gerontology for High School and (Module 1) The geriatric resident

NCCTE.HN44.01.02 - (Module 2) Culture change and person-centered care

NCCTE.HN44.01.03 - (Module 3) Stress management for nurse aide who care for geriatric residents

NCCTE.HN44.02.00 - Understand infection control, pressure ulcers, mobility, and alternatives to restraints for the geriatric resident.

NCCTE.HN44.02.01 - (Module 4) Infection control related to geriatrics

NCCTE.HN44.02.02 - (Module 5) Pressure Ulcers related to geriatrics

NCCTE.HN44.02.03 - (Module 6) New approaches for enhancing mobility for geriatrics

NCCTE.HN44.02.04 - (Module 7) Alternatives for restraints for geriatrics

NCCTE.HN44.03.00 - Understand hydration and nutrition needs of the geriatric resident.

NCCTE.HN44.03.01 - (Module 8) Nutrition: MyPyramid

NCCTE.HN44.03.02 - (Module 9) Hydration needs for geriatrics

NCCTE.HN44.03.03 - (Module 10) Obesity and malnutrition in geriatrics

NCCTE.HN44.03.04 - (Modules 11 - 12) The eating process and the dining experience in geriatrics

NCCTE.HN44.04.00 - Understand mental health needs of geriatric residents.

NCCTE.HN44.04.01 - (Module 13) Mental health and mental illness in geriatric residents

NCCTE.HN44.04.02 - (Modules 14 - 17) Alzheimer's disease in geriatric residents

NCCTE.HN44.04.03 - (Module 18) Understanding challenging behaviors and key concepts in assisting the geriatric resident

NCCTE.HN44.05.00 - Understand pain management and palliative care for the geriatric resident within the scope of nurse aide practice.

NCCTE.HN44.05.01 - (Modules 19 - 20) Pain management in the geriatric resident

NCCTE.HN44.05.02 - (Modules 21 - 31) Palliative Care for the geriatric resident

Course: Public Health Fundamentals

NCCTE.HN45 - Public Health Fundamentals

NCCTE.HN45.01.00 - Understand public health basics and the role of home care in public health.

NCCTE.HN45.01.01 - (Module 00) Understand the basics of public health***

NCCTE.HN45.01.02 - (Module 1A) Understand the history of home care/home health.

NCCTE.HN45.01.03 - (Module 1B) Understand the care disciplines involved in home care.

NCCTE.HN45.02.00 - Understand the role and supervision of the home care aide.

NCCTE.HN45.02.01 - (Module 1C) Understand the role of the home care aide.

NCCTE.HN45.02.02 - (Module 1D) Understand the supervision of the home care aide.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.HN45.03.00 - Understand legal/ethical issues and personal safety issues related to home care.

NCCTE.HN45.03.01 - (Module 2) Understand legal and ethical issues related to home care.

NCCTE.HN45.03.02 - (Module 3A-3E) Understand personal safety issues related to home care.

NCCTE.HN45.04.00 - Understand person-centered care and cultural considerations in home care.

NCCTE.HN45.04.01 - (Module 4) Understand person-centered care.

NCCTE.HN45.04.02 - (Module 5) Understand culture considerations related to home care.

NCCTE.HN45.05.00 - Understand age appropriate care, caregiver burnout, patient abuse, and infection control in home care.

NCCTE.HN45.05.01 - (Module 6) Understand age appropriate care, caregiver burnout, and patient abuse.

NCCTE.HN45.05.02 - (Module 7) Understand infection control in home care.

NCCTE.HN45.06.00 - Understand how to care for the patient's home environment and work efficiently using time management skills.

NCCTE.HN45.06.01 - (Module 8) Understand how to provide care for the patient's environment.

NCCTE.HN45.06.02 - (Module 9) Understand time management related to home care.

NCCTE.HN45.07.00 - Understand communication skills and relationship building skills needed to care for home care patients and the families.

NCCTE.HN45.07.01 - (Module 10) Understand relationships with patients and families.

NCCTE.HN45.07.02 - (Module 11A-D) Understand communications.

NCCTE.HN45.08.00 - Understand emergency preparedness and patient safety for home care.

NCCTE.HN45.08.01 - (Module 12A-D) Understand emergency preparedness for home care.

NCCTE.HN45.08.02 - (Module 13A-C) Understand patient safety within home care.

NCCTE.HN45.09.00 - Understand nutritional needs specific to home care patients.

NCCTE.HN45.09.01 - (Module 14A-14C) Understand "MyPlate", special diets, and food labels.

NCCTE.HN45.09.02 - (Module 14D-E) Understand grocery shopping for and hydration needs of the patient in home care.

NCCTE.HN45.10.00 - Understand how to care for patients with diseases most common to homebound individuals, provide restorative care, and assist in pain management for home care patients.

NCCTE.HN45.10.01 - (Module 15) Understand care needs of patients with diseases most common to homebound individuals.

NCCTE.HN45.10.02 - (Module 16) Understand restorative care for home care patients.

NCCTE.HN45.10.03 - (Module 18) Understand pain management for home care patients.

NCCTE.HN45.11.00 - Understand Alzheimer's Disease, mental health needs, and challenging behaviors.

NCCTE.HN45.11.01 - (Module 17) Understand Alzheimer's Disease.

NCCTE.HN45.11.02 - (Module 19A-C) Understand mental health needs of homebound patients.

NCCTE.HN45.11.03 - (Module 20A-D) Understand challenging behaviors in the home care setting.

NCCTE.HN45.12.00 - Understand palliative and end of life care in the home setting.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.HN45.12.01 - (Module 21) Understand palliative care needs of patients in the home care setting.

NCCTE.HN45.12.02 - (Module 22A-D) Understand end of life care in the home care setting.

NCCTE.HN45.13.00 - Understand stress management for home care aides, role of medication administration by home care aides, and the Health Care Personnel Registry.

NCCTE.HN45.13.01 - (Module 23) Understand stress management for home care aides.

NCCTE.HN45.13.02 - (Module 24) Understand the role of the home care aide in medication administration.

NCCTE.HN45.13.03 - (Module 25A-C) Understand the Health Care Personnel Registry

Course: Foundations of Health Science

NCCTE.HU10 - Health Team Relations

NCCTE.HU10.01.00 - Use medical abbreviations and terminology.

NCCTE.HU10.01.01 - Identify abbreviations commonly used in a health care setting.

NCCTE.HU10.01.02 - Define prefixes, suffixes and root words.

NCCTE.HU10.01.03 - Combine word parts to form commonly used medical terms.

NCCTE.HU10.02.00 - Evaluate historical contributions in the development of health care.

NCCTE.HU10.02.01 - Discuss medical treatments and beliefs from ancient civilizations through the Renaissance.

NCCTE.HU10.02.02 - Describe medical advances made in 16th- 20th century health care.

NCCTE.HU10.02.03 - Research men and women who made historical contributions to health care.

NCCTE.HU10.02.04 - Explore current trends in health care.

NCCTE.HU10.03.00 - Analyze services provided in the health care delivery system.

NCCTE.HU10.03.01 - Investigate the services of health care facilities.

NCCTE.HU10.03.02 - Describe government and nonprofit agencies.

NCCTE.HU10.03.03 - Discuss the basic principles of different health insurance plans.

NCCTE.HU10.04.00 - Demonstrate the personal and professional standards of health care workers.

NCCTE.HU10.04.01 - Demonstrate personal and professional appearance and characteristics.

NCCTE.HU10.04.02 - Utilize elements of effective communication.

NCCTE.HU10.04.03 - Apply principles of leadership and teamwork.

NCCTE.HU10.04.04 - Analyze stressors and stress management skills.

NCCTE.HU10.04.05 - Practice time management skills.

NCCTE.HU10.05.00 - Analyze medical and health care careers.

NCCTE.HU10.05.01 - Investigate educational requirements and levels of training.

NCCTE.HU10.05.02 - Analyze dental, diagnostic, emergency, and health information services.

NCCTE.HU10.05.03 - Analyze careers in health care facility services, medical services, and mental health and social services.

NCCTE.HU10.05.04 - Analyze mortuary, nursing, nutrition and dietary careers.

NCCTE.HU10.05.05 - Analyze therapeutic services, veterinary medicine, and vision services.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.HU10.05.06 - Apply self-assessment for career planning and revise an individual career development plan.

NCCTE.HU10.06.00 - Analyze legal and ethical responsibilities in health care.

NCCTE.HU10.06.01 - Analyze the legal responsibilities that apply to torts.

NCCTE.HU10.06.02 - Analyze contracts, privileged communications, and HIPAA.

NCCTE.HU10.06.03 - Evaluate ethical and professional standards in a health care setting.

NCCTE.HU10.07.00 - Analyze cultural diversity in the delivery of health care.

NCCTE.HU10.07.01 - Discuss concepts of culture, ethnicity and race.

NCCTE.HU10.07.02 - Analyze behaviors and their cultural significance.

NCCTE.HU10.07.03 - Evaluate cultural and spiritual beliefs regarding health care.

NCCTE.HU10.08.00 - Analyze the use of medical mathematics in the health care system.

NCCTE.HU10.08.01 - Identify and use household and metric units.

NCCTE.HU10.08.02 - Convert among metric and standard measurements.

NCCTE.HU10.08.03 - Use Roman numerals and the 24-hour clock.

NCCTE.HU10.09.00 - Explore selected topic(s) within the health care community.

NCCTE.HU10.09.01 - Identify and explore selected topics that relate to the health care community and pursuit of a health profession.

Course: Health Science I **Updated**

NCCTE.2020.HU40 - Health Science I

NCCTE.2020.HU40.01.00 - Understand structural organization of the body and roles of the first responder

NCCTE.2020.HU40.01.01 - Understand types of body tissues

NCCTE.2020.HU40.01.02 - Understand anatomical locations and terminology

NCCTE.2020.HU40.01.03 - Understand how to recognize and respond to emergencies as a first responder

NCCTE.2020.HU40.02.00 - Understand the body's support exchange systems

NCCTE.2020.HU40.02.01 - Understand the structures, functions, and disorders of the skeletal system

NCCTE.2020.HU40.02.02 - Understand the structures, functions, and disorders of the muscular system

NCCTE.2020.HU40.02.03 - Understand the structures, functions, and disorders of the integumentary system

NCCTE.2020.HU40.03.00 - Understand the body's nutrient exchange and communication systems

NCCTE.2020.HU40.03.01 - Understand the structures, functions, and disorders of the digestive system

NCCTE.2020.HU40.03.02 - Understand the structures, functions, and disorders of the urinary system

NCCTE.2020.HU40.03.03 - Understand the structures, functions, and disorders of the nervous



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system

NCCTE.2020.HU40.03.04 - Understand the structures, functions, and disorders of the sensory system

NCCTE.2020.HU40.04.00 - Understand the body's hormone control systems

NCCTE.2020.HU40.04.01 - Understand the structures, functions, and disorders of the lymphatic and immune systems

NCCTE.2020.HU40.04.02 - Understand the structures, functions, and disorders of the endocrine system

NCCTE.2020.HU40.04.03 - Understand the structures, functions, and disorders of the male and female reproductive systems

Course: Health Science II **Updated**

NCCTE.2020.HU42 - Health Science II

NCCTE.2020.HU42.01.00 - Understand employability skills for healthcare professionals

NCCTE.2020.HU42.01.01 - Understand characteristics and attributes of healthcare professionals

NCCTE.2020.HU42.01.02 - Understand trans-cultural awareness related to healthcare services

NCCTE.2020.HU42.01.03 - Understand legal and ethical issues related to healthcare

NCCTE.2020.HU42.02.00 - Understand healthcare safety and infection control procedures

NCCTE.2020.HU42.02.01 - Understand communicable disease pathology, treatment, and prevention

NCCTE.2020.HU42.02.02 - Understand infection control and aseptic procedures (may use Career Safe OSHA 10-Hour Healthcare module)

NCCTE.2020.HU42.02.03 - Understand safety considerations and procedures when providing healthcare services (may use Career Safe OSHA 10-Hour Healthcare module)

NCCTE.2020.HU42.03.00 - Understand cardiovascular and respiratory systems and how to respond to emergencies

NCCTE.2020.HU42.03.01 - Understand the structures, functions, and disorders of the respiratory system

NCCTE.2020.HU42.03.02 - Understand the structures, functions, and disorders of the circulatory system

NCCTE.2020.HU42.03.03 - Apply BLS CPR and AED skills to respond to respiratory and cardiovascular emergencies

NCCTE.2020.HU42.04.00 - Understand the domains of healthcare

NCCTE.2020.HU42.04.01 - Understand diagnostic and therapeutic services

NCCTE.2020.HU42.04.02 - Understand health informatics and support services

Trade, Technology, Engineering, and Industrial Education

Grade: Grade 9 - 12



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Course: Construction Core **Updated**

NCCTE.2020.IC00 - Construction Core

- NCCTE.2020.IC00.01.00** - Understand Basis Safety (00101-15).
- NCCTE.2020.IC00.02.00** - Understand Introduction to Construction Math (00102-15).
- NCCTE.2020.IC00.03.00** - Understand Introduction to Hand Tools (00103-15).
- NCCTE.2020.IC00.04.00** - Understand Introduction to Power Tools (00104-15).
- NCCTE.2020.IC00.05.00** - Understand Introduction to Construction Drawings - Blueprints (00105-15).
- NCCTE.2020.IC00.06.00** - Apply Material Handling Procedures (00109-15).
- NCCTE.2020.IC00.07.00** - Understand Basic Communication Skills (00107-15).
- NCCTE.2020.IC00.08.00** - Understand Basic Employability Skills (00108-15).
- NCCTE.2020.IC00.09.00** - Understand Your Role in the Green Environment (Module 70101-15).

