Agricultural Education

Grade: Grade 6 - 8
Course: Exploring Biotechnology in Agriculture

**NCCTE.AU01** - Exploring Biotechnology in Agriculture
  - **NCCTE.AU01.01.00** - Unit A - Introduction to Biotechnology
  - **NCCTE.AU01.02.00** - Unit B - Biotech Terminology and Math
  - **NCCTE.AU01.03.00** - Unit C - Laboratory Safety and Infection Control
  - **NCCTE.AU01.04.00** - Unit D - Cellular Design and DNA
  - **NCCTE.AU01.05.00** - Unit E - Agricultural Biotechnology
  - **NCCTE.AU01.06.00** - Unit F - Biotechnology in Healthcare
  - **NCCTE.AU01.07.00** - Unit G - Industrial and Environmental Biotechnology
  - **NCCTE.AU01.08.00** - Unit H - Biomedical Research
  - **NCCTE.AU01.09.00** - Unit I - Bioethics
  - **NCCTE.AU01.10.00** - Unit J - Careers in Biotechnology

Course: Exploring Agriculture Science

**NCCTE.AU02** - Exploring Agriculture Science
  - **NCCTE.AU02.01.00** - Apply fundamentals of the agricultural science program.
  - **NCCTE.AU02.02.00** - Understand the Importance of Agriculture to our social and economic well-being.
  - **NCCTE.AU02.03.00** - Understand the relationship between natural resources and the production of food and fiber.
  - **NCCTE.AU02.04.00** - Understand how environmental stewardship within the agricultural industry relates to natural resource stewardship.
  - **NCCTE.AU02.05.00** - Understand the fundamentals of the animal science industry.
  - **NCCTE.AU02.06.00** - Understand the fundamentals of the plant science industry.
  - **NCCTE.AU02.07.00** - Understand the importance of food and agricultural product processes.
  - **NCCTE.AU02.08.00** - Understand the role of science and technology in the agricultural industry.
  - **NCCTE.AU02.09.00** - Understand the current issues impacting the agricultural industry.
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.
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.
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: 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.
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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 - 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: 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 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: Environmental and Natural Resources I

NCCTE.AN51 - Environmental and Natural Resources I

NCCTE.AN51.01.00 - Investigate organizations related to the environmental and natural resources industry.
  NCCTE.AN51.01.01 - Describe opportunities for leadership development in environmental and natural resources industry organizations.
  NCCTE.AN51.01.02 - Examine youth activities provided by organizations in the environmental and natural resources industry.
NCCTE.AN51.02.00 - Demonstrate the process used in conducting business meetings in environmental and natural resource industry organizations.
  NCCTE.AN51.02.01 - Explain the role of parliamentary procedure in conducting business meetings.
  NCCTE.AN51.02.02 - Demonstrate key parliamentary procedure abilities used in a business meeting.

NCCTE.AN51.03.00 - Research aspects of public speaking and their importance to environmental and natural resources businesses.
  NCCTE.AN51.03.01 - Compare techniques of public speaking.
  NCCTE.AN51.03.02 - Demonstrate a conversational knowledge of environment and natural resources by delivering a prepared speech.

NCCTE.AN51.04.00 - Discuss the environmental and natural resources industry and its importance to the national, state, and local economy.
  NCCTE.AN51.04.01 - Describe careers in the environmental and natural resources industry.
  NCCTE.AN51.04.02 - Discuss the environmental and natural resources profession and its the importance to the economy.

NCCTE.AN51.05.00 - Explore the common career paths in environmental and natural resources.
  NCCTE.AN51.05.01 - Analyze environmental and natural resource industry careers and related employment opportunities.
  NCCTE.AN51.05.02 - Compare characteristics, preparation and credentials needed for employment in environmental and natural resources industry careers.

NCCTE.AN51.06.00 - Examine opportunities for work-based learning experiences related to the environmental and natural resources industry.
  NCCTE.AN51.06.01 - Revise career development plans to reflect environmental and natural resources career opportunities.
  NCCTE.AN51.06.02 - Research opportunities for career development in environmental and natural resources.

NCCTE.AN51.07.00 - Examine the Supervised Agricultural Experience component of environmental and natural resources.
  NCCTE.AN51.07.01 - Identify Supervised Agricultural Experiences in environmental and natural resources.
  NCCTE.AN51.07.02 - Correctly record entries in the SAE Record.

NCCTE.AN51.08.00 - Explore methods of financial record keeping in an environmental and natural resources business.
  NCCTE.AN51.08.01 - Define the terminology used in financial record keeping systems.
  NCCTE.AN51.08.02 - Correctly record entries in a financial record system.

NCCTE.AN51.09.00 - Research alternative methods of record keeping.
  NCCTE.AN51.09.01 - Compare computer software programs designed to aid record keeping.
  NCCTE.AN51.09.02 - Examine the Internet for methods of record keeping.

NCCTE.AN51.10.00 - Research customer relation techniques for working in an environmental and natural resources business.
NCCTE.AN51.10.01 - Apply customer relation techniques in an environmental and natural resources business situation.
NCCTE.AN51.10.02 - Compare various markets, marketing methods, and salesmanship techniques in the environmental and natural resources industry.

NCCTE.AN51.11.00 - Investigate techniques for marketing environmental and natural resource products.
NCCTE.AN51.11.01 - Design advertisements and arrange displays of environmental and natural resource products.
NCCTE.AN51.11.02 - Explain the principles of supply and demand.

NCCTE.AN51.12.00 - Summarize information related to environmental science, natural resources and conservation studies.
NCCTE.AN51.12.01 - Define terms related to Environmental Science, Natural Resources, and Conservation Studies.
NCCTE.AN51.12.02 - Describe the interaction and interdependence of the environment and natural resources.

NCCTE.AN51.13.00 - Discuss the relationship between natural resources management and humans.
NCCTE.AN51.13.01 - Discuss the importance of sustainability and conservation in relation to humans.
NCCTE.AN51.13.02 - Interpret human population growth and the demands it places on the environment and natural resources.

NCCTE.AN51.14.00 - Analyze the relationship between science and technology and environmental science, natural resources, and conservation.
NCCTE.AN51.14.01 - Define terms relating to science and technology and environmental science, natural resources, and conservation.
NCCTE.AN51.14.02 - Describe basic life processes in relation to structures of living organisms.
NCCTE.AN51.14.03 - Classify living things by their scientific name and environmental role.
NCCTE.AN51.14.04 - Discuss earth science and its relation to the environment.

NCCTE.AN51.15.00 - Examine the relationships between chemistry and environmental science, natural resources, and conservation.
NCCTE.AN51.15.01 - Define terms and the states, properties, and classifications of matter related to chemistry and the environment.
NCCTE.AN51.15.02 - Discuss chemical elements, compounds, reactions, formulas, and equations.
NCCTE.AN51.15.03 - Demonstrate the ability to determine the pH and salts of a material and relate it to environmental conditions.
NCCTE.AN51.15.04 - Discuss chemical sources of environmental hazards.

NCCTE.AN51.16.00 - Interpret ecological concepts for environmental science, natural resources, and conservation.
NCCTE.AN51.16.01 - Summarize how ecology and the environment affect an organism's ability to adapt and change.
NCCTE.AN51.16.02 - Discuss population ecology as it relates to living communities, population, ecology, food chains, and biomes.

NCCTE.AN51.17.00 - Examine the effects of weather and climate on environmental science, natural
resources, and conservation.

NCCTE.AN51.17.01 - Define terms related to weather and climate.
NCCTE.AN51.17.02 - Relate weather information as to the effects on the environment, natural resources, and conservation.
NCCTE.AN51.17.03 - Examine the formation and measurement of precipitation.

NCCTE.AN51.18.00 - Demonstrate an understanding of formation, contents, classification, and use of soils.
NCCTE.AN51.18.01 - Describe the contents of soil and soil formation processes.
NCCTE.AN51.18.02 - Demonstrate the ability to properly evaluate soil properties and classify soils.
NCCTE.AN51.18.03 - Apply soil sampling skills utilizing soil sampling instructions from the North Carolina Department of Agriculture and Consumer Services.
NCCTE.AN51.18.04 - Interpret a computerized soil report from NCDA&CS.

NCCTE.AN51.19.00 - Discuss soil erosion and conservation.
NCCTE.AN51.19.01 - Explain the causes and effects of soil erosion.
NCCTE.AN51.19.02 - Describe proper soil conservation practices.

NCCTE.AN51.20.00 - Evaluate the concepts of water supply and management.
NCCTE.AN51.20.01 - Discuss the nature, importance, and sources of water.
NCCTE.AN51.20.02 - Summarize water storage, distribution, and management.
NCCTE.AN51.20.03 - Check water samples for quality.
NCCTE.AN51.20.04 - Identify methods of determining volume of water in a river or stream.
NCCTE.AN51.20.05 - Discuss the important characteristics and classifications of wetlands.
NCCTE.AN51.20.06 - Identify federal, state, and local legislation or regulations that govern water resource management.

NCCTE.AN51.21.00 - Discuss the concepts of air that determine air quality.
NCCTE.AN51.21.01 - Summarize the sources of air pollution and the importance of air quality relative to plant and animal life.
NCCTE.AN51.21.02 - Summarize how air pollution is detected and controlled.
NCCTE.AN51.21.03 - Describe the history of air quality management from the Industrial Revolution to present time.

NCCTE.AN51.22.00 - Examine methods of solid and toxic waste management used to protect the environment.
NCCTE.AN51.22.01 - Discuss sources and types of waste.
NCCTE.AN51.22.02 - Evaluate methods of waste management and disposal.

NCCTE.AN51.23.00 - Explore the concepts of freshwater fishery management.
NCCTE.AN51.23.01 - Discuss the lake habitat to include basic fishery management techniques.
NCCTE.AN51.23.02 - Differentiate among freshwater fish common to North Carolina.
NCCTE.AN51.23.03 - Produce fish in an aquaculture system.

NCCTE.AN51.24.00 - Summarize the concepts of marine fishery management.
NCCTE.AN51.24.01 - Describe characteristics of the ocean and estuarine ecosystem.
NCCTE.AN51.24.02 - Discuss ocean cultivation as related to regulations and laws.
NCCTE.AN51.25.00 - Discuss wildlife habitats, game management practices, and factors that have affected wildlife species in North Carolina.

NCCTE.AN51.25.01 - Describe wildlife habitat requirements and game management practices.

NCCTE.AN51.25.02 - Discuss factors that have affected wildlife species in North Carolina.

NCCTE.AN51.26.00 - Compare wildlife and bird species that are native to North Carolina.

NCCTE.AN51.26.01 - Classify North Carolina migratory birds, game birds, raptors, and wildlife mammals in relation to their habitats.

NCCTE.AN51.26.02 - Discuss North Carolina migratory birds, game birds, raptors, and wildlife mammals as related to agricultural production.

NCCTE.AN51.27.00 - Apply safe practices in managing and harvesting wildlife species.

NCCTE.AN51.27.01 - Explain the responsibilities of a hunter for the purpose of developing safe and efficient wildlife management practices.

NCCTE.AN51.27.02 - Demonstrate the safe use of firearms and hunting paraphernalia.

NCCTE.AN51.27.03 - Assess the impact of local legislation as it relates to the management and utilization of wildlife resources.

NCCTE.AN51.27.04 - Distinguish between livestock and wildlife species using commonly accepted recognition techniques.

NCCTE.AN51.28.00 - Describe the role of forests and their growth in the environment and society.

NCCTE.AN51.28.01 - Describe the impact of forests, their products, and processing on our environment, economy, and society.

NCCTE.AN51.28.02 - Describe the parts of a tree and their functions.

NCCTE.AN51.29.00 - Demonstrate proper forest management techniques.

NCCTE.AN51.29.01 - Identify common North Carolina trees based on physical characteristics.

NCCTE.AN51.29.02 - Apply tree measurement techniques and skills that are used by professional foresters.

NCCTE.AN51.29.03 - Describe cutting and reproducing techniques used in the forestry industry to improve forest quality.

Course: Environmental and Natural Resources II

NCCTE.AN52 - Environmental and Natural Resources II

NCCTE.AN52.01.00 - Demonstrate the major components of leadership involved in successful employment in environmental and natural resources.

NCCTE.AN52.01.01 - Identify leadership qualities desired by the natural resources industry.

NCCTE.AN52.01.02 - Develop leadership qualities through participation in the environmental and natural resource instructional program.

NCCTE.AN52.02.00 - Adapt public speaking techniques to the audience and purpose of the communication.

NCCTE.AN52.02.01 - Describe the major types of speeches and the variables to be considered when presenting the speeches.

NCCTE.AN52.02.02 - Use public speaking techniques to deliver a speech on an environmental and natural resources topic.
NCCTE.AN52.03.00 - Apply Robert's Rules of Order to conduct business meetings of environmental and natural resource organizations.

NCCTE.AN52.03.01 - Analyze the role that Robert's Rules of Order plays in the orderly conduct of business.

NCCTE.AN52.03.02 - Use Robert's Rules of Order to conduct an orderly transaction of business.

NCCTE.AN52.04.00 - Use career objectives to design a school-to-work employment plan.

NCCTE.AN52.04.01 - Describe the procedures to follow in planning and implementing a school-to-work employment plan.

NCCTE.AN52.04.02 - Use career objectives to create an individual written school-to-work employment plan.

NCCTE.AN52.05.00 - Develop a financial record system for use in the environmental and natural resources industry.

NCCTE.AN52.05.01 - Identify the elements in a financial statement.

NCCTE.AN52.05.02 - Use a record keeping system to compose a financial statement.

NCCTE.AN52.06.00 - Summarize information about common tree species, insects, and diseases that occur in North Carolina.

NCCTE.AN52.06.01 - Summarize the identifying characteristics and value of trees in North Carolina.

NCCTE.AN52.06.02 - Discuss common forest pests and their damage.

NCCTE.AN52.07.00 - Examine management practices related to forestry production as recommended by the North Carolina Division of Forest Resources (NCDFR).

NCCTE.AN52.07.01 - Summarize proper road layout and construction in relation to forestry management.

NCCTE.AN52.07.02 - Discuss silvicultural practices as related to their benefit to the production of forestry products.

NCCTE.AN52.07.03 - Demonstrate harvesting skills that reflect management practices as recommended by the NCDFR.

NCCTE.AN52.07.04 - Apply forestry concepts to evaluate timber in a natural setting.

NCCTE.AN52.07.05 - Apply Global Positioning System (GPS) technology in the management of a forest.

NCCTE.AN52.08.00 - Examine basic procedures involved in camping.

NCCTE.AN52.08.01 - Discuss the fundamentals of establishing and using a campsite for cooking and living.

NCCTE.AN52.08.02 - Use the principles of surveying to identify state and privately operated camping sites in the community.

NCCTE.AN52.08.03 - Use principles of camping to plan a camping trip.

NCCTE.AN52.09.00 - Apply principles of hunting and firearm safety.

NCCTE.AN52.09.01 - Discuss the history and purposes of hunter education.

NCCTE.AN52.09.02 - Explain responsibilities of hunters in regard to the safe use of firearms.

NCCTE.AN52.09.03 - Demonstrate knowledge and proficiencies needed to obtain NC hunter certification.

NCCTE.AN52.09.04 - Demonstrate the safe use of firearms.
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.AN52.10.00 - Examine basic principles of freshwater fishing.
  NCCTE.AN52.10.01 - Summarize fundamentals associated with freshwater fishing and equipment selection.
  NCCTE.AN52.10.02 - Demonstrate freshwater angling techniques.

NCCTE.AN52.11.00 - Apply practices related to classifying soils according to their potential agricultural and urban use.
  NCCTE.AN52.11.01 - Evaluate soil properties that affect land use in agricultural and urban areas.
  NCCTE.AN52.11.02 - Critique land capability classes to determine possible land use.
  NCCTE.AN52.11.03 - Apply judging techniques to evaluate the properties and use of soils.

NCCTE.AN52.12.00 - Examine soil conservation management practices that affect land use planning in rural and urban areas.
  NCCTE.AN52.12.01 - Explain soil conservation considerations and practices in relation to farming situations.
  NCCTE.AN52.12.02 - Discuss local and regional land use planning concepts.
  NCCTE.AN52.12.03 - Develop a soil conservation or land use plan that maximizes the potential of the site.

NCCTE.AN52.13.00 - Demonstrate the ability to properly sample soils and evaluate test results.
  NCCTE.AN52.13.01 - Interpret a computerized soil report from the North Carolina Department of Agriculture and Consumer Services (NCDA&CS).
  NCCTE.AN52.13.02 - Apply soil sampling skills utilizing soil sampling instructions from NCDA&CS.

NCCTE.AN52.14.00 - Discuss the properties of water.
  NCCTE.AN52.14.01 - Describe the characteristics of water and the water cycle.
  NCCTE.AN52.14.02 - Discuss flowing and nonflowing water.
  NCCTE.AN52.14.03 - Identify methods of determining volume of water in a river or stream.

NCCTE.AN52.15.00 - Analyze water quality issues.
  NCCTE.AN52.15.01 - Describe water pollution and processing methods used for purification.
  NCCTE.AN52.15.02 - Demonstrate the ability to monitor and test water for quality.

NCCTE.AN52.16.00 - Discuss the important characteristics and classifications of wetlands.
  NCCTE.AN52.16.01 - Describe the kinds of wetlands and their importance.
  NCCTE.AN52.16.02 - Explain the causes of wetland damage and improvement methods.

NCCTE.AN52.17.00 - Discuss factors related to the management of animals.
  NCCTE.AN52.17.01 - Discuss concepts affecting the interaction of animals and society.
  NCCTE.AN52.17.02 - Discuss variables affecting wildlife populations.

NCCTE.AN52.18.00 - Examine characteristics of animal species.
  NCCTE.AN52.18.01 - Identify animals using characteristics found in NC Wildlife Profiles.
  NCCTE.AN52.18.02 - Apply environmental principles to develop a habitat or observation point to identify wildlife.

NCCTE.AN52.19.00 - Explore the importance of and practices involved in sustainable agriculture.
NCCTE.AN52.19.01 - Describe sustainable agriculture practices and their importance to resource management.

NCCTE.AN52.19.02 - Evaluate sustainable agriculture practices being conducted in the community.

NCCTE.AN52.20.00 - Summarize terms and concepts related to energy.
   NCCTE.AN52.20.01 - Define terms related to energy.
   NCCTE.AN52.20.02 - Discuss major sources of energy and ways to conserve energy.

NCCTE.AN52.21.00 - Investigate factors involved in planning and establishing an aquaculture facility.
   NCCTE.AN52.21.01 - Summarize factors involved in planning and managing an aquaculture facility site.
   NCCTE.AN52.21.02 - Research the evolution of the aquaculture industry in the United States.

NCCTE.AN52.22.00 - Establish an aquaculture facility that produces economically beneficial species of fish.
   NCCTE.AN52.22.01 - Analyze the factors and materials necessary for establishing an aquarium aquaculture system.
   NCCTE.AN52.22.02 - Apply aquaculture concepts in developing a re-circulating aquaculture facility that produces economically beneficial species of fish.
   NCCTE.AN52.22.03 - Use information about the local geographical region to develop a marketing plan for aquatic crops.

NCCTE.AN52.23.00 - Examine careers related to natural resources and the environment.
   NCCTE.AN52.23.01 - Describe careers related to the management of our natural resources and the environment.
   NCCTE.AN52.23.02 - Analyze a career choice in the natural resources industry.

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

Course: Horticulture II - Turfgrass Management

NCCTE.AP43 - Horticulture II - Turfgrass Management
   NCCTE.AP43.01.00 - Examine leadership organizations as related to the turfgrass industry.
      NCCTE.AP43.01.01 - Access opportunities for leadership development in turfgrass industry organizations.
      NCCTE.AP43.01.02 - Examine the significance and meaning of ceremonies and traditions in agricultural organizations.

   NCCTE.AP43.02.00 - Demonstrate the process used in conducting business meetings in turfgrass management organizations.
      NCCTE.AP43.02.01 - Explain the role of parliamentary law in the conduction of business.
      NCCTE.AP43.02.02 - Demonstrate parliamentary abilities that would be used in a business meeting.

   NCCTE.AP43.03.00 - Apply appropriate techniques in public speaking.
      NCCTE.AP43.03.01 - Identify the parts of a speech.
      NCCTE.AP43.03.02 - Deliver a speech.
      NCCTE.AP43.03.03 - Identify the various components of the techniques involved in agricultural sales.
      NCCTE.AP43.03.04 - Demonstrate sales techniques with a 7 minute sales presentation on turfgrass products or services.

   NCCTE.AP43.04.00 - Examine the Supervised Agricultural Experience Component of the turfgrass management class.
      NCCTE.AP43.04.01 - Identify the component parts of the Supervised Agricultural Experience Record used in the Turfgrass Management class.
      NCCTE.AP43.04.02 - Correctly record entries in the SAE record.

   NCCTE.AP43.05.00 - Examine financial record-keeping systems used in the turfgrass industry.
NCCTE.AP43.05.01 - Define the terminology used in the financial record-keeping systems, such as asset, liability, inventory, etc.
NCCTE.AP43.05.02 - Correctly record entries in a financial record system.

NCCTE.AP43.06.00 - Examine the principles of plant science as related to Turfgrass Management.
  NCCTE.AP43.06.01 - Examine the structure and function of the vegetative and reproductive parts of a plant, including a typical turfgrass plant.
  NCCTE.AP43.06.02 - Investigate the major factors such as light, moisture, temperature, and elements affecting plants, including turfgrass.

NCCTE.AP43.07.00 - Examine the principles of pest management as related to Turfgrass Management.
  NCCTE.AP43.07.01 - Analyze information found on chemical pesticide labels.
  NCCTE.AP43.07.02 - Compare Integrated Pest Management (IPM) and Best Turfgrass Management (BTM)

NCCTE.AP43.08.00 - Explore the relationship of Turfgrass Management on Wildlife management practices.
  NCCTE.AP43.08.01 - Identify features of three different kinds of ecosystems.
  NCCTE.AP43.08.02 - Compare warm-blooded and cold-blooded animals.
  NCCTE.AP43.08.03 - Examine the implementation of a habitat improvement plan.

NCCTE.AP43.09.00 - Explore the relationship of turfgrass management on water management practices.
  NCCTE.AP43.09.01 - Describe the four parts of a stream system.
  NCCTE.AP43.09.02 - Explain the Best Management Practices (BMP) to avoid polluting groundwater and streams.

NCCTE.AP43.10.00 - Explore the relationship of turfgrass management on waste management practices.
  NCCTE.AP43.10.01 - Explain the carbon cycle.
  NCCTE.AP43.10.02 - Explain the processes that occur in a properly constructed compost pile.

NCCTE.AP43.11.00 - Examine the distinguishing characteristics of landscape plants.
  NCCTE.AP43.11.01 - Determine landscape plants using vegetative clues, location, and the dichotomous key.
  NCCTE.AP43.11.02 - Analyze plant propagation methods including seeds and cuttings.

NCCTE.AP43.12.00 - Compare fertilization and pruning techniques used on landscape plants.
  NCCTE.AP43.12.01 - Interpret fertilizer information as described on a fertilizer bag.
  NCCTE.AP43.12.02 - Execute proper pruning techniques on selected landscape plants.

NCCTE.AP43.13.00 - Explore career opportunities in the lawn care and turf production industries.
  NCCTE.AP43.13.01 - Describe the scope and development of the turfgrass industry.
  NCCTE.AP43.13.02 - Describe the career opportunities available in the lawn care industry.

NCCTE.AP43.14.00 - Analyze basic turfgrass growth and development.
  NCCTE.AP43.14.01 - Analyze warm and cool season turfgrass in comparison with southern, northern, and transition lawns.
  NCCTE.AP43.14.02 - Analyze specific fertilizers used exclusively for golf courses and other sports
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

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.
   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.

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 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.AS31.03.00 - 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.AS32 - Agricultural Mechanics II
NCCTE.AS32.01.00 - Demonstrate the major components of leadership involved in successful employment.
   - NCCTE.AS32.01.01 - Identify leadership qualities desired by the agricultural mechanics industry.
   - NCCTE.AS32.01.02 - Develop leadership qualities through participation in the agricultural mechanics instructional program.

NCCTE.AS32.02.00 - Adapt public speaking techniques to the audience and purpose of the communication.
   - NCCTE.AS32.02.01 - Describe the major types of speeches and the variables to be considered when presenting the speeches.
   - NCCTE.AS32.02.02 - Use principles of public speaking to deliver a speech on an agricultural mechanics topic.

NCCTE.AS32.03.00 - Apply Robert's Rules of Order to conduct business meetings of agricultural mechanics organizations.
   - NCCTE.AS32.03.01 - Analyze the role of Robert's Rules of Order in the orderly conduct of business.
   - NCCTE.AS32.03.02 - Use principles of parliamentary procedure to conduct an orderly transaction of business utilizing Robert's Rules of Order.

NCCTE.AS32.04.00 - Use career objectives to design a school-to-work employment plan.
   - NCCTE.AS32.04.01 - Describe the procedures for planning and implementing a school-to-work employment plan.
   - NCCTE.AS32.04.02 - Use career objectives to create an individual written school-to-work employment plan.
NCCTE.AS32.05.00 - Develop a financial record system for use in the agricultural mechanics industry.
NCCTE.AS32.05.01 - Identify the elements of a financial statement.
NCCTE.AS32.05.02 - Use principles of financial literacy to compose a financial statement.

NCCTE.AS32.06.00 - Investigate safety practices that apply to agricultural mechanics.
NCCTE.AS32.06.01 - Explain safety rules related to agricultural mechanics.
NCCTE.AS32.06.02 - Describe fire prevention as it relates to agricultural mechanics.

NCCTE.AS32.07.00 - Demonstrate the proper use of agricultural mechanics tools, equipment, and facilities.
NCCTE.AS32.07.01 - Describe tools and equipment used in agricultural mechanics.
NCCTE.AS32.07.02 - Explain procedures for using tools, equipment, and facilities.
NCCTE.AS32.07.03 - Use tools and equipment properly and safely.
NCCTE.AS32.07.04 - Determine design criteria for safe and effective use and management of agricultural mechanics service centers.
NCCTE.AS32.07.05 - Use design criteria to design plans for an agricultural mechanics service center.

NCCTE.AS32.08.00 - Investigate procedures for fastening metal.
NCCTE.AS32.08.01 - Explain the purposes of different metal fasteners.
NCCTE.AS32.08.02 - Use proper procedures for fastening with bolts, nuts, washers, screws, rivets, taps, and dies.

NCCTE.AS32.09.00 - Use oxy-fuel welding equipment and materials.
NCCTE.AS32.09.01 - Explain procedures for using oxyacetylene equipment and materials.
NCCTE.AS32.09.02 - Demonstrate welding various types of joints and metals.
NCCTE.AS32.09.03 - Demonstrate safe assembly of an oxyacetylene rig.
NCCTE.AS32.09.04 - Demonstrate cutting low carbon steel.
NCCTE.AS32.09.05 - Use proper procedures to solder and braze various metals.
NCCTE.AS32.09.06 - Heat, bend, harden, temper, and anneal metal.

NCCTE.AS32.10.00 - Use arc welding equipment and materials.
NCCTE.AS32.10.01 - Explain procedures for using arc welding equipment.
NCCTE.AS32.10.02 - Weld using SMAW, GMAW, and GTAW procedures.

NCCTE.AS32.11.00 - Demonstrate plasma arc cutting and welding.
NCCTE.AS32.11.01 - Examine procedures of plasma arc cutting and plasma arc welding.
NCCTE.AS32.11.02 - Cut and weld using plasma arc.

NCCTE.AS32.12.00 - Weld cast iron.
NCCTE.AS32.12.01 - Recognize the characteristics and proper welding techniques of cast iron.
NCCTE.AS32.12.02 - Explain procedures for welding cast iron.
NCCTE.AS32.12.03 - Weld cast iron in agricultural metal fabrication.

NCCTE.AS32.13.00 - Construct a metal fabrication project.
NCCTE.AS32.13.01 - Identify common symbols, abbreviations, and numbering systems used for various metals in metal fabrication.
NCCTE.AS32.13.02 - Explain procedures to design a metal fabrication project.
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<td>Use proper procedures to construct a metal fabrication project.</td>
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<td>Examine techniques for welding plastics.</td>
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<td>NCCTE.AS32.14.01</td>
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<td>NCCTE.AS32.14.02</td>
<td>Use proper techniques to weld plastics.</td>
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<td>NCCTE.AS32.15.00</td>
<td>Investigate techniques for repairing synthetic materials.</td>
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<td>NCCTE.AS32.15.01</td>
<td>Research common types of fiberglass repairs and the materials needed.</td>
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<td>NCCTE.AS32.16.00</td>
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<tr>
<td>NCCTE.AS32.16.01</td>
<td>Describe types of agricultural tractors and their uses.</td>
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<td>NCCTE.AS32.17.01</td>
<td>Explain preventive maintenance procedures for tractors, equipment, and small engines.</td>
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<td>NCCTE.AS32.18.01</td>
<td>Identify blueprint terms and symbols.</td>
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<td>Read blueprints to plan layout and framing.</td>
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<td>NCCTE.AS32.19.00</td>
<td>Demonstrate safe use of layout tools and equipment.</td>
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<td>Use builder's level, tripod, and laser level.</td>
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<td>Demonstrate the 3-4-5 method to lay out a building.</td>
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<td>Build the framing of a wood structure.</td>
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<td>Identify framing terms and materials.</td>
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<td>Explain procedures used to calculate rafter lengths and angles.</td>
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<td>Maintain an agricultural water system.</td>
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<td>NCCTE.AS32.21.01</td>
<td>Describe pipe tools, types of pipe, fixtures, and supplies.</td>
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<tr>
<td>NCCTE.AS32.21.03</td>
<td>Maintain and repair pipes, fixtures, and water systems.</td>
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<td>Use principles and procedures to plan water systems.</td>
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<td>NCCTE.AS32.22.00</td>
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<tr>
<td>NCCTE.AS32.22.01</td>
<td>Explain principles and procedures for constructing fences.</td>
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<tr>
<td>NCCTE.AS32.22.02</td>
<td>Demonstrate correct principles and procedures to build a fence.</td>
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</table>
Course: Agricultural Mechanics II - Small Engines
NCCTE.2015.AS33 - Agricultural Mechanics II - Small Engines
   NCCTE.2015.AS33.01.00 - Understand internal combustion engines.
   NCCTE.2015.AS33.02.00 - Understand engine operation.
   NCCTE.2015.AS33.03.00 - Understand compression.
   NCCTE.2015.AS33.04.00 - Understand the fuel system.
   NCCTE.2015.AS33.05.00 - Understand the governor system.

NCCTE.AS33 - Agricultural Mechanics II - Small Engines
   NCCTE.AS33.01.00 - Demonstrate the major components of leadership involved in successful employment.
      NCCTE.AS33.01.01 - Identify leadership qualities desired by the small engines industry.
      NCCTE.AS33.01.02 - Develop leadership qualities through participation in the small engines instructional program.
   NCCTE.AS33.02.00 - Apply Robert's Rules of Order to conduct business meetings needed by agricultural organizations.
      NCCTE.AS33.02.01 - Analyze the role that Robert's Rules of Order plays in the orderly conduct of business.
      NCCTE.AS33.02.02 - Conduct the transaction of business using Robert's Rules of Order.
   NCCTE.AS33.03.00 - Adapt public speaking techniques to the audience and to the purpose of the communication taking place.
      NCCTE.AS33.03.01 - Discuss the major types of speeches and the variables to be considered when presenting the speeches.
      NCCTE.AS33.03.02 - Deliver a speech to a small engines industry organization.
      NCCTE.AS33.03.03 - Identify various components of the techniques involved in agricultural sales.
      NCCTE.AS33.03.04 - Demonstrate sales techniques with a 7-minute sales presentation on small engines products or services.
   NCCTE.AS33.04.00 - Design an individual written school-to-work employment plan based upon career objectives.
      NCCTE.AS33.04.01 - Describe the procedures to follow in planning and implementing a school-to-work employment plan.
      NCCTE.AS33.04.02 - Create an individual written school-to-work employment plan based upon career objectives.
   NCCTE.AS33.05.00 - Develop a financial record system for use in the small engines industry.
      NCCTE.AS33.05.01 - Describe the elements in a financial statement.
      NCCTE.AS33.05.02 - Compose a financial statement.
   NCCTE.AS33.06.00 - Interpret shop management safety factors.
      NCCTE.AS33.06.01 - Discuss potential shop hazards.
NCCTE.AS33.06.02 - Explain how to react to shop emergencies.

NCCTE.AS33.07.00 - Practice proper personal procedures.
   NCCTE.AS33.07.01 - Explain the importance of shop safety.
   NCCTE.AS33.07.02 - Use tools and equipment safely.

NCCTE.AS33.08.00 - Demonstrate the use of small engine tools.
   NCCTE.AS33.08.01 - Describe small engine hand tools and measuring instruments.
   NCCTE.AS33.08.02 - Demonstrate the use of small engine hand tools and measuring instruments.

NCCTE.AS33.09.00 - Describe the use of common small engine fasteners, adhesives, and gaskets.
   NCCTE.AS33.09.01 - Identify common small engine fasteners, adhesives, and gaskets.
   NCCTE.AS33.09.02 - Describe the uses of common small engine fasteners, adhesives, sealants, and gaskets.
   NCCTE.AS33.09.03 - Describe important concepts of thread types and threading as it relates to small engines.

NCCTE.AS33.10.00 - Explain basic small engine operating principles.
   NCCTE.AS33.10.01 - Discuss the purposes of the major components of a small engine.
   NCCTE.AS33.10.02 - Explain the principles of fuel combustion in relation to small engine operation.

NCCTE.AS33.11.00 - Explain the theories of small engine operation.
   NCCTE.AS33.11.01 - Define terms related to small engine theory, performance, and operation.
   NCCTE.AS33.11.02 - Explain what takes place during each stroke of four-stroke and two-stroke engines.
   NCCTE.AS33.11.03 - Discuss how horsepower is determined.

NCCTE.AS33.12.00 - Discuss common engine fuel systems and their uses.
   NCCTE.AS33.12.01 - Summarize types and applications of fuels and mixtures.
   NCCTE.AS33.12.02 - Describe the types, operation, and maintenance of common fuel delivery systems.
   NCCTE.AS33.12.03 - Discuss emission control related agencies and regulations.

NCCTE.AS33.13.00 - Demonstrate knowledge of carburetors and their operation.
   NCCTE.AS33.13.01 - Explain the principles and operation of carburetors.
   NCCTE.AS33.13.02 - Summarize common carburetor systems and their parts.

NCCTE.AS33.14.00 - Explain the concepts of small engine ignition systems.
   NCCTE.AS33.14.01 - Describe the operation of a basic ignition system.
   NCCTE.AS33.14.02 - Explain the fundamental electrical principles and measurement.
   NCCTE.AS33.14.03 - Discuss spark plugs and their uses.

NCCTE.AS33.15.00 - Analyze the operation of small engine magneto ignition systems.
   NCCTE.AS33.15.01 - Explain the principles and operation of magneto systems.
   NCCTE.AS33.15.02 - Compare the three magneto ignition systems.

NCCTE.AS33.16.00 - Analyze the operation of battery ignition systems.
NCCTE.AS33.16.01 - Explain the principles and functions of battery ignition systems.
NCCTE.AS33.16.02 - Compare magneto ignition systems and battery ignition systems.

NCCTE.AS33.17.00 - Describe general concepts of oils and lubrication in small engines.
NCCTE.AS33.17.01 - Recognize the purposes, properties, and importance of oil to small engines.
NCCTE.AS33.17.02 - Define oil viscosity information and terms.

NCCTE.AS33.18.00 - Demonstrate the general concepts of small engine lubrication.
NCCTE.AS33.18.01 - Explain the importance of a proper gas:oil mixture in 2-cycle engines.
NCCTE.AS33.18.02 - Describe the common lubrication systems for a 4-cycle small engine.
NCCTE.AS33.18.03 - Mix an appropriate gas:oil mixture for a given 2-cycle engine.

NCCTE.AS33.19.00 - Demonstrate an understanding of small engine cooling concepts.
NCCTE.AS33.19.01 - Explain the importance of properly cooling a small engine.
NCCTE.AS33.19.02 - Compare the various methods of cooling small engines.

NCCTE.AS33.20.00 - Explain the operation of cooling system components.
NCCTE.AS33.20.01 - Describe the types of water pumps found in small engines.
NCCTE.AS33.20.02 - Explain the operation of a thermostat.
NCCTE.AS33.20.03 - Describe a radiator and its operation.

NCCTE.AS33.21.00 - Perform general preventative maintenance on a small engine.
NCCTE.AS33.21.01 - Service air-cooled small engines.
NCCTE.AS33.21.02 - Service a water-cooled small engine cooling system.

NCCTE.AS33.22.00 - Troubleshoot a small engine.
NCCTE.AS33.22.01 - Explain the terms and rationale behind small engine troubleshooting.
NCCTE.AS33.22.02 - Demonstrate small engine troubleshooting techniques according to service manuals.

NCCTE.AS33.23.00 - Service a small engine fuel system.
NCCTE.AS33.23.01 - Troubleshoot a small engine fuel system.
NCCTE.AS33.23.02 - Repair the components of a small engine fuel system.

NCCTE.AS33.24.00 - Service a small engine ignition system.
NCCTE.AS33.24.01 - Test a small engine ignition system.
NCCTE.AS33.24.02 - Maintain a small engine ignition system.
NCCTE.AS33.24.03 - Test and service batteries.

NCCTE.AS33.25.00 - Service a small engine block assembly.
NCCTE.AS33.25.01 - Explain small engine block assembly terms.
NCCTE.AS33.25.02 - Inspect a block assembly and related components.
NCCTE.AS33.25.03 - Service a block assembly and related components.

NCCTE.AS33.26.00 - Service a small engine electrical system.
NCCTE.AS33.26.01 - Check dc starter/generator circuits.
NCCTE.AS33.26.02 - Maintain alternator charging system and related parts.
- Troubleshoot an alternator charging system.

- Demonstrate safe work habits and procedures when working with power equipment.
- Describe basic safe work procedures specific to power equipment.
- Demonstrate basic safe work procedures specific to power equipment.

- Perform basic operation and maintenance on a lawn mower.
- Identify parts of commonly used lawn mowers.
- Suggest a mower and accessories for a given situation.
- Demonstrate proper use of common lawn mower starting systems.
- Sharpen a lawn mower blade.
- Discuss storage procedures for a lawn mower.
- Demonstrate safe handling of a lawn mower.

- Perform basic operations and maintenance on a chain saw.
- Discuss purchasing considerations for a chain saw.
- Demonstrate safe handling of a chain saw.
- Demonstrate chain saw troubleshooting.
- Demonstrate chain saw maintenance.

- Perform basic operations and maintenance on a string trimmer.
- Discuss purchasing considerations for a string trimmer.
- Demonstrate safe handling of a string trimmer.
- Demonstrate string trimmer maintenance.

Course: Agricultural Production I

- Remember organizations related to the agricultural production industry.
- Recognize opportunities for leadership development and youth activities in agricultural production industry organizations.
- Recall a conversational knowledge of agricultural production and the agricultural production industry.

- Apply the processes used in public speaking and in conducting business meetings in agricultural production organizations.
- Explain the role of parliamentary procedure in conducting business meetings.
- Execute key parliamentary procedure abilities that would be used in a business meeting.
- Compare techniques of public speaking.

- Understand agricultural production as a profession and its importance in relation to the national, state, and local economies.
- Classify the different categories in the broad field of agricultural production.
- Explain the economic importance, issues, and trends for each of the different categories of agricultural production.
- Explain how various skills are necessary for employment in agricultural production careers.
NCCTE.AU11.04.00 - Analyze occupations in the field of agricultural production and its common career paths.
   NCCTE.AU11.04.01 - Analyze agricultural production industry careers and related employment opportunities.
   NCCTE.AU11.04.02 - Compare characteristics, preparation, and credentials needed in agricultural production industry careers.

NCCTE.AU11.05.00 - Apply opportunities for work-based learning experiences related to the agricultural production industry.
   NCCTE.AU11.05.01 - Implement revisions to career development plans to reflect agricultural production career opportunities.
   NCCTE.AU11.05.02 - Apply techniques of customer relations in an agricultural production business situation.
   NCCTE.AU11.05.03 - Compare various markets, marketing methods, and salesmanship techniques in the agricultural production industry.
   NCCTE.AU11.05.04 - Explain the principles of supply, demand, and advertising.

NCCTE.AU11.06.00 - Understand the Supervised Agricultural Experience component of the agricultural production course and apply procedures for keeping records.
   NCCTE.AU11.06.01 - Classify the component parts of the Supervised Agricultural Experience Record used in the agricultural production course.
   NCCTE.AU11.06.02 - Implement procedures to correctly record entries in the SAE Record or other financial record systems.
   NCCTE.AU11.06.03 - Compare computer software programs designed to aid record keeping.

NCCTE.AU11.07.00 - Understand terms and external parts of agricultural animals.
   NCCTE.AU11.07.01 - Recognize the major external parts of agricultural animals and the terminology used to distinguish animals by age, sex, and physical traits.
   NCCTE.AU11.07.02 - Classify the major breeds of agricultural animals.

NCCTE.AU11.08.00 - Understand the functions and sources of feed nutrients for agricultural animals.
   NCCTE.AU11.08.01 - Recognize five major groups of nutrients and sources for each.
   NCCTE.AU11.08.02 - Explain the functions of the five major groups of nutrients.

NCCTE.AU11.09.00 - Understand reproduction of agricultural animals.
   NCCTE.AU11.09.01 - Recognize terminology related to reproductive management, breeding systems, and the major parts of female and male reproductive systems.
   NCCTE.AU11.09.02 - Explain functions of the female and the male reproductive systems.

NCCTE.AU11.10.00 - Apply approved production practices for each of the major classes of agricultural animals produced in North Carolina.
   NCCTE.AU11.10.01 - Explain appropriate production practices for optimum production.
   NCCTE.AU11.10.02 - Recognize facilities and equipment needed.
   NCCTE.AU11.10.03 - Implement major management tasks associated with optimum production including a marketing plan for a specific class of animal.

NCCTE.AU11.11.00 - Understand land capability classes.
NCCTE.AU11.11.01 - Explain soil characteristics and properties as they relate to land capability classes and plant growth.
NCCTE.AU11.11.02 - Classify land by capability classes with their recommended uses and management practices for agricultural and urban uses.

NCCTE.AU11.12.00 - Apply procedures to measure and calculate land acreage.
NCCTE.AU11.12.01 - Explain basic units and procedures used to measure land.
NCCTE.AU11.12.02 - Implement procedures for measuring and calculating the acreage in a given land area.

NCCTE.AU11.13.00 - Understand how to use soil samples to determine soil fertility.
NCCTE.AU11.13.01 - Explain procedures for taking a soil sample and completing an information sheet.
NCCTE.AU11.13.02 - Interpret a soil sample report.

NCCTE.AU11.14.00 - Apply procedures to determine the role of nutrients in plant growth.
NCCTE.AU11.14.01 - Explain primary and secondary nutrients and the characteristics caused by the specific nutrient deficiencies.
NCCTE.AU11.14.02 - Compare the advantages and disadvantages of different types of fertilizers.
NCCTE.AU11.14.03 - Execute procedures to determine the units of primary nutrients needed per acre for various crops.

NCCTE.AU11.15.00 - Understand plant growth principles as they relate to crop production.
NCCTE.AU11.15.01 - Recognize biological terms used to describe plants and major plant parts with the distinguishing characteristics of each.
NCCTE.AU11.15.02 - Explain the functions of plant parts and their relationships and how light, moisture, temperature, and nutrients affect plants.

NCCTE.AU11.16.00 - Apply approved production practices for each of the major crops produced in North Carolina.
NCCTE.AU11.16.01 - Implement procedures to determine the appropriate varieties, site, tillage, planting, fertilization, irrigation, pest control, and harvesting practices.
NCCTE.AU11.16.02 - Execute a marketing plan for the specific crop.

NCCTE.AU11.17.00 - Apply approved practices to manage forests.
NCCTE.AU11.17.01 - Explain the importance of forestry and forest management and the factors that affect the productivity of forests including harvesting and reforestation techniques.
NCCTE.AU11.17.02 - Classify common North Carolina trees based on their physical characteristics.
NCCTE.AU11.17.03 - Implement procedures used to measure saw timber and pulpwood.

NCCTE.AU11.18.00 - Apply principles of managing wildlife on private property.
NCCTE.AU11.18.01 - Explain methods of managing wildlife resources and the impact of federal, state, and local legislation on the management and use of wildlife.
NCCTE.AU11.18.02 - Implement procedures used to increase and maintain adequate supplies of diverse wildlife populations.

NCCTE.AU11.19.00 - Apply safe practices in managing and harvesting wildlife species.
NCCTE.AU11.19.01 - Explain the responsibilities of a hunter for the purpose of developing safe and efficient wildlife management practices.
NCCTE.AU11.19.02 - Implement the safe use of firearms, hunting equipment, and supplies.

NCCTE.AU11.20.00 - Understand pesticide safety practices.
NCCTE.AU11.20.01 - Recall safety regulations for handling, applying, and storing pesticides.
NCCTE.AU11.20.02 - Explain EPA regulations for the safe handling of pesticides.

NCCTE.AU11.21.00 - Apply procedures for selecting various types of pesticides based on chemical labels.
NCCTE.AU11.21.01 - Classify the type of product based upon the label.
NCCTE.AU11.21.02 - Implement procedures to select pesticides to control common plant and animal pests.

NCCTE.AU11.22.00 - Apply procedures for the safe use of agricultural tools, machinery, and equipment.
NCCTE.AU11.22.01 - Explain safety rules including color codes, safety emblems and signs, and the importance of good organization.
NCCTE.AU11.22.02 - Explain the uses of agricultural tools, machinery, and equipment.
NCCTE.AU11.22.03 - Implement the procedures for safe use of agricultural tools, machinery, and equipment.

NCCTE.AU11.23.00 - Apply cold metal skills.
NCCTE.AU11.23.01 - Explain skills needed to perform cold metal tasks.
NCCTE.AU11.23.02 - Implement procedures used to identify, cut, drill, bend, shape, file, and grind cold metals.

NCCTE.AU11.24.00 - Understand proper procedures for oxyacetylene processes.
NCCTE.AU11.24.01 - Explain oxy-fuel procedures.
NCCTE.AU11.24.02 - Explain how cutting and welding tips are used to cut and weld metal.

NCCTE.AU11.25.00 - Apply procedures for basic arc welding.
NCCTE.AU11.25.01 - Compare types and uses of arc welding machines, welding equipment, and electrodes.
NCCTE.AU11.25.02 - Explain basic arc welding procedures.
NCCTE.AU11.25.03 - Execute basic steps of arc welding in the flat position.
NCCTE.AU11.25.04 - Execute out-of-position welds.

NCCTE.AU11.26.00 - Apply procedures used to purchase and calculate construction materials.
NCCTE.AU11.26.01 - Classify lumber, plywood, and other construction materials and their uses.
NCCTE.AU11.26.02 - Execute procedures used to calculate board feet and square feet.

NCCTE.AU11.27.00 - Create an agricultural project from wood and/or metal.
NCCTE.AU11.27.01 - Explain procedures to design a project.
NCCTE.AU11.27.02 - Plan a project using correct procedures.
NCCTE.AU11.27.03 - Implement proper procedures for fastening wood and/or metal with nails, bolts, nuts, washers, screws, rivets, taps, and dies.
NCCTE.AU11.27.04 - Produce a construction project.
NCCTE.AU11.28.00 - Evaluate preventive maintenance procedures for tractors, equipment, and small engines.
NCCTE.AU11.28.01 - Explain preventive maintenance procedures for tractors, equipment, and small engines.
NCCTE.AU11.28.02 - Check problems in agricultural tractors, equipment, and small engines by using owner’s manuals to troubleshoot.

Course: Agricultural Production II
NCCTE.AU12 - Agricultural Production II
NCCTE.AU12.01.00 - Apply the major components of leadership involved in successful employment.
NCCTE.AU12.01.01 - Remember leadership qualities desired by the agricultural production industry.
NCCTE.AU12.01.02 - Implement leadership qualities through participation in the agricultural production instructional program.

NCCTE.AU12.02.00 - Apply principles of public speaking and parliamentary procedure.
NCCTE.AU12.02.01 - Execute principles of public speaking to deliver a speech on an agricultural production topic.
NCCTE.AU12.02.02 - Implement principles of parliamentary procedure to conduct an orderly transaction of business utilizing Robert

NCCTE.AU12.03.00 - Create a school-to-work employment plan.
NCCTE.AU12.03.01 - Recall procedures for planning and implementing a school-to-work employment plan.
NCCTE.AU12.03.02 - Produce an individual written school-to-work employment plan based on career objectives.

NCCTE.AU12.04.00 - Apply opportunities for work-based learning and Supervised Agricultural Experience record keeping.
NCCTE.AU12.04.01 - Classify types of work-based learning available.
NCCTE.AU12.04.02 - Implement procedures for keeping SAE records.

NCCTE.AU12.05.00 - Understand reproductive principles and breeding systems used in livestock and poultry production.
NCCTE.AU12.05.01 - Explain functions of the reproductive organs of livestock and poultry.
NCCTE.AU12.05.02 - Explain the role of the estrus cycle, ovulation, heat detection, fertilization, artificial insemination, embryo transfer, and cloning in animal reproduction management.
NCCTE.AU12.05.03 - Compare the different methods and the major systems of breeding livestock and poultry.
NCCTE.AU12.05.04 - Infer the genotype of offspring based on genetic principles.

NCCTE.AU12.06.00 - Understand the role of prevention, rations, feed additives, and hormone implants in animal health and productivity.
NCCTE.AU12.06.01 - Explain the uses of sanitation, immunization, and surgical procedures in animal production.
NCCTE.AU12.06.02 - Recognize the six functions and the characteristics of a good ration.
NCCTE.AU12.06.03 - Explain the use of feed additives and hormone implants for various kinds of animals.
NCCTE.AU12.07.00 - Understand animal disease and parasite problems and treatments.
   NCCTE.AU12.07.01 - Classify the major diseases and parasites affecting livestock and poultry.
   NCCTE.AU12.07.02 - Explain methods of controlling and treating diseases and parasites of livestock and poultry.

NCCTE.AU12.08.00 - Evaluate livestock and poultry.
   NCCTE.AU12.08.01 - Check production records needed to improve livestock and poultry.
   NCCTE.AU12.08.02 - Critique selected livestock and poultry using physical characteristics and performance records.
   NCCTE.AU12.08.03 - Implement procedures to prepare animals for a livestock show.

NCCTE.AU12.09.00 - Understand approved production and management practices for optimum return to land, labor, capital, and management for each of the major agricultural crops produced in North Carolina.
   NCCTE.AU12.09.01 - Explain procedures for optimum yields.
   NCCTE.AU12.09.02 - Explain procedures for least cost of production.

NCCTE.AU12.10.00 - Apply approved practices to manage forests.
   NCCTE.AU12.10.01 - Explain the importance of forestry and forest management and the factors that affect the productivity of forests including harvesting and reforestation techniques.
   NCCTE.AU12.10.02 - Classify common North Carolina trees based on their physical characteristics.
   NCCTE.AU12.10.03 - Implement procedures used to measure saw timber and pulpwood.

NCCTE.AU12.11.00 - Apply principles of managing wildlife on private property.
   NCCTE.AU12.11.01 - Explain methods of managing wildlife resources and the impact of federal, state, and local legislation on the management and use of wildlife.
   NCCTE.AU12.11.02 - Implement procedures used to increase and maintain adequate supplies of diverse wildlife populations.

NCCTE.AU12.12.00 - Apply safe practices in managing and harvesting wildlife species.
   NCCTE.AU12.12.01 - Explain the responsibilities of a hunter for the purpose of developing safe and efficient wildlife management practices.
   NCCTE.AU12.12.02 - Implement the safe use of firearms, hunting equipment, and supplies.

NCCTE.AU12.13.00 - Understand the factors that affect marketing of agricultural products.
   NCCTE.AU12.13.01 - Compare factors that affect marketing of agricultural products.
   NCCTE.AU12.13.02 - Compare the types of marketing strategies for agricultural products.

NCCTE.AU12.14.00 - Apply procedures for keeping records on an agricultural enterprise to determine return to land, labor, capital, and management.
   NCCTE.AU12.14.01 - Remember terms used in agricultural business management and financial statements.
   NCCTE.AU12.14.02 - Execute procedures used to complete financial statements.

NCCTE.AU12.15.00 - Apply procedures for determining sources of credit for agricultural businesses.
   NCCTE.AU12.15.01 - Compare major sources of agricultural credit, the eligibility requirements for each source, and the different methods of computing interest.
   NCCTE.AU12.15.02 - Execute procedures for completing loan forms and computing interest and...
payments on long and short-term loans.

**NCCTE.AU12.16.00** - Apply procedures for the proper use of agricultural production tools, equipment, and facilities.
- **NCCTE.AU12.16.01** - Explain safety rules related to agricultural production.
- **NCCTE.AU12.16.02** - Explain procedures for using tools, equipment, and facilities.
- **NCCTE.AU12.16.03** - Apply procedures for using tools and equipment properly and safely.

**NCCTE.AU12.17.00** - Apply procedures used for oxy-fuel welding.
- **NCCTE.AU12.17.01** - Explain procedures for using oxyacetylene equipment and materials.
- **NCCTE.AU12.17.02** - Execute procedures to weld various types of joints and metals, cut low carbon steel, solder, braze, heat, bend, harden, and temper metal.

**NCCTE.AU12.18.00** - Apply procedures used to arc weld.
- **NCCTE.AU12.18.01** - Explain procedures for using arc welding equipment.
- **NCCTE.AU12.18.02** - Execute procedures to weld using SMAW, GMAW, and GTAW procedures.

**NCCTE.AU12.19.00** - Apply procedures for the safe operation of tractors.
- **NCCTE.AU12.19.01** - Classify types of agricultural tractors and their uses.
- **NCCTE.AU12.19.02** - Implement principles and procedures for safe operation of tractors.

**NCCTE.AU12.20.00** - Apply preventive maintenance procedures for tractors, equipment, and small engines.
- **NCCTE.AU12.20.01** - Explain preventive maintenance procedures for tractors, equipment, and small engines.
- **NCCTE.AU12.20.02** - Implement procedures to troubleshoot agricultural tractors, equipment, and small engines using owner

**NCCTE.AU12.21.00** - Apply procedures to maintain an agricultural water system.
- **NCCTE.AU12.21.01** - Recognize pipe tools, types of pipe, fixtures, and supplies.
- **NCCTE.AU12.21.02** - Explain principles and procedures to maintain and repair pipes, fixtures, and water systems.
- **NCCTE.AU12.21.03** - Implement principles and procedures to maintain and repair pipes, fixtures, and water systems.

**Course: Biotechnology and Agriscience Research I**

**NCCTE.AU71** - Biotechnology and Agriscience Research I
- **NCCTE.AU71.01.00** - Investigate organizations related to the biotechnology industry.
  - **NCCTE.AU71.01.01** - Discuss opportunities for leadership development in the biotechnology industry.
  - **NCCTE.AU71.01.02** - Examine youth activities provided by biotechnology industry organizations.

- **NCCTE.AU71.02.00** - Demonstrate the process used in conducting business meetings in biotechnology industry organizations.
  - **NCCTE.AU71.02.01** - Explain the role of parliamentary procedure in conducting business meetings in biotechnology industry organizations.
  - **NCCTE.AU71.02.02** - Demonstrate parliamentary procedure abilities used in a business meeting.
NCCTE.AU71.03.00 - Use appropriate techniques in public speaking.
   NCCTE.AU71.03.01 - Discuss the fundamentals of public speaking and speech development.
   NCCTE.AU71.03.02 - Deliver a speech that addresses agriscience and the biotechnology industry.

NCCTE.AU71.04.00 - Discuss skills needed for careers in the biotechnology industry.
   NCCTE.AU71.04.01 - Identify biotechnology careers and related employment opportunities.
   NCCTE.AU71.04.02 - Explain various skills and credentials needed for employment in the biotechnology industry.

NCCTE.AU71.05.00 - Examine the Supervised Agricultural Experience component of the Biotechnology and Agriscience Research I course.
   NCCTE.AU71.05.01 - Identify the component parts of the Supervised Agricultural Experience Record used in the biotechnology course.
   NCCTE.AU71.05.02 - Properly maintain a current S.A.E. Record Sheet.
   NCCTE.AU71.05.03 - Demonstrate the use of the scientific method in the planning and development of an experimental S.A.E. Project.

NCCTE.AU71.06.00 - Explore methods of financial record keeping in the biotechnology industry.
   NCCTE.AU71.06.01 - Define terminology used in financial record keeping systems.
   NCCTE.AU71.06.02 - Record entries in a financial record system.

NCCTE.AU71.07.00 - Explain the historical development of the biotechnology industry.
   NCCTE.AU71.07.01 - Identify important historical achievements in biotechnology and agriscience research.
   NCCTE.AU71.07.02 - Discuss the importance of the biotechnology industry.
   NCCTE.AU71.07.03 - Discuss the historical impact of biotechnology on the field of agriculture.

NCCTE.AU71.08.00 - Interpret the role of biotechnology in agriscience.
   NCCTE.AU71.08.01 - Define terminology related to biotechnology.
   NCCTE.AU71.08.02 - Discuss potential applications for biotechnology in production agriculture.
   NCCTE.AU71.08.03 - Summarize the relationship between the various divisions of biotechnology and agriscience.

NCCTE.AU71.09.00 - Demonstrate safety principles in a biotechnology laboratory.
   NCCTE.AU71.09.01 - Explain safety rules for a biotechnology laboratory.
   NCCTE.AU71.09.02 - Outline procedures for achieving and maintaining aseptic conditions during biotechnology laboratories.
   NCCTE.AU71.09.03 - Prepare reagents and solutions while observing safe laboratory protocol in accordance with Material Safety Data Sheets.
   NCCTE.AU71.09.04 - Implement safety practices in a laboratory setting.

NCCTE.AU71.10.00 - Evaluate equipment and technology utilized in agricultural laboratories.
   NCCTE.AU71.10.01 - Describe the proper name of, and use for, common biotechnology laboratory equipment.
   NCCTE.AU71.10.02 - Demonstrate approved safety practices while conducting scientific experiments in a biotechnology laboratory.
   NCCTE.AU71.10.03 - Use computer technology to prepare scientific documents.
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.AU71.11.00 - Analyze the impact of cells on the formation and function of living organisms.
   NCCTE.AU71.11.01 - Explain the difference between viruses and prokaryotic cells in order to distinguish characteristics of life.
   NCCTE.AU71.11.02 - Outline the role of bacteria in agriculture and the importance of microorganisms in agricultural biotechnology.
   NCCTE.AU71.11.03 - Discuss the structure and function of eukaryotic cells and the role of these cells in the formation of life.
   NCCTE.AU71.11.04 - Apply laboratory skills in the culturing of microorganisms and cells.

NCCTE.AU71.12.00 - Explore concepts of Mendelian genetics and inheritance related to plant and animal breeding.
   NCCTE.AU71.12.01 - Define key genetic terms related to agriscience research and biotechnology.
   NCCTE.AU71.12.02 - Use Punnett Squares to investigate the transition of inherited traits in plant and animal breeding.
   NCCTE.AU71.12.03 - Explain the role of heredity on the development of plant and animal offspring.

NCCTE.AU71.13.00 - Explain the role of DNA in sexual reproduction.
   NCCTE.AU71.13.01 - Discuss the structure and function of DNA in relation to sexual reproduction in organisms.
   NCCTE.AU71.13.02 - Explain the relationship between DNA, gene sequences, traits, and the genome.
   NCCTE.AU71.13.03 - Summarize the role of DNA in genetic disorders and mutations.
   NCCTE.AU71.13.04 - Outline the processes of mitosis and meiosis in plant and animal cells.

NCCTE.AU71.14.00 - Evaluate the role of sexual reproduction in agricultural breeding programs.
   NCCTE.AU71.14.01 - Explain the mechanics of natural selection and selective breeding, including the role of each in agriculture.
   NCCTE.AU71.14.02 - Evaluate animal and plant specimens for breeding potential based on phenotypic and genotypic value.

NCCTE.AU71.15.00 - Explore nucleic acid techniques utilized in agriculture.
   NCCTE.AU71.15.01 - Identify methods and goals of DNA analysis in production agriculture and agriscience.
   NCCTE.AU71.15.02 - Explore the process of DNA extraction in order to observe the structure of DNA.
   NCCTE.AU71.15.03 - Interpret a written protocol for restriction digest and gel electrophoresis.
   NCCTE.AU71.15.04 - Apply appropriate procedures in restriction digests and gel electrophoresis.

NCCTE.AU71.16.00 - Analyze simple techniques for genetic manipulation in agricultural biotechnology.
   NCCTE.AU71.16.01 - Discuss sexual reproduction in both plants and animals.
   NCCTE.AU71.16.02 - Summarize the process and purpose of selective breeding techniques.
   NCCTE.AU71.16.03 - Discuss asexual reproduction and the use of cloning to improve genetics in plant and animal lines.
   NCCTE.AU71.16.04 - Demonstrate proper technique in simple asexual propagation of plants.
   NCCTE.AU71.16.05 - Explain methods of gene insertion used in the creation of transgenic organisms.

Course: Biotechnology and Agriscience Research II
   NCCTE.AU72 - Biotechnology and Agriscience Research II
   NCCTE.AU72.01.00 - Demonstrate the major components of leadership involved in successful
NCCTE.AU72.01.01 - Identify leadership qualities desired by the agriscience biotechnology industry.
NCCTE.AU72.01.02 - Demonstrate leadership in the biotechnology agriscience instructional program.

NCCTE.AU72.02.00 - Adapt public speaking techniques to address the audience and purpose of communication.
NCCTE.AU72.02.01 - Describe the major types of speeches and the variables to be considered when presenting the speeches.
NCCTE.AU72.02.02 - Use public speaking principles to develop a technical presentation.

NCCTE.AU72.03.00 - Apply Robert's Rules of Order to conduct business meetings of biotechnology organizations.
NCCTE.AU72.03.01 - Analyze the role that Robert's Rules of Order plays in properly disposing of business in a group.
NCCTE.AU72.03.02 - Demonstrate correct usage of parliamentary procedure abilities (as stated in Robert's Rules of Order) in a formal discussion.

NCCTE.AU72.04.00 - Design a school-to-work employment plan based upon career objectives.
NCCTE.AU72.04.01 - Describe the procedures to follow in planning and implementing a school-to-work employment plan.
NCCTE.AU72.04.02 - Use career objectives to create an individualized written school-to-work employment plan.

NCCTE.AU72.05.00 - Develop a financial record system for use in the agriscience biotechnology industry.
NCCTE.AU72.05.01 - Identify the elements of standard financial statement.
NCCTE.AU72.05.02 - Use the principles of accounting to develop a financial statement for an experimental SAE.

NCCTE.AU72.06.00 - Use advanced laboratory techniques and procedures in agriscience research.
NCCTE.AU72.06.01 - Use principles of record keeping to develop and maintain an accurate/detailed laboratory notebook.
NCCTE.AU72.06.02 - Identify data analysis and statistical models utilized in biotechnology and agricultural research.
NCCTE.AU72.06.03 - Discuss the identification, function, maintenance, and proper use of advanced laboratory equipment.
NCCTE.AU72.06.04 - Explain the guidelines for, and limitations of research on humans and other animal subjects.
NCCTE.AU72.06.05 - Demonstrate aseptic technique and proper handling of hazardous lab materials, including disposal of biologicals.
NCCTE.AU72.06.06 - Apply laboratory skills to manage a research greenhouse or field trial.