Course: Masonry I

NCCTE.2019.IC11 - Masonry I

- NCCTE.2019.IC11.01.00** - Understand the Introduction to Masonry (Module 28101-13)
- NCCTE.2019.IC11.02.00** - Apply Masonry Safety Standards (Module 28106-13)
- NCCTE.2019.IC11.03.00** - Apply Masonry Tools and Equipment (Module 28102-13)
- NCCTE.2019.IC11.04.00** - Understand Measurement, Drawings, and Specifications (Module 20103-13)
- NCCTE.2019.IC11.05.00** - Apply Mortar Skills and Techniques (Module 28104-13)
- NCCTE.2019.IC11.06.00** - Apply Masonry Units and Installation Techniques (Module 28105-13)

Course: Masonry II **Updated**

NCCTE.2020.IC12 - Masonry II

- NCCTE.2020.IC12.01.00** - Understand Residential Plans and Drawing Interpretation (Module 28201-14).
- NCCTE.2020.IC12.02.00** - Understand Residential Masonry (Module 28202-14).
- NCCTE.2020.IC12.03.00** - Apply Reinforced Masonry (Module 28203-14).
- NCCTE.2020.IC12.04.00** - Apply Masonry Openings and Metal Work (Module 28204-14).

Course: Masonry III **Updated**

NCCTE.2020.IC13 - Masonry III

- NCCTE.2020.IC13.01.00** - Understand Introduction to Weatherization (Module 59101-10).
- NCCTE.2020.IC13.02.00** - Apply Advanced Laying Techniques (Module 28205-14).
- NCCTE.2020.IC13.03.00** - Apply the Effects of Climate on Masonry Procedures (Module 28206-14).
- NCCTE.2020.IC13.04.00** - Apply Construction Inspection and Quality Control Processes (Module 28207-14).

Course: Carpentry I

NCCTE.2019.IC21 - Carpentry I

- NCCTE.2019.IC21.01.00** - Understand Orientation to the Trade (Module 27101-13)



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NCCTE.2019.IC21.02.00 - Understand Building Materials, Fasteners and Adhesives (Module 27102-13)

NCCTE.2019.IC21.03.00 - Apply Hand and Power Tools (Module 27103-13)

NCCTE.2019.IC21.04.00 - Understand Introduction to Construction Drawings, Specifications, and Layout (Module 27104-13)

NCCTE.2019.IC21.05.00 - Apply Floor Systems (27105-13)

NCCTE.2019.IC21.06.00 - Apply Wall Systems (Module 27111-13)

NCCTE.2019.IC21.07.00 - Apply Basic Stair Layout (Module 27110-13)

Course: Carpentry II **Updated**

NCCTE.2020.IC22 - Carpentry II

NCCTE.2020.IC22.01.00 - Apply Ceiling Joist and Roof Framing (Module 27112-13).

NCCTE.2020.IC22.02.00 - Apply Roofing Applications: Residential (Module 27202-13).

NCCTE.2020.IC22.03.00 - Understand Thermal and Moisture Protection (Module 27203-13).

NCCTE.2020.IC22.04.00 - Apply Introduction to Building Envelope Systems (Module 27109-13).

NCCTE.2020.IC22.05.00 - Apply Exterior Finishing: Residential (Module 27204-13).

Course: Carpentry III **Updated**

NCCTE.2020.IC23 - Carpentry III

NCCTE.2020.IC23.01.00 - Understand Introduction to Weatherization (Module 59101-10).

NCCTE.2020.IC23.02.00 - Understand the use of Commercial Drawings (Module 27201-13).

NCCTE.2020.IC23.03.00 - Apply Cold-Formed Steel Framing (Module 27205-13).

NCCTE.2020.IC23.04.00 - Apply Drywall Installation (Module 27206-13).

NCCTE.2020.IC23.05.00 - Apply Drywall Finishing (Module 27207-13).

NCCTE.2020.IC23.06.00 - Apply Doors and Door Hardware (Module 27208-13).

NCCTE.2020.IC23.07.00 - Apply Window, Door, Floor, and Ceiling Trim (Module 27210-13).

Course: Electrical Trades I **Updated**

NCCTE.2020.IC41 - Electrical Trades I

NCCTE.2020.IC41.01.00 - Understand Orientation to the Electrical Trade. (Module 26101-17).

NCCTE.2020.IC41.02.00 - Understand Electrical Safety. (Module 26102-17).

NCCTE.2020.IC41.03.00 - Understand Introduction to Electrical Circuits. (Module 26103-17).

NCCTE.2020.IC41.04.00 - Understand Electrical Theory. (Module 26104-17).

NCCTE.2020.IC41.05.00 - Understand Introduction to the National Electric Code. (Module 26105-17).

NCCTE.2020.IC41.06.00 - Apply Device Boxes to Structure. (Module 26106-17).

NCCTE.2020.IC41.07.00 - Apply Hand Bending Techniques. (Module 26107-17).

NCCTE.2020.IC41.08.00 - Apply Raceways and Fittings to Structure. (Module 26108-17).

Course: Electrical Trades II **Updated**

NCCTE.2020.IC42 - Electrical Trades II

NCCTE.2020.IC42.01.00 - Understand Conductors and Cables. (Module 26109-17).



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NCCTE.2020.IC42.02.00 - Understand Basic Electrical Construction Drawings. (Module 26110-17).

NCCTE.2020.IC42.03.00 - Understand Residential Electric Services. (Module 26111-17).

NCCTE.2020.IC42.04.00 - Apply Electrical Test Equipment Usage. (Module 26112-17).

NCCTE.2020.IC42.05.00 - Understand Alternating Current (A/C) Theory. (Module 26201-17).

NCCTE.2020.IC42.06.00 - Apply Grounding and Bonding Techniques. (Module 26209-17).

NCCTE.2020.IC42.07.00 - Understand Motors: Theory and Application. (Module 26202-17).

NCCTE.2020.IC42.08.00 - Apply Electric Lighting to Structures. (Module 26203-17).

Course: Electrical Trades III **Updated**

NCCTE.2020.IC43 - Electrical Trades III

NCCTE.2020.IC43.01.00 - Understand Introduction to Weatherization (Module 59101-10).

NCCTE.2020.IC43.02.00 - Apply Conduit Bending Techniques. (Module 26204-17).

NCCTE.2020.IC43.03.00 - Apply Pull and Junction Boxes to Structure. (Module 26205-17).

NCCTE.2020.IC43.04.00 - Apply Conductor Installations. (Module 26206-17).

NCCTE.2020.IC43.05.00 - Apply Cable Tray to Structure. (Module 26207-17).

NCCTE.2020.IC43.06.00 - Apply Conductor Terminations and Splices. (Module 26208-17).

NCCTE.2020.IC43.07.00 - Apply Circuit Breakers and Fuses. (Module 26210-14).

NCCTE.2020.IC43.08.00 - Understand Control Systems and Fundamental Concepts. (Module 26211-17).

Course: Drafting I

NCCTE.IC61 - Drafting I

NCCTE.IC61.01.00 - Understand Fundamental Concepts and Trends of Drafting.

NCCTE.IC61.01.01 - Understand BIM, and Rapid Prototyping.

NCCTE.IC61.01.02 - Understand Industrial Design, Sustainable Design, and LEED.

NCCTE.IC61.01.03 - Understand Career Options.

NCCTE.IC61.02.00 - Understand the Ideation process. (big 6 in academia) (SUPPLEMENTAL)

NCCTE.IC61.03.00 - Apply sketching skills and techniques. (Architectural & Engineering)

NCCTE.IC61.03.01 - Apply Rough sketching (lettering for clarity, uppercase caps).

NCCTE.IC61.03.02 - Apply 2D sketching - Single and Multi-view.

NCCTE.IC61.03.03 - Apply 3D sketching - Pictorials (isometric, oblique).

NCCTE.IC61.04.00 - Apply CAD User Skills (with use of the following CAD software).

NCCTE.IC61.04.01 - Apply procedures for working with the User interface (navigation tools).

NCCTE.IC61.04.02 - Apply procedures for creating drawings (coordinates and draw tools). Review Geometric Shapes.

NCCTE.IC61.04.03 - Apply procedures for manipulating objects (grips, object selection, drawing aids).

NCCTE.IC61.04.04 - Apply procedures for working with the drawing organization and inquiry commands (layers).



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NCCTE.IC61.04.05 - Apply procedures for altering objects (modifying).

NCCTE.IC61.04.06 - Apply procedures for working with layouts (templates, viewports).

NCCTE.IC61.04.07 - Apply procedures for annotating the drawing (adding Text).

NCCTE.IC61.04.08 - Apply procedures for dimensioning.

NCCTE.IC61.04.09 - Apply procedures for hatching objects (Drawing enhancements).

NCCTE.IC61.04.10 - Apply procedures for working with reusable content (blocks).

NCCTE.IC61.04.11 - Apply procedures for creating Additional drawing objects (polylines splines ellipse).

NCCTE.IC61.04.12 - Apply procedures for plotting the drawing.

Course: Drafting II - Architectural **Updated**

NCCTE.2020.IC62 - Drafting II - Architectural

NCCTE.2020.IC62.01.00 - Understand Architectural Styles and Industry Terms.

NCCTE.2020.IC62.01.01 - Understand various architectural styles.

NCCTE.2020.IC62.01.02 - Understand terms related to selected styles of residential architecture and create a collection of illustrations or a presentation that demonstrates the various elements of residential styles.

NCCTE.2020.IC62.01.03 - Understand architectural industry terms.

NCCTE.2020.IC62.02.00 - Apply procedures to create Floor Plans.

NCCTE.2020.IC62.02.01 - Apply terms and definitions and accepted principles related to single-level residential space planning.

NCCTE.2020.IC62.02.02 - Apply residential door and window types, symbols for doors, windows and room identification.

NCCTE.2020.IC62.02.03 - Apply terms and definitions related to single-level residential space planning.

NCCTE.2020.IC62.02.04 - Apply accepted principles of single-view residential space planning.

NCCTE.2020.IC62.02.05 - Apply door and window types.

NCCTE.2020.IC62.02.06 - Apply floor plan symbols.

NCCTE.2020.IC62.02.07 - Apply procedures to draw a single-level residential floor plan using 3D CAD, BIM software, for example: Revit Architecture.

NCCTE.2020.IC62.02.08 - Apply procedures to annotate a single-level residential floor plan using 3D CAD, BIM software, for example: Revit Architecture.

NCCTE.2020.IC62.03.00 - Apply procedures to create Foundation plans and Levels of a Building.

NCCTE.2020.IC62.03.01 - Apply terminology related to common foundation plans.

NCCTE.2020.IC62.03.02 - Apply footing and foundation wall construction types.

NCCTE.2020.IC62.03.03 - Apply the purpose of a foundation plan and describe its features.

NCCTE.2020.IC62.03.04 - Apply concepts of wood sill and floor construction.

NCCTE.2020.IC62.03.05 - Apply procedures to draw a foundation plan using 3D CAD, BIM software.



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NCCTE.2020.IC62.04.00 - Apply procedures to create Simple Roof and Floor System Designs.

NCCTE.2020.IC62.04.01 - Understand terms and definitions related to roof plans.

NCCTE.2020.IC62.04.02 - Understand concepts of roof construction including roof types: gable, hip, roof slope.

NCCTE.2020.IC62.04.03 - Understand concepts of floor systems.

NCCTE.2020.IC62.04.04 - Apply procedures to draw roof and floor systems using 3D CAD, BIM software.

NCCTE.2020.IC62.05.00 - Apply procedures for drawing View types.

NCCTE.2020.IC62.05.01 - Apply terms and definitions related to construction drawing view types: Plan views, Section views, Elevation views, 3D Views, and Detail views.

NCCTE.2020.IC62.05.02 - Apply terms and definitions related to wall sections and details.

NCCTE.2020.IC62.05.03 - Apply concepts of wood frame wall construction.

NCCTE.2020.IC62.05.04 - Apply the purpose and features of a wall section, noting insulation and vapor barrier materials and construction.

NCCTE.2020.IC62.05.05 - Apply terms, purpose, features and definitions related to exterior elevations and building sections.

NCCTE.2020.IC62.05.06 - Apply procedures to draw typical wall sections using 3D CAD, BIM software.

NCCTE.2020.IC62.05.07 - Apply procedures to draw exterior elevations and building sections using 3D CAD, BIM software.

NCCTE.2020.IC62.06.00 - Apply Procedures to Complete a Residential Construction Documents (CD) Set.

NCCTE.2020.IC62.06.01 - Apply key components/sheets needed, sheet numbering, naming conventions for a CD set.

NCCTE.2020.IC62.06.02 - Apply schedules and labels used in CD Set.