NCCTE.AU72.07.00 - Outline the development of genetically modified organisms (GMO
NCCTE.AU72.07.01 - Outline the stages in the development of genetically modified organisms.
NCCTE.AU72.07.02 - Discuss genetically modified organisms and their impact on agriculture.
NCCTE.AU72.07.03 - Explain considerations in the selection and isolation of genes for use in modifying an organism.
NCCTE.AU72.07.04 - Test genetically modified organisms for successful expression of engineered
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

genes.

NCCTE.AU72.08.00 - Examine the various methods of genetic manipulation in plant and animal cells.
NCCTE.AU72.08.01 - Explain methods of inserting vectors containing recombinant DNA into plant cells.
NCCTE.AU72.08.02 - Discuss techniques for the creation of transgenic animals.
NCCTE.AU72.08.03 - Analyze the development of genetically modified plant and animal cells after insertion of recombinant DNA.

NCCTE.AU72.09.00 - Discuss biological processes in plant science related to biotechnology.
NCCTE.AU72.09.01 - Summarize the chemical and physical needs of plants for optimal growth.
NCCTE.AU72.09.02 - Discuss how plants respond to environmental stimuli.
NCCTE.AU72.09.03 - Explain the fundamentals of plant disease and infestation.
NCCTE.AU72.09.04 - Outline biological, chemical, and physical methods of plant pest management.
NCCTE.AU72.09.05 - Discuss the development and utilization of virus, herbicide, and insect resistant crops.

NCCTE.AU72.10.00 - Use biotechnology protocol in horticulture and crop science research.
NCCTE.AU72.10.01 - Apply proper experimental design techniques related to field plot design and management.
NCCTE.AU72.10.02 - Apply integrated pest management including biological/genetic controls and pest population monitoring.
NCCTE.AU72.10.03 - Demonstrate proper techniques in the micropropagation of various plant tissues.

NCCTE.AU72.11.00 - Examine biological processes in animal science related to biotechnology.
NCCTE.AU72.11.01 - Summarize the physiological needs of animals for growth and reproduction.
NCCTE.AU72.11.02 - Analyze the impact of biotechnology on animal disease prevention, diagnosis, and management.
NCCTE.AU72.11.03 - Discuss the role of genetic engineering and biotechnology techniques on improving animal breeding.
NCCTE.AU72.11.04 - Evaluate the function of hormones in animal growth and body regulation.

NCCTE.AU72.12.00 - Perform biotechnology protocol related to animal science.
NCCTE.AU72.12.01 - Practice biotechnology techniques utilized in animal breeding.
NCCTE.AU72.12.02 - Trace the process of cloning in animals.

NCCTE.AU72.13.00 - Examine techniques and biological processes in food science related to biotechnology.
NCCTE.AU72.13.01 - Explore food borne pathogens and spoilage organisms in relation to agricultural biotechnology.
NCCTE.AU72.13.02 - Summarize enzyme activities and fermentation processes that are useful in the food processing industry.
NCCTE.AU72.13.03 - Discuss the impact of genetic engineering on food preservation, food quality, and nutritional value.
NCCTE.AU72.13.04 - Demonstrate proper food preservation and sterilization techniques.

NCCTE.AU72.14.00 - Examine techniques and biological processes in environmental science related to biotechnology.
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.AU72.14.01 - Summarize the use of biotechnology applications in the field of environmental science.
NCCTE.AU72.14.02 - Discuss the impact of biotechnology on sustainability.
NCCTE.AU72.14.03 - Use scientific principles to conduct a simple experiment in contained bioremediation.

NCCTE.AU72.15.00 - Explain biotechnology concepts related to agrimedicine and "pharming".
NCCTE.AU72.15.01 - Define vocabulary related to agrimedicine and biotechnology.
NCCTE.AU72.15.02 - Outline biomedical applications of agricultural products and processes.
NCCTE.AU72.15.03 - Discuss the practice of "pharming" and the creation of genetically altered organisms to produce medical substances.
NCCTE.AU72.15.04 - Conduct a basic experiment in the area of agrimedicine.

NCCTE.AU72.16.00 - Discuss ethical and practical issues surrounding biotechnology.
NCCTE.AU72.16.01 - Discuss regulatory organizations and issues concerning genetically modified organisms.
NCCTE.AU72.16.02 - Examine ethical issues concerning the use of genetic manipulation to improve the agricultural productivity of living organisms.
NCCTE.AU72.16.03 - Critique ethical issues arising from the use of biotechnology and genetic engineering techniques in human health care.

Course: Veterinary Assisting

NCCTE.AA41 - Veterinary Assisting
NCCTE.AA41.01.00 - Analyze proper usage of veterinary practice management procedures.
NCCTE.AA41.01.01 - Understand the proper veterinary terminology to accurately describe and record medical conditions.
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.
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

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: Equine Science I

NCCTE.2016.AA31 - 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.
   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.
**NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS**

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 - 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.
   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.
Business, Finance, and Information Technology Education

Grade: Grade 6 - 8

Course: Computer Skills and Applications

NCCTE.BU10 - Computer Skills and Applications
  NCCTE.BU10.01.00 - Digital Literacy
  NCCTE.BU10.02.00 - Keyboarding - Alpha Keys
  NCCTE.BU10.03.00 - Keyboarding - Number/Symbol and Numerical Keypad
  NCCTE.BU10.04.00 - Keyboarding - Build Speed and Accuracy
  NCCTE.BU10.05.00 - Word Processing - Basics and Business Correspondence
  NCCTE.BU10.06.00 - Word Processing - Advanced Business Documents
  NCCTE.BU10.07.00 - Spreadsheets - Basics and Formulas
  NCCTE.BU10.08.00 - Spreadsheets - Charts and Advanced Functions
  NCCTE.BU10.09.00 - Database Basics
  NCCTE.BU10.10.00 - Presentation Basics
  NCCTE.BU10.11.00 - Presentation Techniques
  NCCTE.BU10.12.00 - Desktop Publishing Basics

Course: Exploring Business, Marketing, and Entrepreneurship

NCCTE.BU20 - Exploring Business, Marketing, and Entrepreneurship
  NCCTE.BU20.01.00 - Understand principles of business.
    NCCTE.BU20.01.01 - Understand the purpose and the functions of business.
    NCCTE.BU20.01.02 - Compare the main types of business organization: sole proprietorship, partnership, corporation, and franchise.
    NCCTE.BU20.01.03 - Classify businesses as profit-making or non profit-making; and service, product or combination.
  NCCTE.BU20.02.00 - Understand economics and economic systems.
    NCCTE.BU20.02.01 - Compare different types of economic systems: traditional, free enterprise, command, mixed.
    NCCTE.BU20.02.02 - Interpret supply and demand graphs.
    NCCTE.BU20.02.03 - Explain how the Federal Reserve, stock market and e-commerce impact the U.S. economy.
    NCCTE.BU20.02.04 - Understand the United States' economic system.
  NCCTE.BU20.03.00 - Understand the concept of entrepreneurship.
NCCTE.BU20.03.01 - Recall personal characteristics and skills needed for a successful entrepreneur.
NCCTE.BU20.03.02 - Understand entrepreneurship and the entrepreneurial process.
NCCTE.BU20.03.03 - Understand the procedures and requirements for starting a business.

NCCTE.BU20.04.00 - Understand business activities and careers.
NCCTE.BU20.04.01 - Understand finance activities and careers.
NCCTE.BU20.04.02 - Understand business management activities and careers.
NCCTE.BU20.04.03 - Understand information technology activities and careers.
NCCTE.BU20.04.04 - Understand marketing activities and careers.
NCCTE.BU20.04.05 - Understand small business management and entrepreneurship activities and careers.

NCCTE.BU20.05.00 - Understand appropriate business procedures.
NCCTE.BU20.05.01 - Understand appropriate business etiquette and business communication.
NCCTE.BU20.05.02 - Understand ethics and ethical decision-making.

NCCTE.BU20.06.00 - Understand requirements for seeking, gaining, and maintaining employment.
NCCTE.BU20.06.01 - Understand skills required for seeking employment.
NCCTE.BU20.06.02 - Understand procedures for gaining employment.
NCCTE.BU20.06.03 - Understand behaviors required for maintaining employment.

NCCTE.BU20.07.00 - Understand leadership and team building.
NCCTE.BU20.07.01 - Understand leadership.
NCCTE.BU20.07.02 - Understand team building.

Grade: Grade 9 - 12
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: Network Administration I
NCCTE.2015.BN20 - Network Administration I
NCCTE.2015.BN20.01.00 - Understand device configurations.
NCCTE.2015.BN20.01.01 - Understand device options
NCCTE.2015.BN20.01.02 - Understand desktop settings.
NCCTE.2015.BN20.01.03 - Understand drive encryption.
NCCTE.2015.BN20.01.04 - Understand updates.

NCCTE.2015.BN20.02.00 - Understand data access and management.
NCCTE.2015.BN20.02.01 - Understand cloud storage services.
NCCTE.2015.BN20.02.02 - Understand local storage.
NCCTE.2015.BN20.02.03 - Understand file systems.
NCCTE.2015.BN20.02.04 - Understand file and print sharing.
NCCTE.2015.BN20.02.05 - Understand data encryption.

NCCTE.2015.BN20.03.00 - Understand device security.
NCCTE.2015.BN20.03.01 - Understand the Internet, an intranet, and an extranet.
NCCTE.2015.BN20.03.02 - Understand user authentication.
NCCTE.2015.BN20.03.03 - Understand permissions.
NCCTE.2015.BN20.03.04 - Understand malware.

NCCTE.2015.BN20.04.00 - Understand cloud services.
NCCTE.2015.BN20.04.01 - Understand types of cloud services.
NCCTE.2015.BN20.04.02 - Understand Microsoft Intune.
NCCTE.2015.BN20.04.03 - Understand Microsoft Azure.

NCCTE.2015.BN20.05.00 - Understand enterprise mobility.
NCCTE.2015.BN20.05.01 - Understand identity services.
NCCTE.2015.BN20.05.02 - Understand business data access.
NCCTE.2015.BN20.05.03 - Understand Bring Your Own Device (BYOD).

NCCTE.2015.BN20.06.00 - Understand network infrastructures.
NCCTE.2015.BN20.06.01 - Understand the concepts of the Internet, intranet, and extranet.
NCCTE.2015.BN20.06.02 - Understand local area networks (LANs).
NCCTE.2015.BN20.06.03 - Understand wide area networks (WANs).
NCCTE.2015.BN20.06.04 - Understand wireless networking.
NCCTE.2015.BN20.06.05 - Understand network topologies and access methods.
NCCTE.2015.BN20.07.00 - Understand network hardware.
NCCTE.2015.BN20.07.01 - Understand switches.
NCCTE.2015.BN20.07.02 - Understand routers.
NCCTE.2015.BN20.07.03 - Understand media types.

NCCTE.2015.BN20.08.00 - Understand protocols and services.
NCCTE.2015.BN20.08.01 - Understand the OSI model.
NCCTE.2015.BN20.08.02 - Understand IPv4.
NCCTE.2015.BN20.08.03 - Understand IPv6.
NCCTE.2015.BN20.08.04 - Understand names resolution.
NCCTE.2015.BN20.08.05 - Understand networking services.
NCCTE.2015.BN20.08.06 - Understand TCP/IP.

NCCTE.2015.BN20.09.00 - Understand security layers.
NCCTE.2015.BN20.09.01 - Understand core security principles.
NCCTE.2015.BN20.09.02 - Understand physical security.
NCCTE.2015.BN20.09.03 - Understand Internet security.
NCCTE.2015.BN20.09.04 - Understand wireless security.

NCCTE.2015.BN20.10.00 - Understand operating system security.
NCCTE.2015.BN20.10.01 - Understand user authentication.
NCCTE.2015.BN20.10.02 - Understand permissions.
NCCTE.2015.BN20.10.03 - Understand password policies.
NCCTE.2015.BN20.10.04 - Understand audit policies.
NCCTE.2015.BN20.10.05 - Understand encryption.
NCCTE.2015.BN20.10.06 - Understand malware.

NCCTE.2015.BN20.11.00 - Understand network security.
NCCTE.2015.BN20.11.01 - Understand dedicated firewalls.
NCCTE.2015.BN20.11.02 - Understand Network Access Protection (NAP).
NCCTE.2015.BN20.11.03 - Understand network isolation.
NCCTE.2015.BN20.11.04 - Understand protocol security.

NCCTE.2015.BN20.12.00 - Understand security software.
NCCTE.2015.BN20.12.02 - Understand e-mail protection.
NCCTE.2015.BN20.12.03 - Understand server protection.

NCCTE.2015.BN20.13.00 - Understand server installation. (SUPPLEMENTAL)
NCCTE.2015.BN20.13.01 - Understand device drivers and services. (SUPPLEMENTAL)
NCCTE.2015.BN20.13.02 - Understand server installation options. (SUPPLEMENTAL)

NCCTE.2015.BN20.14.00 - Understand server roles. (SUPPLEMENTAL)
NCCTE.2015.BN20.14.01 - Identify applications servers. (SUPPLEMENTAL)
NCCTE.2015.BN20.14.02 - Understand Web services. (SUPPLEMENTAL)
NCCTE.2015.BN20.14.03 - Understand remote access. (SUPPLEMENTAL)
NCCTE.2015.BN20.14.04 - Understand file and print services. (SUPPLEMENTAL)
NCCTE.2015.BN20.14.05 - Understand server virtualization. (SUPPLEMENTAL)

NCCTE.2015.BN20.15.00 - Understand active directory. (SUPPLEMENTAL)
NCCTE.2015.BN20.15.01 - Understand accounts and groups. (SUPPLEMENTAL)
NCCTE.2015.BN20.15.02 - Understand organizational units (Ous) and containers. (SUPPLEMENTAL)
NCCTE.2015.BN20.15.03 - Understand Active Directory infrastructure. (SUPPLEMENTAL)
NCCTE.2015.BN20.15.04 - Understand group policy. (SUPPLEMENTAL)

NCCTE.2015.BN20.16.00 - Understand storage. (SUPPLEMENTAL)
NCCTE.2015.BN20.16.01 - Identify storage technologies. (SUPPLEMENTAL)
NCCTE.2015.BN20.16.02 - Understand RAID. (SUPPLEMENTAL)
NCCTE.2015.BN20.16.03 - Understand disk types. (SUPPLEMENTAL)

NCCTE.2015.BN20.17.00 - Understand server performance management. (SUPPLEMENTAL)
NCCTE.2015.BN20.17.01 - Identify major server hardware components. (SUPPLEMENTAL)
NCCTE.2015.BN20.17.02 - Understand performance monitoring. (SUPPLEMENTAL)
NCCTE.2015.BN20.17.03 - Understand logs and alerts. (SUPPLEMENTAL)

NCCTE.2015.BN20.18.00 - Understand server maintenance. (SUPPLEMENTAL)
NCCTE.2015.BN20.18.01 - Identify steps in the startup process. (SUPPLEMENTAL)
NCCTE.2015.BN20.18.02 - Understand business continuity. (SUPPLEMENTAL)
NCCTE.2015.BN20.18.03 - Understand updates. (SUPPLEMENTAL)
NCCTE.2015.BN20.18.04 - Understand troubleshooting methodology. (SUPPLEMENTAL)

NCCTE.BN20 - Network Administration I
NCCTE.BN20.01.00 - Understand operating system configurations.
NCCTE.BN20.01.01 - Configure control panel options.
NCCTE.BN20.01.02 - Configure desktop settings.
NCCTE.BN20.01.03 - Understand native applications and tools.
NCCTE.BN20.01.04 - Understand mobility.
NCCTE.BN20.01.05 - Understand remote management and assistance.

NCCTE.BN20.02.00 - Understand procedures to install and upgrade client systems.
NCCTE.BN20.02.01 - Identify Windows operating system editions.
NCCTE.BN20.02.02 - Identify upgrade paths.
NCCTE.BN20.02.03 - Understand installation types.
NCCTE.BN20.02.04 - Understand virtualized clients.

NCCTE.BN20.03.00 - Apply procedures to manage applications.
NCCTE.BN20.03.01 - Understand application installations.
NCCTE.BN20.03.02 - Understand user account control (UAC).
NCCTE.BN20.03.03 - Remove malicious software.
NCCTE.BN20.03.04 - Understand services.
NCCTE.BN20.03.05 - Understand application virtualization.

NCCTE.BN20.04.00 - Understand procedures to manage files and folders.
NCCTE.BN20.04.01 - Understand file systems.
NCCTE.BN20.04.02 - Understand file and print sharing.
NCCTE.BN20.04.03 - Understand encryption.
NCCTE.BN20.04.04 - Understand libraries.

NCCTE.BN20.05.00 - Apply procedures to manage devices.
NCCTE.BN20.05.01 - Connect devices.
NCCTE.BN20.05.02 - Understand storage.
NCCTE.BN20.05.03 - Understand printing devices.
NCCTE.BN20.05.04 - Understand system devices.

NCCTE.BN20.06.00 - Understand operating system maintenance.
NCCTE.BN20.06.01 - Understand backup and recovery methods.
NCCTE.BN20.06.02 - Understand maintenance tools.
NCCTE.BN20.06.03 - Understand updates.

NCCTE.BN20.07.00 - Understand network infrastructures.
NCCTE.BN20.07.01 - Understand the concepts of the Internet, intranet, and extranet.
NCCTE.BN20.07.02 - Understand local area networks (LANs).
NCCTE.BN20.07.03 - Understand wide area networks (WANs).
NCCTE.BN20.07.04 - Understand wireless networking.
NCCTE.BN20.07.05 - Understand network topologies and access methods.

NCCTE.BN20.08.00 - Understand network hardware.
NCCTE.BN20.08.01 - Understand switches.
NCCTE.BN20.08.02 - Understand routers.
NCCTE.BN20.08.03 - Understand media types.

NCCTE.BN20.09.00 - Understand protocols and services.
NCCTE.BN20.09.01 - Understand the OSI model.
NCCTE.BN20.09.02 - Understand IPv4.
NCCTE.BN20.09.03 - Understand IPv6.
NCCTE.BN20.09.04 - Understand names resolution.
NCCTE.BN20.09.05 - Understand networking services.
NCCTE.BN20.09.06 - Understand TCP/IP.

NCCTE.BN20.10.00 - Understand security layers.
NCCTE.BN20.10.01 - Understand core security principles.
NCCTE.BN20.10.02 - Understand physical security.
NCCTE.BN20.10.03 - Understand Internet security.
NCCTE.BN20.10.04 - Understand wireless security.

NCCTE.BN20.11.00 - Understand operating system security.
NCCTE.BN20.11.01 - Understand user authentication.
NCCTE.BN20.11.02 - Understand permissions.
NCCTE.BN20.11.03 - Understand password policies.
NCCTE.BN20.11.04 - Understand audit policies.
NCCTE.BN20.11.05 - Understand encryption.
NCCTE.BN20.11.06 - Understand malware.

NCCTE.BN20.12.00 - Understand network security.
  NCCTE.BN20.12.01 - Understand dedicated firewalls.
  NCCTE.BN20.12.02 - Understand Network Access Protection (NAP).
  NCCTE.BN20.12.03 - Understand network isolation.
  NCCTE.BN20.12.04 - Understand protocol security.

NCCTE.BN20.13.00 - Understand security software.
  NCCTE.BN20.13.01 - Understand client protection.
  NCCTE.BN20.13.02 - Understand e-mail protection.
  NCCTE.BN20.13.03 - Understand server protection.

NCCTE.BN20.14.00 - Understand server installation. (SUPPLEMENTAL)
  NCCTE.BN20.14.01 - Understand device drivers and services. (SUPPLEMENTAL)
  NCCTE.BN20.14.02 - Understand server installation options. (SUPPLEMENTAL)

NCCTE.BN20.15.00 - Understand server roles. (SUPPLEMENTAL)
  NCCTE.BN20.15.01 - Identify applications servers. (SUPPLEMENTAL)
  NCCTE.BN20.15.02 - Understand Web services. (SUPPLEMENTAL)
  NCCTE.BN20.15.03 - Understand remote access. (SUPPLEMENTAL)
  NCCTE.BN20.15.04 - Understand file and print services. (SUPPLEMENTAL)
  NCCTE.BN20.15.05 - Understand server virtualization. (SUPPLEMENTAL)

NCCTE.BN20.16.00 - Understand active directory. (SUPPLEMENTAL)
  NCCTE.BN20.16.01 - Understand accounts and groups. (SUPPLEMENTAL)
  NCCTE.BN20.16.02 - Understand organizational units (OUs) and containers. (SUPPLEMENTAL)
  NCCTE.BN20.16.03 - Understand Active Directory infrastructure. (SUPPLEMENTAL)
  NCCTE.BN20.16.04 - Understand group policy. (SUPPLEMENTAL)

NCCTE.BN20.17.00 - Understand storage. (SUPPLEMENTAL)
  NCCTE.BN20.17.01 - Identify storage technologies. (SUPPLEMENTAL)
  NCCTE.BN20.17.02 - Understand RAID. (SUPPLEMENTAL)
  NCCTE.BN20.17.03 - Understand disk types. (SUPPLEMENTAL)

NCCTE.BN20.18.00 - Understand server performance management. (SUPPLEMENTAL)
  NCCTE.BN20.18.01 - Identify major server hardware components. (SUPPLEMENTAL)
  NCCTE.BN20.18.02 - Understand performance monitoring. (SUPPLEMENTAL)
  NCCTE.BN20.18.03 - Understand logs and alerts. (SUPPLEMENTAL)

NCCTE.BN20.19.00 - Understand server maintenance. (SUPPLEMENTAL)
  NCCTE.BN20.19.01 - Identify steps in the startup process. (SUPPLEMENTAL)
  NCCTE.BN20.19.02 - Understand business continuity. (SUPPLEMENTAL)
  NCCTE.BN20.19.03 - Understand updates. (SUPPLEMENTAL)
  NCCTE.BN20.19.04 - Understand troubleshooting methodology. (SUPPLEMENTAL)
Course: Network Administration II
NCCTE.BN22 - Network Administration II
   NCCTE.BN22.01.00 - Apply procedures to install, upgrade, and migrate to Windows 7.
      NCCTE.BN22.01.01 - Perform a clean installation.
      NCCTE.BN22.01.02 - Upgrade to Windows 7 from previous versions of Windows.
      NCCTE.BN22.01.03 - Migrate user profiles.
   NCCTE.BN22.02.00 - Apply procedures to deploy Windows 7.
      NCCTE.BN22.02.01 - Capture a system image.
      NCCTE.BN22.02.02 - Prepare a system image for deployment.
      NCCTE.BN22.02.03 - Deploy a system image.
      NCCTE.BN22.02.04 - Configure a VHD.
   NCCTE.BN22.03.00 - Apply procedures to configure hardware and applications.
      NCCTE.BN22.03.01 - Configure devices.
      NCCTE.BN22.03.02 - Configure application compatibility.
      NCCTE.BN22.03.03 - Configure application restrictions.
      NCCTE.BN22.03.04 - Configure Internet Explorer.
   NCCTE.BN22.04.00 - Apply procedures to connect to a network.
      NCCTE.BN22.04.01 - Configure IPv4 network settings.
      NCCTE.BN22.04.02 - Configure IPv6 network settings.
      NCCTE.BN22.04.03 - Configure network settings.
      NCCTE.BN22.04.04 - Configure Windows Firewall.
      NCCTE.BN22.04.05 - Configure remote management.
   NCCTE.BN22.05.00 - Apply procedures to share resources.
      NCCTE.BN22.05.01 - Configure shared resources.
      NCCTE.BN22.05.02 - Configure file and folder access.
      NCCTE.BN22.05.03 - Configure user account control (UAC)
      NCCTE.BN22.05.04 - Configure authentication and authorization.
      NCCTE.BN22.05.05 - Configure BranchCache.
   NCCTE.BN22.06.00 - Apply procedures to configure mobile computing.
      NCCTE.BN22.06.01 - Configure Bitlocker and BitLocker to Go.
      NCCTE.BN22.06.02 - Configure DirectAccess.
      NCCTE.BN22.06.03 - Configure mobility options.
      NCCTE.BN22.06.04 - Configure remote connections.
   NCCTE.BN22.07.00 - Apply procedures to monitor and maintain systems that run Windows 7.
      NCCTE.BN22.07.01 - Configure updates to Windows 7.
      NCCTE.BN22.07.02 - Manage disks.
      NCCTE.BN22.07.03 - Monitor systems.
      NCCTE.BN22.07.04 - Configure performance settings.
   NCCTE.BN22.08.00 - Apply procedures to configure backup and recovery options.
      NCCTE.BN22.08.01 - Configure backup.
NCCTE.BN22.08.02 - Configure system recovery options.
NCCTE.BN22.08.03 - Configure file recovery options.

Course: Network Administration III

NCCTE.BN24 - Network Administration III
NCCTE.BN24.01.00 - Apply procedures to resolve new software installation issues.
   NCCTE.BN24.01.01 - Configure installation permissions.
   NCCTE.BN24.01.02 - Configure administrator requirements.
   NCCTE.BN24.01.03 - Understand license requirements and digital signing.

NCCTE.BN24.02.00 - Apply procedures to resolve software configuration issues.
   NCCTE.BN24.02.01 - Configure features and advanced settings.
   NCCTE.BN24.02.02 - Configure network resources.
   NCCTE.BN24.02.03 - Configure images.

NCCTE.BN24.03.00 - Apply procedures to resolve software failure issues.
   NCCTE.BN24.03.01 - Examine logs.
   NCCTE.BN24.03.02 - Examine application and compatibility settings.
   NCCTE.BN24.03.03 - Repair the installation.

NCCTE.BN24.04.00 - Apply procedures to resolve logon issues.
   NCCTE.BN24.04.01 - Analyze hardware and network issues.
   NCCTE.BN24.04.02 - Analyze logon context and trust relationships.

NCCTE.BN24.05.00 - Apply procedures to resolve network connectivity issues.
   NCCTE.BN24.05.01 - Identify type of issue
   NCCTE.BN24.05.02 - Configure TCP/IP.
   NCCTE.BN24.05.03 - Analyze hardware and cabling.

NCCTE.BN24.06.00 - Apply procedures to resolve names resolution issues.
   NCCTE.BN24.06.01 - Configure DNS.
   NCCTE.BN24.06.02 - Configure DHCP.

NCCTE.BN24.07.00 - Apply procedures to resolve network printer issues.
   NCCTE.BN24.07.01 - Analyze hardware failure.
   NCCTE.BN24.07.02 - Analyze software failure.
   NCCTE.BN24.07.03 - Analyze network failure.

NCCTE.BN24.08.00 - Apply procedures to resolve performance issues.
   NCCTE.BN24.08.01 - Analyze the event viewer.
   NCCTE.BN24.08.02 - Analyze started services.
   NCCTE.BN24.08.03 - Configure power management.
   NCCTE.BN24.08.04 - Optimize hard disk space and virtual memory.

NCCTE.BN24.09.00 - Apply procedures to resolve hardware failure issues.
   NCCTE.BN24.09.01 - Diagnose hardware issues.
   NCCTE.BN24.09.02 - Configure the BIOS.
NCCTE.BN24.10.00 - Apply procedures to resolve wireless connectivity issues.
   NCCTE.BN24.10.01 - Configure wireless devices.
   NCCTE.BN24.10.02 - Implement encryption.

NCCTE.BN24.11.00 - Apply procedures to resolve remote access issues.
   NCCTE.BN24.11.01 - Configure VPN.
   NCCTE.BN24.11.02 - Understand IP v.6
   NCCTE.BN24.11.03 - Configure authentication and network access.

NCCTE.BN24.12.00 - Apply procedures to resolve Windows Internet Explorer security issues.
   NCCTE.BN24.12.01 - Implement security settings.
   NCCTE.BN24.12.02 - Implement group policy for IE.
   NCCTE.BN24.12.03 - Understand security certificates.

NCCTE.BN24.13.00 - Apply procedures to resolve issues due to malicious software.
   NCCTE.BN24.13.01 - Analyze services, programs, processes, and browser helper add-ons.
   NCCTE.BN24.13.02 - Configure user account control.

NCCTE.BN24.14.00 - Apply procedures to resolve encryption issues.
   NCCTE.BN24.14.01 - Understand requirements for installing.
   NCCTE.BN24.14.02 - Configure key management.

NCCTE.BN24.15.00 - Apply procedures to resolve software update issues.
   NCCTE.BN24.15.01 - Configure Windows updates.
   NCCTE.BN24.15.02 - Configure Windows update group policy settings.

Course: Computer Programming I
NCCTE.BP10 - Computer Programming I
   NCCTE.BP10.01.00 - Understand ethics, security, and the history of computer programming.
      NCCTE.BP10.01.01 - Understand the evolution of computers and computer programming languages.
      NCCTE.BP10.01.02 - Understand numbering systems.
      NCCTE.BP10.01.03 - Understand ethics and security in the programming process.
   NCCTE.BP10.02.00 - Understand the solution development process.
      NCCTE.BP10.02.01 - Understand the programming process.
      NCCTE.BP10.02.02 - Understand problem solving tools to design programming solutions.
      NCCTE.BP10.02.03 - Understand proper program documentation, code comments, Use Cases, and Requirements Definition.
   NCCTE.BP10.03.00 - Apply procedures to construct Windows forms.
      NCCTE.BP10.03.01 - Apply controls associated with the Windows form.
      NCCTE.BP10.03.02 - Apply the properties associated with controls.
   NCCTE.BP10.04.00 - Understand variables and naming conventions.
      NCCTE.BP10.04.01 - Understand variables and data types.
      NCCTE.BP10.04.02 - Understand object naming and naming conventions and standards.
NCCTE.BP10.05.00 - Apply programming and conditional logic.
  NCCTE.BP10.05.01 - Understand different types of programming errors.
  NCCTE.BP10.05.02 - Understand breakpoint, watch window, and try and catch to find errors.
  NCCTE.BP10.05.03 - Apply operators and Boolean expressions.
  NCCTE.BP10.05.04 - Apply decision-making structures.
  NCCTE.BP10.05.05 - Apply looping statements.

NCCTE.BP10.06.00 - Apply tools and procedures to obtain and validate user input.
  NCCTE.BP10.06.01 - Apply tools to develop menus, List Box, and Combo Box objects.
  NCCTE.BP10.06.02 - Apply tools to develop message, input, and dialog boxes.
  NCCTE.BP10.06.03 - Apply procedures for validation of user input.

NCCTE.BP10.07.00 - Apply advanced logic.
  NCCTE.BP10.07.01 - Apply sub procedures/methods and user defined functions.
  NCCTE.BP10.07.02 - Apply one-dimensional arrays.
  NCCTE.BP10.07.03 - Apply built-in Math functions.

NCCTE.BP10.08.00 - Apply procedures to develop graphics applications.
  NCCTE.BP10.08.01 - Understand coordinate systems.
  NCCTE.BP10.08.02 - Apply procedures to create picture boxes using images.
  NCCTE.BP10.08.03 - Apply animation and graphic methods in a Windows form.

Course: Computer Programming II
NCCTE.2015.BP12 - Computer Programming II
  NCCTE.2015.BP12.01.00 - Understand C family programming languages.
    NCCTE.2015.BP12.01.01 - Understand variable declaration and syntax.
    NCCTE.2015.BP12.01.02 - Understand looping and decision structures.
    NCCTE.2015.BP12.01.03 - Understand procedures to randomize output.
    NCCTE.2015.BP12.01.04 - Understand program design, analysis, and debugging techniques using the software design life cycle.

NCCTE.2015.BP12.02.00 - Apply data structures and classes.
  NCCTE.2015.BP12.02.01 - Understand members, properties, and instance variables.
  NCCTE.2015.BP12.02.02 - Understand data encapsulation, polymorphism (methods and constructors) and inheritance.
  NCCTE.2015.BP12.02.03 - Understand recursion and enumeration.
  NCCTE.2015.BP12.02.04 - Apply data structures and classes.

NCCTE.2015.BP12.03.00 - Apply advanced object-oriented programming concepts.
  NCCTE.2015.BP12.03.01 - Apply decision structures to modify and access object properties.
  NCCTE.2015.BP12.03.02 - Apply procedures to initialize and instantiate objects using constructors.
  NCCTE.2015.BP12.03.03 - Apply procedures to implement parameters.
  NCCTE.2015.BP12.03.04 - Apply polymorphism.