NCCTE.2020.IC62.06.03 - Apply CAD printing and set up.

NCCTE.2020.IC62.06.04 - Apply procedures to complete a residential Construction Documents Set using 3D CAD, BIM software.

Course: Drafting III - Architectural **Updated**

NCCTE.2020.IC63 - Drafting III - Architectural

NCCTE.2020.IC63.01.00 - Understand Foundation Design, Calculations and Construction.

NCCTE.2020.IC63.01.01 - Understand terms and definitions relating to foundation design, calculations and construction.

NCCTE.2020.IC63.01.02 - Understand use of footings, foundation walls, girders, piers, ventilation, and slab floor/foundations.

NCCTE.2020.IC63.02.00 - Apply Procedures to Create Basic Electrical Design Concepts.

NCCTE.2020.IC63.02.01 - Apply terms and symbols used to indicate electrical fixtures in a residential design.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.IC63.02.02 - Apply the rules and standards for electrical fixture placement.

NCCTE.2020.IC63.02.03 - Apply the rules and standards for electrical fixture placement and create an electrical/lighting plan using 3D CAD software, such as Revit Architecture.

NCCTE.2020.IC63.03.00 - Apply Procedures to Create Stair/Railing Designs for Construction.

NCCTE.2020.IC63.03.01 - Apply terms and definitions relating to stair design and construction.

NCCTE.2020.IC63.03.02 - Apply the parts and standards used to construct various stair system and types (Straight, Curved, with landings and turns).

NCCTE.2020.IC63.03.03 - Apply the calculations for rise, run, total rise, total run, and floor cutout.

NCCTE.2020.IC63.03.04 - Apply typical railing design and construction for stairs, landings and decks.

NCCTE.2020.IC63.03.05 - Apply accepted procedures to draw plans for stair construction using 3D CAD software, such as Revit Architecture.

NCCTE.2020.IC63.04.00 - Apply Procedures to Create Advanced Kitchen and Bath Details.

NCCTE.2020.IC63.04.01 - Apply terms, concepts and elements related to kitchen and bath details and design.

NCCTE.2020.IC63.04.02 - Apply plans for kitchen cabinet drawings, standard sizes and configurations.

NCCTE.2020.IC63.04.03 - Apply procedures to draw enlarged detailed plans and interior elevations for kitchens and baths using 3D CAD software, such as Revit Architecture.

NCCTE.2020.IC63.05.00 - Apply Procedures to Create Multi-level Residential Floor Plans.

NCCTE.2020.IC63.05.01 - Understand terms, definitions and accepted principles related to 2-story or multi-level residential space planning.

NCCTE.2020.IC63.05.02 - Understand residential door and window types (review of Level II Arch).

NCCTE.2020.IC63.05.03 - Understand floor plan symbols for doors, windows and room identification.

NCCTE.2020.IC63.05.04 - Understand the steps in drawing, dimensioning, and annotating a 2 story or multi-level floor plan.

NCCTE.2020.IC63.05.05 - Apply procedures to design, draw and annotate a 2 story or multi-level residential floor plan, including foundation plan using 3D CAD, BIM software.

NCCTE.2020.IC63.06.00 - Apply procedures to create a Site Development Plan.

NCCTE.2020.IC63.06.01 - Apply terms related to site development.

NCCTE.2020.IC63.06.02 - Apply factors to be considered when developing a site for residential construction.

NCCTE.2020.IC63.06.03 - Apply the lines, symbols, and features found on site plans.

NCCTE.2020.IC63.06.04 - Apply how to develop a site plan drawing.

NCCTE.2020.IC63.06.05 - Apply accepted procedures to draw a site plan for a residential structure using 3D CAD software, such as Revit Architecture.

NCCTE.2020.IC63.07.00 - Apply Procedures and Construction Techniques to Create a Small



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Commercial Building Design.

NCCTE.2020.IC63.07.01 - Apply various types of small commercial design projects.

NCCTE.2020.IC63.07.02 - Apply the different construction practices from residential to commercial; metal studs vs. wood construction, steel beams.

NCCTE.2020.IC63.07.03 - Apply commercial reflected ceiling plans, including lighting layout, electrical and fire protection symbols.

NCCTE.2020.IC63.07.04 - Apply Grid and column design and layout, labeling.

NCCTE.2020.IC63.07.05 - Apply multi-story stair design for commercial buildings.

NCCTE.2020.IC63.07.06 - Apply procedures to draw a small commercial building using 3D CAD software, such as Revit Architecture.

NCCTE.2020.IC63.08.00 - Apply Procedures to Create Rendering and Walkthroughs.

NCCTE.2020.IC63.08.01 - Apply the definition, purpose and techniques for a 3D rendering of a building.

NCCTE.2020.IC63.08.02 - Apply interior lighting and exterior solar effects on a building design.

NCCTE.2020.IC63.08.03 - Apply how camera angles affect perspective views of a building, interior and exterior.

NCCTE.2020.IC63.08.04 - Apply 3D building walkthroughs.

NCCTE.2020.IC63.08.05 - Apply CAD techniques to create a 3D rendering of an architectural model using 3D CAD software, such as Revit Architecture.

Course: Drone Technology I **New**

NCCTE.2020.ID11 - Drone Technology I

NCCTE.2020.ID11.01.00 - Understanding Drones.

NCCTE.2020.ID11.01.01 - Understand the history of Drones.

NCCTE.2020.ID11.01.02 - Understand careers in the drone industry.

NCCTE.2020.ID11.01.03 - Understand 21st century skills needed by professional in the drone industry.

NCCTE.2020.ID11.02.00 - Apply procedures to troubleshoot Drone hardware.

NCCTE.2020.ID11.02.01 - Understand the functions and relationship components that make up a drone.

NCCTE.2020.ID11.02.02 - Apply procedures to troubleshoot Drone hardware.

NCCTE.2020.ID11.03.00 - Understand the requirements for FAA 14 CFR Part 107 and NCDOT UAS Operator Permit.

NCCTE.2020.ID11.03.01 - Understand regulations concerning drone use.

NCCTE.2020.ID11.03.02 - Understand airspace classifications and operations requirements in the drone industry.

NCCTE.2020.ID11.03.03 - Understand weather related requirements concerning drone use.

NCCTE.2020.ID11.03.04 - Understand loading and performance requirements in the drone industry.



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NCCTE.2020.ID11.03.05 - Understand drone operations.

NCCTE.2020.ID11.03.06 - Understand NC UAS Drone Operator requirements.

NCCTE.2020.ID11.04.00 - Apply procedures needed for basic Drone flight.

NCCTE.2020.ID11.04.01 - Apply procedures for manual drone flight.

NCCTE.2020.ID11.04.02 - Understand drone autonomous flight.

NCCTE.2020.ID11.04.03 - Understand drone mapping software.

Course: Drone Technology II **New**

NCCTE.2020.ID12 - Drone Technology II

NCCTE.2020.ID12.01.00 - Understand entrepreneurship in the Drone Industry.

NCCTE.2020.ID12.02.00 - Apply procedures used in Drone Fleet Management.

NCCTE.2020.ID12.03.00 - Apply procedures used in Drone Simulated Environment.

NCCTE.2020.ID12.03.01 - Understand Visual Line of Sight Operations.

NCCTE.2020.ID12.03.02 - Apply procedures used in the Drone Flight Simulation.

NCCTE.2020.ID12.03.03 - Apply procedures used in the Drone Manual Flight Operations (construction, agriculture, public safety, and cinematography)

NCCTE.2020.ID12.04.00 - Apply procedures used to modify Drone Software.

NCCTE.2020.ID12.04.01 - Apply procedures for updating Drone firmware.

NCCTE.2020.ID12.04.02 - Apply procedures for using Drone Graphic User Interfaces (GUI).

NCCTE.2020.ID12.04.03 - Understanding Drone Software Development.

Course: HVAC/R I **New**

NCCTE.2020.IL55 - HVAC/R I

NCCTE.2020.IL55.01.00 - Understand Introduction to HVAC (NCCER Module 03101).

NCCTE.2020.IL55.02.00 - Apply Trade Mathematics (NCCER Module 03102).

NCCTE.2020.IL55.03.00 - Apply Basic Electricity (NCCER Module 03106).

NCCTE.2020.IL55.04.00 - Understand Introduction to Heating (NCCER Module 03108).

NCCTE.2020.IL55.05.00 - Understand Introduction to Cooling (NCCER Module 03107).

NCCTE.2020.IL55.06.00 - Understand Air Distribution Systems (NCCER Module 03109).

NCCTE.2020.IL55.07.00 - Apply Basic Copper and Plastic Piping Practices (NCCER Module 03103).

NCCTE.2020.IL55.08.00 - Apply Soldering and Brazing (NCCER Module 03104).

NCCTE.2020.IL55.09.00 - Apply Basic Carbon Steel Piping Practices (NCCER Module 03105).

Course: HVAC/R II **New**

NCCTE.2020.IL56 - HVAC/R II

NCCTE.2020.IL56.01.00 - Understand Alternating Current (NCCER Module 03206).

NCCTE.2020.IL56.02.00 - Understand Heat Pumps (NCCER Module 03211).

NCCTE.2020.IL56.03.00 - Apply Troubleshooting Heat Pumps (Module 03311).

NCCTE.2020.IL56.04.00 - Apply Troubleshooting Cooling (Module 03210).

NCCTE.2020.IL56.05.00 - Apply Leak detection, Evacuation, Recovery and Recharging (NCCER



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Module 03205).

NCCTE.2020.IL56.06.00 - Apply Refrigerants and Oils (NCCER Module 03301).

Course: HVAC/R III **New**

NCCTE.2020.IL57 - HVAC/R III

NCCTE.2020.IL57.01.00 - Apply Sheet Metal Duct Systems (NCCER Module 03213).

NCCTE.2020.IL57.02.00 - Understand Compressors (NCCER Module (03302).

NCCTE.2020.IL57.03.00 - Apply Metering Devices (NCCER Module 03303).

NCCTE.2020.IL57.04.00 - Apply Control Circuit and Motor Troubleshooting (Module 03314).

NCCTE.2020.IL57.05.00 - Apply Troubleshooting Gas Heating (Module 03209).

NCCTE.2020.IL57.06.00 - Understand Chimneys, Vents, Flues (NCCER Module 03202).

NCCTE.2020.IL57.07.00 - Understand Introduction to Weatherization (Module 59101).

Course: Plumbing I **New**

NCCTE.2020.IL58 - Plumbing I

NCCTE.2020.IL58.01.00 - Understand Introduction to the Plumbing Profession (NCCER Module 02101).

NCCTE.2020.IL58.02.00 - Apply Plumbing Safety (NCCER Module 02102).

NCCTE.2020.IL58.03.00 - Apply Plumbing Tools (NCCER Module 02103).

NCCTE.2020.IL58.04.00 - Understand Introduction to Plumbing Math (NCCER Module 02104).

NCCTE.2020.IL58.05.00 - Understand Introduction to Plumbing Drawings (NCCER Module 02105).

NCCTE.2020.IL58.06.00 - Apply Plastic Pipe and Fittings (NCCER Module 02106).

NCCTE.2020.IL58.07.00 - Apply Copper Tube and Fittings (NCCER Module 02107).

NCCTE.2020.IL58.08.00 - Apply Cast-Iron Pipe and Fittings (NCCER Module 02108).

NCCTE.2020.IL58.09.00 - Apply Steel Pipe and Fittings (NCCER Module 02109).

NCCTE.2020.IL58.10.00 - Understand Introduction to Plumbing Fixtures (NCCER Module 02110).

Course: Plumbing II **New**

NCCTE.2020.IL59 - Plumbing II

NCCTE.2020.IL59.01.00 - Understand Introduction to DWV Systems (NCCER Module 02111).

NCCTE.2020.IL59.02.00 - Understand Introduction to Water Distribution Systems (NCCER Module 02112).

NCCTE.2020.IL59.03.00 - Apply Plumbing Math 2 (NCCER Module 02201).

NCCTE.2020.IL59.04.00 - Apply Reading Commercial Drawings (NCCER Module 02202).

NCCTE.2020.IL59.05.00 - Apply Structural Penetrations, Insulating, and Firestopping (NCCER Module 002203).

NCCTE.2020.IL59.06.00 - Apply Installing and Testing DWV Piping (NCCER Module 02204).

NCCTE.2020.IL59.07.00 - Apply Installing Roof, Floor, and Area Drains (NCCER Module 02205).

NCCTE.2020.IL59.08.00 - Apply Types of Valves (NCCER Module 02206).



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Course: Plumbing III **New**

NCCTE.2020.IL60 - Plumbing III

NCCTE.2020.IL60.01.00 - Apply Installing and Testing Water Supply Piping (NCCER Module 02207).

NCCTE.2020.IL60.02.00 - Apply Installing Fixtures and Valves (NCCER Module 02208).

NCCTE.2020.IL60.03.00 - Apply Installing Water Heaters (NCCER Module 02210).

NCCTE.2020.IL60.04.00 - Apply Basic Electricity (NCCER Module 02209).

NCCTE.2020.IL60.05.00 - Apply Fuel Gas Systems (NCCER Module 02211).