NCCTE.2015.BP12.04.00 - Apply advanced properties of arrays in programs.
  NCCTE.2015.BP12.04.01 - Apply procedures to construct multi-dimensional arrays.
NCCTE.2015.BP12.04.02 - Apply procedures to sort and search arrays.
NCCTE.2015.BP12.04.03 - Apply procedures to design and implement a List.

NCCTE.2015.BP12.05.00 - Apply derived classes and advanced string methods to solve problems.
   NCCTE.2015.BP12.05.01 - Apply inheritance and composition to create derived classes in the solution of problems.
   NCCTE.2015.BP12.05.02 - Apply advanced string methods in the solution of problems.

NCCTE.2015.BP12.06.00 - Apply file input and output techniques in programs.
   NCCTE.2015.BP12.06.01 - Apply procedures to create custom exceptions.
   NCCTE.2015.BP12.06.02 - Apply environmental variables and file/folder structures.
   NCCTE.2015.BP12.06.03 - Apply file input and output techniques.

NCCTE.2015.BP12.07.00 - Supplemental Course Enhancements (SUPPLEMENTAL)
   NCCTE.2015.BP12.07.01 - Apply database concepts. (SUPPLEMENTAL)
   NCCTE.2015.BP12.07.02 - Apply procedures to use recursive methods in programming applications. (SUPPLEMENTAL)
   NCCTE.2015.BP12.07.03 - Apply procedures for advanced sorting techniques. (SUPPLEMENTAL)

NCCTE.BP12 - Computer Programming II
   NCCTE.BP12.01.00 - Apply C# Procedures in the XNA Framework.
      NCCTE.BP12.01.01 - Understand classes, structures, and the XNA Framework.
      NCCTE.BP12.01.02 - Apply decision structures to modify and access object properties.
      NCCTE.BP12.01.03 - Apply procedures to randomize output and obtain player input.

   NCCTE.BP12.02.00 - Apply multimedia programming concepts.
      NCCTE.BP12.02.01 - Apply the Rectangle class to handle images and collision.
      NCCTE.BP12.02.02 - Understand how to work with XML files.
      NCCTE.BP12.02.03 - Apply implementation of sound and video.

   NCCTE.BP12.03.00 - Apply advanced properties of arrays.
      NCCTE.BP12.03.01 - Apply procedures to construct two-dimensional arrays.
      NCCTE.BP12.03.02 - Apply procedures to construct dynamic arrays.
      NCCTE.BP12.03.03 - Apply procedures to sort and search arrays.

   NCCTE.BP12.04.00 - Understand game design principles.
      NCCTE.BP12.04.01 - Understand the seven elements of game design.
      NCCTE.BP12.04.02 - Understand the Game Design Document.

   NCCTE.BP12.05.00 - Apply procedures to design class structures.
      NCCTE.BP12.05.01 - Understand classes, objects, properties, and instance variables.
      NCCTE.BP12.05.02 - Apply procedures to initialize objects using constructors.
      NCCTE.BP12.05.03 - Apply procedures to create methods and instantiate an object from a class.
      NCCTE.BP12.05.04 - Apply procedures to create class methods with value, reference and default parameters.
      NCCTE.BP12.05.05 - Apply procedures to overload class methods.
NCCTE.BP12.06.00 - Apply advanced object-oriented programming concepts.
   NCCTE.BP12.06.01 - Apply inheritance and composition to create derived classes.
   NCCTE.BP12.06.02 - Understand polymorphism.
   NCCTE.BP12.06.03 - Understand data encapsulation.

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 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: SAS Programming II
NCCTE.BP22 - SAS Programming II
   NCCTE.BP22.01.00 - Apply techniques for basic queries and subqueries.
   NCCTE.BP22.01.01 - Apply basic SQL procedures to present and display data.
   NCCTE.BP22.01.02 - Apply SQL procedures to correlated and non-correlated subqueries.

   NCCTE.BP22.02.00 - Apply SQL join techniques.
   NCCTE.BP22.02.01 - Apply SQL basic, complex, and set joins.
NCCTE.BP22.02.02 - Apply SQL operators including EXCEPT, INTERSECT, UNION, OUTER UNION.

NCCTE.BP22.03.00 - Apply SQL procedures to tables and views.
   NCCTE.BP22.03.01 - Apply SQL procedures and options to create and maintain Tables.
   NCCTE.BP22.03.02 - Apply SQL procedures and options to create Views.

NCCTE.BP22.04.00 - Apply methods for the Macro Facility.
   NCCTE.BP22.04.01 - Understand the Macro Facility and Program Flow.
   NCCTE.BP22.04.02 - Apply methods to define and use macro variables.
   NCCTE.BP22.04.03 - Apply macro functions.

NCCTE.BP22.05.00 - Apply methods for macros and macro calls.
   NCCTE.BP22.05.01 - Apply methods to create and call a macro.
   NCCTE.BP22.05.02 - Apply methods to create and use macro variables in the DATA step.
   NCCTE.BP22.05.03 - Apply methods to create and use macro variables in the SQL procedure.

NCCTE.BP22.06.00 - Apply techniques to create macro programs.
   NCCTE.BP22.06.01 - Apply conditional and iterative processing and parameter validation.
   NCCTE.BP22.06.02 - Apply techniques for Global and Local Symbol Tables.

Course: Computer Science Principles

NCCTE.BP40 - Computer Science Principles
   NCCTE.BP40.01.00 - Understand the pervasiveness of the Internet in modern computing.
      NCCTE.BP40.01.01 - Understand the abstractions in the Internet and how the Internet functions.
      NCCTE.BP40.01.02 - Understand how the characteristics of the Internet and the system built on it influence their use.
      NCCTE.BP40.01.03 - Understand the connection between cybersecurity with the Internet and the systems built on it.
   NCCTE.BP40.02.00 - Understand the impact of computing.
      NCCTE.BP40.02.01 - Understand how computing affects communication, interaction, and cognition and how computing connects innovations with other fields.
      NCCTE.BP40.02.02 - Understand the beneficial and harmful effects of computing.
      NCCTE.BP40.02.03 - Understand the connection between computing within economic, social, and cultural contexts.
   NCCTE.BP40.03.00 - Apply techniques to create artifacts.
      NCCTE.BP40.03.01 - Apply computing tools and techniques to create and analyze artifacts.
      NCCTE.BP40.03.02 - Apply computing tools and techniques for creative expression.
      NCCTE.BP40.03.03 - Apply programming as a creative tool.
   NCCTE.BP40.04.00 - Apply abstraction to focus on relevant concepts.
      NCCTE.BP40.04.01 - Understand the combination of abstractions used to represent data.
      NCCTE.BP40.04.02 - Understand how binary sequences are used to represent digital data.
      NCCTE.BP40.04.03 - Apply procedures to develop an abstraction.
      NCCTE.BP40.04.04 - Apply multiple levels of abstraction in computation.
      NCCTE.BP40.04.05 - Apply models and simulations to raise and answer questions.
NCCTE.BP40.05.00 - Apply processes to data and information to create knowledge.
NCCTE.BP40.05.01 - Apply process to information to gain insight and knowledge.
NCCTE.BP40.05.02 - Understand how computer programs are used to process information.
NCCTE.BP40.05.03 - Apply computing to facilitate exploration and the discovery of connections in information.
NCCTE.BP40.05.04 - Apply procedures to use large datasets to explore and discover information and knowledge.
NCCTE.BP40.05.05 - Understand the considerations involved in the computational manipulation of information.

NCCTE.BP40.06.00 - Apply algorithms in computer science.
NCCTE.BP40.06.01 - Apply procedures to develop an algorithm.
NCCTE.BP40.06.02 - Apply procedures to express an algorithm in a language.
NCCTE.BP40.06.03 - Apply procedures to connect problems and potential algorithmic solutions.
NCCTE.BP40.06.04 - Apply procedures to evaluate algorithms analytically and empirically.

NCCTE.BP40.07.00 - Apply programming in problem solving, human expression, and knowledge creation.
NCCTE.BP40.07.01 - Understand how programs implement algorithms.
NCCTE.BP40.07.02 - Apply abstraction to manage complexity in programs.
NCCTE.BP40.07.03 - Apply processes to evaluate a program for correctness.
NCCTE.BP40.07.04 - Apply procedures to develop a correct program.
NCCTE.BP40.07.05 - Apply mathematical and logical concepts in programming.

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.
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: Multimedia and Webpage Design
NCCTE.2015.BD10 - Multimedia and Webpage Design
   NCCTE.2015.BD10.01.00 - Understand design.
      NCCTE.2015.BD10.01.01 - Understand typography, multiuse design principles and elements.
      NCCTE.2015.BD10.01.02 - Understand digital communication products.

   NCCTE.2015.BD10.02.00 - Understand digital image design.
      NCCTE.2015.BD10.02.01 - Understand digital raster graphics.
      NCCTE.2015.BD10.02.02 - Understand digital vector graphics.

   NCCTE.2015.BD10.03.00 - Understand time based media.
      NCCTE.2015.BD10.03.01 - Understand principles of audio and video.
      NCCTE.2015.BD10.03.02 - Understand basic motion graphic programming.

   NCCTE.2015.BD10.04.00 - Understand the fundamentals of web design.
      NCCTE.2015.BD10.04.01 - Understand the fundamentals of HTML5 and CSS.
      NCCTE.2015.BD10.04.02 - Understand the concepts of responsive web design.

NCCTE.BD10 - Multimedia and Webpage Design
   NCCTE.BD10.01.00 - Understand design.
      NCCTE.BD10.01.01 - Understand typography, multiuse design principles, and elements.
      NCCTE.BD10.01.02 - Understand digital communication products.

   NCCTE.BD10.02.00 - Understand digital image design.
      NCCTE.BD10.02.01 - Understand digital raster graphics.
      NCCTE.BD10.02.02 - Understand digital vector graphics.

   NCCTE.BD10.03.00 - Understand time based media.
      NCCTE.BD10.03.01 - Understand principles of audio and video.
      NCCTE.BD10.03.02 - Understand basic motion graphic programming.

   NCCTE.BD10.04.00 - Understand the fundamentals of web design.
      NCCTE.BD10.04.01 - Understand the fundamentals of HTML5 and CSS.
      NCCTE.BD10.04.02 - Understand the concepts of responsive web design.

Course: Business Management
NCCTE.BB40 - Business Management
   NCCTE.BB40.01.00 - Understand communication skills, strategic management, emotional intelligence, and professional development
      NCCTE.BB40.01.01 - Read to acquire meaning from written material and to apply the information to a
task.

**NCCTE.BB40.01.02** - Recognize management's role to understand its contribution to business success. (FOUNDATION)

**NCCTE.BB40.01.03** - Apply ethics to demonstrate trustworthiness. (FOUNDATION)

**NCCTE.BB40.01.04** - Understand and follow company rules and regulations to maintain employment.

**NCCTE.BB40.01.05** - Recognize management's role to understand its contribution to business success. (SUPPLEMENTAL)

**NCCTE.BB40.02.00** - Understand operations, economics, and professional development

**NCCTE.BB40.02.01** - Maintain work flow to enhance productivity.

**NCCTE.BB40.02.02** - Acquire knowledge of the impact of government on business activities to make informed economic decisions. (REVIEW)

**NCCTE.BB40.02.03** - Analyze cost/profit relationships to guide business decision-making.

**NCCTE.BB40.02.04** - Understand economic 3s to recognize economic trends and conditions.

**NCCTE.BB40.02.05** - Understand and follow company rules and regulations to maintain employment.

**NCCTE.BB40.02.06** - Utilize critical-thinking skills to determine best options/outcomes.

**NCCTE.BB40.02.07** - Determine global trade's impact on business decision-making.

**NCCTE.BB40.03.00** - Understand communication skills, strategic management, human resource management, and professional development.

**NCCTE.BB40.03.01** - Write internal and external business correspondence to convey and obtain information effectively. (SUPPLEMENTAL)

**NCCTE.BB40.03.02** - Recognize management's role to understand its contribution to business success. (FOUNDATION)

**NCCTE.BB40.03.03** - Manage staff growth and development to increase productivity and employee satisfaction.

**NCCTE.BB40.03.04** - Implement organizational skills to facilitate others' work efforts. (SUPPLEMENTAL)

**NCCTE.BB40.03.05** - Achieve organizational goals to contribute to company growth.

**NCCTE.BB40.04.00** - Understand knowledge management, communication skills, and operations.

**NCCTE.BB40.04.01** - Acquire a foundational understanding of knowledge management to understand its nature and scope.

**NCCTE.BB40.04.02** - Use knowledge management strategies to improve the performance and competitive advantage of an organization.

**NCCTE.BB40.04.03** - Write internal and external business correspondence to convey and obtain information effectively. (SUPPLEMENTAL)

**NCCTE.BB40.05.00** - Understand operations and human resource management.

**NCCTE.BB40.05.01** - Understand operation's role and function in business to value its contribution to a company.

**NCCTE.BB40.05.02** - Implement purchasing activities to obtain business supplies, equipment, and services.

**NCCTE.BB40.05.03** - Apply ethics to demonstrate trustworthiness. (FOUNDATION)

**NCCTE.BB40.05.04** - Understand the role and function of human resources management to obtain a foundational knowledge of its nature and scope.

**NCCTE.BB40.05.05** - Recognize management's role to understand its contribution to business success.
NCCTE.BB40.06.00 - Understand customer relations, professional development, and marketing.
  NCCTE.BB40.06.01 - Foster positive relationships with customers to enhance company image.
  NCCTE.BB40.06.02 - Write internal and external business correspondence to convey and obtain information effectively. (SUPPLEMENTAL)
  NCCTE.BB40.06.03 - Resolve conflicts with/for customers to encourage repeat business.
  NCCTE.BB40.06.04 - Utilize critical-thinking skills to determine best options/outcomes. (FOUNDATION)
  NCCTE.BB40.06.05 - Reinforce company's image to exhibit the company's brand promise.
  NCCTE.BB40.06.06 - Acquire foundational knowledge of customer/client/business behavior to understand what motivates decision-making.
  NCCTE.BB40.06.07 - Understand the nature of customer relationship management to show its contributions to a company.
  NCCTE.BB40.06.08 - Utilize technology to facilitate customer relationship management.
  NCCTE.BB40.06.09 - Understand marketing’s role and function in business to facilitate economic exchanges with customers.
  NCCTE.BB40.06.10 - Recognize management's role to understand its contribution to business success. (SUPPLEMENTAL)

NCCTE.BB40.07.00 - Understand financial analysis.
  NCCTE.BB40.07.01 - Acquire foundational knowledge of accounting to understand its scope and nature.
  NCCTE.BB40.07.02 - Implement accounting procedures to track money flow and to determine financial status.
  NCCTE.BB40.07.03 - Manage financial resources to ensure solvency.
  NCCTE.BB40.07.04 - Identify potential business threats and opportunities to protect a business

NCCTE.BB40.08.00 - Understand risk management, quality management, and project management.
  NCCTE.BB40.08.01 - Acquire a foundational understanding of risk management to demonstrate knowledge of its nature and scope.
  NCCTE.BB40.08.02 - Understand the role and function of quality management to obtain a foundational knowledge of its nature and scope.
  NCCTE.BB40.08.03 - Implement quality-control processes to minimize errors and to expedite workflow. (SUPPLEMENTAL)
  NCCTE.BB40.08.04 - Utilize project management skills to start, run, and end projects.
  NCCTE.BB40.08.05 - Recognize management’s role to understand its contribution to business success. (SUPPLEMENTAL)
  NCCTE.BB40.08.06 - Utilize planning tools to guide organization's/department's activities. (SUPPLEMENTAL)

Course: e-Commerce I

NCCTE.BD12 - e-Commerce I
  NCCTE.BD12.01.00 - Understand the e-commerce environment.
  NCCTE.BD12.01.01 - Summarize the evolution, characteristics, and purpose of e-commerce.
  NCCTE.BD12.01.02 - Classify electronic commerce activities.
NCCTE.BD12.02.00 - Understand the impact of the Internet on business.
   NCCTE.BD12.02.01 - Explain effects of the Internet on businesses.
   NCCTE.BD12.02.02 - Summarize the economic impact of e-commerce.

NCCTE.BD12.03.00 - Understand e-business structure.
   NCCTE.BD12.03.01 - Compare basic business functions and e-business activities.
   NCCTE.BD12.03.02 - Understand aspects of target marketing on the Internet.
   NCCTE.BD12.03.03 - Understand the marketing functions of an e-business.

NCCTE.BD12.04.00 - Understand copyright and trademark laws for an e-business website.
   NCCTE.BD12.04.01 - Summarize procedures for obtaining copyrights and registering trademarks.
   NCCTE.BD12.04.02 - Understand appropriate copyright and trademark laws for an e-business website.

NCCTE.BD12.05.00 - Understand legislation affecting e-businesses.
   NCCTE.BD12.05.01 - Understand current legislation related to e-commerce.
   NCCTE.BD12.05.02 - Understand legislation concerning Internet security issues.

NCCTE.BD12.06.00 - Apply visual design elements in an e-business website.
   NCCTE.BD12.06.01 - Compare web page design in existing web pages.
   NCCTE.BD12.06.02 - Understand website accessibility compliance, including mobile considerations.
   NCCTE.BD12.06.03 - Apply procedures to develop graphics for an e-business website.

NCCTE.BD12.07.00 - Understand pre- and post-production issues for an e-business website.
   NCCTE.BD12.07.01 - Compare hosting options.
   NCCTE.BD12.07.02 - Summarize techniques for exposing and promoting websites, including social networking and search engine optimization.
   NCCTE.BD12.07.03 - Summarize website maintenance issues.

NCCTE.BD12.08.00 - Apply procedures to develop web pages for an e-business website.
   NCCTE.BD12.08.01 - Understand how to develop a storyboard with navigational options.
   NCCTE.BD12.08.02 - Apply procedures to develop basic HTML web pages using internal/embedded and inline CSS containing text, images, and links.
   NCCTE.BD12.08.03 - Apply procedures to develop a complex HTML web site using external style sheets containing forms and tables.
   NCCTE.BD12.08.04 - Apply procedures to develop an advanced HTML web site containing advanced CSS elements, multimedia, and JavaScript.

Course: e-Commerce II

NCCTE.BD14 - e-Commerce II
   NCCTE.BD14.01.00 - Understand how to plan an effective e-business website.
   NCCTE.BD14.01.01 - Compare competing e-business websites.
   NCCTE.BD14.01.02 - Understand web demographics and target audiences.

NCCTE.BD14.02.00 - Understand how to market an e-business website.
   NCCTE.BD14.02.01 - Compare appropriate tools for directing customers to the website.
   NCCTE.BD14.02.02 - Understand how to develop a marketing plan for the e-business website.
NCCTE.BD14.03.00 - Understand post-production issues.
  NCCTE.BD14.03.01 - Compare hosting options.
  NCCTE.BD14.03.02 - Understand website maintenance issues and maintenance plans.

NCCTE.BD14.04.00 - Apply procedures to develop web graphics and multimedia.
  NCCTE.BD14.04.01 - Apply procedures to optimize graphics.
  NCCTE.BD14.04.02 - Apply procedures to develop graphics for an e-business.
  NCCTE.BD14.04.03 - Apply procedures to create multimedia for an e-business website.

NCCTE.BD14.05.00 - Apply procedures to employ advanced CSS.
  NCCTE.BD14.05.01 - Understand the use of CSS on successful e-business websites.
  NCCTE.BD14.05.02 - Apply procedures to create embedded, internal, and external style sheets.

NCCTE.BD14.06.00 - Apply procedures to create an e-business website using industry standard coding applications (HTML5, CSS, and JavaScript).
  NCCTE.BD14.06.01 - Apply procedures to develop a website using HTML5, CSS, and JavaScript.
  NCCTE.BD14.06.02 - Apply procedures to develop a website using WordPress.

NCCTE.BD14.07.00 - Apply procedures to add order entry, payment, and tracking to an e-business website.
  NCCTE.BD14.07.01 - Understand different payment options.
  NCCTE.BD14.07.02 - Apply procedures to add appropriate tools for order entry and tracking.
  NCCTE.BD14.07.03 - Apply procedures to develop suitable forms for retrieving data from the e-business website.

NCCTE.BD14.08.00 - Apply procedures to implement security management on an e-business website.
  NCCTE.BD14.08.01 - Understand internal, external, and transactional security issues.
  NCCTE.BD14.08.02 - Understand fraud issues.
  NCCTE.BD14.08.03 - Apply procedures to select security measures for an e-business website and to develop a security plan.

Course: Business Financial Planning

NCCTE.BF20 - Business Financial Planning
  NCCTE.BF20.01.00 - Understand professional development and financial analysis.
    NCCTE.BF20.01.01 - Utilize critical-thinking skills to determine best options/outcomes. (PD:019)
    NCCTE.BF20.01.02 - Acquire a foundational knowledge of accounting to understand its nature and scope. (Fi:085, Fi:351)
    NCCTE.BF20.01.03 - Acquire a foundational knowledge of finance to understand its nature and scope. (Fi:354, Fi:355)
    NCCTE.BF20.01.04 - Explore careers in finance to enhance potential for career success. (PD:152)
    NCCTE.BF20.01.05 - Understand financial markets to recognize their importance in business. (Fi:336, Fi:337)
    NCCTE.BF20.01.06 - Acquire knowledge of retail/business banking process and services to facilitate workplace activities. (PD:154, PD:204)
    NCCTE.BF20.01.07 - Acquire knowledge of the insurance industry to obtain a foundation for employment in insurance. (PD:157)
NCCTE.BF20.02.00 - Understand communication, selling, financial-information management, and financial analysis.

- NCCTE.BF20.02.02 - Acquire foundational knowledge of financial-information management to understand its scope and function. (FM:001, FM:002, FM:003)
- NCCTE.BF20.02.03 - Utilize financial information technology tools to manage financial information and perform work responsibilities. (FM:011)
- NCCTE.BF20.02.04 - Acquire fundamental knowledge of investment analysis and selection to make prudent investment decisions. (FI:276, FI: 277)
- NCCTE.BF20.02.05 - Write internal and external business correspondence to convey and obtain information effectively. (CO:040)
- NCCTE.BF20.02.06 - Acquire product knowledge to communicate product benefits and to ensure appropriateness of product for the client. (SE:428, SE:421, SE:429)

NCCTE.BF20.03.00 - Understand financial analysis and professional development.

- NCCTE.BF20.03.01 - Utilize sources of securities information to make informed financial decisions. (FI:274, FI:275)
- NCCTE.BF20.03.02 - Acquire knowledge of the securities and investments industry to understand the environment in which its services are offered. (PD:238, PD:236)
- NCCTE.BF20.03.03 - Acquire fundamental knowledge of investment analysis and selection to make prudent investment decisions. (FI:279, FI:280, FI:283)
- NCCTE.BF20.03.04 - Select investments to generate revenue for clients. (FI:281, FI:282, FI:284)

NCCTE.BF20.04.00 - Understand professional development, business law, financial analysis, compliance, and economics.

- NCCTE.BF20.04.01 - Understand types of banking institutions to be aware of their roles in providing financial services. (PD:198)
- NCCTE.BF20.04.02 - Understand government regulations pertaining to the finance industry to protect the company well-being. (BL:133, BL:134)
- NCCTE.BF20.04.03 - Understand financial markets to recognize their importance in business. (FI:573)
- NCCTE.BF20.04.04 - Acquire a foundational knowledge of compliance to understand its nature and scope. (CC:003, CC:004)
- NCCTE.BF20.04.05 - Acquire knowledge of the impact of government on business activities to make informed economic decisions. (EC:072)
- NCCTE.BF20.04.06 - Analyze cost/profit relationships to guide business decision-making. (EC:015, EC:014, EC:023)

NCCTE.BF20.05.00 - Understand economics and financial analysis.

- NCCTE.BF20.05.01 - Understand economic indicators to recognize economic trends and conditions. (EC:083, EC:081, EC:017, EC:082, EC:084, EC:018)
- NCCTE.BF20.05.02 - Understand financial markets to recognize their importance in business. (FI:574, FI:575)
- NCCTE.BF20.05.03 - Determine global trade's impact on business decision-making to acquire insight into the global forces affecting business. (EC:016, EC:045, EC:100)

NCCTE.BF20.06.00 - Understand customer relations, communication skills, professional development,
and marketing.

**NCCTE.BF20.06.01** - Understand characteristics, motivations, and behaviors of clients in finance to facilitate client interaction. (CR:012)

**NCCTE.BF20.06.02** - Foster positive relationships with customers to enhance company image. (CR:004, CR:005, CR:006, CR:019, CR:007)

**NCCTE.BF20.06.03** - Write internal and external business correspondence to convey and obtain information effectively. (CO:039, CO:133)

**NCCTE.BF20.06.04** - Resolve conflicts with/for customers to encourage repeat business. (CR:009, CR:010)

**NCCTE.BF20.06.05** - Utilize critical-thinking skills to determine best options/outcomes. (PD:012)

**NCCTE.BF20.06.06** - Reinforce company's image to exhibit the company's brand promise. (CR:001, CR:002)

**NCCTE.BF20.06.07** - Acquire foundational/knowledge of customer/client/business behavior to understand what motivates decision-making. (MK:014, MK:015)

**NCCTE.BF20.06.08** - Understand the nature of customer relationship management to show its contributions to a company. (CR:016, CR:017)

**NCCTE.BF20.06.09** - Utilize technology to facilitate customer relationship management. (CR:018, CR:024)

**NCCTE.BF20.06.10** - Understand marketing's role and function in business to facilitate economic exchanges with customers. (MK:002)

**NCCTE.BF20.07.00** - Understand human resources management and professional development.

**NCCTE.BF20.07.01** - Manage staff growth and development to increase productivity and employee satisfaction. (HR:360)

**NCCTE.BF20.07.02** - Utilize career-advancement activities to enhance professional development. (PD:082, PD:153)

**Course:** Accounting I

**NCCTE.BA10** - Accounting I

**NCCTE.BA10.01.00** - Understand accounting fundamentals.

**NCCTE.BA10.01.01** - Understand the accounting equation, debits, and credits.

**NCCTE.BA10.01.02** - Understand double-entry accounting journal entries.

**NCCTE.BA10.01.03** - Understand ethics and skills needed for employment in accounting.

**NCCTE.BA10.02.00** - Apply accounting procedures for a sole proprietorship.

**NCCTE.BA10.02.01** - Apply procedures to prepare and post journal entries for a sole proprietorship.

**NCCTE.BA10.02.02** - Apply procedures to prepare financial statements for a sole proprietorship.

**NCCTE.BA10.02.03** - Apply accounting procedures to prepare end of period adjusting and closing entries.

**NCCTE.BA10.03.00** - Apply accounting procedures for a merchandising business.

**NCCTE.BA10.03.01** - Apply procedures to prepare journal entries related to purchases and cash payments.

**NCCTE.BA10.03.02** - Apply procedures to prepare journal entries related to sales and cash receipts.

**NCCTE.BA10.03.03** - Apply accounting procedures to post to the ledgers and prepare adjusting entries, closing entries, and financial statements for a merchandising business.
NCCTE.BA10.04.00 - Apply accounting procedures to perform banking and payroll activities.
NCCTE.BA10.04.01 - Apply procedures to reconcile a bank statement and prepare related journal entries.
NCCTE.BA10.04.02 - Apply procedures to maintain a petty cash fund and prepare related journal entries.
NCCTE.BA10.04.03 - Apply procedures to complete payroll records and prepare related journal entries.
NCCTE.BA10.05.00 - Apply accounting procedures to perform selected specialized accounting activities.
NCCTE.BA10.05.01 - Apply procedures to prepare journal entries for notes payable and notes receivable transactions.
NCCTE.BA10.05.02 - Apply procedures to prepare journal entries for uncollectible accounts transactions.
NCCTE.BA10.05.03 - Apply procedures to prepare journal entries for straight-line depreciation of plant assets transactions.

Course: Accounting II
NCCTE.BA20 - Accounting II
NCCTE.BA20.01.00 - Understand Generally Accepted Accounting Principles and professional ethics.
NCCTE.BA20.01.01 - Understand Generally Accepted Accounting Principles.
NCCTE.BA20.01.02 - Understand the AICPA Code of Professional Conduct.

NCCTE.BA20.02.00 - Understand career and educational opportunities in accounting.
NCCTE.BA20.02.01 - Understand accounting career opportunities.
NCCTE.BA20.02.02 - Understand accounting post-secondary educational and work-based learning opportunities.

NCCTE.BA20.03.00 - Apply accounting concepts to practices and procedures for a departmentalized merchandising business.
NCCTE.BA20.03.01 - Apply journal procedures in a departmentalized merchandising business.
NCCTE.BA20.03.02 - Apply procedures to calculate gross profit, prepare a departmentalized worksheet, and prepare departmental margin statements.
NCCTE.BA20.03.03 - Apply procedures to journalize adjusting and closing entries and prepare a post-closing trial balance for a departmentalized merchandising business.

NCCTE.BA20.04.00 - Apply accounting concepts to practices and procedures for a corporation.
NCCTE.BA20.04.01 - Apply concepts to practices and procedures for the formation of a corporation, the payment of dividends, and acquiring additional capital for a corporation.
NCCTE.BA20.04.02 - Apply procedures for calculating and journalizing depreciation expense.
NCCTE.BA20.04.03 - Apply procedures for calculating and journalizing accruals and deferrals.
NCCTE.BA20.04.04 - Apply procedures for preparing corporate financial statements.

NCCTE.BA20.05.00 - Analyze financial data to make managerial decisions.
NCCTE.BA20.05.01 - Understand concepts and practices related to budgeting.
NCCTE.BA20.05.02 - Apply procedures to calculate cost-volume-profit relationship indicators.
NCCTE.BA20.05.03 - Apply procedures to calculate financial ratios.
NCCTE.BA20.05.04 - Analyze financial indicators and ratios to make business decisions.
NCCTE.BA20.06.00 - Apply inventory control methods.
NCCTE.BA20.06.01 - Understand inventory control methods.
NCCTE.BA20.06.02 - Apply inventory control methods to calculate the cost of inventory.

NCCTE.BA20.07.00 - Apply concepts for cost accounting procedures.
NCCTE.BA20.07.01 - Understand cost accounting concepts and practices for a manufacturing business.
NCCTE.BA20.07.02 - Apply cost accounting procedures to journalize transactions for a manufacturing business.

Course: Microsoft Word and PowerPoint
NCCTE.BM10 - Microsoft Word and PowerPoint
NCCTE.BM10.01.00 - Understand word processing software application skills using Microsoft Word.
NCCTE.BM10.01.01 - MOAC Lesson 1: Understanding Word
NCCTE.BM10.01.02 - MOAC Lesson 2: Basic Editing
NCCTE.BM10.01.03 - MOAC Lesson 3: Character Formatting
NCCTE.BM10.01.04 - MOAC Lesson 4: Paragraph Formatting
NCCTE.BM10.01.05 - MOAC Lesson 5: Managing Text Flow
NCCTE.BM10.01.06 - MOAC Lesson 6: Creating Tables
NCCTE.BM10.01.07 - MOAC Lesson 7: Working With Themes, Style Sets, Backgrounds, Quick Parts, and Text Boxes
NCCTE.BM10.01.08 - MOAC Lesson 8: Using Illustrations And Graphics
NCCTE.BM10.01.09 - MOAC Lesson 9: Proofing Documents
NCCTE.BM10.01.10 - MOAC Lesson 10: Formatting A Research Paper
NCCTE.BM10.01.11 - MOAC Lesson 11: Performing Mail Merges
NCCTE.BM10.01.12 - MOAC Lesson 12: Maintaining Documents And Macros
NCCTE.BM10.01.13 - MOAC Lesson 13: Protecting And Sharing Documents
NCCTE.BM10.01.14 - MOAC Lesson 14: Using Advanced Options

NCCTE.BM10.02.00 - Understand presentation software application skills using Microsoft PowerPoint.
NCCTE.BM10.02.01 - MOAC Lesson 1: PowerPoint Essentials
NCCTE.BM10.02.02 - MOAC Lesson 2: Presentation Basics
NCCTE.BM10.02.03 - MOAC Lesson 3: Working With Text
NCCTE.BM10.02.04 - MOAC Lesson 4: Designing A Presentation
NCCTE.BM10.02.05 - MOAC Lesson 5: Adding Tables To Slides
NCCTE.BM10.02.06 - MOAC Lesson 6: Using Charts In A Presentation
NCCTE.BM10.02.07 - MOAC Lesson 7: Creating SmartArt Graphics
NCCTE.BM10.02.08 - MOAC Lesson 8: Adding Graphics To A Presentation
NCCTE.BM10.02.09 - MOAC Lesson 9: Using Animation And Multimedia
NCCTE.BM10.02.10 - MOAC Lesson 10: Securing And Sharing A Presentation
NCCTE.BM10.02.11 - MOAC Lesson 11: Delivering A Presentation

NCCTE.BM10.03.00 - Understand desktop publishing application skills using Microsoft Publisher (SUPPLEMENTAL).
NCCTE.BM10.03.01 - Plan, design, create, save, and exit various publications.
NCCTE.BM10.03.02 - Create professional-looking publications by modifying the text.
NCCTE.BM10.03.03 - Create professional-looking publications with the use of graphics.
NCCTE.BM10.03.04 - Use design and formatting elements to enhance text.
NCCTE.BM10.03.05 - Create and edit multipage publications.

NCCTE.BM10.04.00 - Understand information gathering skills using Microsoft OneNote (SUPPLEMENTAL).
   NCCTE.BM10.04.01 - Create, save, and add media elements to a notebook.
   NCCTE.BM10.04.02 - View, print, and share a notebook.

Course: Microsoft Excel and Access
NCCTE.BM20 - Microsoft Excel and Access
NCCTE.BM20.01.00 - Understand basic, intermediate, and advanced spreadsheet software skills using Microsoft Excel.
   NCCTE.BM20.01.01 - MOAC Lesson 1: Overview
   NCCTE.BM20.01.02 - MOAC Lesson 2: Working with Microsoft Excel 2013
   NCCTE.BM20.01.03 - MOAC Lesson 3: Using Office Backstage
   NCCTE.BM20.01.04 - MOAC Lesson 4: Using Basic Formulas
   NCCTE.BM20.01.05 - MOAC Lesson 5: Using Functions
   NCCTE.BM20.01.06 - MOAC Lesson 6: Formatting Cells and Ranges
   NCCTE.BM20.01.07 - MOAC Lesson 7: Formatting Worksheets
   NCCTE.BM20.01.08 - MOAC Lesson 8: Managing Worksheets
   NCCTE.BM20.01.09 - MOAC Lesson 9: Working with Data and Macros
   NCCTE.BM20.01.10 - MOAC Lesson 10: Using Advanced Formulas
   NCCTE.BM20.01.11 - MOAC Lesson 11: Securing and Sharing Workbooks
   NCCTE.BM20.01.12 - MOAC Lesson 12: Creating Charts
   NCCTE.BM20.01.13 - MOAC Lesson 13: Adding Pictures and Shapes to a Worksheet

NCCTE.BM20.02.00 - Understand basic database software skills using Microsoft Access.
   NCCTE.BM20.02.01 - MOAC Lesson 1: Database Essentials
   NCCTE.BM20.02.02 - MOAC Lesson 2: Create Database Tables
   NCCTE.BM20.02.03 - MOAC Lesson 3: Work With Tables And Database Records
   NCCTE.BM20.02.04 - MOAC Lesson 4: Modify Tables And Fields
   NCCTE.BM20.02.05 - MOAC Lesson 5: Create Forms
   NCCTE.BM20.02.06 - MOAC Lesson 6: Create Reports
   NCCTE.BM20.02.07 - MOAC Lesson 7: Create And Modify Queries
   NCCTE.BM20.02.08 - MOAC Lesson 8: Use Controls In Reports And Forms
   NCCTE.BM20.02.09 - MOAC Lesson 9: Advanced Tables
   NCCTE.BM20.02.10 - MOAC Lesson 10: Advanced Forms
   NCCTE.BM20.02.11 - MOAC Lesson 11: Advanced Reports
   NCCTE.BM20.02.12 - MOAC Lesson 12: Advanced Queries
   NCCTE.BM20.02.13 - MOAC Lesson 13: Display And Share Data
   NCCTE.BM20.02.14 - MOAC Lesson 14: Import And Export Data
   NCCTE.BM20.02.15 - MOAC Lesson 15: Database Tools

Course: Personal Finance
NCCTE.2015.BF05 - Personal Finance
   NCCTE.2015.BF05.01.00 - Understand How to Take Charge of Your Financial Well-Being.
   NCCTE.2015.BF05.01.01 - Money in Your Life
NCCTE.2015.BF05.01.02 - Financial Decisions
NCCTE.2015.BF05.01.03 - Setting Financial Goals

NCCTE.2015.BF05.02.00 - Understand the Principles of Managing Your Money.
  NCCTE.2015.BF05.02.01 - Introduction to Depository Institutions
  NCCTE.2015.BF05.02.02 - The Basics of Taxes
  NCCTE.2015.BF05.02.03 - Statement of Financial Position
  NCCTE.2015.BF05.02.04 - Income and Expense Statement
  NCCTE.2015.BF05.02.05 - Spending Plans

NCCTE.2015.BF05.03.00 - Understand the Principles of Earning.
  NCCTE.2015.BF05.03.01 - Invest in Yourself
  NCCTE.2015.BF05.03.02 - Career Exploration
  NCCTE.2015.BF05.03.03 - Preparing for Higher Education
  NCCTE.2015.BF05.03.04 - Planning for Higher Education
  NCCTE.2015.BF05.03.05 - Paying for Higher Education
  NCCTE.2015.BF05.03.06 - Lifelong Employment
  NCCTE.2015.BF05.03.07 - Getting Paid

NCCTE.2015.BF05.04.00 - Understand the Principles of Receiving.
  NCCTE.2015.BF05.04.01 - Receiving from Family, Friends, and Non-profits
  NCCTE.2015.BF05.04.02 - Receiving from Government Programs

NCCTE.2015.BF05.05.00 - Understand the Principles of Saving and Investing.
  NCCTE.2015.BF05.05.01 - Choose to Save
  NCCTE.2015.BF05.05.02 - Savings Tools
  NCCTE.2015.BF05.05.03 - The Fundamentals of Investing

NCCTE.2015.BF05.06.00 - Understand the Principles of Spending (includes protecting and borrowing).
  NCCTE.2015.BF05.06.01 - Credit Reports and Scores
  NCCTE.2015.BF05.06.02 - Credit Basics
  NCCTE.2015.BF05.06.03 - Understanding Credit Cards
  NCCTE.2015.BF05.06.04 - Protecting Yourself from Fraud: Identity Theft
  NCCTE.2015.BF05.06.05 - Types of Insurance
  NCCTE.2015.BF05.06.06 - Smart Consumer Spending
  NCCTE.2015.BF05.06.07 - Major Expenditures: Housing, Transportation and Food

NCCTE.2015.BF05.07.00 - Understand the Principles of Giving.
  NCCTE.2015.BF05.07.01 - Give to Others
  NCCTE.2015.BF05.07.02 - Estate Planning

NCCTE.BF05 - Personal Finance
  NCCTE.BF05.01.00 - Understand How to Take Charge of Your Financial Well
  NCCTE.BF05.01.01 - Money in Your Life
  NCCTE.BF05.01.02 - Financial Decisions
  NCCTE.BF05.01.03 - Setting Financial Goals
NCCTE.BF05.02.00 - Understand the Principles of Managing Your Money.
  NCCTE.BF05.02.01 - Introduction to Depository Institutions
  NCCTE.BF05.02.02 - The Basics of Taxes
  NCCTE.BF05.02.03 - Statement of Financial Position
  NCCTE.BF05.02.04 - Income and Expense Statement
  NCCTE.BF05.02.05 - Spending Plans

NCCTE.BF05.03.00 - Understand the Principles of Earning.
  NCCTE.BF05.03.01 - Invest in Yourself
  NCCTE.BF05.03.02 - Career Exploration
  NCCTE.BF05.03.03 - Preparing for Higher Education
  NCCTE.BF05.03.04 - Planning for Higher Education
  NCCTE.BF05.03.05 - Paying for Higher Education
  NCCTE.BF05.03.06 - Lifelong Employment
  NCCTE.BF05.03.07 - Getting Paid

NCCTE.BF05.04.00 - Understand the Principles of Receiving.
  NCCTE.BF05.04.01 - Receiving from Family, Friends, and Non-profits
  NCCTE.BF05.04.02 - Receiving from Government Programs

NCCTE.BF05.05.00 - Understand the Principles of Saving and Investing.
  NCCTE.BF05.05.01 - Choose to Save
  NCCTE.BF05.05.02 - Savings Tools
  NCCTE.BF05.05.03 - The Fundamentals of Investing

NCCTE.BF05.06.00 - Understand the Principles of Spending (includes protecting and borrowing).
  NCCTE.BF05.06.01 - Credit Reports and Scores
  NCCTE.BF05.06.02 - Credit Basics
  NCCTE.BF05.06.03 - Understanding Credit Cards
  NCCTE.BF05.06.04 - Protecting Yourself from Fraud: Identity Theft
  NCCTE.BF05.06.05 - Types of Insurance
  NCCTE.BF05.06.06 - Smart Consumer Spending
  NCCTE.BF05.06.07 - Major Expenditures: Housing, Transportation and Food

NCCTE.BF05.07.00 - Understand the Principles of Giving.
  NCCTE.BF05.07.01 - Give to Others
  NCCTE.BF05.07.02 - Estate Planning

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
   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-CS11.04.00 - 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-CS11.05.00 - Understand Cost Management
   NCCTE.2016-CS11.05.01 - Estimate costs and determine a budget
   NCCTE.2016-CS11.05.02 - Control costs

NCCTE-CS11 - Project Management I
   NCCTE-CS11.01.00 - Understand project management as a concept and as a process.
      NCCTE-CS11.01.01 - Understand the five processes of project management, individually and collectively.
      NCCTE-CS11.01.02 - Interpret each of the core and facilitating functions associated with project management and the relationship between and among them.
      NCCTE-CS11.01.03 - Understand how to conduct web-based research that yields valid and reliable information.
   NCCTE-CS11.02.00 - Understand the importance of professional associations in project management.
      NCCTE-CS11.02.01 - Summarize the structures, functions, and benefits of various professional associations related to the field of project management.
      NCCTE-CS11.02.02 - Understand how professional associations are formed and maintained.
   NCCTE-CS11.03.00 - Understand how group dynamics, personality types, and the "team concept" affect project success.
      NCCTE-CS11.03.01 - Understand the concepts of "group dynamics," "personality types," and the "team concept" as they pertain to successful project management.
      NCCTE-CS11.03.02 - Understand how knowledge of group dynamics, personality types, and the team concept together can be used to ensure project success.
   NCCTE-CS11.04.00 - Understand the principles and skills required for effective management and leadership.
      NCCTE-CS11.04.01 - Understand the roles and responsibilities of effective project managers.
      NCCTE-CS11.04.02 - Understand the meaning of leadership and the generally-accepted principles of effective leadership.
NCCTE.CS11.04.03 - Compare leadership and management.

NCCTE.CS11.05.00 - Apply core and facilitative functions as appropriate within the various process stages of project management.
- NCCTE.CS11.05.01 - Compare the relative value of optimization and maximization when determining the scope and cost of projects.
- NCCTE.CS11.05.02 - Apply appropriate procedures for establishing positive stakeholder relationships, managing time efficiently, and preparing budgets that are sufficient to ensure project success.
- NCCTE.CS11.05.03 - Apply Gantt charts and the critical path method to schedule project activities and prepare reasonable timelines.
- NCCTE.CS11.05.04 - Apply appropriate methods to identify and assess potential risks as well as to plan appropriate risk responses.

NCCTE.CS11.06.00 - Apply appropriate methods and techniques to monitor and control project activities.
- NCCTE.CS11.06.01 - Apply tools and techniques that provide the information needed to monitor and control project activities, including potential threats to project success.
- NCCTE.CS11.06.02 - Interpret information for specific purposes and audiences.

Course: Oracle Programming I
NCCTE.2015.BP30 - Oracle Database Programming I
- NCCTE.2015.BP30.01.00 - Understand data, databases, and data modeling.
- NCCTE.2015.BP30.01.01 - Understand data, information, and databases.
- NCCTE.2015.BP30.01.02 - Understand entities, instances, attributes, and identifiers.
- NCCTE.2015.BP30.01.03 - Understand entity relationship modeling and diagramming.

- NCCTE.2015.BP30.02.00 - Understand entity relationships.
- NCCTE.2015.BP30.02.01 - Understand supertypes, subtypes, and business rules.
- NCCTE.2015.BP30.02.02 - Understand unique identifiers and normalization.
- NCCTE.2015.BP30.02.03 - Understand arcs, hierarchies, and historical data.

- NCCTE.2015.BP30.03.00 - Apply procedures to prepare entity relationship diagrams.
- NCCTE.2015.BP30.03.01 - Apply procedures to present the entity relationship diagram to the client.
- NCCTE.2015.BP30.03.02 - Apply procedures to model changes in time and price.
- NCCTE.2015.BP30.03.03 - Understand drawing conventions and generic modeling.
- NCCTE.2015.BP30.03.04 - Apply procedures to transform a conceptual model to a physical model.

- NCCTE.2015.BP30.04.00 - Understand SQL programming in the Oracle environment.
- NCCTE.2015.BP30.04.01 - Understand the Oracle Application Express and SQL queries.
- NCCTE.2015.BP30.04.02 - Understand SQL project management, documentation, and presentation.
- NCCTE.2015.BP30.04.03 - Understand SQL SELECT statements and relational database technology.
- NCCTE.2015.BP30.04.04 - Understand the WHERE clause.
- NCCTE.2015.BP30.04.05 - Understand rows and functions.

- NCCTE.2015.BP30.05.00 - Apply procedures to develop SQL statements.
- NCCTE.2015.BP30.05.01 - Apply procedures to use character, number, and date functions.
- NCCTE.2015.BP30.05.02 - Apply procedures to use single row functions.
- NCCTE.2015.BP30.05.03 - Apply procedures to execute database joins.
NCCTE.2015.BP30.05.04 - Apply procedures to work with GROUP functions.

NCCTE.2015.BP30.06.00 - Apply procedures to use complex SQL with aggregated data.
  NCCTE.2015.BP30.06.01 - Apply procedures to use clauses and operators.
  NCCTE.2015.BP30.06.02 - Apply procedures to create subqueries.
  NCCTE.2015.BP30.06.03 - Apply procedures to construct DML and DDL statements.
  NCCTE.2015.BP30.06.04 - Understand rows and functions.

NCCTE.2015.BP30.07.00 - Apply procedures to ensure quality and manage constraints and views.
  NCCTE.2015.BP30.07.01 - Apply procedures to ensure quality query results.
  NCCTE.2015.BP30.07.02 - Apply procedures to create and manage constraints.
  NCCTE.2015.BP30.07.03 - Apply procedures to create and manage views.
  NCCTE.2015.BP30.07.04 - Apply procedures to work with sequences.

NCCTE.2015.BP30.08.00 - Apply procedures to ensure database security.
  NCCTE.2015.BP30.08.01 - Apply procedures to control user access and to create and revoke object privileges.
  NCCTE.2015.BP30.08.02 - Understand database transactions.
  NCCTE.2015.BP30.08.03 - Apply procedures to use the Oracle proprietary JOIN operations.

Course: Oracle Programming II

NCCTE.2015.BP32 - Oracle Database Programming II
  NCCTE.2015.BP32.01.00 - Understand PL/SQL variables, data types, and programming practices.
    NCCTE.2015.BP32.01.01 - Understand the use of variables in PL/SQL.
    NCCTE.2015.BP32.01.02 - Understand PL/SQL data types.
    NCCTE.2015.BP32.01.03 - Understand programming practices including nested blocks.

NCCTE.2015.BP32.02.00 - Apply procedures to control execution flow and use cursors and parameters.
  NCCTE.2015.BP32.02.01 - Understand using SQL in PL/SQL.
  NCCTE.2015.BP32.02.02 - Apply procedures to write conditional and iterative control statements.
  NCCTE.2015.BP32.02.03 - Apply procedures to use cursors and parameters.
  NCCTE.2015.BP32.02.04 - Apply procedures to use composite datatypes.

NCCTE.2015.BP32.03.00 - Apply procedures to use composite datatypes, handle exceptions, and manage procedures and functions using PL/SQL.
  NCCTE.2015.BP32.03.01 - Apply procedures to handle exceptions in PL/SQL.
  NCCTE.2015.BP32.03.02 - Apply procedures to use and manage procedures.
  NCCTE.2015.BP32.03.03 - Apply procedures to use and manage functions.
  NCCTE.2015.BP32.03.04 - Apply procedures to use and manage packages.

NCCTE.2015.BP32.04.00 - Apply procedures to improve PL/SQL performance.
  NCCTE.2015.BP32.04.01 - Apply procedures to use dynamic SQL.
  NCCTE.2015.BP32.04.02 - Apply procedures to improve PL/SQL performance.

NCCTE.2015.BP32.05.00 - Apply procedures to use and manage PL/SQL Triggers.
  NCCTE.2015.BP32.05.01 - Understand triggers.
  NCCTE.2015.BP32.05.02 - Apply procedures to create DML triggers.
NCCTE.2015.BP32.05.03 - Apply procedures to create DDL and database event triggers.
NCCTE.2015.BP32.05.04 - Apply procedures to manage triggers.

NCCTE.2015.BP32.06.00 - Understand how to manage dependencies.
   NCCTE.2015.BP32.06.01 - Understand dependencies.
   NCCTE.2015.BP32.06.02 - Understand how to use and manage remote dependencies.

NCCTE.2015.BP32.07.00 - Apply procedures to use the PL/SQL compiler.
   NCCTE.2015.BP32.07.01 - Apply procedures to use the PL/SQL initialization parameters.
   NCCTE.2015.BP32.07.02 - Apply procedures to display compiler warning messages.
   NCCTE.2015.BP32.07.03 - Apply procedures to use conditional compilation.
   NCCTE.2015.BP32.07.04 - Apply procedures to hide source code.

Course: Principles of Business and Finance
NCCTE.2016.BF10 - 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.
      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.
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.BF10.05.04 - Acquire knowledge of the impact of government on business activities 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)
Career Development Education

Grade: Grade 6 - 8
Course: Exploring Career Decisions
NCCTE.CC58 - Exploring Career Decisions
   NCCTE.CC58.01.00 - Understand interests, attitudes, values, personality, learning styles, and skills.
   NCCTE.CC58.01.01 - Understand interests, attitudes, and values.
   NCCTE.CC58.01.02 - Understand personality and learning styles.
   NCCTE.CC58.01.03 - Understand personal and transferable skills.

   NCCTE.CC58.02.00 - Understand how interests, values, and personality influence career choices.
   NCCTE.CC58.02.01 - Understand how interests and values influence career choices.
   NCCTE.CC58.02.02 - Understand how personality influences career choices.

   NCCTE.CC58.03.00 - Understand the world of work and skills needed for employment success.
   NCCTE.CC58.03.01 - Understand the world of work and how the world of work changes.
   NCCTE.CC58.03.02 - Understand skills needed for employment success.

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
conditions into a career plan.

NCCTE.CC45 - Career Management
   NCCTE.CC45.01.00 - Understand Personal Social Development.
      NCCTE.CC45.01.01 - Develop understanding of yourself to build and maintain a positive self-concept.
      NCCTE.CC45.01.02 - Develop positive interpersonal skills including respect for diversity.
      NCCTE.CC45.01.03 - Integrate growth and change into your career development.
      NCCTE.CC45.01.04 - Balance personal, leisure, community, learner, family, and work roles.

NCCTE.CC45.02.00 - Understand Educational Achievement and Lifelong Learning.
   NCCTE.CC45.02.01 - Attain educational achievement and performance levels needed to reach personal and career goals.
   NCCTE.CC45.02.02 - Participate in ongoing, lifelong learning experiences to enhance your ability to function effectively in a diverse and changing economy.

NCCTE.CC45.03.00 - Understand Career Management.
   NCCTE.CC45.03.01 - Create and manage a career plan that meets your career goals.
   NCCTE.CC45.03.02 - Use a process of decision-making as one component of career development.
   NCCTE.CC45.03.03 - Use accurate, current, and unbiased career information during career planning and management.
   NCCTE.CC45.03.04 - Master academic, occupational, and general employability skills in order to obtain, create, maintain, and/or advance your employment.
   NCCTE.CC45.03.05 - Integrate changing employment trends, societal needs, and economic conditions into a career plan.
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

Family and Consumer Sciences Education

Grade: Grade 6 - 8
Course: Exploring Family and Consumer Sciences Education

NCCTE.FC01.01.00 - Understand interpersonal relationships.
  NCCTE.FC01.01.01 - Understand the unique characteristics of self.
  NCCTE.FC01.01.02 - Understand the family unit.
  NCCTE.FC01.01.03 - Understand relationships and communication.

NCCTE.FC01.02.00 - Understand personal finance and resource management.
  NCCTE.FC01.02.01 - Understand personal financial literacy.
  NCCTE.FC01.02.02 - Understand resource management.

NCCTE.FC01.03.00 - Understand factors that influence nutrition and wellness.
  NCCTE.FC01.03.01 - Understand the impact of choices on wellness.
  NCCTE.FC01.03.02 - Understand kitchen basics.
  NCCTE.FC01.03.03 - Understand nutritious meal planning and preparation.

NCCTE.FC01.04.00 - Understand the basics of food service and hospitality.
  NCCTE.FC01.04.01 - Understand the basics of food safety and sanitation.
  NCCTE.FC01.04.02 - Understand culinary and hospitality basics.

NCCTE.FC01.05.00 - Understand how to care for infants, toddlers and school-age children.
  NCCTE.FC01.05.01 - Understand the business of childcare.
  NCCTE.FC01.05.02 - Understand the ages, stages and milestones of infants, toddlers and school-age children.
  NCCTE.FC01.05.03 - Understand how to effectively and safely care for infants, toddlers and school-age children.

NCCTE.FC01.06.00 - Understand factors that influence clothing choice.
  NCCTE.FC01.06.01 - Understand the basic elements of design.
  NCCTE.FC01.06.02 - Understand basic construction techniques.
  NCCTE.FC01.06.03 - Understand the impact of function and marketing on clothing choices.

NCCTE.FC01.07.00 - Understand Interior Design
  NCCTE.FC01.07.01 - Understand the basic principles of design.
  NCCTE.FC01.07.02 - Understand sustainable design.
  NCCTE.FC01.07.03 - Understand how to manage a living space.

Grade: Grade 9 - 12
Course: Introduction to Culinary Arts and Hospitality

NCCTE.FH20.01.00 - Examine the skills necessary to be a culinary professional.
  NCCTE.FH20.01.01 - Utilize communication skills in the industry.
  NCCTE.FH20.01.02 - Summarize positive work ethics.
NCCTE.FH20.02.00 - Discuss career opportunities and trends in the industry.
    NCCTE.FH20.02.01 - Examine career opportunities in the culinary and hospitality industry.
    NCCTE.FH20.02.02 - Examine trends in the culinary and hospitality industry.

NCCTE.FH20.03.00 - Understand causes of foodborne illness.
    NCCTE.FH20.03.01 - Understand food safety issues.
    NCCTE.FH20.03.02 - Understand foodborne contaminants and food allergies.
    NCCTE.FH20.03.03 - Understand the food handlers' responsibilities in preventing contamination of food.

NCCTE.FH20.04.00 - Understand factors that influence food safety.
    NCCTE.FH20.04.01 - Understand hazards in the flow of food.
    NCCTE.FH20.04.02 - Understand procedures involved in purchasing, receiving, and storage of food.
    NCCTE.FH20.04.03 - Understand safety procedures involved in food preparation.
    NCCTE.FH20.04.04 - Understand rules for holding and serving food safely.
    NCCTE.FH20.04.05 - Understand food safety management systems.

NCCTE.FH20.05.00 - Understand safe facilities, pest management, and sanitation.
    NCCTE.FH20.05.01 - Understand safe facilities and pest management.
    NCCTE.FH20.05.02 - Understand cleaning and sanitizing guidelines for a food service facility and equipment.

NCCTE.FH20.06.00 - Summarize safety guidelines for food production, service, and employees.
    NCCTE.FH20.06.01 - Summarize major causes of accidents and procedures for preventing them.
    NCCTE.FH20.06.02 - Summarize appropriate first aid procedures and emergency situations.

NCCTE.FH20.07.00 - Use large equipment and smallwares in the commercial kitchen.
    NCCTE.FH20.07.01 - Identify standard measuring equipment and hand tools.
    NCCTE.FH20.07.02 - Identify standard cookware.
    NCCTE.FH20.07.03 - Identify large equipment used in the commercial kitchen.
    NCCTE.FH20.07.04 - Demonstrate the use of large equipment.

NCCTE.FH20.08.00 - Use math for culinary tasks.
    NCCTE.FH20.08.01 - Identify measurements and abbreviations.
    NCCTE.FH20.08.02 - Use conversions and yields of recipes and ingredients.

NCCTE.FH20.09.00 - Utilize basic knife skills.
    NCCTE.FH20.09.01 - Identify types and parts of knives used in the culinary kitchen.
    NCCTE.FH20.09.02 - Demonstrate knife safety in the kitchen.
    NCCTE.FH20.09.03 - Demonstrate classic vegetable cuts used in recipes.

NCCTE.FH20.10.00 - Demonstrate basic cold food production.
    NCCTE.FH20.10.01 - Identify types of salads, ingredients, and dressings.
    NCCTE.FH20.10.02 - Prepare salads and dressings.
    NCCTE.FH20.10.03 - Summarize basic Garde Manger.
Course: Culinary Arts and Hospitality I

NCCTE.FH21 - Culinary Arts and Hospitality I

NCCTE.FH21.01.00 - Demonstrate basic hot food production.
NCCTE.FH21.01.01 - Identify cooking methods and how cooking alters food.
NCCTE.FH21.01.02 - Demonstrate dry heat cooking.
NCCTE.FH21.01.03 - Demonstrate moist cooking.
NCCTE.FH21.01.04 - Demonstrate combination cooking.
NCCTE.FH21.01.05 - Prepare stocks, sauces, and soups.

NCCTE.FH21.02.00 - Apply basic baking techniques.
NCCTE.FH21.02.01 - Demonstrate preparation of basic quick breads.
NCCTE.FH21.02.02 - Demonstrate preparation of basic cookies.
NCCTE.FH21.02.03 - Demonstrate preparation of basic cakes.

NCCTE.FH21.03.00 - Apply modern American service skills.
NCCTE.FH21.03.01 - Explain modern American table settings.
NCCTE.FH21.03.02 - Demonstrate modern American plated service.
NCCTE.FH21.03.03 - Identify additional service styles and environments.
NCCTE.FH21.03.04 - Review food handler’s responsibilities in preventing contamination of food.

Course: Culinary Arts and Hospitality II

NCCTE.FH22 - Culinary Arts and Hospitality II

NCCTE.FH22.01.00 - Examine professional skills needed in the culinary arts and hospitality industry.
NCCTE.FH22.01.01 - Demonstrate tools needed for employment in the culinary and hospitality industry.
NCCTE.FH22.01.02 - Critique current trends in the culinary arts and hospitality industry.
NCCTE.FH22.01.03 - Explain why new technology developments affect the culinary arts and hospitality industry.
NCCTE.FH22.01.04 - Outline the function of a business plan in the culinary arts and hospitality industry.

NCCTE.FH22.02.00 - Summarize management skills in a culinary business.
NCCTE.FH22.02.01 - Explain the skills needed to be a successful manager.
NCCTE.FH22.02.02 - Explain the responsibilities of a successful manager.

NCCTE.FH22.03.00 - Demonstrate customer service skills.
NCCTE.FH22.03.01 - Explain roles and duties of each member of the service staff.
NCCTE.FH22.03.02 - Demonstrate skills for providing customer service.

NCCTE.FH22.04.00 - Explain the role of the menu in culinary businesses.
NCCTE.FH22.04.01 - Describe types of menus used in culinary businesses.
NCCTE.FH22.04.02 - Calculate food costs for recipes.
NCCTE.FH22.04.03 - Calculate prices of menus for a culinary business.

NCCTE.FH22.05.00 - Apply principles of advanced knife skills.
NCCTE.FH22.05.01 - Apply principles of cutting meat.
NCCTE.FH22.05.02 - Apply principles of cutting poultry.
NCCTE.FH22.05.03 - Apply principles of cutting seafood.
NCCTE.FH22.06.00 - Demonstrate the principles of advanced hot food production.
NCCTE.FH22.06.01 - Identify terminology and principles of hot food production.
NCCTE.FH22.06.02 - Use the principles of stir frying foods.
NCCTE.FH22.06.03 - Use the principles of poaching.
NCCTE.FH22.06.04 - Use the principles of braising.
NCCTE.FH22.06.05 - Use the principles of pan frying.
NCCTE.FH22.06.06 - Use the principles of grilling/broiling.

NCCTE.FH22.07.00 - Demonstrate the principles of advanced baking production.
NCCTE.FH22.07.01 - Demonstrate the principles of yeast bread production.
NCCTE.FH22.07.02 - Demonstrate the principles of advanced pastry production.

NCCTE.FH22.08.00 - Analyze a product for a live entrepreneurial project.
NCCTE.FH22.08.01 - Summarize project concerns and options.
NCCTE.FH22.08.02 - Set goals for an entrepreneurial project within the classroom.
NCCTE.FH22.08.03 - Plan an entrepreneurial project within the classroom.
NCCTE.FH22.08.04 - Evaluate the entrepreneurial project conducted by students.

NCCTE.FH22.09.00 - Implement a food-related live project within the classroom for a target audience.

Course: ProStart II

NCCTE.FH72 - ProStart II
NCCTE.FH72.01.00 - Apply techniques to prepare breakfast food and sandwiches.
NCCTE.FH72.02.00 - Understand basic nutrition.
NCCTE.FH72.03.00 - Understand foodservice costs.
NCCTE.FH72.04.00 - Apply techniques to prepare salads and garnishes.
NCCTE.FH72.05.00 - Understand essential elements of purchasing and inventory.
NCCTE.FH72.06.00 - Apply techniques to prepare meat, poultry, and seafood.
NCCTE.FH72.07.00 - Understand marketing and menu development.
NCCTE.FH72.08.00 - Apply techniques to prepare desserts and baked goods.
NCCTE.FH72.09.00 - Understand sustainability and foodservice industry.
NCCTE.FH72.10.00 - Understand global cuisines.

Course: ProStart I

NCCTE.FH71 - ProStart I
NCCTE.FH71.01.00 - Understand the restaurant and foodservice industry.
NCCTE.FH71.02.00 - Understand basic food safety and occupational safety.
NCCTE.FH71.03.00 - Apply essential culinary techniques.

NCCTE.FH71.04.00 - Apply techniques to prepare stocks, sauces, and soups.

NCCTE.FH71.05.00 - Apply effective communication skills.

NCCTE.FH71.06.00 - Understand essential elements of management.

NCCTE.FH71.07.00 - Understand fruits and vegetables.

NCCTE.FH71.08.00 - Understand customer service techniques.

NCCTE.FH71.09.00 - Understand potatoes and grains.

NCCTE.FH71.10.00 - Understand techniques used to build a career in the restaurant and foodservice industry.

Course: Foods I

NCCTE.FN41 - Foods I

NCCTE.FN41.01.00 - Understand methods for safety, sanitation, processes, and conserving resources.
  NCCTE.FN41.01.01 - Understand safety and sanitation for food preparation.
  NCCTE.FN41.01.02 - Understand processes and benefits of a work plan and teamwork for preparing healthy foods.
  NCCTE.FN41.01.03 - Understand food conservation practices.