NCCTE.2020.IL60.06.00 - Understand Introduction to Weatherization (Module 59101).

Course: Advanced Manufacturing I **Updated**

NCCTE.2020.IM11 - Advanced Manufacturing I

NCCTE.2020.IM11.01.00 - Understand Safety Standards to Manufacturing Processes and Production (MSSC-M1).

NCCTE.2020.IM11.01.01 - Understand advanced manufacturing.

NCCTE.2020.IM11.01.02 - Understand communications used in advanced manufacturing.

NCCTE.2020.IM11.01.03 - Understand production teams.

NCCTE.2020.IM11.01.04 - Understand training & leadership needed in advanced manufacturing.

NCCTE.2020.IM11.01.05 - Understand safety organization.

NCCTE.2020.IM11.01.06 - Understand personal protective equipment and its purposes.

NCCTE.2020.IM11.01.07 - Describe fire and electrical safety and its use in advanced manufacturing.

NCCTE.2020.IM11.01.08 - Understand work area safety.

NCCTE.2020.IM11.01.09 - Understand hazardous material safety in a manufacturing environment.

NCCTE.2020.IM11.01.10 - Understand tool and machine safety.

NCCTE.2020.IM11.01.11 - Understand material handling safety.

NCCTE.2020.IM11.02.00 - Understand Maintenance Awareness Standards to Manufacturing Processes and Production (MSSC-M4).

NCCTE.2020.IM11.02.01 - Understand maintenance requirements in welding.

NCCTE.2020.IM11.02.02 - Understand maintenance requirements in basic electrical circuits.

NCCTE.2020.IM11.02.03 - Understand maintenance requirements in electrical measurement

NCCTE.2020.IM11.02.04 - Understand maintenance requirements in electrical power.

NCCTE.2020.IM11.02.05 - Understand maintenance requirements in pneumatic power systems.

NCCTE.2020.IM11.02.06 - Understand maintenance requirements in hydraulic power systems.

NCCTE.2020.IM11.02.07 - Understand lubrication concepts.

NCCTE.2020.IM11.02.08 - Understand maintenance requirements in bearings and couplings.

NCCTE.2020.IM11.02.09 - Understand maintenance requirements in belt drives.

NCCTE.2020.IM11.02.10 - Understand maintenance requirements in chain drives.

NCCTE.2020.IM11.02.11 - Understand machine control concepts.

NCCTE.2020.IM11.02.12 - Understand maintenance requirements in machine automation.



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Course: Advanced Manufacturing II **Updated**

NCCTE.2020.IM12 - Advanced Manufacturing II

NCCTE.2020.IM12.01.00 - Understand quality practices and measurement to manufacturing processes and production (MSSC-M2).

NCCTE.2020.IM12.01.01 - Understanding multi-view drawing in blueprints.

NCCTE.2020.IM12.01.02 - Understanding assembly drawings and fasteners in blueprints.

NCCTE.2020.IM12.01.03 - Understanding geometric dimensioning and tolerancing in blueprint drawings.

NCCTE.2020.IM12.01.04 - Understand basic measurement.

NCCTE.2020.IM12.01.05 - Understand precision measurement tools.

NCCTE.2020.IM12.01.06 - Understand dimensional gauging.

NCCTE.2020.IM12.01.07 - Understand quality systems.

NCCTE.2020.IM12.01.08 - Understand the use of SPC (statistical process control).

NCCTE.2020.IM12.01.09 - Understand the use of control charts.

NCCTE.2020.IM12.01.10 - Understand continuous improvement in the manufacturing process.

NCCTE.2020.IM12.02.00 - Understand manufacturing processes and production standards (MSSC-M3).

NCCTE.2020.IM12.02.01 - Understand mechanical principles used in manufacturing.

NCCTE.2020.IM12.02.02 - Understand mechanical linkages used in manufacturing.

NCCTE.2020.IM12.02.03 - Understand material quality control.

NCCTE.2020.IM12.02.04 - Understand manufacturing materials and processes.

NCCTE.2020.IM12.02.05 - Understand machining processes in manufacturing.

NCCTE.2020.IM12.02.06 - Understand machine tooling used in manufacturing.

NCCTE.2020.IM12.02.07 - Understand machine operations in manufacturing.

NCCTE.2020.IM12.02.08 - Understand hand tools used in manufacturing.

NCCTE.2020.IM12.02.09 - Understand equipment procedures used in manufacturing.

NCCTE.2020.IM12.02.10 - Understand manufacturing production planning and workflow.

NCCTE.2020.IM12.02.11 - Understand manufacturing metrics.

NCCTE.2020.IM12.02.12 - Understand production control.

Course: Manufacturing Robotics **New**

NCCTE.2020.IM14 - Manufacturing Robotics

NCCTE.2020.IM14.01.00 - Understand Robot Safety and Safety Devices.

NCCTE.2020.IM14.02.00 - Understand Robot Systems and Components.

NCCTE.2020.IM14.03.00 - Apply procedures needed for Initial Installation and Start Up.

NCCTE.2020.IM14.04.00 - Apply procedures needed for Basic Robot Operations Using Teach Pendant.

NCCTE.2020.IM14.05.00 - Apply procedures needed for Basic Robot Programming.

NCCTE.2020.IM14.06.00 - Apply procedures needed for Program File Manipulations.



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NCCTE.2020.IM14.07.00 - Apply procedures needed for Robot Integration.

NCCTE.2020.IM14.08.00 - Apply procedures needed for Troubleshoot System Errors.

NCCTE.2020.IM14.09.00 - Apply procedures needed for Simulation.

Course: Woodworking I

NCCTE.2018.IM21 - Woodworking I

NCCTE.2018.IM21.01.00 - Understand The Cabinetmaking Industry, and Health and Safety Hazards and Safe Practices.

NCCTE.2018.IM21.01.01 - Understand educational requirements.

NCCTE.2018.IM21.01.02 - Understand employment opportunities.

NCCTE.2018.IM21.01.03 - Understand skills necessary.

NCCTE.2018.IM21.01.04 - Understand Personal Protective Equipment.

NCCTE.2018.IM21.01.05 - Understand OSHA.

NCCTE.2018.IM21.01.06 - Understand SDS (MSDS).

NCCTE.2018.IM21.01.07 - Understand hazardous conditions.

NCCTE.2018.IM21.01.08 - Understand guards and shielding.

NCCTE.2018.IM21.02.00 - Apply Design and Layout Procedures.

NCCTE.2018.IM21.02.01 - Apply standard and metric measurement.

NCCTE.2018.IM21.02.02 - Apply working drawings.

NCCTE.2018.IM21.02.03 - Apply measurement and marking tools.

NCCTE.2018.IM21.02.04 - Apply the concepts of Construction Math.

NCCTE.2018.IM21.03.00 - Understand Materials and Characteristics.

NCCTE.2018.IM21.03.01 - Understand wood characteristics.

NCCTE.2018.IM21.03.02 - Understand lumber and millwork.

NCCTE.2018.IM21.03.03 - Understand cabinet and furniture woods.

NCCTE.2018.IM21.03.04 - Understand panel products.

NCCTE.2018.IM21.04.00 - Apply Appropriate use of hand tools.

NCCTE.2018.IM21.04.01 - Apply sawing tools.

NCCTE.2018.IM21.04.02 - Apply surfacing tools.

NCCTE.2018.IM21.04.03 - Apply fastening and assembly tools.

NCCTE.2018.IM21.05.00 - Apply Appropriate use of Portable Power Tools.

NCCTE.2018.IM21.05.01 - Apply sawing tools.

NCCTE.2018.IM21.05.02 - Apply surfacing tools.

NCCTE.2018.IM21.05.03 - Apply fastening and assembly tools.

NCCTE.2018.IM21.06.00 - Apply Appropriate use of Stationary Power Tools.

NCCTE.2018.IM21.06.01 - Apply sawing tools.

NCCTE.2018.IM21.06.02 - Apply shaping tools.

NCCTE.2018.IM21.06.03 - Apply abrasive machines.

NCCTE.2018.IM21.06.04 - Apply drilling and boring tools.



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NCCTE.2018.IM21.06.05 - Apply surfacing machines.

NCCTE.2018.IM21.06.06 - Apply turning machines.

NCCTE.2018.IM21.07.00 - Apply Surface Preparation and Finishing.

NCCTE.2018.IM21.07.01 - Apply abrasive grits.

NCCTE.2018.IM21.07.02 - Apply proper sanding methods.

NCCTE.2018.IM21.07.03 - Apply finishing processes.

NCCTE.2018.IM21.07.04 - Apply a basic finish.

NCCTE.2018.IM21.08.00 - Apply Cabinet Construction and Assembly.

NCCTE.2018.IM21.08.01 - Apply basic woodworking joints.

NCCTE.2018.IM21.08.02 - Apply basic gluing and clamping.

NCCTE.2018.IM21.08.03 - Apply basic mechanical fasteners.

Course: Woodworking II

NCCTE.2018.IM22 - Woodworking II

NCCTE.2018.IM22.01.00 - Understand The Cabinetmaking Industry, and Health and Safety Hazards and Safe Practices.

NCCTE.2018.IM22.01.01 - Understand advanced education options.

NCCTE.2018.IM22.01.02 - Understand advanced career options.

NCCTE.2018.IM22.01.03 - Understand advanced employability skills.

NCCTE.2018.IM22.01.04 - Understand Personal Protective Equipment.

NCCTE.2018.IM22.01.05 - Understand OSHA.

NCCTE.2018.IM22.01.06 - Understand SDS (MSDS).

NCCTE.2018.IM22.01.07 - Understand hazardous conditions.

NCCTE.2018.IM22.01.08 - Understand guards and shielding.

NCCTE.2018.IM22.02.00 - Apply Advanced Design and Layout Procedures.

NCCTE.2018.IM22.02.01 - Apply basic furniture styles.

NCCTE.2018.IM22.02.02 - Apply the use of advanced working drawings.

NCCTE.2018.IM22.02.03 - Apply measurement and marking tools.

NCCTE.2018.IM22.02.04 - Apply concepts of construction math.

NCCTE.2018.IM22.02.05 - Apply basic architectural standards.

NCCTE.2018.IM22.02.06 - Apply advanced layout methods.

NCCTE.2018.IM22.03.00 - Understand Materials and Characteristics.

NCCTE.2018.IM22.03.01 - Understand wood characteristics.

NCCTE.2018.IM22.03.02 - Understand lumber and millwork.

NCCTE.2018.IM22.03.03 - Understand cabinet and furniture woods.

NCCTE.2018.IM22.03.04 - Understand panel products.

NCCTE.2018.IM22.03.05 - Understand laminate and veneer.

NCCTE.2018.IM22.03.06 - Understand cabinetmaking hardware.

NCCTE.2018.IM22.04.00 - Apply Advanced use of Hand Tools.



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NCCTE.2018.IM22.04.01 - Apply basic sharpening skills and processes.

NCCTE.2018.IM22.04.02 - Apply hand tool maintenance.

NCCTE.2018.IM22.04.03 - Apply proper use of hand tools.

NCCTE.2018.IM22.04.04 - Apply advanced hand tool techniques.

NCCTE.2018.IM22.04.05 - Apply hand tool maintenance.

NCCTE.2018.IM22.05.00 - Apply Advanced use of Portable Power Tools.

NCCTE.2018.IM22.05.01 - Apply sawing tools.

NCCTE.2018.IM22.05.02 - Apply surfacing tools.

NCCTE.2018.IM22.05.03 - Apply fastening and assembly tools.

NCCTE.2018.IM22.06.00 - Apply Appropriate use of Stationary Power Tools.

NCCTE.2018.IM22.06.01 - Apply the use of jigs and fixtures.

NCCTE.2018.IM22.06.02 - Apply basic maintenance.

NCCTE.2018.IM22.06.03 - Apply basic setup techniques.

NCCTE.2018.IM22.07.00 - Apply Advanced Surface Preparation and Finishing Techniques.

NCCTE.2018.IM22.07.01 - Apply the advanced use of abrasive grits.

NCCTE.2018.IM22.07.02 - Apply advanced finishing processes.

NCCTE.2018.IM22.08.00 - Apply Advanced Cabinet Construction and Assembly Techniques.

NCCTE.2018.IM22.08.01 - Apply advanced woodworking joints.

NCCTE.2018.IM22.08.02 - Apply cabinet door types and construction.

NCCTE.2018.IM22.08.03 - Apply cabinet drawer types and construction.

NCCTE.2018.IM22.08.04 - Apply veneers and plastic laminates.

Course: Metals Manufacturing Technology I **Updated**

NCCTE.2020.IM41 - Metals Manufacturing Technology I

NCCTE.2020.IM41.01.00 - Understand Industrial Safety and Environmental Protection.

NCCTE.2020.IM41.01.01 - Understand personal protective equipment.

NCCTE.2020.IM41.01.02 - Understand safety data sheet knowledge.

NCCTE.2020.IM41.01.03 - Understand basic shop safety.

NCCTE.2020.IM41.01.04 - Understand machine safety.

NCCTE.2020.IM41.02.00 - Apply General Maintenance.

NCCTE.2020.IM41.02.01 - Apply hand tool safety and maintenance.

NCCTE.2020.IM41.02.02 - Understand finding maintenance procedures.

NCCTE.2020.IM41.02.03 - Apply machine maintenance.

NCCTE.2020.IM41.02.04 - Apply tooling maintenance.

NCCTE.2020.IM41.03.00 - Apply Quality Control and Inspection.

NCCTE.2020.IM41.03.01 - Understand introduction to the Machinery Handbook.

NCCTE.2020.IM41.03.02 - Understand inspection plan and sampling.

NCCTE.2020.IM41.03.03 - Apply measuring techniques and tools.

NCCTE.2020.IM41.03.04 - Apply gage blocks.



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NCCTE.2020.IM41.03.05 - Understand surface finish.

NCCTE.2020.IM41.03.06 - Understand statistical process control.

NCCTE.2020.IM41.04.00 - Apply Process Adjustment and Improvement.

NCCTE.2020.IM41.04.01 - Understand rationale for process improvement.

NCCTE.2020.IM41.04.02 - Understand fit and allowances.

NCCTE.2020.IM41.04.03 - Apply tapping and threading process adjustments.

NCCTE.2020.IM41.04.04 - Apply grinding process adjustments.

NCCTE.2020.IM41.04.05 - Apply milling process adjustments.

NCCTE.2020.IM41.04.06 - Apply drilling process adjustments.

NCCTE.2020.IM41.05.00 - Understand Metals Classification, Properties, and Numbering Systems.

NCCTE.2020.IM41.05.01 - Understand metal classifications.

NCCTE.2020.IM41.05.02 - Understand metal properties.

NCCTE.2020.IM41.05.03 - Understand UNS and AISI/SAE numbering systems.

NCCTE.2020.IM41.05.04 - Understand harness testing of metals and alloys.

Course: Metals Manufacturing Technology II **Updated**

NCCTE.2020.IM42 - Metals Manufacturing Technology II

NCCTE.2020.IM42.01.00 - Apply Job Planning and Management.

NCCTE.2020.IM42.01.01 - Understand Machinery Handbook Applications.

NCCTE.2020.IM42.01.02 - Apply Measurement (semi-precision).

NCCTE.2020.IM42.01.03 - Apply Measurement (precision).

NCCTE.2020.IM42.01.04 - Apply Math Applications.

NCCTE.2020.IM42.01.05 - Understand speeds and feeds formulas and terms.

NCCTE.2020.IM42.01.06 - Apply tolerance, fits, and allowances.

NCCTE.2020.IM42.01.07 - Understand taper problems.

NCCTE.2020.IM42.02.00 - Apply Layout.

NCCTE.2020.IM42.02.01 - Apply layout (semi-precision).

NCCTE.2020.IM42.02.02 - Apply layout (precision).

NCCTE.2020.IM42.03.00 - Apply Benchwork.

NCCTE.2020.IM42.03.01 - Apply blueprint reading.

NCCTE.2020.IM42.03.02 - Understand materials.

NCCTE.2020.IM42.03.03 - Apply filing.

NCCTE.2020.IM42.03.04 - Understand machine theory.

NCCTE.2020.IM42.03.05 - Apply sawing.

NCCTE.2020.IM42.03.06 - Apply drilling.

NCCTE.2020.IM42.03.07 - Apply threads and tapping.

NCCTE.2020.IM42.03.08 - Apply milling.

NCCTE.2020.IM42.03.09 - Apply reaming.

NCCTE.2020.IM42.03.10 - Apply knurling.



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NCCTE.2020.IM42.04.00 - Apply Workpiece Clamping and Tool Holding.

NCCTE.2020.IM42.04.01 - Apply tool holding applications.

NCCTE.2020.IM42.04.02 - Apply clamping and vise applications.

NCCTE.2020.IM42.05.00 - Apply Drilling Operations on a Vertical Milling Machine.

NCCTE.2020.IM42.05.01 - Apply drilling operations setup.

NCCTE.2020.IM42.05.02 - Apply drilling operations.

NCCTE.2020.IM42.06.00 - Apply Milling Operations

NCCTE.2020.IM42.06.01 - Understand milling machine components.

NCCTE.2020.IM42.06.02 - Understand feeds and speeds.

NCCTE.2020.IM42.06.03 - Apply milling operations setup.

NCCTE.2020.IM42.06.04 - Apply basic milling operations.

NCCTE.2020.IM42.07.00 - Understand Quality Control and Inspection Tasks.

NCCTE.2020.IM42.07.01 - Understand measurement practices.

NCCTE.2020.IM42.07.02 - Understand process improvement.

Course: Welding Technology I **Updated**

NCCTE.2020.IM61 - Welding Technology I

NCCTE.2020.IM61.01.00 - Apply Procedures to complete AWS SENSE Module 2 - Safety and Health of Welders

NCCTE.2020.IM61.01.01 - Demonstrate proper use and inspection of personal protection equipment (PPE).

NCCTE.2020.IM61.01.02 - Demonstrate proper safe operation practices in the work area.

NCCTE.2020.IM61.01.03 - Demonstrate proper use and inspection of ventilation equipment.

NCCTE.2020.IM61.01.04 - Demonstrate proper Hot Zone operation.

NCCTE.2020.IM61.01.05 - Demonstrate proper work actions for working in confined spaces.

NCCTE.2020.IM61.01.06 - Demonstrate proper use of precautionary labeling and SDS information.

NCCTE.2020.IM61.01.07 - Demonstrate proper inspection and operation of equipment used for each welding and thermal cutting process.

NCCTE.2020.IM61.02.00 - Apply Procedures to complete AWS SENSE Module 8 - Thermal Cutting Process - Safety

NCCTE.2020.IM61.02.01 - Perform safety inspections of manual and mechanized OFC equipment and accessories.

NCCTE.2020.IM61.02.02 - Perform safety inspections of manual PAC equipment and accessories.

NCCTE.2020.IM61.02.03 - Perform safety inspections of manual CAC-A equipment and accessories.

NCCTE.2020.IM61.03.00 - Apply Procedures to complete AWS SENSE Module 8 - Thermal Cutting Process - Unit 1: Manual Oxyfuel Cutting and Unit 2: Mechanized Oxyfuel Gas Cutting

NCCTE.2020.IM61.03.01 - Make minor external repairs to manual and mechanized OFC



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equipment and accessories.

NCCTE.2020.IM61.03.02 - Set up for manual and mechanized OFC operations on carbon steel.

NCCTE.2020.IM61.03.03 - Operate manual and mechanized OFC equipment on carbon steel.

NCCTE.2020.IM61.03.04 - Perform straight and shape, square and bevel edge cutting operations in flat position, on carbon steel.

NCCTE.2020.IM61.04.00 - Apply Procedures to complete AWS SENSE Module 8 -Thermal Cutting Process -Unit 3 Manual Plasma Arc Cutting

NCCTE.2020.IM61.04.01 - Make minor external repairs to manual PAC equipment and accessories.

NCCTE.2020.IM61.04.02 - Sets up for manual PAC operations on carbon steel, austenitic stainless steel, and aluminum.

NCCTE.2020.IM61.04.03 - Operate manual PAC equipment on carbon steel, austenitic stainless steel, and aluminum.

NCCTE.2020.IM61.04.04 - Perform straight and shape, square edge, cutting operations, in the flat position, on carbon steel, austenitic stainless steel, and aluminum.

NCCTE.2020.IM61.05.00 - Apply Procedures to complete AWS SENSE Module 8 -Thermal Cutting Process -Unit 4 Manual Air Carbon Arc Cutting

NCCTE.2020.IM61.05.01 - Make minor external repairs to manual CAC-A equipment and accessories.

NCCTE.2020.IM61.05.02 - Set up for manual CAC-A scarfing and gouging operations on carbon steel.

NCCTE.2020.IM61.05.03 - Operate manual CAC-A equipment on carbon steel.

NCCTE.2020.IM61.05.04 - Perform scarfing and gouging operations to remove base and weld metal, in the flat and horizontal positions, on carbon steel.

NCCTE.2020.IM61.06.00 - Apply Procedures from AWS SENSE Module 4 - Shielded Metal Arc Welding (SMAW) Safety

NCCTE.2020.IM61.06.01 - Perform safety inspections of SMAW equipment and accessories.

NCCTE.2020.IM61.06.02 - demonstrate safe working practices as described in American National Standard Z49.1

NCCTE.2020.IM61.07.00 - Apply Procedures from AWS SENSE Module 4 - Shielded Metal Arc Welding (SMAW) Base Metal Prep and Welding Positions

NCCTE.2020.IM61.07.01 - Operate SMAW equipment on carbon steel.

NCCTE.2020.IM61.07.02 - Prepares base metal for welds

NCCTE.2020.IM61.07.03 - Identifies and performs various welding positions

NCCTE.2020.IM61.08.00 - Apply Procedures from AWS SENSE Module 4 - Shielded Metal Arc Welding (SMAW) Equipment Setup

NCCTE.2020.IM61.08.01 - Make minor external repairs to SMAW equipment and accessories.

NCCTE.2020.IM61.08.02 - Set up for SMAW operations on carbon steel.



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.IM61.09.00 - Apply Procedures from AWS SENSE Module 4 - Shielded Metal Arc Welding (SMAW) Fillet Weld

NCCTE.2020.IM61.09.01 - Make fillet welds in all positions on carbon steel.

NCCTE.2020.IM61.09.02 - Perform welds using E6010, E6011, or E7018 electrodes.

Course: Welding Technology II **Updated**

NCCTE.2020.IM62 - Welding Technology II

NCCTE.2020.IM62.01.00 - Apply procedures to complete AWS SENSE Module 1 - Occupational Orientation

NCCTE.2020.IM62.01.01 - Prepare time or job cards, reports or records.

NCCTE.2020.IM62.01.02 - Perform housekeeping duties.

NCCTE.2020.IM62.01.03 - Follow verbal instructions to complete work assignments.

NCCTE.2020.IM62.01.04 - Follow written instructions to complete work assignments.

NCCTE.2020.IM62.02.00 - Apply procedures to complete AWS SENSE Module 3 - Drawing and Welding Symbol Interpretation

NCCTE.2020.IM62.02.01 - Interpret basic elements of a drawing or sketch.

NCCTE.2020.IM62.02.02 - Interpret welding symbol information.

NCCTE.2020.IM62.02.03 - Fabricate parts from a drawing or sketch.

NCCTE.2020.IM62.03.00 - Apply procedures to complete AWS SENSE Module 4 - Shielded Metal Arc Welding (SMAW) Electrodes

NCCTE.2020.IM62.03.01 - Demonstrate the proper applications of various electrodes.

NCCTE.2020.IM62.03.02 - Describe electrode identification

NCCTE.2020.IM62.04.00 - Apply procedures to complete AWS SENSE Module 4 - Shielded Metal Arc Welding (SMAW) Groove Weld Prep

NCCTE.2020.IM62.04.01 - Set up for SMAW operations on carbon steel for groove welds.

NCCTE.2020.IM62.04.02 - Demonstrate proper welder settings depending on groove weld application

NCCTE.2020.IM62.05.00 - Perform procedures to complete AWS SENSE Module 4 - Shielded Metal Arc Welding (SMAW) Groove Weld

NCCTE.2020.IM62.05.01 - Make groove weld in all positions on carbon steel.

NCCTE.2020.IM62.05.02 - Set up for SMAW operations on carbon steel for groove welds.

NCCTE.2020.IM62.05.03 - Operate SMAW equipment on carbon steel for groove welds.

NCCTE.2020.IM62.05.04 - Pass SMAW welder performance qualification test (2G and 3G, uphill, limited thickness test plates) on carbon steel.

NCCTE.2020.IM62.06.00 - Apply procedures to complete AWS SENSE Module 9 - Welding Inspection and Testing

NCCTE.2020.IM62.06.01 - Examine cut surfaces and edges of prepared base metal parts.

NCCTE.2020.IM62.06.02 - Examine tacks, root passes, intermediate layers, and completed welds.



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Course: Welding Technology III **Updated**

NCCTE.2020.IM63 - Welding Technology III

NCCTE.2020.IM63.01.00 - Apply procedures to complete AWS SENSE Module 5 and 6 - Gas Metal Arc Welding and Flux Cored Arc Welding Safety

NCCTE.2020.IM63.01.01 - Perform safety inspections of GMAW equipment and accessories.

NCCTE.2020.IM63.01.02 - Perform safety inspections of FCAW equipment and accessories.

NCCTE.2020.IM63.02.00 - Apply procedures to complete AWS SENSE Module 5 and 6 - Gas Metal Arc Welding and Flux Cored Arc Welding Equipment Setup

NCCTE.2020.IM63.02.01 - Make minor external repairs to GMAW equipment and accessories.

NCCTE.2020.IM63.02.02 - Make minor external repairs to FCAW equipment and accessories.

NCCTE.2020.IM63.02.03 - Set up for GMAW-S and GMAW (spray) operations on carbon steel.

NCCTE.2020.IM63.02.04 - Set up for FCAW-G/GM & S operations on carbon steel.