NCCTE.FN41.02.00 - Understand methods for food preparation.
  NCCTE.FN41.02.01 - Remember recipe parts and sources.
  NCCTE.FN41.02.02 - Remember equipment and procedures for its use and care.
  NCCTE.FN41.02.03 - Remember measuring, cutting/preparation, mixing, and cooking/cleaning terms.
  NCCTE.FN41.02.04 - Understand how to interpret food label information and adjust recipes.
  NCCTE.FN41.02.05 - Understand procedures, equipment, and cooking methods in food preparation.

NCCTE.FN41.03.00 - Understand the principles of etiquette for meal service.
  NCCTE.FN41.03.01 - Understand the principles of basic table setting and meal service.
  NCCTE.FN41.03.02 - Understand the principles of table manners.

NCCTE.FN41.04.00 - Understand the relationship between food choices and health.
  NCCTE.FN41.04.01 - Understand the six nutrient groups in food.
  NCCTE.FN41.04.02 - Understand nutritional needs through the life cycle, special nutritional needs, and types of eating plans.

NCCTE.FN41.05.00 - Understand food choices.
  NCCTE.FN41.05.01 - Understand influences on food choices.
  NCCTE.FN41.05.02 - Understand guidelines for healthful food choices.

NCCTE.FN41.06.00 - Apply methods for meal planning and preparation.
  NCCTE.FN41.06.01 - Understand strategies of selecting and storing food.
NCCTE.FN41.06.02 - Understand strategies in meal planning.
NCCTE.FN41.06.03 - Apply methods to prepare healthy meals and snacks.

Course: Foods II - Enterprise
NCCTE.2016.FN42 - Food and Nutrition II

NCCTE.2016.FN42.01.00 - Understand culinary nutrition careers and food safety management.
  NCCTE.2016.FN42.01.01 - Remember culinary nutrition career pathways and the lean canvas model for entrepreneurship.
  NCCTE.2016.FN42.01.02 - Understand causes of foodborne illness.
  NCCTE.2016.FN42.01.03 - Understand factors that influence food safety.
  NCCTE.2016.FN42.01.04 - Understand safe facilities, pest management and sanitation.

NCCTE.2016.FN42.02.00 - Understand nutrition principles and applications.
  NCCTE.2016.FN42.02.01 - Understand nutrients found in food.
  NCCTE.2016.FN42.02.02 - Understand nutrition assessment through the life cycle.
  NCCTE.2016.FN42.02.03 - Understand special nutrition needs and medical nutrition therapy.
  NCCTE.2016.FN42.02.04 - Understand sports nutrition recommendations for peak performance.

NCCTE.2016.FN42.03.00 - Understand foodways in America and around the world.
  NCCTE.2016.FN42.03.01 - Understand the United States food system from farm to table.
  NCCTE.2016.FN42.03.02 - Understand vegetarian diets and global cuisines.

NCCTE.2016.FN42.04.00 - Analyze culinary nutrition opportunities to meet the needs of customer-clients.
  NCCTE.2016.FN42.04.01 - Analyze recipes to modify cooking techniques and ingredients to develop a healthy and well-balanced menu.
  NCCTE.2016.FN42.04.02 - Apply startup processes for ventures in culinary nutrition.

NCCTE.FN42 - Foods II - Enterprise

NCCTE.FN42.01.00 - Understand causes of foodborne illness.
  NCCTE.FN42.01.01 - Understand food safety issues.
  NCCTE.FN42.01.02 - Understand foodborne contaminates and food allergies.
  NCCTE.FN42.01.03 - Understand the food handlers

NCCTE.FN42.02.00 - Understand factors that influence food safety.
  NCCTE.FN42.02.01 - Understand hazards in the flow of food.
  NCCTE.FN42.02.02 - Understand procedures involved in purchasing, receiving, and storage of food.
  NCCTE.FN42.02.03 - Understand safety procedures involved in food preparation.
  NCCTE.FN42.02.04 - Understand rules for holding and serving food safely.
  NCCTE.FN42.02.05 - Understand food safety management systems.

NCCTE.FN42.03.00 - Understand safe facilities, pest management, and sanitation.
  NCCTE.FN42.03.01 - Understand safe facilities and pest management.
  NCCTE.FN42.03.02 - Understand cleaning and sanitizing guidelines for a food service facility and equipment.

NCCTE.FN42.04.00 - Understand the Roadmap to Food Entrepreneurship
  NCCTE.FN42.04.01 - Understand opportunity. (Mile Markers 1 and 2)
NCCTE.FN42.04.02 - Understand test feasibility and accessing information. (Mile Markers 3 and 4)
NCCTE.FN42.04.03 - Recognize the importance of community outreach. (Mile Marker 5)
NCCTE.FN42.04.04 - Understand marketplace experience. (Mile Marker 6)
NCCTE.FN42.04.05 - Understand future directions. (Mile Marker 7)

NCCTE.FN42.05.00 - Apply specialty food preparation skills.
NCCTE.FN42.05.01 - Apply knife skills commonly used in food preparation.
NCCTE.FN42.05.02 - Apply garnishes for specific service.

NCCTE.FN42.06.00 - Apply procedures to prepare and serve yeast bread products.
NCCTE.FN42.06.01 - Apply procedures to prepare yeast breads.
NCCTE.FN42.06.02 - Apply procedures to adapt yeast bread recipes and products.

NCCTE.FN42.07.00 - Apply procedures to prepare and serve cakes, fillings, and frostings.
NCCTE.FN42.07.01 - Apply procedures to prepare cakes, fillings, and frostings.
NCCTE.FN42.07.02 - Apply procedures to adapt cake, filling, and frosting recipes and products.
NCCTE.FN42.07.03 - Understand marketing issues specific to cakes, fillings, and frostings.

Course: Foods II - 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.
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

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.
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.

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 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 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.

Course: Parenting and 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.
   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: Interior Design I

NCCTE.2016.FI51 - Interior Design I
   NCCTE.2016.FI51.01.00 - Understand the value of interior design to society.
      NCCTE.2016.FI51.01.01 - Remember the interior design profession and the design process.
      NCCTE.2016.FI51.01.02 - Understand the impact of human and environmental factors in the pre-design and programming phase of the design process.

   NCCTE.2016.FI51.02.00 - Understand design language.
      NCCTE.2016.FI51.02.01 - Understand color basics and color theory.
      NCCTE.2016.FI51.02.02 - Understand elements & principles of design.

   NCCTE.2016.FI51.03.00 - Understand schematic design.
      NCCTE.2016.FI51.03.01 - Understand space planning.
      NCCTE.2016.FI51.03.02 - Remember architecture basics and technology systems.
      NCCTE.2016.FI51.03.03 - Understand hand sketching and digital design techniques.
      NCCTE.2016.FI51.03.04 - Understand products and materials for residential and commercial design.

   NCCTE.2016.FI51.04.00 - Understand aspects of well-designed spaces.
      NCCTE.2016.FI51.04.01 - Understand design concepts in the creative design process.
      NCCTE.2016.FI51.04.02 - Understand presentation techniques.

   NCCTE.FI51 - Interior Design I
      NCCTE.FI51.01.00 - Interpret individual and family housing needs.
         NCCTE.FI51.01.01 - Explain how homes meet individual and family needs throughout the life cycle.
         NCCTE.FI51.01.02 - Summarize factors to consider when choosing a place to live.
         NCCTE.FI51.01.03 - Explain ways to adapt housing to meet special needs.

   NCCTE.FI51.02.00 - Evaluate options and legal aspects of housing.
      NCCTE.FI51.02.01 - Critique housing options.
      NCCTE.FI51.02.02 - Analyze financial and legal aspects of renting.
      NCCTE.FI51.02.03 - Analyze financial and legal aspects of home ownership.

   NCCTE.FI51.03.00 - Understand and apply the elements and principles of design and color.
      NCCTE.FI51.03.01 - Apply the elements of design.
NCCTE.FI51.03.02 - Implement color terminology and the components of the color wheel.
NCCTE.FI51.03.03 - Implement color schemes in housing interiors.
NCCTE.FI51.03.04 - Apply the principles of design.

NCCTE.FI51.04.00 - Analyze interior background treatments.
NCCTE.FI51.04.01 - Recognize basic textiles used in interiors.
NCCTE.FI51.04.02 - Classify floor coverings.
NCCTE.FI51.04.03 - Critique window styles and treatments.
NCCTE.FI51.04.04 - Recognize wall coverings.
NCCTE.FI51.04.05 - Compare various forms of lighting.

NCCTE.FI51.05.00 - Recognize and evaluate home furnishings.
NCCTE.FI51.05.01 - Classify the most recognized styles of furniture.
NCCTE.FI51.05.02 - Critique components of quality furniture construction.

NCCTE.FI51.06.00 - Understand architectural styles and construction components.
NCCTE.FI51.06.01 - Recognize architectural features.
NCCTE.FI51.06.02 - Recognize components of construction.

NCCTE.FI51.07.00 - Understand aspects of a well-designed house.
NCCTE.FI51.07.01 - Apply the elements of a functional kitchen.
NCCTE.FI51.07.02 - Explain the essentials of home baths.
NCCTE.FI51.07.03 - Explain the functioning home office.
NCCTE.FI51.07.04 - Summarize home storage.
NCCTE.FI51.07.05 - Recognize technological advances in home design.
NCCTE.FI51.07.06 - Interpret simple drawings and computer-aided design.
NCCTE.FI51.07.07 - Execute scaled drawings.

NCCTE.FI51.08.00 - Interpret levels of comfort and safety in home design.
NCCTE.FI51.08.01 - Recognize ways to control comfort through air quality.
NCCTE.FI51.08.02 - Classify home safety and security features.
NCCTE.FI51.08.03 - Recognize conservation components.

NCCTE.FI51.09.00 - Understand and apply home maintenance.
NCCTE.FI51.09.01 - Explain the benefits of interior home care.
NCCTE.FI51.09.02 - Explain the benefits of exterior home care.
NCCTE.FI51.09.03 - Analyze home maintenance techniques.

NCCTE.FI51.10.00 - Recognize career opportunities in interior design and housing.
NCCTE.FI51.10.01 - Recognize career opportunities in the housing industry.
NCCTE.FI51.10.02 - Recognize career development techniques.

Course: Interior Design II
NCCTE.FI52 - Interior Design II
NCCTE.FI52.01.00 - Analyze career development techniques appropriate for entry-level and technical employment in the residential and non-residential design field.
NCCTE.FI52.01.01 - Describe employment opportunities, educational requirements, and job trends.
NCCTE.FI52.01.02 - Relate workplace readiness standards and behaviors.
NCCTE.FI52.01.03 - Demonstrate job seeking skills.

NCCTE.FI52.02.00 - Interpret career development techniques appropriate for professional and entrepreneurial positions in the residential and non-residential design field.
   - NCCTE.FI52.02.01 - Explain employment opportunities, educational requirements, and job trends.
   - NCCTE.FI52.02.02 - Relate workplace readiness standards and behaviors to a professional environment.

NCCTE.FI52.03.00 - Evaluate business skills needed by an entrepreneur or a professional in the residential and non-residential design field.
   - NCCTE.FI52.03.01 - Define factors influencing entrepreneurship.
   - NCCTE.FI52.03.02 - Determine managerial skills needed to operate a business.
   - NCCTE.FI52.03.03 - Demonstrate ways to compute a client's cost of goods and services.
   - NCCTE.FI52.03.04 - Explain simple project presentation techniques appropriate for residential and non-residential design.

NCCTE.FI52.04.00 - Apply the elements and principles of design in the residential and non-residential design field.
   - NCCTE.FI52.04.01 - Illustrate the elements and principles of design.
   - NCCTE.FI52.04.02 - Document how the elements and principles of design are used in interior design.

NCCTE.FI52.05.00 - Critique residential and non-residential space in respect to space planning guidelines.
   - NCCTE.FI52.05.01 - Explain the use of residential and non-residential spaces.
   - NCCTE.FI52.05.02 - Organize furniture layout using floor plans.

NCCTE.FI52.06.00 - Produce simple residential and non-residential architectural drawings.
   - NCCTE.FI52.06.01 - Interpret architectural styles.
   - NCCTE.FI52.06.02 - Interpret architectural terms and symbols.
   - NCCTE.FI52.06.03 - Cite sources and usage of building code requirements.
   - NCCTE.FI52.06.04 - Design a landscape plan incorporating natural and manufactured elements.
   - NCCTE.FI52.06.05 - Identify the components of house plans.
   - NCCTE.FI52.06.06 - Draw basic floor plans and elevations.
   - NCCTE.FI52.06.07 - Produce computer-aided floor plan designs.

Course: Interior Applications

NCCTE.FI53 - Interior Applications

NCCTE.FI53.01.00 - Analyze materials and components used in residential and non-residential design according to client needs.
   - NCCTE.FI53.01.01 - Discuss wall coverings.
   - NCCTE.FI53.01.02 - Compare acceptable floor coverings.
   - NCCTE.FI53.01.03 - Compare acceptable upholstery materials.
   - NCCTE.FI53.01.04 - Select interior lighting fixtures.
   - NCCTE.FI53.01.05 - Illustrate windows and window treatments.
   - NCCTE.FI53.01.06 - Produce simple window treatments.
   - NCCTE.FI53.01.07 - Apply simple wall coverings.
NCCTE.FI53.02.00 - Synthesize furniture and accessories that create an aesthetically pleasing environment.
  
  NCCTE.FI53.02.01 - Describe furniture styles from a historical perspective.
  NCCTE.FI53.02.02 - Explain the guidelines for selecting furniture.
  NCCTE.FI53.02.03 - Outline criteria for selecting and providing accessories.

NCCTE.FI53.03.00 - Apply renovation techniques to residential and non-residential spaces and furnishings.
  
  NCCTE.FI53.03.01 - Analyze the components of renovation.
  NCCTE.FI53.03.02 - Demonstrate renovation techniques for a project.

NCCTE.FI53.04.00 - Implement a cumulative housing and interiors-related project within the classroom for a target audience.

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
  
  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

NCCTE.FA31 - Apparel and Textile Production I
  
  NCCTE.FA31.01.00 - Understand the fashion industry and design.
    NCCTE.FA31.01.01 - Understand the fashion industry.
    NCCTE.FA31.01.02 - Understand fashion design.

NCCTE.FA31.02.00 - Understand textiles.
  
  NCCTE.FA31.02.01 - Understand fibers, fabrics, and finishes.
  NCCTE.FA31.02.02 - Understand care of textile products.

NCCTE.FA31.03.00 - Understand apparel engineering.
  
  NCCTE.FA31.03.01 - Understand body measurements, sizing, and patterns.
  NCCTE.FA31.03.02 - Understand tools and equipment.
  NCCTE.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.
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

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.

NCCTE.FA32 - Apparel and Textile Production II
NCCTE.FA32.01.00 - Understand Engineering and Fabrication in the Apparel and Textile Industry.
NCCTE.FA32.01.01 - Understand the Apparel and Textile Industry.
NCCTE.FA32.01.02 - Understand the Technical Design Process.

NCCTE.FA32.02.00 - Understand Construction in the Apparel and Textile Industry.
NCCTE.FA32.02.01 - Understand product construction.
NCCTE.FA32.02.02 - Understand global production and manufacturing.

NCCTE.FA32.03.00 - Understand the Apparel and Textile Market.
NCCTE.FA32.03.01 - Understand the marketing mix.
NCCTE.FA32.03.02 - Understand market research.

NCCTE.FA32.04.00 - Understand Global Markets.
NCCTE.FA32.04.01 - Understand product labeling guidelines.
NCCTE.FA32.04.02 - Understand the buyer's market.

Course: Principles of Family and Human Services
NCCTE.2016.FC11 - 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.FC11.02.00 - 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.FC11.03.00 - 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.FC11.04.00 - 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.
Health Science Education

Grade: Grade 6 - 8
Course: Exploring Biotechnology in Health Science Education

NCCTE.HB05 - Exploring Biotechnology in Health Science Education
  NCCTE.HB05.01.00 - Unit A - Introduction to Biotechnology
  NCCTE.HB05.02.00 - Unit B - Biotech Terminology and Math
  NCCTE.HB05.03.00 - Unit C - Laboratory Safety and Infection Control
  NCCTE.HB05.04.00 - Unit D - Cellular Design and DNA
  NCCTE.HB05.05.00 - Unit E - Agricultural Biotechnology
  NCCTE.HB05.06.00 - Unit F - Biotechnology in Healthcare
  NCCTE.HB05.07.00 - Unit G - Industrial and Environmental Biotechnology
  NCCTE.HB05.08.00 - Unit H - Biomedical Research
  NCCTE.HB05.09.00 - Unit I - Bioethics
  NCCTE.HB05.10.00 - Unit J - Careers in Biotechnology

Grade: Grade 9 - 12
Course: Health Science I

NCCTE.HU40 - Health Science I
  NCCTE.HU40.01.00 - Understand the body's systems of support and movement.
    NCCTE.HU40.01.01 - Remember structural organization.
    NCCTE.HU40.01.02 - Remember the structures of the skeletal system.
    NCCTE.HU40.01.03 - Understand the functions and disorders of the skeletal system.
    NCCTE.HU40.01.04 - Remember the structures of the muscular system.
    NCCTE.HU40.01.05 - Understand the functions and disorders of the muscular system.
  NCCTE.HU40.02.00 - Understand the body's use of nutrients.
    NCCTE.HU40.02.01 - Remember the structures of the circulatory system.
    NCCTE.HU40.02.02 - Understand the functions and disorders of the circulatory system.
    NCCTE.HU40.02.03 - Remember the structures of the lymphatic system.
    NCCTE.HU40.02.04 - Understand the functions and disorders of the lymphatic system.
    NCCTE.HU40.02.05 - Remember the structures of the respiratory system.
    NCCTE.HU40.02.06 - Understand the functions and disorders of the respiratory system.
    NCCTE.HU40.02.07 - Remember the structures of the digestive system.
    NCCTE.HU40.02.08 - Understand the functions and disorders of the digestive system.
  NCCTE.HU40.03.00 - Understand the body's communication systems.
    NCCTE.HU40.03.01 - Remember the structures of the nervous system.
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.HU40.03.02 - Understand the functions and disorders of the nervous system.
NCCTE.HU40.03.03 - Remember the structures of the sensory system.
NCCTE.HU40.03.04 - Understand the functions and disorders of the sensory system.
NCCTE.HU40.03.05 - Remember the structures of the integumentary system.
NCCTE.HU40.03.06 - Understand the functions and disorders of the integumentary system.

NCCTE.HU40.04.00 - Understand the body’s systems of hormone control.
NCCTE.HU40.04.01 - Remember the structures of the urinary system.
NCCTE.HU40.04.02 - Understand the functions and disorders of the urinary system.
NCCTE.HU40.04.03 - Remember the structures of the endocrine system.
NCCTE.HU40.04.04 - Understand the functions and disorders of the endocrine system.
NCCTE.HU40.04.05 - Remember the structures of the reproductive system.
NCCTE.HU40.04.06 - Understand the functions and disorders of the reproductive system.

Course: Health Science II

NCCTE.HU42 - Health Science II

NCCTE.HU42.01.00 - Understand healthcare foundation standards.
NCCTE.HU42.01.01 - Remember elements of healthcare career decision making.
NCCTE.HU42.01.02 - Understand effective communication.
NCCTE.HU42.01.03 - Understand healthcare agencies, finances, and trends.
NCCTE.HU42.01.04 - Understand legal and ethical issues in healthcare.
NCCTE.HU42.01.05 - Understand concepts of teamwork.
NCCTE.HU42.01.06 - Understand the fundamentals of wellness.

NCCTE.HU42.02.00 - Understand safety and infection control procedures.
NCCTE.HU42.02.01 - Understand safety procedures.
NCCTE.HU42.02.02 - Understand infection control procedures.

NCCTE.HU42.03.00 - Understand health science standards.
NCCTE.HU42.03.01 - Understand diagnostic and therapeutic services.
NCCTE.HU42.03.02 - Understand health informatics.
NCCTE.HU42.03.03 - Understand support services.
NCCTE.HU42.03.04 - Understand biotechnology research and development.

NCCTE.HU42.04.00 - Apply procedures to provide basic emergency care.
NCCTE.HU42.04.01 - Apply procedures to provide CPR.
NCCTE.HU42.04.02 - Apply procedures to provide first aid.
NCCTE.HU42.04.03 - Apply procedures to complete clinical internship.

Course: Health Team Relations

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.
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: 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

NCCTE.HN43 - Nursing Fundamentals
- NCCTE.HN43.01.00 - Understand the role, function, legal, and ethical responsibilities of the nurse aide within the healthcare system.
  - NCCTE.HN43.01.01 - Understand healthcare facilities and organizational structure.
  - NCCTE.HN43.01.02 - Understand nurse aide range of function as a member of the healthcare team.
  - NCCTE.HN43.01.03 - Understand residents' rights, advocacy, and grievance procedures.
- NCCTE.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.HN43.02.01 - Understand communication and interpersonal skills needed to provide resident care and relate to team members.
  - NCCTE.HN43.02.02 - Understand nurse aide observations, recording, and reporting.
  - NCCTE.HN43.02.03 - Understand basic human needs and nurse aide guidelines in meeting those needs.
  - NCCTE.HN43.02.04 - Understand the dying process and needs of the resident nearing the end of life.
- NCCTE.HN43.03.00 - Understand infection control, safety, and emergency skills within the nurse aide range of function.
  - NCCTE.HN43.03.01 - Understand infection control within nurse aide range of function.
  - NCCTE.HN43.03.02 - Understand safety and emergency care skills within nurse aide range of function.
- NCCTE.HN43.04.00 - Understand nurse aide skills related to residents' vital functions and movement.
  - NCCTE.HN43.04.01 - Understand vital signs, height, and weight measurement skills.
  - NCCTE.HN43.04.02 - Understand the nurse aide's range of function in rehabilitative/restorative and maintenance care.
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.HN43.05.00 - Understand nurse aide skills related to residents' hygiene, grooming, skin integrity, and living environment needs.
   - NCCTE.HN43.05.01 - Understand nurse aide skills needed for residents' hygiene and grooming.
   - NCCTE.HN43.05.02 - Understand nurse aide skills needed to promote skin integrity.
   - NCCTE.HN43.05.03 - Understand the nurse aide's role in creating a safe and clean environment that fosters resident independence, contentment, and self-esteem.

NCCTE.HN43.06.00 - Understand nurse aide skills needed to provide for residents' nutrition, hydration, and elimination needs.
   - NCCTE.HN43.06.01 - Understand nurse aide skills needed to meet the nutritional and hydration needs of residents.
   - NCCTE.HN43.06.02 - Understand nurse aide skills needed to care for residents' elimination and urination needs.

NCCTE.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.

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
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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.

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.

**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:** Biomedical Technology I

**NCCTE.2016.HB11** - 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.
Marking and Entrepreneurship Education

Grade: Grade 9 - 12
Course: Marketing

NCCTE.MM51 - Marketing

NCCTE.MM51.01.00 - Understand marketing, career opportunities, market planning, and foundation of marketing-information management.
  NCCTE.MM51.01.01 - Understand marketing's role and functions in business to facilitate economic exchanges with customers. (MK:001), (MK:002)
  NCCTE.MM51.01.02 - Understand career opportunities in marketing to make career decisions. (PD:024)
  NCCTE.MM51.01.03 - Read to acquire meaning from written material and to apply the information to a task. (CO:057) (SUPPLEMENTAL)
  NCCTE.MM51.01.04 - Employ marketing-information to develop a marketing plan. (MP:001), (MP:003)
  NCCTE.MM51.01.05 - Acquire foundational knowledge of marketing-information management to understand its nature and scope. (IM:012), (IM:184)
  NCCTE.MM51.01.06 - Write internal and external business correspondence to convey and obtain information effectively. (CO:133) (SUPPLEMENTAL)

NCCTE.MM51.02.00 - Understand selling, customer relations and product management.
  NCCTE.MM51.02.01 - Acquire a foundational knowledge of selling to understand its nature and scope. (SE:017), (SE:076)
  NCCTE.MM51.02.02 - Foster positive relationships with customers to enhance company image. (CR:004), (CR:005), (CR:019), (CR:006) (SUPPLEMENTAL)
  NCCTE.MM51.02.03 - Acquire a foundational knowledge of selling to understand its nature and scope. (SE:932)
  NCCTE.MM51.02.04 - Foster positive relationships with customers to enhance company image. (CR:007) (SUPPLEMENTAL)
  NCCTE.MM51.02.05 - Resolve conflicts with/for customers to encourage repeat business. (CR:009), (CR:010) (SUPPLEMENTAL)
  NCCTE.MM51.02.06 - Apply quality assurances to enhance product/service offerings. (PM:019), (PM:020)
  NCCTE.MM51.02.07 - Reinforce company's image to exhibit the company's brand promise. (CR:001), (CR:002)
  NCCTE.MM51.02.08 - Acquire product knowledge to communicate product benefits and to ensure appropriateness of product for the customer. (SE:062), (SE:109)
  NCCTE.MM51.02.09 - Understand sales processes and techniques to enhance customer relationships and to increase the likelihood of making sales. (SE:048)
  NCCTE.MM51.02.10 - Employ sales processes and techniques to enhance customer relationships and to increase the likelihood of making sales. (SE:110), (SE:111), (SE:114) (SUPPLEMENTAL)
  NCCTE.MM51.02.11 - Process the sale to complete the exchange. (SE:116)
  NCCTE.MM51.02.12 - Process the sale to complete the exchange. (SE:009), (SE:835) (SUPPLEMENTAL)

NCCTE.MM51.03.00 - Understand product/service management, pricing, and channel management.
  NCCTE.MM51.03.01 - Acquire a foundational knowledge of product/service management to understand its nature and scope. (PM:001), (PM:024), (PM:039), (PM:040)
NCCTE.MM51.03.02 - Apply quality assurances to enhance product/service offerings. (PM:017) (SUPPLEMENTAL)
NCCTE.MM51.03.03 - Employ product-mix strategies to meet customer expectations. (PM:003)
NCCTE.MM51.03.04 - Position products/services to acquire desired business image. (PM:042), (PM:021)
NCCTE.MM51.03.05 - Position company to acquire desired business image. (PM:206) (SUPPLEMENTAL)
NCCTE.MM51.03.06 - Develop a foundational knowledge of pricing to understand its role in marketing. (PI:001), (PI:015), (PI:016), (PI:017), (PI:002)
NCCTE.MM51.03.07 - Acquire a foundational knowledge of channel management to understand its role in marketing. (CM:001), (CM:002), (CM:003), (CM:004)
NCCTE.MM51.03.08 - Acquire a foundational knowledge of channel management to understand its role in marketing. (CM:005), (CM:006) (SUPPLEMENTAL)
NCCTE.MM51.03.09 - Write internal and external business correspondence to convey and obtain information effectively. (CO:039) (SUPPLEMENTAL)
NCCTE.MM51.04.00 - Understand promotion, marketing-information management, and selling.
NCCTE.MM51.04.01 - Acquire a foundational knowledge of promotion to understand its nature and scope. (PR:001), (PR:002), (PR:003), (PR:099), (PR:100), (PR:101)
NCCTE.MM51.04.02 - Understand promotional channels used to communicate with targeted audiences. (PR:007)
NCCTE.MM51.04.03 - Understand promotional channels used to communicate with targeted audiences. (PR:247), (PR:089) (SUPPLEMENTAL)
NCCTE.MM51.04.04 - Understand promotional channels used to communicate with targeted audiences. (PR:249), (PR:250)
NCCTE.MM51.04.05 - Write internal and external business correspondence to convey and obtain information effectively. (CO:040) (SUPPLEMENTAL)
NCCTE.MM51.04.06 - Acquire foundational knowledge of marketing-information management to understand its nature and scope. (IM:001)
NCCTE.MM51.04.07 - Acquire foundational knowledge of marketing-information management to understand its nature and scope. (IM:025) (SUPPLEMENTAL)
NCCTE.MM51.04.08 - Acquire foundational knowledge of marketing-information management to understand its nature and scope. (IM:183)
NCCTE.MM51.04.09 - Acquire foundational knowledge of marketing-information management to understand its nature and scope. (IM:419) (SUPPLEMENTAL)
NCCTE.MM51.04.10 - Understand marketing-research activities to show command of their nature and scope. (IM:010), (IM:282) (SUPPLEMENTAL)
NCCTE.MM51.04.11 - Understand marketing-research design considerations to evaluate their appropriateness for the research problem/issue. (IM:284), (IM:281), (IM:285) (SUPPLEMENTAL)
NCCTE.MM51.04.12 - Understand data-collection methods to evaluate their appropriateness for the research problem/issue. (IM:289)
NCCTE.MM51.04.13 - Understand data-collection methods to evaluate their appropriateness for the research problem/issue. (IM:418), (IM:286)
NCCTE.MM51.04.14 - Acquire a foundational knowledge of selling to understand its nature and scope. (SE:828) (SUPPLEMENTAL)
NCCTE.MM51.04.15 - Acquire a foundational knowledge of selling to understand its nature and scope. (SE:106)
NCCTE.MM51.04.16 - Acquire a foundational knowledge of selling to understand its nature and scope. (SE:107), (SE:108) (SUPPLEMENTAL)

Course: Marketing Applications

NCCTE.MA52 - Marketing Management

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. (SUPPLEMENTAL)
  - 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.MA52.03.00 - 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.
  - 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 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: Strategic Marketing
NCCTE.MU92 - Strategic Marketing
NCCTE.MU92.01.00 - Understand the impact of marketing on society.
NCCTE.MU92.01.01 - Remember the key marketing terms and the marketing mix.
NCCTE.MU92.01.02 - Exemplify marketing philosophies and strategic planning.
NCCTE.MU92.01.03 - Understand social responsibility, ethics, and the external marketing environment.
NCCTE.MU92.01.04 - Exemplify customer relationship management.
NCCTE.MU92.02.00 - Apply procedures used in buying behavior.
NCCTE.MU92.02.01 - Understand consumer and business buying behavior.
NCCTE.MU92.02.02 - Apply procedures used to complete the consumer and business buying decision process.
NCCTE.MU92.02.03 - Understand market segmentation, targeting, and positioning and the impact on buying behavior.
NCCTE.MU92.03.00 - Apply procedures to manage marketing information.
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NCCTE.MU92.03.01 - Understand marketing decision support systems.
NCCTE.MU92.03.02 - Apply procedures to research and use marketing information.

NCCTE.MU92.04.00 - Understand procedures to develop and manage products.
NCCTE.MU92.04.01 - Understand products, branding, and services marketing.
NCCTE.MU92.04.02 - Understand procedures for new product development and the product life cycle.

NCCTE.MU92.05.00 - Understand pricing procedures.
NCCTE.MU92.05.01 - Exemplify the concepts that determine price.
NCCTE.MU92.05.02 - Understand how to set a price for a product or service.

NCCTE.MU92.06.00 - Understand promotion.
NCCTE.MU92.06.01 - Understand marketing communications.
NCCTE.MU92.06.02 - Understand advertising, public relations, sales promotion, and personal selling.

NCCTE.MU92.07.00 - Understand marketing channels, supply chain management, and retail operations.
NCCTE.MU92.07.01 - Exemplify marketing channels and supply chain management.
NCCTE.MU92.07.02 - Classify retail operations.

NCCTE.MU92.08.00 - Understand global marketing.
NCCTE.MU92.08.01 - Understand global factors impacting companies.
NCCTE.MU92.08.02 - Understand global market entry strategies and the global marketing mix.

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),
NCCTE.MH31.02.02 - Utilize project-management skills to improve workflow and minimize costs.

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 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. (Pl:047), (Pl: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)
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)
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)
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: 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.
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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 in 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.

NCCTE.MI21 - Fashion Merchandising
  NCCTE.MI21.01.00 - Identify the components of the Fashion Merchandising course.
  NCCTE.MI21.01.01 - Describe the basic content of the Fashion Merchandising course as part of the Marketing Education program.
  NCCTE.MI21.01.02 - Explain the value of DECA as an integral part of the Fashion Merchandising course.
  NCCTE.MI21.01.03 - Identify the scope and importance of the fashion industry to our economy.