NCCTE.2020.IM63.03.00 - Apply procedures to complete AWS SENSE Module 5 and 6 - Gas Metal Arc Welding and Flux Cored Arc Welding Gasses

NCCTE.2020.IM63.03.01 - Describe and apply the various gasses used in GMAW

NCCTE.2020.IM63.03.02 - Describe and apply the various gasses used in FCAW

NCCTE.2020.IM63.04.00 - Apply procedures to complete AWS SENSE Module 5 and 6 - Gas Metal Arc Welding and Flux Cored Arc Welding Filler Wire

NCCTE.2020.IM63.04.01 - Describe and apply the various electrodes/filler metals used in GMAW

NCCTE.2020.IM63.04.02 - Describe and apply the various electrodes/filler metals used in FCAW

NCCTE.2020.IM63.05.00 - Perform procedures to complete AWS SENSE Module 5 - Gas Metal Arc Welding (GMAW) Short Circuit Fillet and Groove Welds

NCCTE.2020.IM63.05.01 - Operate GMAW-S and GMAW (spray) equipment on carbon steel.

NCCTE.2020.IM63.06.00 - Perform procedures to complete AWS SENSE Module 5 - Gas Metal Arc Welding (GMAW) Spray Fillet and Groove Welds

NCCTE.2020.IM63.06.01 - Operate GMAW-S and GMAW (spray) equipment on carbon steel.

NCCTE.2020.IM63.06.02 - Make GMAW-S fillet welds in all positions and GMAW (spray) fillet welds in the 1F and 2F positions on carbon steel.

NCCTE.2020.IM63.06.03 - Make GMAW-S groove welds in all positions and GMAW (spray) groove welds in the 1G position on carbon steel.

NCCTE.2020.IM63.06.04 - Pass GMAW-S and GMAW (spray) welder performance qualification test on carbon steel.

NCCTE.2020.IM63.07.00 - Perform procedures to complete AWS SENSE Module 6 - Flux Cored Arc Welding (FCAW) Gas and Self Shielded Fillet and Groove Welds

NCCTE.2020.IM63.07.01 - Operate FCAW-G/GM & S equipment on carbon steel.

NCCTE.2020.IM63.07.02 - Make FCAW-G/GM & S fillet welds in all positions on carbon steel.

NCCTE.2020.IM63.07.03 - Make FCAW-G/GM & S groove welds in all positions on carbon steel.

NCCTE.2020.IM63.07.04 - Pass FCAW-G/GM & S welder performance qualification test on carbon



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steel.

Course: Public Safety I

NCCTE.2016.IP11 - Public Safety I

NCCTE.2016.IP11.01.00 - Understand basic career information in Public Safety.

NCCTE.2016.IP11.02.00 - Apply procedures to obtain NIMS 700 - National Incident Command System (NIMS), and Introduction.

NCCTE.2016.IP11.03.00 - Apply procedures to obtain NIMS 100 - Introduction to Incident Command System.

NCCTE.2016.IP11.04.00 - Understand careers in Fire Fighting Services.

NCCTE.2016.IP11.05.00 - Understand careers in Emergency Medical Services.

NCCTE.2016.IP11.06.00 - Understand careers in Law and Justice Services.

NCCTE.2016.IP11.07.00 - Apply procedures to obtain NIMS 200 - ICS for Single Resource and Initial Action Incidents.

NCCTE.2016.IP11.08.00 - Understand careers in Emergency Management Services.

NCCTE.2016.IP11.09.00 - Apply procedures to obtain NIMS 800 - National Response Framework, an Introduction.

NCCTE.2016.IP11.10.00 - Apply a procedure to develop a personal plan for a career in Public Safety.

Course: Public Safety II **Updated**

NCCTE.2020.IP12 - Public Safety II

NCCTE.2020.IP12.01.00 - Understand Disaster Preparedness.

NCCTE.2020.IP12.02.00 - Understand Fire Safety and Utility Controls.

NCCTE.2020.IP12.03.00 - Apply procedures needed for Disaster Medical Operations - Part I.

NCCTE.2020.IP12.04.00 - Apply procedures needed for Disaster Medical Operations - Part II.

NCCTE.2020.IP12.05.00 - Apply procedures needed for Light Search and Rescue Operations.

NCCTE.2020.IP12.06.00 - Understand CERT Organization.

NCCTE.2020.IP12.07.00 - Understand Disaster Psychology.

NCCTE.2020.IP12.08.00 - Understand Terrorism and CERT.

NCCTE.2020.IP12.09.00 - Apply procedures needed for Course Review, Final Exam, Disaster Simulation.

NCCTE.2020.IP12.10.00 - Apply procedures needed for 911 Telecommunicator.

Course: Emergency Medical Technology I

NCCTE.IP21 - EMT I

NCCTE.IP21.01.00 - PREPARATORY

NCCTE.IP21.01.01 - Introduction to EMS Systems

NCCTE.IP21.01.02 - The Well Being of the EMT

NCCTE.IP21.01.03 - Medical / Legal and Ethical Issues

NCCTE.IP21.01.04 - The Human Body



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NCCTE.IP21.01.05 - Baseline Vital Signs and SAMPLE History

NCCTE.IP21.01.06 - Lifting and Moving Patients

NCCTE.IP21.02.00 - MODULE 2: AIRWAY (to include CPR skills)

NCCTE.IP21.02.01 - Airway Management

NCCTE.IP21.03.00 - PATIENT ASSESSMENT

NCCTE.IP21.03.01 - Scene Size-up

NCCTE.IP21.03.02 - The Initial Assessment

NCCTE.IP21.03.03 - Focused History and Physical Exam - Trauma Patients

NCCTE.IP21.03.04 - Focused History and Physical Exam - Medical Patients

NCCTE.IP21.03.05 - Detailed Physical Exam

NCCTE.IP21.03.06 - On-going Assessment

NCCTE.IP21.03.07 - Communications

NCCTE.IP21.03.08 - Documentation

NCCTE.IP21.04.00 - MEDICAL/BEHAVIORAL EMERGENCIES AND OBSTETRICS/GYNECOLOGY

NCCTE.IP21.04.01 - General Pharmacology

NCCTE.IP21.04.02 - Respiratory Emergencies

Course: Emergency Medical Technology II

NCCTE.IP22 - EMT II

NCCTE.IP22.00.00 - COMPREHENSIVE CONTENT IP21 EMT I

NCCTE.IP22.01.00 - MEDICAL/BEHAVIORAL EMERGENCIES AND OBSTETRICS/GYNECOLOGY

NCCTE.IP22.01.01 - Cardiovascular Emergencies

NCCTE.IP22.01.02 - Diabetes/Altered Mental Status

NCCTE.IP22.01.03 - Allergies

NCCTE.IP22.01.04 - Poisoning/Overdose

NCCTE.IP22.01.05 - Environmental Emergencies

NCCTE.IP22.01.06 - Behavioral Emergencies

NCCTE.IP22.01.07 - Obstetrics/Gynecology

NCCTE.IP22.02.00 - TRAUMA

NCCTE.IP22.02.01 - Bleeding and Shock

NCCTE.IP22.02.02 - Soft Tissue Injuries

NCCTE.IP22.02.03 - Musculoskeletal Care

NCCTE.IP22.02.04 - Injuries to the Head and Spine

NCCTE.IP22.03.00 - INFANTS AND CHILDREN

NCCTE.IP22.03.01 - Infants and Children

NCCTE.IP22.04.00 - OPERATIONS

NCCTE.IP22.04.01 - Ambulance Operations

NCCTE.IP22.04.02 - Gaining Access

NCCTE.IP22.04.03 - Overviews



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Course: Firefighter Technology I **Updated**

NCCTE.2020.IP31 - Firefighter Technology I

NCCTE.2020.IP31.01.00 - Understand FF General and Communications.

NCCTE.2020.IP31.01.01 - Orientation (Chapter 1, 22).

NCCTE.2020.IP31.01.02 - Fire Service Communications (Chapter 4).

NCCTE.2020.IP31.02.00 - Apply procedures needed for FF Fireground Ops 1.

NCCTE.2020.IP31.02.01 - Firefighter Health & Safety (Chapters 2, 20).

NCCTE.2020.IP31.03.00 - Apply procedures needed for FF Fireground Ops 2.

NCCTE.2020.IP31.03.01 - PPE (Chapter 3).

NCCTE.2020.IP31.04.00 - Apply procedures needed for FF Fireground Ops 3.

NCCTE.2020.IP31.04.01 - Building Construction (Chapter 6).

NCCTE.2020.IP31.04.02 - Portable Extinguishers (Chapter 7).

NCCTE.2020.IP31.04.03 - Fire Behavior (Chapter 5).

NCCTE.2020.IP31.05.00 - Apply procedures needed for FF Fireground Ops 4.

NCCTE.2020.IP31.05.01 - Tools and Forcible Entry (Chapters 8, 10).

NCCTE.2020.IP31.05.02 - Loss Control (Chapters 19, 28).

Course: Firefighter Technology II **Updated**

NCCTE.2020.IP32 - Firefighter Technology II

NCCTE.2020.IP32.01.00 - Apply procedures needed for FF Fireground Ops 5.

NCCTE.2020.IP32.01.01 - Ladders (Chapter 11).

NCCTE.2020.IP32.01.02 - Ventilation (Chapter 13).

NCCTE.2020.IP32.02.00 - Apply procedures needed for FF Fireground Ops 6.

NCCTE.2020.IP32.02.01 - Ropes & Knots (Chapter 9).

NCCTE.2020.IP32.02.02 - Search & Rescue (Chapter 12).

NCCTE.2020.IP32.03.00 - Apply procedures needed for FF Fireground Ops 7

NCCTE.2020.IP32.03.01 - Water Supplies (Chapter 14).

NCCTE.2020.IP32.04.00 - Apply procedures needed for FF Fireground Ops 8

NCCTE.2020.IP32.04.01 - Hose, Streams, Appliances (Chapters 15, 16).

NCCTE.2020.IP32.05.00 - Apply procedures needed for Emergency Medical Care (FIP 3016)

Course: Firefighter Technology III

NCCTE.2015.IP33 - Fire Fighter Technology III

NCCTE.2015.IP33.01.00 - Water Supplies (FIP# 3018)

NCCTE.2015.IP33.02.00 - Sprinklers (FIP# 3019)

NCCTE.2015.IP33.03.00 - Fire & Life Safety Preparedness (FIP# 3021)

NCCTE.2015.IP33.04.00 - Rescue (FIP# 3017)

NCCTE.2015.IP33.05.00 - Mayday (FIP# 3026)

NCCTE.2015.IP33.06.00 - Safety & Survival (FIP# 3025)



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

Course: Law and Justice I

NCCTE.2016.IP41 - Law and Justice I

NCCTE.2016.IP41.01.00 - Understand Careers in Law and Justice

NCCTE.2016.IP41.02.00 - Understand Basic Criminal Justice System

NCCTE.2016.IP41.03.00 - Understand Basic Criminal and Constitutional Law

NCCTE.2016.IP41.04.00 - Apply Procedures Used to Create Police Reports

NCCTE.2016.IP41.05.00 - Understand the Use of Force

NCCTE.2016.IP41.06.00 - Apply Procedures used in Approach and Arrest of Suspects

NCCTE.2016.IP41.07.00 - Understand Patrol Operations

NCCTE.2016.IP41.08.00 - Understand Traffic Codes and Investigations

NCCTE.2016.IP41.09.00 - Understand Community Policing, Conflict Resolution, and Cultural Diversity

NCCTE.2016.IP41.10.00 - Understand Sentencing and Correctional Issues.