NCCTE.MI21.02.00 - Explain the evolution and movement of fashion.
  NCCTE.MI21.02.01 - Interpret the process of fashion forecasting.
  NCCTE.MI21.02.02 - Summarize the movement and acceptance of fashion.
  NCCTE.MI21.02.03 - Recognize the relationship between historical events and fashion evolution.
  NCCTE.MI21.02.04 - Identify major fashion centers, types of designers, and price market categories.
  NCCTE.MI21.02.05 - Research influential names in fashion design.
  NCCTE.MI21.02.06 - Recognize current fashion trends.

NCCTE.MI21.03.00 - Explain the business and economics of the fashion industry.
  NCCTE.MI21.03.01 - Explain the concept of marketing in fashion.
  NCCTE.MI21.03.02 - Explain the economics of fashion.
  NCCTE.MI21.03.03 - Identify the types of fashion retailers.
NCCTE.MI21.03.04 - Describe the fashion industry from a global perspective.
NCCTE.MI21.04.00 - Explain merchandise information used in fashion merchandising.
   NCCTE.MI21.04.01 - Identify basic textile fibers, fabrics, and their characteristics.
   NCCTE.MI21.04.02 - Explain the elements and principles of design.
   NCCTE.MI21.04.03 - Identify merchandise classifications.
   NCCTE.MI21.04.04 - Explain sizing in apparel.
NCCTE.MI21.05.00 - Develop the skills necessary for selling fashion.
   NCCTE.MI21.05.01 - Explain selling in the retail environment.
   NCCTE.MI21.05.02 - Demonstrate the steps of a sale.
   NCCTE.MI21.05.03 - Perform various mathematical calculations in retail sales.
NCCTE.MI21.06.00 - Recognize the importance of promotion in fashion.
   NCCTE.MI21.06.01 - Identify the components of the promotional mix.
   NCCTE.MI21.06.02 - Discuss fashion advertising.
   NCCTE.MI21.06.03 - Explain visual merchandising.
   NCCTE.MI21.06.04 - Describe the use of special events in fashion promotion.
   NCCTE.MI21.06.05 - Create a fashion promotion plan.
NCCTE.MI21.07.00 - Develop professional and interpersonal skills needed for success in the fashion industry.
   NCCTE.MI21.07.01 - Recognize soft skills necessary in the workplace.
   NCCTE.MI21.07.02 - Demonstrate effective employability skills.
   NCCTE.MI21.07.03 - Summarize careers in the fashion industry.

Course: Entrepreneurship I
NCCTE.ME11 - Entrepreneurship I
   NCCTE.ME11.01.00 - Understand economics, career planning, and information management.
       NCCTE.ME11.01.01 - Understand economic systems to be able to recognize the environments in which businesses function. (EC:065)
       NCCTE.ME11.01.02 - Participate in career-planning to enhance job-success potential. (PD:066), (PD:067) (SUPPLEMENTAL)
       NCCTE.ME11.01.03 - Acquire information to guide business decision-making. (MN:187)
       NCCTE.ME11.01.04 - Write internal and external business correspondence to convey and obtain information effectively. (CO:040) (SUPPLEMENTAL)
   NCCTE.ME11.02.00 - Understand entrepreneurship, product/service management, information management, professional development, emotional intelligence, and operations.
       NCCTE.ME11.02.01 - Employ entrepreneurial discovery strategies to generate feasible ideas for business ventures/products. (EN:001), (EN:002)
       NCCTE.ME11.02.02 - Acquire information to guide business decision-making. (NF:015)
       NCCTE.ME11.02.03 - Employ entrepreneurial discovery strategies to generate feasible ideas for business ventures/products. (EN:003), (EN:004), (EN:005)
       NCCTE.ME11.02.04 - Generate venture/product ideas to contribute to ongoing business success. (PM:127)
       NCCTE.ME11.02.05 - Utilize critical-thinking skills to determine best options/outcomes. (PD:012)
NCCTE.ME11.02.06 - Employ entrepreneurial discovery strategies to generate feasible ideas for business ventures/products. (EN:006)
NCCTE.ME11.02.07 - Employ product-mix strategies to meet customer expectations. (PM:130)
NCCTE.ME11.02.08 - Apply ethics to demonstrate trustworthiness. (EI:091), (EI:075)
NCCTE.ME11.02.09 - Develop a concept for new business venture to evaluate its success potential. (EN:007), (EN:008)
NCCTE.ME11.02.10 - Implement expense-control strategies to enhance a business's financial well-being. (OP:024)
NCCTE.ME11.02.11 - Develop a concept for new business venture to evaluate its success potential. (EN:009), (EN:010)
NCCTE.ME11.02.12 - Apply ethics to demonstrate trustworthiness. (EI:092) (SUPPLEMENTAL)
NCCTE.ME11.02.13 - Employ entrepreneurial discovery strategies to generate feasible ideas for business ventures/products. (EN:038)

NCCTE.ME11.03.00 - Understand market planning and business law.
   - Develop marketing strategies to guide marketing tactics. (MP:001)
   - Select a target market appropriate for venture/product to obtain the best return on marketing investment (ROMI). (MP:003)
   - Employ marketing-information to develop a marketing plan. (MP:007), (MP:008)
   - Select a target market appropriate for venture/product to obtain the best return on marketing investment (ROMI). (MP:004), (MP:005)
   - Employ marketing-information to develop a marketing plan. (MP:009), (MP:010), (MP:012)
   - Acquire foundational knowledge of business laws and regulations to understand their nature and scope. (BL:001), (BL:006)

NCCTE.ME11.04.00 - Understand product/service management, strategic management, and channel management.
   - Position venture/product to acquire desired business image. (PM:131)
   - Utilize planning tools to guide organization's/department's activities. (SM:008), (SM:009)
   - Acquire a foundational knowledge of product/service management to understand its nature and scope. (PM:001)
   - Employ product-mix strategies to meet customer expectations. (PM:003), (PM:006)
   - Position venture/product to acquire desired business image. (PM:042) (SUPPLEMENTAL)
   - Employ product-mix strategies to meet customer expectations. (PM:036)
   - Position venture/product to acquire desired business image. (PM:272), (PM:132)
   - Acquire foundational knowledge of channel management to understand its role in marketing. (CM:001), (CM:003)
   - Manage channel activities to minimize costs and to determine distribution strategies. (CM:010) (SUPPLEMENTAL)

NCCTE.ME11.05.00 - Understand pricing, promotion, and market planning.
NCCTE.ME11.05.01 - Develop a foundational knowledge of pricing to understand its role in marketing.
  (PI:001), (PI:002)
NCCTE.ME11.05.02 - Employ pricing strategies to determine optimal prices. (PI:019), (PI:006), (PI:007)
NCCTE.ME11.05.03 - Acquire a foundational knowledge of promotion to understand its nature and scope. (PR:001), (PR:002), (PR:003)
NCCTE.ME11.05.04 - Understand promotional channels used to communicate with targeted audiences. (PR:007)
NCCTE.ME11.05.05 - Manage promotional activities to maximize return on promotional investments. (PR:097)
NCCTE.ME11.05.06 - Employ marketing-information to develop a marketing plan. (MP:013), (MP:014), (MP:015), (MP:016), (MP:017), (MP:018)

Course: Entrepreneurship II
NCCTE.ME12 - Entrepreneurship II
NCCTE.ME12.01.00 - Understand strategic marketing, entrepreneurship, information management, and economics for continuing developing a small business.
  NCCTE.ME12.01.01 - Utilize planning tools to guide organization's/department's activities. (SM:007), (SM:011)
  NCCTE.ME12.01.02 - Develop concept for new business venture to evaluate its success potential. (EN:012)
  NCCTE.ME12.01.03 - Maintain business records to facilitate business operations. (NF:001)
  NCCTE.ME12.01.04 - Analyze marketing information to make informed marketing decisions. (IM:363)
  NCCTE.ME12.01.05 - Acquire knowledge of the impact of government on business activities to make informed economic decisions. (EC:072)
  NCCTE.ME12.01.06 - Understand economic indicators to recognize economic trends and conditions. (EC:083), (EC:084), (EC:018)
  NCCTE.ME12.01.07 - Determine global trade's impact on business decision-making. (EC:066)

NCCTE.ME12.02.00 - Understand information management, promotion, channel management, and pricing for continuing developing a small business.
  NCCTE.ME12.02.01 - Analyze marketing information to make informed marketing decisions. (IM:302)
  NCCTE.ME12.02.02 - Position product/service to acquire desired business image. (PM:021), (PM:228), (PM:214), (PM:246), (PM:206)
  NCCTE.ME12.02.03 - Analyze marketing information to make informed marketing decisions. (IM:350)
  NCCTE.ME12.02.04 - Develop channel-management strategies. (CM:014)
  NCCTE.ME12.02.05 - Employ pricing strategies to determine optimal prices. (PI:044), (PI:020), (PI:021), (PI:022), (PI:005), (PI:023)

NCCTE.ME12.03.00 - Understand strategic management, entrepreneurship, human resources, and information management for continuing developing a small business.
  NCCTE.ME12.03.01 - Utilize planning tools to guide organization's/department's activities. (MN:042)
  NCCTE.ME12.03.02 - Determine needed resources for a new business venture to contribute to its start-up viability. (EN:018)
  NCCTE.ME12.03.03 - Understand human resources management models to demonstrate knowledge of their nature and scope. (HR:415)
  NCCTE.ME12.03.04 - Plan talent-acquisition activities to guide human resources management decision-making. (HR:416)
NCCTE.ME12.03.05 - Staff a business unit to satisfy work demands while adhering to budget constraints. (HR:353)

NCCTE.ME12.03.06 - Plan talent-acquisition activities to guide human resources management decision-making. (HR:495)

NCCTE.ME12.03.07 - Determine needed resources for a new business venture to contribute to its start-up viability. (EN:020)

NCCTE.ME12.03.08 - Utilize information-technology tools to manage and perform work responsibilities. (NF:091), (NF:012)

NCCTE.ME12.04.00 - Understand operation, entrepreneurship and financial analysis for continuing developing a small business.

NCCTE.ME12.04.01 - Implement purchasing activities to obtain business supplies, equipment, and services. (OP:161)

NCCTE.ME12.04.02 - Determine needed resources for a new business venture to contribute to its start-up viability. (EN:021)

NCCTE.ME12.04.03 - Actualize new business venture to generate profit and/or meet objectives. (EN:022)

NCCTE.ME12.04.04 - Implement financial skills to obtain business credit and to control its use. (FI:023), (FI:036), (FI:043), (FI:041), (FI:031)

NCCTE.ME12.04.05 - Implement accounting procedures to track money flow and to determine financial status. (FI:094)

NCCTE.ME12.04.06 - Conduct profit planning to forecast business profit. (FI:510)

NCCTE.ME12.04.07 - Implement accounting procedures to track money flow and to determine financial status. (FI:091)

NCCTE.ME12.04.08 - Conduct profit planning to forecast business profit. (FI:602)

NCCTE.ME12.04.09 - Implement accounting procedures to track money flow and to determine financial status. (FI:093)

NCCTE.ME12.04.10 - Conduct profit planning to forecast business profit. (FI:511)

NCCTE.ME12.05.00 - Understand strategic marketing, communication, emotional intelligence, financial analysis, operation, and marketing for continuing developing a small business.

NCCTE.ME12.05.01 - Utilize planning tools to guide organization's/department's activities. (SM:027), (SM:012)

NCCTE.ME12.05.02 - Write internal and external business correspondence to convey and obtain information effectively. (CO:091)

NCCTE.ME12.05.03 - Utilize planning tools to guide organization's/department's activities. (SM:013)

NCCTE.ME12.05.04 - Use communication skills to influence others. (EI:093)

NCCTE.ME12.05.05 - Implement financial skills to obtain business credit and to control its use. (FI:039), (FI:034), (FI:033)

NCCTE.ME12.05.06 - Use communication skills to influence others. (EI:012), (EI:062)

NCCTE.ME12.05.07 - Implement expense-control strategies to enhance a business's financial well-being. (OP:028)

NCCTE.ME12.05.08 - Identify potential business threats and opportunities to protect a business

NCCTE.ME12.05.09 - Implement quality-control processes to minimize errors and to expedite workflow. (OP:019), (OP:020)

NCCTE.ME12.05.10 - Understand company's unique selling proposition to recognize what sets the company apart from its competitors. (MK:021)
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

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.MH42.04.00 - 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.
    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.

NCCTE.MH42 - Hospitality and Tourism

NCCTE.MH42.01.00 - Understand the complexity of hospitality and tourism destinations.
  NCCTE.MH42.01.01 - Identify career opportunities in the hospitality and tourism industry.
  NCCTE.MH42.01.02 - Understand the types and interrelationships of hospitality and tourism destinations.
  NCCTE.MH42.01.03 - Understand inter-organizational systems operations impact products and services offered at hospitality and tourism destination.
NCCTE.MH42.02.00 - Apply procedures for maximizing on resources at hospitality and tourism destinations.
  NCCTE.MH42.02.01 - Understand the impact of the hospitality and tourism destinations on an economy.
  NCCTE.MH42.02.02 - Understand forecasting skills to identify potential cost and profit for hospitality and tourism destinations.
  NCCTE.MH42.02.03 - Apply skills to manage plans and budgets to accomplish goals and objectives of hospitality and tourism destinations.

NCCTE.MH42.03.00 - Understand hospitality marketing.
  NCCTE.MH42.03.01 - Understand categories and motivation of travelers and tourists.
  NCCTE.MH42.03.02 - Understand how cultural diversity impacts products and services offered by hospitality and tourism destinations.
  NCCTE.MH42.03.03 - Understand how geography impacts hospitality and tourism destinations.
  NCCTE.MH42.03.04 - Understand destination marketing strategies.

NCCTE.MH42.04.00 - Understand the impact of customer service at hospitality and tourism destinations.
  NCCTE.MH42.04.01 - Understand customer service skills to ensure guest and customer satisfaction at hospitality and tourism destinations.
  NCCTE.MH42.04.02 - Understand fostering relationships with clientele for the hospitality and tourism destinations.

NCCTE.MH42.05.00 - Understand safety and security and legal and ethical responsibilities at hospitality and tourism destinations.
  NCCTE.MH42.05.01 - Understand rules and laws designed to promote safety and security at hospitality and tourism destinations.
  NCCTE.MH42.05.02 - Understand ethical and legal implications for guest, customer, and employee conduct at hospitality and tourism destinations.

Course: Virtual Enterprise

NCCTE.MU81 - Virtual Enterprise
  NCCTE.MU81.01.00 - Develop and apply concepts related to human relations, safety, career development, and leadership skills for a global workplace.
  NCCTE.MU81.02.00 - Demonstrate an understanding of business, marketing, and international economics concepts.
  NCCTE.MU81.03.00 - Select, apply, and troubleshoot technology used in processing business transactions.
  NCCTE.MU81.04.00 - Identify, organize, plan, and allocate resources for the virtual business.
  NCCTE.MU81.05.00 - Read, write, listen, and speak for information, understanding, expression, and critical analysis and evaluation.
  NCCTE.MU81.06.00 - Use mathematical analysis, scientific inquiry, and engineering design to pose questions, seek answers, and develop solutions.
NCCTE.MU81.07.00 - Research and apply knowledge of ethical and legal issues within the industry.

NCCTE.MU81.08.00 - Develop and demonstrate human relations, self-management, organizational and professional leadership skills.
Technology Engineering and Design Education

Grade: Grade 6 - 8
Course: Technological Systems
  NCCTE.TE02 - Technological Systems
    NCCTE.TE02.01.00 - Technological Systems: How They Work
    NCCTE.TE02.02.00 - Technological Systems: Issues and Impacts
    NCCTE.TE02.03.00 - Technological System Interaction
    NCCTE.TE02.04.00 - Maintaining Technological Systems
    NCCTE.TE02.05.00 - Technological Systems in the Designed World

Course: Technology Design and Innovation
  NCCTE.TE01 - Technology Design and Innovation
    NCCTE.TE01.101.00 - Semester One: Meet Technology
    NCCTE.TE01.102.00 - Semester One: Practicing Design
    NCCTE.TE01.103.00 - Semester One: Project revive
    NCCTE.TE01.201.00 - Semester Two: Introduction to Invention and Innovation
    NCCTE.TE01.202.00 - Semester Two: The Engineering Design Process
    NCCTE.TE01.203.00 - Semester Two: Invention and Innovation of the Designed World
    NCCTE.TE01.204.00 - Semester Two: Design and Creativity
    NCCTE.TE01.205.00 - Semester Two: Technology and Society

Grade: Grade 9 - 12
Course: Technology Engineering and Design
  NCCTE.2015.TE11 - Technology Engineering and Design
    NCCTE.2015.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.2015.TE11.01.01 - Understand that most inventions and innovations are the result of an evolutionary process.
    NCCTE.2015.TE11.01.02 - Understand how new technologies are used to create new processes and products.
    NCCTE.2015.TE11.01.03 - Classify the factors that impact the demand and design of technology.
    NCCTE.2015.TE11.01.04 - Explain the research and development process as a problem-solving approach.
NCCTE.2015.TE11.02.00 - History of Technology: Explain how technology changes history.
NCCTE.2015.TE11.02.01 - Analyze the historic significance and interaction of technological advancements within society and the environment.
NCCTE.2015.TE11.02.02 - Understand the evolutionary process of technological development throughout history.

NCCTE.2015.TE11.03.00 - Systems: Apply the Universal Systems Model to troubleshoot technological systems
NCCTE.2015.TE11.03.01 - Differentiate the nine core technologies and their relationship within larger systems and products.
NCCTE.2015.TE11.03.02 - Analyze a functional system using the Universal Systems Model.
NCCTE.2015.TE11.03.03 - Analyze the function of a product by reverse engineering.
NCCTE.2015.TE11.03.04 - Apply procedures to troubleshoot a product and create a diagram and/or simulation.

NCCTE.2015.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.2015.TE11.04.01 - Apply design principles when generating solutions to problems.
NCCTE.2015.TE11.04.02 - Apply the Engineering Design Process to produce solutions to problems
NCCTE.2015.TE11.04.03 - Interpret criteria and constraints to develop solutions to problems.
NCCTE.2015.TE11.04.04 - Apply procedures to construct models that meet design solutions.
NCCTE.2015.TE11.04.05 - Analyze data used in the engineering design process.
NCCTE.2015.TE11.04.06 - Propose an engineering design solution to the intended audience.

NCCTE.2015.TE11.05.00 - The Designed World: Analyze technology relationships to the designed world
NCCTE.2015.TE11.05.01 - Analyze energy and power systems.
NCCTE.2015.TE11.05.02 - Analyze types of manufacturing and the properties of materials problems.
NCCTE.2015.TE11.05.03 - Classify the types of construction and the factors that affect the design of structures.
NCCTE.2015.TE11.05.04 - Classify information and communication systems and their interaction with society.
NCCTE.2015.TE11.05.05 - Explain the relationship between agriculture and transportation.
NCCTE.2015.TE11.05.06 - Explain the technologies integrated in telemedicine.

NCCTE.TE11 - Technology Engineering and Design
NCCTE.TE11.01.00 - 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.TE11.02.00 - Explain how technology changes history.
NCCTE.TE11.03.00 - Apply the Universal Systems Model to troubleshoot technological systems.
NCCTE.TE11.04.00 - Analyze the Engineering Design process as a systematic, iterative problem solving method that produces solutions to meet human wants and desires.
NCCTE.TE11.05.00 - Analyze Technology Relationships to the Designed World.
Course: Technological Design

NCCTE.2015.TE12 - Technological Design

NCCTE.2015.TE12.01.00 - Introduction to Technological Design: Understand a STEM approach to understanding research methods in a global society to create a well-informed, creative, innovative, technologically literate citizen.
  - NCCTE.2015.TE12.01.01 - Understanding emerging technologies.
  - NCCTE.2015.TE12.01.02 - Evaluate fundamentals of STEM.
  - NCCTE.2015.TE12.01.03 - Understand research, design and development.
  - NCCTE.2015.TE12.01.04 - Evaluate universal design.

NCCTE.2015.TE12.02.00 - Technological Design Skills: Apply a management process to plan, design, create and analyze to refine a product through modeling.
  - NCCTE.2015.TE12.02.01 - Understanding and interpret the impact of product design and development.
  - NCCTE.2015.TE12.02.02 - Apply the Design Process.
  - NCCTE.2015.TE12.02.03 - Create using models and plans.

NCCTE.2015.TE12.03.00 - Technological Design Fundamentals: Apply Systems Thinking and the Universal Systems Model to meet criteria and constraints.
  - NCCTE.2015.TE12.03.01 - Apply systems thinking through compromise and optimization by analyzing a system.
  - NCCTE.2015.TE12.03.02 - Evaluate communication systems.
  - NCCTE.2015.TE12.03.03 - Assess complex systems thinking.
  - NCCTE.2015.TE12.03.04 - Understand patents, criteria, constraints and other design requirements.

NCCTE.2015.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.2015.TE12.04.01 - Discover technology trade-offs and transfers.
  - NCCTE.2015.TE12.04.02 - Examine how technology impacts the community.
  - NCCTE.2015.TE12.04.03 - Evaluate how technology impacts the environment.

NCCTE.2015.TE12.05.00 - The Designed World: Apply the areas of the Design World using the engineering design process to plan, organize, develop and control productivity to maximize efficiency.
  - NCCTE.2015.TE12.05.01 - Analyze types of bio-related and agricultural technologies.
  - NCCTE.2015.TE12.05.02 - Analyze types of energy, power and transportation.
  - NCCTE.2015.TE12.05.03 - Maximize resources in lean manufacturing.
  - NCCTE.2015.TE12.05.04 - Design using sustainable construction procedures.

NCCTE.TE12 - Technological Design

NCCTE.TE12.01.00 - Understand Technological Design.
  - NCCTE.TE12.01.01 - Describe how the nature and development of technological knowledge and processes are functions of the setting.
  - NCCTE.TE12.01.02 - Describe changes in the body of scientific knowledge that are small modifications of prior knowledge.

NCCTE.TE12.02.00 - Apply Technological Design skills and Concepts.
  - NCCTE.TE12.02.01 - Give an example of a design problem that is not clearly defined.
  - NCCTE.TE12.02.02 - Define a prototype as a working model used to test a design concept.
NCCTE.TE12.02.03 - Fabricate a prototype to test a design concept by making actual observations and necessary adjustments.

NCCTE.TE12.03.00 - Understand Technological Design Fundamentals.
NCCTE.TE12.03.01 - Recall that systems thinking requires logic, creativity, and compromise.
NCCTE.TE12.03.02 - Apply systems thinking with appropriate compromises to solve complex real-life problems.
NCCTE.TE12.03.03 - Implement mathematical modeling in engineering design to simulate how a proposed system might behave.
NCCTE.TE12.03.04 - Define a system by specifying its boundaries and sub-systems, its relationship to other systems, and identifying its inputs and outputs.
NCCTE.TE12.03.05 - Describe the components of a system, especially those in the feedback loop that affect the stability of a technological system.
NCCTE.TE12.03.06 - Explain that fully automatic systems require human control at some point.
NCCTE.TE12.03.07 - Explain that the stability of a system can be greater with the appropriate feedback mechanisms.
NCCTE.TE12.03.08 - Specify requirements of a product or system that involve the identification of criteria and constraints.
NCCTE.TE12.03.09 - Determine how criteria and constraints affect the final design and development of a product or system.
NCCTE.TE12.03.10 - Distinguish between the various layers of controls and feedback loops that provide information in complex systems.
NCCTE.TE12.03.11 - Explain that complex systems have layers of controls that operate particular parts of a system or control other controls that operate parts of the system.
NCCTE.TE12.03.12 - Explain that the more parts and connections a system has, the more ways it can go wrong.
NCCTE.TE12.03.13 - Describe components of a complex system that detect, back up, bypass, or compensate for minor failures.
NCCTE.TE12.03.14 - Describe the patenting process and its importance to the development of products and services.
NCCTE.TE12.03.15 - Determine the social and economic forces that influence how a given technology will be developed and used.
NCCTE.TE12.03.16 - Demonstrate the process of checking, critiquing, redefining, and improving design ideas.
NCCTE.TE12.03.17 - Describe a situation where the requirements of a design, such as criteria, constraints, and efficiency compete with each other.
NCCTE.TE12.03.18 - Explain that engineering design is influenced by personal characteristics, such as creativity, resourcefulness, and the ability to visualize and think abstractly.
NCCTE.TE12.03.19 - Communicate technological knowledge and processes using symbols, measurement, conventions, icons, graphic images, and languages that incorporate a variety of visual, auditory, and tactile stimuli.
NCCTE.TE12.03.20 - Write equivalent forms of equations, inequalities and systems of equations and solve them with fluency - mentally or with paper and pencil and simple cases and using technology in all cases.
NCCTE.TE12.03.21 - Use symbolic algebra to represent and explain mathematical relationships.

NCCTE.TE12.04.00 - Understand the Relationship Between Technology and Society.
NCCTE.TE12.04.01 - Compare trade-offs between competing values such as availability, cost, desirability, and waste, when selecting resources to solve technological problems.

NCCTE.TE12.04.02 - Consider key questions that arise concerning possible alternatives such as who benefits and who suffers, financial and social costs, possible risks, resources used, and waste disposal when deciding on proposals to introduce new technologies or curtail existing ones.

NCCTE.TE12.04.03 - Explain that benefits and costs of proposed choices include consequences that are long-term as well as short-term and indirect as well as direct.

NCCTE.TE12.04.04 - Provide examples of technology transfer occurring when a new user applies an existing innovation developed for one purpose in a different function.

NCCTE.TE12.04.05 - Provide examples of technological innovation resulting when ideas, knowledge, or skills are shared within a technology, among technologies, or across other fields.

NCCTE.TE12.04.06 - Identify innovations in mathematics that presented new problems to be solved that were the results of developments in science or technology.

NCCTE.TE12.04.07 - Identify new scientific knowledge that is the result of technological problems and advances.

NCCTE.TE12.04.08 - Identify technological problems and advances that are the results of new scientific knowledge.

NCCTE.TE12.04.09 - Distinguish between ethical considerations that are important in the development, selection, and use of technologies.

NCCTE.TE12.04.10 - Analyze the risks to society posed by scientific research and the scientist's decision whether to continue the research based on personal as well as professional ethics.

NCCTE.TE12.04.11 - Compare the advantages and disadvantages between various trade-offs that must be considered when new technologies, such as increased production vs. environmental harm in agriculture, are developed.

NCCTE.TE12.04.12 - Devise technologies to reduce the negative impacts of other technologies.

NCCTE.TE12.04.13 - Consider societal opinions and demands in addition to corporate culture when deciding whether or not to develop certain technologies.

NCCTE.TE12.04.14 - Recognize that technology usually affects society more directly than science does because technology solves practical problems and serves human needs.

NCCTE.TE12.04.15 - Recognize that science affects society by stimulating and satisfying people's curiosity and enlarging or challenging their views of what the world is like.

NCCTE.TE12.05.00 - Understand the Designed World.

NCCTE.TE12.05.01 - Develop and produce a product or system using a design process.

NCCTE.TE12.05.02 - Demonstrate knowledge of artificial ecosystems and the effects of technological development on flora and fauna through engineering design and management of agricultural systems.

NCCTE.TE12.05.03 - Classify energy resources as renewable or nonrenewable.

NCCTE.TE12.05.04 - Distinguish between the source of energy, the process, and the load of a power system.

NCCTE.TE12.05.05 - Compare the processes and innovative techniques used in the design of intelligent and non-intelligent transportation systems.

NCCTE.TE12.05.06 - Classify goods as durable or non-durable depending on the amount of time they have been designed to operate.

NCCTE.TE12.05.07 - Describe an historical event where the interchangeability of parts increased the effectiveness of the manufacturing process.

NCCTE.TE12.05.08 - Describe a number of requirements that determines the design of structures.

NCCTE.TE12.05.09 - Describe prefabricated materials that are used in the construction of structures.
Course: Engineering Design

NCCTE.2015.TE13 - Engineering Design

NCCTE.2015.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.2015.TE13.01.01 - Understand how Human Factors impact Design.
  NCCTE.2015.TE13.01.02 - Understand how Environmental Factors impact Design.
  NCCTE.2015.TE13.01.03 - Understand how Industrial Factors impact Design.
  NCCTE.2015.TE13.01.04 - Understand and Apply Research techniques and tools.
  NCCTE.2015.TE13.01.05 - Analyze Market and Profit Influence.
  NCCTE.2015.TE13.01.06 - Apply the Engineering Design Process.
  NCCTE.2015.TE13.01.07 - Identify and Prioritize Design Constraints.

NCCTE.2015.TE13.02.00 - Elements of Design: Apply scientific concepts and mathematical calculations used by engineers and designers for specific applications in Design.

  NCCTE.2015.TE13.02.01 - Apply critical factors that lead to design improvements.
  NCCTE.2015.TE13.02.02 - Evaluate design requirements to obtain an optimum solution.
  NCCTE.2015.TE13.02.03 - Analyze the 9 Core Technologies.
  NCCTE.2015.TE13.02.04 - Evaluate competing design values to optimize critical decisions.

NCCTE.2015.TE13.03.00 - Modeling, Prototyping, and Protecting Ideas: Apply structured design concepts to solve diverse engineering problems.

  NCCTE.2015.TE13.03.01 - Analyze diverse examples of Technology Transfer.
  NCCTE.2015.TE13.03.02 - Understand the importance of the Patent Process.
  NCCTE.2015.TE13.03.03 - Apply Engineering Resources to solve specific design problems.
  NCCTE.2015.TE13.03.04 - Apply Material Science concepts.
  NCCTE.2015.TE13.03.05 - Evaluate the role of creativity in diverse design activities.
  NCCTE.2015.TE13.03.06 - Understand patents, criteria, constraints and other design requirements.

NCCTE.2015.TE13.04.00 - Product, Systems Engineering and Analysis Management: Apply project management through the Engineering Design Process.

  NCCTE.2015.TE13.04.01 - Apply contemporary project management.
  NCCTE.2015.TE13.04.02 - Apply a quality assurance methods to ensure optimum performance.
  NCCTE.2015.TE13.04.03 - Evaluate the results of the Engineering Design Process.

NCCTE.TE13 - Engineering Design

NCCTE.TE13.01.00 - Understand Fundamentals of Engineering Design.

  NCCTE.TE13.01.01 - Relate the nature of scientific discovery and the development of technological knowledge, products and systems.
  NCCTE.TE13.01.02 - Explain the nature of engineering design including the concept of ill-structured problem solving.
  NCCTE.TE13.01.03 - Contrast between the requirements of an engineering design, such as criteria, constraints, and efficiency, and describe how they sometimes compete with each other.
  NCCTE.TE13.01.04 - Apply logic and creativity with appropriate compromises in complex engineering problems.
  NCCTE.TE13.01.05 - Explain how the stability of a technological system is influenced by all of the components in the system, especially those in the feedback loop.
NCCTE.TE13.01.06 - Develop and produce a product or system using a design process.
NCCTE.TE13.01.07 - Explain how the identification of the criteria and constraints of a product or system affect the final design and development.
NCCTE.TE13.01.08 - Summarize how optimization is used as an ongoing process or methodology for designing or making a product and is dependent on criteria and constraints.
NCCTE.TE13.01.09 - Describe how humans devise technologies to reduce the negative consequences of other technologies.
NCCTE.TE13.01.10 - Predict how new technologies create the need for new processes.
NCCTE.TE13.01.11 - Compare and contrast between the competing influences of social, cultural, and corporate pressures on the development of new technological systems and products.
NCCTE.TE13.01.12 - Differentiate between renewable and nonrenewable energy resources as a source of material for new technological products and systems.
NCCTE.TE13.01.13 - Demonstrate the ability to apply the design process by defining a problem, brainstorming, researching and generating ideas, identifying criteria and specifying constraints, exploring possibilities, selecting an approach, developing a design proposal, making a model or prototype, testing and evaluating the design using specifications, refining the design, creating or making it, and communicating processes and results.
NCCTE.TE13.01.14 - Demonstrate the ability to use creativity, resourcefulness, and the ability to visualize and think abstractly.
NCCTE.TE13.01.15 - Identify technological products that utilize thermal, radiant, electrical, mechanical, chemical, and nuclear energy systems and differentiate between them.
NCCTE.TE13.01.16 - Demonstrate the ability to apply the process of engineering design while taking into account a number of related factors.