NCCTE.2016.IP41.11.00 - Understand Agency Administration

NCCTE.2016.IP41.12.00 - Understand Ethics in Law and Justice

Course: Law and Justice II

NCCTE.2018.IP42 -

NCCTE.2018.IP42.01.00 - Understand Foundations in Law Enforcement and Protective Services

NCCTE.2018.IP42.02.00 - Apply Procedures for Communications in Law Enforcement and Protective Services

NCCTE.2018.IP42.03.00 - Understand Protection Officers Functions

NCCTE.2018.IP42.04.00 - Understand Crime Prevention and Physical Security

NCCTE.2018.IP42.05.00 - Understand Safety and Fire Protection

NCCTE.2018.IP42.06.00 - Understand Information Protection

NCCTE.2018.IP42.07.00 - Understand Deviance Crime and Violence

NCCTE.2018.IP42.08.00 - Understand Risk and Threat Management

NCCTE.2018.IP42.09.00 - Apply Procedures in Investigations

NCCTE.2018.IP42.10.00 - Understand Legal Aspects of Security

NCCTE.2018.IP42.11.00 - Apply Procedures for Officer Safety and Uses of Force

NCCTE.2018.IP42.12.00 - Apply Procedures for Relations with Others

Course: Emergency Management I **Updated**

NCCTE.2020.IP51 - Emergency Management I

NCCTE.2020.IP51.01.00 - IS-230: Fundamentals of Emergency Management

NCCTE.2020.IP51.02.00 - IS-909: Community Preparedness Implementing Simple Activities for Everyone

NCCTE.2020.IP51.03.00 - IS-235: Emergency Planning

NCCTE.2020.IP51.04.00 - IS-120: An Introduction to Exercises

NCCTE.2020.IP51.05.00 - IS-240: Leadership & Influence

NCCTE.2020.IP51.06.00 - IS-241: Decision-Making and Problem-Solving



NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2020.IP51.07.00 - IS-242: Effective Communication

NCCTE.2020.IP51.08.00 - IS-244: Developing and Managing Volunteers

NCCTE.2020.IP51.09.00 - S-288: The Role of Voluntary Agencies in Emergency Management

NCCTE.2020.IP51.10.00 - IS-703: NIMS Resource Management

NCCTE.2020.IP51.11.00 - IS-706: NIMS Intrastate Mutual Aid, an Introduction

NCCTE.2020.IP51.12.00 - IS-2200: EOC Management and Operations

NCCTE.2020.IP51.13.00 - IS-559: Local Damage Assessment

Course: Emergency Management II **Updated**

NCCTE.2020.IP52 - Emergency Management II

NCCTE.2020.IP52.01.00 - G0191: ICS/EOC Interface

NCCTE.2020.IP52.02.00 - G0775: Emergency Operations Center (EOC) Management and Operations

NCCTE.2020.IP52.03.00 - G0557: Rapid Needs Assessment

NCCTE.2020.IP52.04.00 - IS271: Anticipating Hazardous Weather and Community Risk

NCCTE.2020.IP52.05.00 - G0271: Hazardous Weather and Flooding Preparedness

NCCTE.2020.IP52.06.00 - IS-247: Integrated Public Alert and Warning System (IPAWS)

NCCTE.2020.IP52.07.00 - G0272: Warning Coordination and Communication

NCCTE.2020.IP52.08.00 - G0386: Mass Fatalities Incident Response

NCCTE.2020.IP52.09.00 - IS-393: Introduction to Hazard Mitigation

NCCTE.2020.IP52.10.00 - G0393: Mitigation for Emergency Managers

Course: Automotive Service Fundamentals **Updated**

NCCTE.2015.IT11 - Automotive Service Fundamentals

NCCTE.2015.IT11.01.00 - Understand Automotive Technology Careers.

NCCTE.2015.IT11.02.00 - Understand Shop and Personal Safety.

NCCTE.2015.IT11.03.00 - Understand Cleaners and Lubricants.

NCCTE.2015.IT11.04.00 - Understand Tools and Equipment.

NCCTE.2015.IT11.05.00 - Understand Vehicle Service Preparation.

NCCTE.2015.IT11.06.00 - Understand Engine Service

NCCTE.2015.IT11.07.00 - Understand Automatic Transmission/Transaxle Service

NCCTE.2015.IT11.08.00 - Understand Manual Drive Train & Axle Service

NCCTE.2015.IT11.09.00 - Understand Suspension & Steering Service

NCCTE.2015.IT11.10.00 - Understand Brake Service

NCCTE.2015.IT11.11.00 - Understand Electrical/Electronic System Service

NCCTE.2015.IT11.12.00 - Understand Heating & Air Conditioning Service

NCCTE.2015.IT11.13.00 - Understand Engine Performance Service

Course: Automotive Service I **Updated**

NCCTE.2015.IT16 - Automotive Service I

NCCTE.2015.IT16.01.00 - Understand Engine Service



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NCCTE.2015.IT16.02.00 - Understand Automatic Transmission/Transaxle Service

NCCTE.2015.IT16.03.00 - Understand Manual Drive Train and Axle Service

NCCTE.2015.IT16.04.00 - Understand Suspension and Steering Service

NCCTE.2015.IT16.05.00 - Understand Brake Service

NCCTE.2015.IT16.06.00 - Understand Electrical/Electronic System Service

NCCTE.2015.IT16.07.00 - Understand Heating and Air Conditioning Service

NCCTE.2015.IT16.08.00 - Understand Engine Performance Service

Course: Automotive Service II **Updated**

NCCTE.2019.IT17 - Automotive Service II

NCCTE.2019.IT17.01.00 - Understand Engine Service

NCCTE.2019.IT17.02.00 - Understand Automatic Transmission/Transaxle Service

NCCTE.2019.IT17.03.00 - Understand Manual Drive Train and Axle Service

NCCTE.2019.IT17.04.00 - Understand Suspension and Steering Service

NCCTE.2019.IT17.05.00 - Understand Brake Service

NCCTE.2019.IT17.06.00 - Understand Electrical/Electronic System Service

NCCTE.2019.IT17.07.00 - Understand Heating and Air Conditioning Service

NCCTE.2019.IT17.08.00 - Understand Engine Performance Service

Course: Automotive Service III **Updated**

NCCTE.2020.IT18 - Auto Service III

NCCTE.2020.IT18.01.00 - Understand Engine Service

NCCTE.2020.IT18.02.00 - Understand Automatic Transmission/Transaxle Service

NCCTE.2020.IT18.03.00 - Understand Manual Drive Train & Axle Service

NCCTE.2020.IT18.04.00 - Understand Suspension & Steering Service

NCCTE.2020.IT18.05.00 - Understand Brake Service

NCCTE.2020.IT18.06.00 - Understand Electrical/Electronic System Service

NCCTE.2020.IT18.07.00 - Understand Heating & Air Conditioning Service

NCCTE.2020.IT18.08.00 - Understand Engine Performance Service

Course: Collision Repair Fundamentals **New**

NCCTE.2020.IT30 - Collision Repair Fundamentals

NCCTE.2020.IT30.01.00 - Understand Collision Repair Process Overview.

NCCTE.2020.IT30.01.01 - Explain obligations to the customer and the liability.

NCCTE.2020.IT30.01.02 - Explain the collision repair process.

NCCTE.2020.IT30.01.03 - Explain structural and non-Structural repairs.

NCCTE.2020.IT30.01.04 - Explain electrical and mechanical repairs.

NCCTE.2020.IT30.01.05 - Explain refinishing and delivery.

NCCTE.2020.IT30.02.00 - Understand Hazardous Materials, Personal Safety, and Refinishing Safety.

NCCTE.2020.IT30.02.01 - Explain safety data sheets.



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NCCTE.2020.IT30.02.02 - Explain labels.

NCCTE.2020.IT30.02.03 - Explain hazardous materials.

NCCTE.2020.IT30.02.04 - Explain personal protective equipment.

NCCTE.2020.IT30.02.05 - Explain repair facility safety.

NCCTE.2020.IT30.02.06 - Explain hazardous wastes.

NCCTE.2020.IT30.02.07 - Explain general protections.

NCCTE.2020.IT30.02.08 - Explain structural repairs.

NCCTE.2020.IT30.02.09 - Explain non-structural repairs.

NCCTE.2020.IT30.02.10 - Explain hybrids.

NCCTE.2020.IT30.03.00 - Understand Tools, Equipment, and Attachment Methods.

NCCTE.2020.IT30.03.01 - Identify basic tools.

NCCTE.2020.IT30.03.02 - Explain mechanical fastening methods.

NCCTE.2020.IT30.03.03 - Explain glass and trim attachment methods.

NCCTE.2020.IT30.03.04 - Explain estimating tools and processes.

NCCTE.2020.IT30.03.05 - Explain measuring and straightening.

NCCTE.2020.IT30.03.06 - Explain welding.

NCCTE.2020.IT30.03.07 - Describe welding methods.

NCCTE.2020.IT30.03.08 - Explain panel bonding.

NCCTE.2020.IT30.03.09 - Explain capital equipment.

NCCTE.2020.IT30.04.00 - Understand Vehicle Construction Materials.

NCCTE.2020.IT30.04.01 - Explain steel construction materials.

NCCTE.2020.IT30.04.02 - Explain aluminum and magnesium construction materials.

NCCTE.2020.IT30.04.03 - Explain plastic and carbon fiber construction materials.

NCCTE.2020.IT30.04.04 - Explain collision energy management.

NCCTE.2020.IT30.05.00 - Remember Vehicle Parts Terminology.

NCCTE.2020.IT30.05.01 - Define bumpers, front body, and roof panels.

NCCTE.2020.IT30.05.02 - Define doors.

NCCTE.2020.IT30.05.03 - Define rear closure panels, box assemblies, and exterior trim.

NCCTE.2020.IT30.05.04 - Define lighting.

NCCTE.2020.IT30.05.05 - Define front unibody structures and full frames.

NCCTE.2020.IT30.05.06 - Define side and rear unibody structures.

NCCTE.2020.IT30.05.07 - Define interiors.

NCCTE.2020.IT30.05.08 - Define glass.

NCCTE.2020.IT30.06.00 - Understand Industry Repair Terms and Concepts.

NCCTE.2020.IT30.06.01 - Explain non-structural terms and concepts.

NCCTE.2020.IT30.06.02 - Explain structural terms and concepts.

NCCTE.2020.IT30.06.03 - Explain structural part replacement terms and concepts.

NCCTE.2020.IT30.06.04 - Explain glass terms and concepts.



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NCCTE.2020.IT30.06.05 - Explain damage report writing terms and concepts.

NCCTE.2020.IT30.07.00 - Understand Basic Mechanical Systems Terminology.

NCCTE.2020.IT30.07.01 - Explain steering systems.

NCCTE.2020.IT30.07.02 - Explain wheels and tires.

NCCTE.2020.IT30.07.03 - Explain brakes.

NCCTE.2020.IT30.07.04 - Explain stability control.

NCCTE.2020.IT30.07.05 - Explain suspension systems.

NCCTE.2020.IT30.07.06 - Explain drivetrains.

NCCTE.2020.IT30.07.07 - Explain heating and cooling systems.

NCCTE.2020.IT30.07.08 - Explain air conditioning systems.

NCCTE.2020.IT30.08.00 - Understand Basic Mechanical Repair Terms and Vehicle Protection.

NCCTE.2020.IT30.08.01 - Explain electrical terms.

NCCTE.2020.IT30.08.02 - Explain mechanical terms

NCCTE.2020.IT30.08.03 - Explain steering and suspension systems terms.

NCCTE.2020.IT30.08.04 - Explain protecting electronic systems.

NCCTE.2020.IT30.08.05 - Explain preventing vehicle damage during repairs.

NCCTE.2020.IT30.09.00 - Understand Safety Systems.

NCCTE.2020.IT30.09.01 - Explain airbags.

NCCTE.2020.IT30.09.02 - Explain seat belts and child safety seats.

NCCTE.2020.IT30.09.03 - Explain occupant classification.

NCCTE.2020.IT30.09.04 - Explain additional safety systems.

NCCTE.2020.IT30.10.00 - Understand Basic Refinishing and Corrosion Protection.

NCCTE.2020.IT30.10.01 - Explain vehicle maker processes.

NCCTE.2020.IT30.10.02 - Explain refinishing terms.

NCCTE.2020.IT30.10.03 - Explain refinishing materials.

NCCTE.2020.IT30.10.04 - Explain personal safety.

NCCTE.2020.IT30.10.05 - Identify refinishing tools.

NCCTE.2020.IT30.10.06 - Explain refinishing preparation.

NCCTE.2020.IT30.10.07 - Identify refinishing defects.

NCCTE.2020.IT30.10.08 - Explain corrosion protection

NCCTE.2020.IT30.11.00 - Understand Detailing.

NCCTE.2020.IT30.11.01 - Explain inspecting the finish.

NCCTE.2020.IT30.11.02 - Explain finish defect removal.

NCCTE.2020.IT30.11.03 - Explain final detailing.

NCCTE.2020.IT30.12.00 - Understand Vehicle Technology and Trends.

NCCTE.2020.IT30.12.01 - Explain trends and industry influences.

NCCTE.2020.IT30.12.02 - Explain North American vehicle makers technology and trends.

NCCTE.2020.IT30.12.03 - Explain Asian vehicle makers technology and trends.



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NCCTE.2020.IT30.12.04 - Explain European vehicle makers technology and trends.

NCCTE.2020.IT30.12.05 - Explain future trends.

Course: Collision Repair I **New**

NCCTE.2020.IT31 - Collision Repair I

NCCTE.2020.IT31.01.00 - Understand Trim and Hardware

NCCTE.2020.IT31.01.01 - Hardware

NCCTE.2020.IT31.01.02 - Hardware Removal and Restoration

NCCTE.2020.IT31.01.03 - Interiors

NCCTE.2020.IT31.01.04 - Trim and Moldings

NCCTE.2020.IT31.01.05 - Front, Rear, and Underbody Trim

NCCTE.2020.IT31.01.06 - Exterior Accessories

NCCTE.2020.IT31.01.07 - Pinstripes and Decals

NCCTE.2020.IT31.02.00 - Understand Bolted-On Part Replacement

NCCTE.2020.IT31.02.01 - Bolted Exterior Panel Replacement Considerations

NCCTE.2020.IT31.02.02 - Doors

NCCTE.2020.IT31.02.03 - Front Body Panels

NCCTE.2020.IT31.02.04 - Rear Body Panels

NCCTE.2020.IT31.03.00 - Understand Moveable Glass

NCCTE.2020.IT31.03.01 - Moveable Glass Overview

NCCTE.2020.IT31.03.02 - Side Door Glass

NCCTE.2020.IT31.03.03 - Rear Body Movable Glass

NCCTE.2020.IT31.03.04 - Sunroofs

NCCTE.2020.IT31.03.05 - Inspection and General Troubleshooting

NCCTE.2020.IT31.04.00 - Understand Plastic and Composite Repair

NCCTE.2020.IT31.04.01 - Plastic Identification and Repair Considerations

NCCTE.2020.IT31.04.02 - Adhesive Bumper Repair

NCCTE.2020.IT31.04.03 - Fiber Reinforced Plastic Repair

NCCTE.2020.IT31.04.04 - Plastic Welding Repairs

NCCTE.2020.IT31.05.00 - Understand Automotive Lighting

NCCTE.2020.IT31.05.01 - I see the Light

NCCTE.2020.IT31.05.02 - When the Lights Go Out

NCCTE.2020.IT31.06.00 - Understand Automotive Foams

NCCTE.2020.IT31.06.01 - Overview of Automotive Foams

NCCTE.2020.IT31.06.02 - Automotive Replacement Foam Types

NCCTE.2020.IT31.06.03 - Foam Safety and Repair

NCCTE.2020.IT31.06.04 - Preparing Parts for Foam

NCCTE.2020.IT31.07.00 - Understand Corrosion Protection

NCCTE.2020.IT31.07.01 - Corrosion Origins and Prevention



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NCCTE.2020.IT31.07.02 - Corrosion Protection During Repairs

NCCTE.2020.IT31.07.03 - Corrosion Protection After Repairs

NCCTE.2020.IT31.07.04 - Vehicle Maker Recommendations

Course: Collision Repair II - Nonstructural **New**

NCCTE.2020.IT32 - Collision Repair II - Non-Structural

NCCTE.2020.IT32.01.00 - Understand Non-Structural Repair.

NCCTE.2020.IT32.01.01 - Explain steel used in vehicle construction.

NCCTE.2020.IT32.01.02 - Explain repairing damage.

NCCTE.2020.IT32.01.03 - Explain body fillers and sanding.

NCCTE.2020.IT32.01.04 - Explain additional repair methods.

Course: Collision Repair II - Refinishing **New**

NCCTE.2020.IT33 - Collision Repair II - Refinishing

NCCTE.2020.IT33.01.00 - Understand Refinishing.

NCCTE.2020.IT33.01.01 - Explain refinishing overview.

NCCTE.2020.IT33.01.02 - Identify refinishing equipment.

NCCTE.2020.IT33.01.03 - Explain starting the refinishing plan.

NCCTE.2020.IT33.01.04 - Explain surface preparation and undercoats.

NCCTE.2020.IT33.01.05 - Explain topcoat applications.

NCCTE.2020.IT33.01.06 - Explain preparation and application issues.

NCCTE.2020.IT33.01.07 - Explain volatile organic compounds (VOC's).

NCCTE.2020.IT33.02.00 - Understand Waterborne Products, Systems and Application.

NCCTE.2020.IT33.02.01 - Identify waterborne refinish materials.

NCCTE.2020.IT33.02.02 - Explain waterborne refinishing systems.

NCCTE.2020.IT33.02.03 - Explain storage, waste disposal, and waterborne conversions.

NCCTE.2020.IT33.03.00 - Understand Hazardous Airborne Pollutant Reduction.

NCCTE.2020.IT33.03.01 - Explain environmental compliance.

NCCTE.2020.IT33.03.02 - Explain refinish applications.

NCCTE.2020.IT33.04.00 - Understand Liquid and Solid Hazardous Waste Storage and Disposal.

NCCTE.2020.IT33.04.01 - Identify hazardous waste.

NCCTE.2020.IT33.04.02 - Explain proper storage of hazardous waste.

NCCTE.2020.IT33.04.03 - Explain proper disposal and records of hazardous waste.

Course: Drafting II - Engineering

NCCTE.2018.IV22 - Drafting II Engineering

NCCTE.2018.IV22.01.00 - Understand Basic Engineering Design and Industry Terms.

NCCTE.2018.IV22.02.00 - Understand Engineering Design Concepts and Principles to Solve Problems.

NCCTE.2018.IV22.03.00 - Understand Manufacturing Processes.



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NCCTE.2018.IV22.04.00 - Apply Parametric-Solid Modeling Techniques to create a 3D Model.

NCCTE.2018.IV22.05.00 - Understand Conventional Dimensioning & Tolerancing.

NCCTE.2018.IV22.06.00 - Apply Procedures to Create Working Drawings of a 3D Model.

NCCTE.2018.IV22.07.00 - Apply Procedures to Create Working Drawings of a 3D Model.

Course: Drafting III Engineering

NCCTE.2018.IV23 - Drafting III Engineering

NCCTE.2018.IV23.01.00 - Understand Requirements for Engineering & Manufacturing Employment.

NCCTE.2018.IV23.02.00 - Apply Engineering Design Concepts and Principles to solve problems.

NCCTE.2018.IV23.03.00 - Understand Advanced Manufacturing Processes.

NCCTE.2018.IV23.04.00 - Apply Advanced 3D Parametric-Solid Model and Assembly Creation Techniques

NCCTE.2018.IV23.05.00 - Apply Procedures to Create Working Drawings of a 3D Model and Assembly.

NCCTE.2018.IV23.06.00 - Apply Procedures to Create Sheet Metal Parts.

NCCTE.2018.IV23.07.00 - Apply Procedures to create Geometric Dimensions and Tolerances.

NCCTE.2018.IV23.08.00 - Apply Procedures to create a professional Portfolio.

Course: Technology Engineering and Design **Updated**

NCCTE.2020.TE11 - Technology Engineering and Design

NCCTE.2020.TE11.01.00 - Technological Innovations and Inventions: Understand that most inventions and innovations are the result of an evolutionary process and how a series of refinements leads to an improvement in a technological device.

NCCTE.2020.TE11.01.01 - Understand that most inventions and innovations are the result of an evolutionary process.

NCCTE.2020.TE11.01.02 - Understand how new technologies are used to create new processes and products.

NCCTE.2020.TE11.01.03 - Classify the factors that impact the demand and design of technology.

NCCTE.2020.TE11.01.04 - Explain the research and development process as a problem-solving approach.

NCCTE.2020.TE11.02.00 - History of Technology: Understand how technology changes history.

NCCTE.2020.TE11.02.01 - Analyze the historic significance and interaction of technological advancements within society and the environment.

NCCTE.2020.TE11.02.02 - Understand the evolutionary process of technological development throughout history.

NCCTE.2020.TE11.03.00 - Systems: Apply the universal systems model to troubleshoot technological systems.

NCCTE.2020.TE11.03.01 - Differentiate the nine core technologies and their relationship within larger systems and products.



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NCCTE.2020.TE11.03.02 - Analyze a functional system using the Universal Systems Model.

NCCTE.2020.TE11.03.03 - Analyze the function of a product by reverse engineering.

NCCTE.2020.TE11.03.04 - Apply procedures to troubleshoot a product and create a diagram and/or simulation.

NCCTE.2020.TE11.04.00 - Design: Analyze the engineering design process as a systematic, iterative problem solving method that produces solutions to meet human wants and desires.

NCCTE.2020.TE11.04.01 - Apply design principles when generating solutions to problems.

NCCTE.2020.TE11.04.02 - Apply the engineering design process to produce solutions to problems

NCCTE.2020.TE11.04.03 - Interpret criteria and constraints to develop solutions to problems.

NCCTE.2020.TE11.04.04 - Apply procedures to construct models that meet design solutions.

NCCTE.2020.TE11.04.05 - Analyze data used in the engineering design process.

NCCTE.2020.TE11.04.06 - Propose an engineering design solution to the intended audience.

NCCTE.2020.TE11.05.00 - The Designed World: Analyze technology relationships to the designed world.

NCCTE.2020.TE11.05.01 - Analyze energy and power systems.

NCCTE.2020.TE11.05.02 - Analyze types of manufacturing and the properties of materials problems.

NCCTE.2020.TE11.05.03 - Classify the types of construction and the factors that affect the design of structures.

NCCTE.2020.TE11.05.04 - Classify information and communication systems and their interaction with society.

NCCTE.2020.TE11.05.05 - Explain the relationship between agriculture and transportation.

NCCTE.2020.TE11.05.06 - Explain the technologies integrated in telemedicine.

Course: Technological Design **Updated**

NCCTE.2020.TE12 - Technological Design

NCCTE.2020.TE12.01.00 - Introduction to Technological Design: Using a STEM approach to understand research methods in a global society to create a well-informed, creative, innovative, technologically literate citizen.

NCCTE.2020.TE12.01.01 - Understand emerging technologies.

NCCTE.2020.TE12.01.02 - Evaluate fundamentals of STEM.

NCCTE.2020.TE12.01.03 - Understand research, design and development.

NCCTE.2020.TE12.01.04 - Evaluate universal design.

NCCTE.2020.TE12.02.00 - Technological Design Skills: Implement a management process to plan, design, create, analyze and refine a product through modeling.

NCCTE.2020.TE12.02.01 - Understand and interpret the impact of product design and development.

NCCTE.2020.TE12.02.02 - Apply the design process to solve a technological problem.

NCCTE.2020.TE12.02.03 - Apply the design process to fabricate a prototype to test a design



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concept.

NCCTE.2020.TE12.02.04 - Understand mathematical modeling and other techniques used to test and refine design concepts.

NCCTE.2020.TE12.02.05 - Understand how to collect data to evaluate the quality of a product or services.

NCCTE.2020.TE12.03.00 - Technological Design Fundamentals: Apply systems thinking and the universal systems model to meet criteria and constraints.

NCCTE.2020.TE12.03.01 - Apply systems thinking through compromise and optimization by analyzing a system.

NCCTE.2020.TE12.03.02 - Evaluate communication systems.

NCCTE.2020.TE12.03.03 - Assess complex systems thinking.

NCCTE.2020.TE12.03.04 - Understand patents, criteria, constraints and other design requirements.

NCCTE.2020.TE12.04.00 - Technology and Society: Understand the effects of the use of technology on society and the environment include consequences that can have both positive and negative impacts.

NCCTE.2020.TE12.04.01 - Understand technology trade-offs and transfers.

NCCTE.2020.TE12.04.02 - Examine how technology impacts the community.

NCCTE.2020.TE12.04.03 - Evaluate how technology impacts the environment.

NCCTE.2020.TE12.05.00 - The Designed World: Understand the areas of the design world using the engineering design process to plan, organize, develop and control productivity to maximize efficiency.

NCCTE.2020.TE12.05.01 - Analyze types of bio-related and agricultural technologies.

NCCTE.2020.TE12.05.02 - Analyze types of energy, power and transportation.

NCCTE.2020.TE12.05.03 - Maximize resources in lean manufacturing.

NCCTE.2020.TE12.05.04 - Design using sustainable construction procedures.

Course: Engineering Design Updated

NCCTE.2020.TE13 - Engineering Design

NCCTE.2020.TE13.01.00 - Fundamentals of Engineering Design: Understand the fundamental principles which impact human thinking and actions when engaged in the process of designing technological products.

NCCTE.2020.TE13.01.01 - Understand how human and Environmental Factors impact Design.

NCCTE.2020.TE13.01.02 - Understand how local, state and federal policies impact design

NCCTE.2020.TE13.01.03 - Understand how Industrial Factors impact design.

NCCTE.2020.TE13.01.04 - Understand Research techniques and tools.

NCCTE.2020.TE13.01.05 - Analyze Market and Profit Influence.

NCCTE.2020.TE13.01.06 - Apply the Engineering Design Process.

NCCTE.2020.TE13.01.07 - Identify and Prioritize Design Constraints.

NCCTE.2020.TE13.02.00 - Elements of Design: Apply scientific concepts and mathematical calculations used by engineers and designers for specific applications in Design.



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NCCTE.2020.TE13.02.01 - Apply critical factors that lead to design improvements.

NCCTE.2020.TE13.02.02 - Analyze the 9 Core Technologies.

NCCTE.2020.TE13.02.03 - Apply the design process to fabricate a prototype to test a design concept.

NCCTE.2020.TE13.02.04 - Evaluate competing design values to optimize critical decisions.

NCCTE.2020.TE13.03.00 - Modeling, Prototyping, and Protecting Ideas: Apply structured design concepts to solve diverse engineering problems..

NCCTE.2020.TE13.03.01 - Analyze diverse examples of "Technology Transfer".

NCCTE.2020.TE13.03.02 - Understand the importance of the Patent Process, and technology spin offs

NCCTE.2020.TE13.03.03 - Apply engineering resources to solve specific design problems.

NCCTE.2020.TE13.03.04 - Apply scientific principle using material science concepts to solve design problems.

NCCTE.2020.TE13.03.05 - Evaluate the role of creativity in diverse design activities.

NCCTE.2020.TE13.03.06 - Understand patents, criteria, constraints and other design requirements.

NCCTE.2020.TE13.03.07 - Apply modeling and prototyping concepts to solve design problems

NCCTE.2020.TE13.04.00 - Product, Systems Engineering and Analysis Management: Apply project management through the Engineering Design Process.

NCCTE.2020.TE13.04.01 - Apply contemporary project management.

NCCTE.2020.TE13.04.02 - Apply a quality assurance methods to ensure optimum performance.

NCCTE.2020.TE13.04.03 - Apply the Engineering Design Process to produce a product or system.

NCCTE.2020.TE13.04.04 - Evaluate the results of the Engineering Design Process, using quality assurance processes.