NCCTE.TE13.02.00 - Apply Elements of Design Concepts.
NCCTE.TE13.02.01 - Demonstrate the ability to apply the design process by defining a problem, brainstorming, researching and generating ideas, identifying criteria and specifying constraints, exploring possibilities, selecting an approach, developing a design proposal, making a model or prototype, testing and evaluating the design using specifications, refining the design, creating or making it, and communicating processes and results.
NCCTE.TE13.02.02 - Justify how humans devise technologies to reduce the negative consequences of other technologies.
NCCTE.TE13.02.03 - Summarize the consideration of resource reduction and tradeoffs in an engineering design project.
NCCTE.TE13.02.04 - Describe how the resources used to create a technological device or system involves trade-offs between competing values, such as availability, cost, desirability, and waste.
NCCTE.TE13.02.05 - Develop and produce a product or system using a design process.
NCCTE.TE13.02.06 - Demonstrate how optimization is used as an ongoing process or methodology for designing or making a product and is dependent on criteria and constraints.
NCCTE.TE13.02.07 - Demonstrate the ability to apply the design process by defining a problem, brainstorming, researching and generating ideas, identifying criteria and specifying constraints, exploring possibilities, selecting an approach, developing a design proposal, making a model or prototype, testing and evaluating the design using specifications, refining the design, creating or making it, and communicating processes and results.
NCCTE.TE13.02.08 - Use established design principles to evaluate existing designs, to collect data, and to guide the design process.
NCCTE.TE13.02.09 - Defend ethical considerations and decisions made during the development of
given historical technological products and systems.

**NCCTE.TE13.02.10** - Critique the role the transfer of a technology from one society to another played in causing cultural, social, economic, and political changes affecting both societies to varying degrees.

**NCCTE.TE13.02.11** - Demonstrate the ability to apply the process of engineering design while taking into account a number of related factors.

**NCCTE.TE13.02.12** - Demonstrate how the interchangeability of parts increased the effectiveness of manufacturing processes using a small manufactured product as a model.

**NCCTE.TE13.03.00** - Understand Engineering Design Processes. (Structural Design: Modeling, Prototyping and Protecting Ideas)

**NCCTE.TE13.03.01** - Compare the methods used to protect intellectual and technological property including patents, trademarks, and copyrights; and, prepare samples.

**NCCTE.TE13.03.02** - Critique an engineering design product or system by redefining and improving the idea.

**NCCTE.TE13.03.03** - Develop and produce a product or system using a design process.

**NCCTE.TE13.03.04** - Select appropriate power systems for use in engineering design solutions.

**NCCTE.TE13.03.05** - Demonstrate the ability to apply the design process by defining a problem, brainstorming, researching and generating ideas, identifying criteria and specifying constraints, exploring possibilities, selecting an approach, developing a design proposal, making a model or prototype, testing and evaluating the design using specifications, refining the design, creating or making it, and communicating processes and results.

**NCCTE.TE13.03.06** - Test an engineering design concept by constructing a prototype as a working model and making observations and necessary adjustments.

**NCCTE.TE13.03.07** - Select durable and non-durable goods to produce appropriate solutions to engineering design problems.

**NCCTE.TE13.03.08** - Explain the requirements needed to design a structure.

**NCCTE.TE13.03.09** - Communicate and summarize the results of a model designed to solve a given engineering design problem using graphic and electronic means.

**NCCTE.TE13.03.10** - Use prefabricated materials to construct products.

**NCCTE.TE13.04.00** - Understand Production and Systems Engineering and Analysis.

**NCCTE.TE13.04.01** - Identify quality control mechanisms in a planned process to ensure that a product, service, or system meets established criteria.

**NCCTE.TE13.04.02** - Manage an engineering design project by using the processes of planning, organizing, and controlling work.

**NCCTE.TE13.04.03** - Explain technological control systems and feedback loops used to provide information during technological design application.

**NCCTE.TE13.04.04** - Demonstrate the ability to apply the design process by defining a problem, brainstorming, researching and generating ideas, identifying criteria and specifying constraints, exploring possibilities, selecting an approach, developing a design proposal, making a model or prototype, testing and evaluating the design using specifications, refining the design, creating or making it, and communicating processes and results.

**NCCTE.TE13.04.05** - Communicate using symbols, measurement, conventions, icons, graphic images, and languages that incorporate a variety of visual, auditory, and tactile stimuli.

**NCCTE.TE13.04.06** - Prepare a manufacturing plan for a model or prototype and identify the appropriate manufacturing method needed to efficiently product quantities of the finished product or system.
NCCTE.TE13.04.07 - Evaluate the design solution using conceptual, physical, and mathematical models at various intervals of the design process in order to check for proper design and to note areas where improvements are needed.

NCCTE.TE13.04.08 - Demonstrate technology transfer by applying an existing innovation developed for one purpose in a different function.

NCCTE.TE13.04.09 - Develop and produce a product or system using a design process.

NCCTE.TE13.04.10 - Illustrate how technological ideas, knowledge, or skills are shared within a technology, among technologies, or across other fields through technological innovation.

NCCTE.TE13.04.11 - Evaluate final solutions and communicate observation, processes, and results of the entire design process, using verbal, graphic, quantitative, virtual, and written means, in addition to three-dimensional models.

NCCTE.TE13.04.12 - Predict the future role of technology in the creation of artificial ecosystems for humans and animals.

Course: Principles of Technology I

NCCTE.TE21 - Principles of Technology I

NCCTE.TE21.01.00 - Analyze and apply the concept of forces in mechanical systems.
   NCCTE.TE21.01.01 - Evaluate the effects of balanced and unbalanced forces.
   NCCTE.TE21.01.02 - Use laboratory equipment to solve mechanical problems.

NCCTE.TE21.02.00 - Analyze and apply the concept of pressure in fluid systems.
   NCCTE.TE21.02.01 - Evaluate the effects of fluid pressure.
   NCCTE.TE21.02.02 - Use laboratory equipment to solve fluid pressure problems.

NCCTE.TE21.03.00 - Analyze and apply the concept of voltage in electrical systems.
   NCCTE.TE21.03.01 - Evaluate the effects of voltage difference.
   NCCTE.TE21.03.02 - Use laboratory equipment to solve voltage problems.

NCCTE.TE21.04.00 - Analyze and apply the concept of force in thermal systems.
   NCCTE.TE21.04.01 - Evaluate the effects of temperature difference.
   NCCTE.TE21.04.02 - Use laboratory equipment to solve problems in thermal systems.

NCCTE.TE21.05.00 - Analyze and apply the concept of work in mechanical systems.
   NCCTE.TE21.05.01 - Evaluate relationships between force and distance.
   NCCTE.TE21.05.02 - Use laboratory equipment to solve mechanical work problems.

NCCTE.TE21.06.00 - Analyze and apply the concept of work in fluid systems.
   NCCTE.TE21.06.01 - Evaluate relationships between pressure and volume.
   NCCTE.TE21.06.02 - Use laboratory equipment to solve fluid work problems.

NCCTE.TE21.07.00 - Analyze and apply the concept of work in electrical systems.
   NCCTE.TE21.07.01 - Evaluate relationships between voltage and charge.
   NCCTE.TE21.07.02 - Use laboratory equipment to solve electrical work problems.

NCCTE.TE21.08.00 - Analyze and apply the concept of rate in mechanical systems.
   NCCTE.TE21.08.01 - Evaluate relationships between distance and time.
   NCCTE.TE21.08.02 - Use laboratory equipment to solve mechanical rate problems.
NCCTE.TE21.09.00 - Analyze and apply the concept of rate in fluid systems.
   NCCTE.TE21.09.01 - Evaluate relationships between volume flow and time.
   NCCTE.TE21.09.02 - Use laboratory equipment to solve fluid rate problems.

NCCTE.TE21.10.00 - Analyze and apply the concept of rate in electrical systems.
   NCCTE.TE21.10.01 - Evaluate relationships between charge moved and time.
   NCCTE.TE21.10.02 - Use laboratory equipment to solve electrical rate problems.

NCCTE.TE21.11.00 - Analyze and apply the concept of rate in thermal systems.
   NCCTE.TE21.11.01 - Evaluate relationships between heat flow and time.
   NCCTE.TE21.11.02 - Use laboratory equipment to solve thermal rate problems.

NCCTE.TE21.12.00 - Analyze and apply the concept of rate in mechanical systems.
   NCCTE.TE21.12.01 - Evaluate the effects of friction and drag in mechanical systems.
   NCCTE.TE21.12.02 - Use laboratory equipment to solve mechanical rate problems.

NCCTE.TE21.13.00 - Analyze and apply the concept of resistance in fluid systems.
   NCCTE.TE21.13.01 - Evaluate the effects of fluid resistance.
   NCCTE.TE21.13.02 - Use laboratory equipment to solve fluid resistance problems.

NCCTE.TE21.14.00 - Analyze and apply the concept of resistance in electrical systems.
   NCCTE.TE21.14.01 - Evaluate the effects of electrical resistance.
   NCCTE.TE21.14.02 - Use laboratory equipment to solve electrical resistance problems.

NCCTE.TE21.15.00 - Analyze and apply the concept of resistance in thermal systems.
   NCCTE.TE21.15.01 - Evaluate the effects of thermal resistance and conductivity.
   NCCTE.TE21.15.02 - Use laboratory equipment to solve thermal resistance problems.

NCCTE.TE21.16.00 - Analyze and apply the concept of potential energy in mechanical and fluid systems.
   NCCTE.TE21.16.01 - Evaluate the effects of potential energy.
   NCCTE.TE21.16.02 - Use laboratory equipment to solve potential energy problems.

NCCTE.TE21.17.00 - Analyze and apply the concept of kinetic energy in mechanical and fluid systems.
   NCCTE.TE21.17.01 - Evaluate the effects of kinetic energy.
   NCCTE.TE21.17.02 - Use laboratory equipment to solve kinetic energy problems.

NCCTE.TE21.18.00 - Analyze and apply the concept of potential energy in electrical systems.
   NCCTE.TE21.18.01 - Evaluate the effect of capacitance and inductance.
   NCCTE.TE21.18.02 - Use laboratory equipment to solve electrical energy problems.

NCCTE.TE21.19.00 - Analyze and apply the concept of energy in thermal systems.
   NCCTE.TE21.19.01 - Evaluate the effects of heat and energy transfer.
   NCCTE.TE21.19.02 - Use laboratory equipment to solve thermal energy problems.

NCCTE.TE21.20.00 - Analyze and apply the concept of power in mechanical systems.
   NCCTE.TE21.20.01 - Evaluate the effects of mechanical power applications.
   NCCTE.TE21.20.02 - Use laboratory equipment to solve mechanical power problems.
NCCTE.TE21.21.00 - Analyze and apply the concept of power in fluid systems.
   NCCTE.TE21.21.01 - Evaluate the effects of fluid power applications.
   NCCTE.TE21.21.02 - Use laboratory equipment to solve fluid power problems.

NCCTE.TE21.22.00 - Analyze and apply the concept of power in electrical systems.
   NCCTE.TE21.22.01 - Evaluate the effects of electrical power applications.
   NCCTE.TE21.22.02 - Use laboratory equipment to solve electrical power problems.

Course: Principles of Technology II
NCCTE.TE22 - Principles of Technology II
   NCCTE.TE22.01.00 - Analyze and apply the concept of force transformers in linear mechanical systems.
      NCCTE.TE22.01.01 - Evaluate inputs and outputs of linear mechanical force transformers.
      NCCTE.TE22.01.02 - Use laboratory equipment to solve linear mechanical force transformer problems.

   NCCTE.TE22.02.00 - Analyze and apply the concept of force transformer in rotational mechanical systems.
      NCCTE.TE22.02.01 - Evaluate inputs and outputs of rotational mechanical force transformers.
      NCCTE.TE22.02.02 - Use laboratory equipment to solve rotational mechanical force transformer problems.

   NCCTE.TE22.03.00 - Analyze and apply the concept of force transformers in fluid systems.
      NCCTE.TE22.03.01 - Evaluate inputs and outputs of fluid force transformers.
      NCCTE.TE22.03.02 - Use laboratory equipment to solve fluid force transformer problems.

   NCCTE.TE22.04.00 - Analyze and apply the concept of force transformer in electricity systems.
      NCCTE.TE22.04.01 - Evaluate inputs and outputs of electrical force transformers.
      NCCTE.TE22.04.02 - Use laboratory equipment to solve electrical force transformer problems.

   NCCTE.TE22.05.00 - Analyze and apply the concept of linear momentum.
      NCCTE.TE22.05.01 - Evaluate relationships between linear momentum and impulse.
      NCCTE.TE22.05.02 - Use laboratory equipment to solve linear momentum and impulse problems.

   NCCTE.TE22.06.00 - Analyze and apply the concept of angular momentum.
      NCCTE.TE22.06.01 - Evaluate relationships between angular momentum and impulse.
      NCCTE.TE22.06.02 - Use laboratory equipment to solve angular momentum and impulse problems.

   NCCTE.TE22.07.00 - Analyze and apply the concept involving the characteristics of waves.
      NCCTE.TE22.07.01 - Evaluate wave form characteristics.
      NCCTE.TE22.07.02 - Use laboratory equipment to solve wave problems.

   NCCTE.TE22.08.00 - Analyze and apply the concept involving the applications of waves and vibrations.
      NCCTE.TE22.08.01 - Evaluate the effects of waves and vibrations.
      NCCTE.TE22.08.02 - Use laboratory equipment to solve wave application problems.

   NCCTE.TE22.09.00 - Analyze and apply the concepts of energy conversions.
      NCCTE.TE22.09.01 - Evaluate mechanical energy conversion.
      NCCTE.TE22.09.02 - Use laboratory equipment to solve mechanical energy conversion problems.
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NCCTE.TE22.10.00 - Analyze and apply the concepts of energy conversion in fluid energy systems.
   NCCTE.TE22.10.01 - Evaluate fluid energy conversion.
   NCCTE.TE22.10.02 - Use laboratory equipment to solve fluid energy conversion problems.

NCCTE.TE22.11.00 - Analyze and apply the concept of energy conversion in electrical systems.
   NCCTE.TE22.11.01 - Evaluate electrical energy conversion.
   NCCTE.TE22.11.02 - Use laboratory equipment to solve electrical energy conversion problems.

NCCTE.TE22.12.00 - Analyze and apply the concepts of energy conversion in thermal energy systems.
   NCCTE.TE22.12.01 - Evaluate thermal energy conversion.
   NCCTE.TE22.12.02 - Use laboratory equipment to solve thermal energy conversion problems.

NCCTE.TE22.13.00 - Analyze and apply the concept of transducers in mechanical systems.
   NCCTE.TE22.13.01 - Evaluate the application of mechanical transducers.
   NCCTE.TE22.13.02 - Use transducers to solve mechanical problems.

NCCTE.TE22.14.00 - Analyze and apply the concept of transducers in fluid systems.
   NCCTE.TE22.14.01 - Evaluate fluid transducers.
   NCCTE.TE22.14.02 - Use transducers to solve fluid problems.

NCCTE.TE22.15.00 - Analyze and apply the concepts of transducers in electrical systems.
   NCCTE.TE22.15.01 - Evaluate electrical transducers.
   NCCTE.TE22.15.02 - Use transducers to solve electrical problems.

NCCTE.TE22.16.00 - Analyze and apply the concept of transducers in thermal systems.
   NCCTE.TE22.16.01 - Evaluate thermal transducers.
   NCCTE.TE22.16.02 - Use transducers to solve thermal problems.

NCCTE.TE22.17.00 - Analyze and apply the concept of radiation.
   NCCTE.TE22.17.01 - Explore the characteristics of electromagnetic radiation.
   NCCTE.TE22.17.02 - Explore the characteristics of nuclear radiation.

NCCTE.TE22.18.00 - Analyze and apply the concepts of light and optic systems.
   NCCTE.TE22.18.01 - Evaluate light reflection and refraction.
   NCCTE.TE22.18.02 - Evaluate interference and diffraction.
   NCCTE.TE22.18.03 - Evaluate the effects of laser light.
   NCCTE.TE22.18.04 - Evaluate the effects of optical systems.

NCCTE.TE22.19.00 - Analyze and apply the concept of time constants.
   NCCTE.TE22.19.01 - Explore time constants in the mechanical and fluid energy systems.
   NCCTE.TE22.19.02 - Explore time constants in the electrical and thermal energy systems.

NCCTE.TE22.20.00 - Develop presentation on the concepts of radiation, light and optics, or time constants.
   NCCTE.TE22.20.01 - Use laboratory equipment to solve problems in radiation, light and optics, or time constants.
   NCCTE.TE22.20.02 - Present lecture and demonstration on the concepts of radiation, light and optics,
or time constants.

Course: Scientific and Technical Visualization I
NCCTE.TS21 - Scientific and Technical Visualization I
   NCCTE.TS21.01.00 - Explain basic business meeting skills and goal setting.
   NCCTE.TS21.01.01 - Identify basic business meeting procedures.
   NCCTE.TS21.01.02 - Establish personal and organizational goals.

   NCCTE.TS21.02.00 - Recognize the history and impact of scientific & technical visualization.
   NCCTE.TS21.02.01 - Describe the historical significance of scientific & technical visualization.
   NCCTE.TS21.02.02 - Describe the technological advancements of scientific & technical visualization.
   NCCTE.TS21.02.03 - Recognize types of scientific & technical visualization and related careers.

   NCCTE.TS21.03.00 - Analyze the use of visualization tools.
   NCCTE.TS21.03.01 - Describe basic computer hardware and software.
   NCCTE.TS21.03.02 - Interpret the use and application of different types of software programs.
   NCCTE.TS21.03.03 - Summarize the ethical use of electronic media.
   NCCTE.TS21.03.04 - Demonstrate basic computer knowledge.

   NCCTE.TS21.04.00 - Apply basic principles of visualization.
   NCCTE.TS21.04.01 - Describe design fundamentals.
   NCCTE.TS21.04.02 - Interpret color and its applications.
   NCCTE.TS21.04.03 - Discuss vector and bitmap images.
   NCCTE.TS21.04.04 - Identify effective 2D presentation techniques.
   NCCTE.TS21.04.05 - Describe 2D software applications and their basic functions.
   NCCTE.TS21.04.06 - Demonstrate effective presentation techniques using appropriate design fundamentals.

   NCCTE.TS21.05.00 - Synthesize data for scientific & technical visualizations.
   NCCTE.TS21.05.01 - Evaluate methods for displaying data using charts and graphs.
   NCCTE.TS21.05.02 - Describe the steps of a design brief.
   NCCTE.TS21.05.03 - Interpret data for use in charts and graphs.
   NCCTE.TS21.05.04 - Apply data to make an appropriate graph.

   NCCTE.TS21.06.00 - Demonstrate visualization processes.
   NCCTE.TS21.06.01 - Recognize digital image formats.
   NCCTE.TS21.06.02 - Summarize basic 3D modeling concepts.
   NCCTE.TS21.06.03 - Recognize basic rendering techniques.
   NCCTE.TS21.06.04 - Summarize basic animation techniques.
   NCCTE.TS21.06.05 - Produce a 3D model with animation and rendering.

Course: Scientific and Technical Visualization II
NCCTE.TS22 - Scientific and Technical Visualization II
   NCCTE.TS22.01.00 - Explain oral communication and job seeking skills.
   NCCTE.TS22.01.01 - Describe how to deliver an extemporaneous technical presentation.
   NCCTE.TS22.01.02 - Prepare an extemporaneous technical presentation.
   NCCTE.TS22.01.03 - Specify how to complete a letter of application, a job application, and a job
interview.

NCCTE.TS22.02.00 - Apply advanced tools of visualization.
NCCTE.TS22.02.01 - Describe how computers store information.
NCCTE.TS22.02.02 - Define how to apply pixel values to digital images.
NCCTE.TS22.02.03 - Apply pixel values to digital images.
NCCTE.TS22.02.04 - Identify trends in scientific & technical visualization tools.

NCCTE.TS22.03.00 - Demonstrate advanced principles of visualization.
NCCTE.TS22.03.01 - Recognize advanced 2D design concepts.
NCCTE.TS22.03.02 - Describe advanced imaging techniques.
NCCTE.TS22.03.03 - Identify advanced presentation techniques.
NCCTE.TS22.03.04 - Demonstrate advanced presentation techniques.
NCCTE.TS22.03.05 - Identify basic web page design.
NCCTE.TS22.03.06 - Demonstrate basic web page design.

NCCTE.TS22.04.00 - Demonstrate advanced visualization processes.
NCCTE.TS22.04.01 - Summarize advanced 3D modeling.
NCCTE.TS22.04.02 - Interpret advanced animation techniques.
NCCTE.TS22.04.03 - Describe video-editing techniques.
NCCTE.TS22.04.04 - Demonstrate video-editing techniques.

NCCTE.TS22.05.00 - Demonstrate advanced scientific visualization.
NCCTE.TS22.05.01 - Recognize cells and their parts.
NCCTE.TS22.05.02 - Create a visualization of the cell and its parts.
NCCTE.TS22.05.03 - Recognize plate tectonics.
NCCTE.TS22.05.04 - Create a visualization of plate tectonics.
NCCTE.TS22.05.05 - Describe DNA and gel electrophoresis.
NCCTE.TS22.05.06 - Create a visualization of DNA and gel electrophoresis.
NCCTE.TS22.05.07 - Explain different simple machines.
NCCTE.TS22.05.08 - Create a visualization of simple machines.
NCCTE.TS22.05.09 - Create an advanced visualization.

NCCTE.TS22.06.00 - Demonstrate preparedness for the future.
NCCTE.TS22.06.01 - Summarize different types of portfolios.
NCCTE.TS22.06.02 - Synthesize an electronic portfolio.

Course: Game Art and Design
NCCTE.TS31 - Game Art and Design
NCCTE.TS31.01.00 - Unit 1: Understand basic history of game design.
NCCTE.TS31.01.01 - Recall the general history and development of gaming, non-electronic and electronic.
NCCTE.TS31.01.02 - Explain how technology and ethics have affected game development.
NCCTE.TS31.01.03 - Summarize the current state and future trends in game development.
NCCTE.TS31.02.00 - Unit 2: Analyze job readiness in the game industry.
NCCTE.TS31.02.01 - Recognize the skills necessary to work in the game industry.
NCCTE.TS31.02.02 - Analyze team structure in game design.
NCCTE.TS31.02.03 - Execute the documents necessary to enter the game industry.

NCCTE.TS31.03.00 - Unit 3: Apply game culture and game play.
NCCTE.TS31.03.01 - Recognize social game interaction.
NCCTE.TS31.03.02 - Summarize formal game elements.
NCCTE.TS31.03.03 - Categorize game theory and genres.
NCCTE.TS31.03.04 - Execute sample games from selected genres.

NCCTE.TS31.04.00 - Unit 4: Produce Game prototypes.
NCCTE.TS31.04.01 - Exampling game conceptualization including brain storming, sketching, and storyboarding.
NCCTE.TS31.04.02 - Execute a game design document.
NCCTE.TS31.04.03 - Create an original board game.
NCCTE.TS31.04.04 - Evaluate the board game design using game design parameters.

NCCTE.TS31.05.00 - Unit 5: Create 3D assets used in games.
NCCTE.TS31.05.01 - Execute 3D modeling including polygonal modeling.
NCCTE.TS31.05.02 - Execute 3D textures and maps.
NCCTE.TS31.05.03 - Produce two related game levels and a 3D character.

NCCTE.TS31.06.00 - Unit 6: Apply 2D game design.
NCCTE.TS31.06.01 - Recognize a basic 2D game engine interface and correct terminology.
NCCTE.TS31.06.02 - Illustrate 2D game sprites, actions, events, and sounds.
NCCTE.TS31.06.03 - Execute 2D games that represent different genres.
NCCTE.TS31.06.04 - Illustrate 2D game levels.

NCCTE.TS31.07.00 - Unit 7: Create 2D games.
NCCTE.TS31.07.01 - Summarize the development process of 2D game design.
NCCTE.TS31.07.02 - Produce original 2D backgrounds and sprites.
NCCTE.TS31.07.03 - Produce an original 2D game using existing game theory and design.
NCCTE.TS31.07.04 - Critique 2D games.
Trade and Industrial Education

Grade: Grade 9 - 12
Course: Introduction to Graphic Communications

NCCTE.IA11 - Introduction to Graphic Communications
   NCCTE.IA11.01.00 - Understanding the Printing Industry.
   NCCTE.IA11.02.00 - Understanding Environmental Health, Safety, and First Aid in the Printing Industry.
   NCCTE.IA11.03.00 - Understand Digital File Preparation Process used in printing industry.
   NCCTE.IA11.04.00 - Understand Image Capture Process used in printing industry.
   NCCTE.IA11.05.00 - Understand Color Theory used in printing industry.
   NCCTE.IA11.06.00 - Understand Digital File Output Process used in printing industry.
   NCCTE.IA11.07.00 - Understand Press Operations (Offset and Digital) used in printing industry.
   NCCTE.IA11.08.00 - Understand Bindery Operations used in printing industry.
   NCCTE.IA11.09.00 - Apply Measurements Procedures used in printing industry.
   NCCTE.IA11.10.00 - Apply Basic Math Procedures used in printing industry.
   NCCTE.IA11.11.00 - Understand Employment and Interpersonal Skills in printing industry.

Course: Digital File Preparation

NCCTE.IA12 - Digital File Preparation
   NCCTE.IA12.01.00 - Apply basic procedures needed for Orientation in Digital File Preparation.
   NCCTE.IA12.02.00 - Apply procedures used in Type for Digital File Preparation.
   NCCTE.IA12.03.00 - Apply procedures used in Page Layout for Digital File Preparation.
   NCCTE.IA12.04.00 - Apply procedures used in Image Capture for Digital File Preparation.
   NCCTE.IA12.05.00 - Apply procedures used to implement PDF for Digital File Preparation.

Course: Print Advertising and Design

NCCTE.IA13 - Print Advertising and Design
   NCCTE.IA13.01.00 - Apply basic procedures needed for Orientation in Advertising and Design.
   NCCTE.IA13.02.00 - Apply procedures used in Type for Advertising and Design.
NCCTE.IA13.03.00 - Apply procedures used in Page Layout for Advertising and Design.

NCCTE.IA13.04.00 - Apply procedures used in Image Capture for Advertising and Design.

NCCTE.IA13.05.00 - Apply procedures used in Illustration for Advertising and Design.

NCCTE.IA13.06.00 - Apply procedures used to implement PDF for Digital File Preparation.

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).
  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

NCCTE.2015.IC62 - Drafting II - Architectural
  NCCTE.2015.IC62.01.00 - Understand Architectural Styles and Industry Terms

NCCTE.2015.IC62.02.00 - Apply Procedures to Create Floor Plans

NCCTE.2015.IC62.03.00 - Apply Procedures to Create Foundation Plans and Levels of a Building
NCCTE.2015.IC62.04.00 - Apply Procedures to Create Simple Roof and Floor System Designs

NCCTE.2015.IC62.05.00 - Apply Procedures for Drawing View types

NCCTE.2015.IC62.06.00 - Apply Procedures to Complete a Residential Construction Documents (CD) Set

NCCTE.IC62 - Drafting II - Architectural
   NCCTE.IC62.01.00 - Demonstrate job seeking skills.
      NCCTE.IC62.01.01 - Identify jobs and job ethics associated with architectural drafting.
      NCCTE.IC62.01.02 - Participate in a job interview.

   NCCTE.IC62.02.00 - Utilize Computer Aided Drafting (CAD) skills to produce drawings.
      NCCTE.IC62.02.01 - Identify common terms and definitions relating to Computer Aided Drafting.
      NCCTE.IC62.02.02 - Construct architectural drawings using CAD.
      NCCTE.IC62.02.03 - Critique CAD drawings.

   NCCTE.IC62.03.00 - Draw floor plans.
      NCCTE.IC62.03.01 - Identify terms and definitions related to single-level residential space planning.
      NCCTE.IC62.03.02 - Analyze accepted principles of single-view residential space planning.
      NCCTE.IC62.03.03 - Determine door and window types.
      NCCTE.IC62.03.04 - Identify floor plan symbols.
      NCCTE.IC62.03.05 - Identify terms and symbols used to indicate electrical fixtures.
      NCCTE.IC62.03.06 - Explain the rules and standards for electrical fixture placement.
      NCCTE.IC62.03.07 - Evaluate the steps in drawing, dimensioning, and annotating a single-level floor plan.
      NCCTE.IC62.03.08 - Draw a single-level residential floor plan.

   NCCTE.IC62.04.00 - Draw foundation plans.
      NCCTE.IC62.04.01 - Identify terminology related to foundation plans.
      NCCTE.IC62.04.02 - Identify common foundation systems.
      NCCTE.IC62.04.03 - Explain footing and foundation wall construction.
      NCCTE.IC62.04.04 - Explain the purpose of a foundation plan and describe its features.
      NCCTE.IC62.04.05 - Draw a foundation plan.

   NCCTE.IC62.05.00 - Draw roof plans.
      NCCTE.IC62.05.01 - Identify terms and definitions related to roof plans.
      NCCTE.IC62.05.02 - Explain concepts of roof construction.
      NCCTE.IC62.05.03 - Draw roof plans.

   NCCTE.IC62.06.00 - Draw wall sections and details.
      NCCTE.IC62.06.01 - Identify terms and definitions related to wall sections and details.
      NCCTE.IC62.06.02 - Explain concepts of wood sill and floor construction.
      NCCTE.IC62.06.03 - Explain concepts of wood frame wall construction.
      NCCTE.IC62.06.04 - Identify insulation and vapor barrier materials and construction.
      NCCTE.IC62.06.05 - Describe the purpose and features of a wall section.
      NCCTE.IC62.06.06 - Draw typical wall sections.
NCCTE.IC62.07.00 - Draw exterior elevations.
NCCTE.IC62.07.01 - Identify terms and definitions related to exterior elevations.
NCCTE.IC62.07.02 - Describe the purpose and features of an exterior elevation.
NCCTE.IC62.07.03 - Draw exterior elevations.

Course: Drafting III - Architectural
NCCTE.2015.IC63 - Drafting III - Architectural
NCCTE.2015.IC63.01.00 - Understand Foundation Design, Calculations and Construction
NCCTE.2015.IC63.02.00 - Apply Procedures to Create Basic Electrical Design Concepts
NCCTE.2015.IC63.03.00 - Apply Procedures to Create Stair/Railing Designs for Construction
NCCTE.2015.IC63.04.00 - Apply Procedures to Create Advanced Kitchen and Bath Details
NCCTE.2015.IC63.05.00 - Apply Procedures to Create Multi-level Residential Floor Plans
NCCTE.2015.IC63.06.00 - Apply Procedures to Create a Site Development Plan
NCCTE.2015.IC63.07.00 - Apply Procedures and Construction Techniques to Create a Small Commercial Building Design
NCCTE.2015.IC63.08.00 - Apply Procedures to Create Rendering and Walkthroughs

NCCTE.IC63 - Drafting III - Architectural
NCCTE.IC63.01.00 - Demonstrate oral presentation skills.
NCCTE.IC63.01.01 - Prepare and deliver a technical presentation with visual aids.
NCCTE.IC63.01.02 - Prepare and deliver extemporaneous technical presentations.
NCCTE.IC63.02.00 - Identify architectural styles.
NCCTE.IC63.02.01 - Define terms related to selected styles of residential architecture.
NCCTE.IC63.02.02 - Explain concepts associated with selected styles of residential architecture.
NCCTE.IC63.02.03 - Produce a collection of illustrations or a presentation that demonstrates the various elements of residential styles.
NCCTE.IC63.03.00 - Create site plan drawings.
NCCTE.IC63.03.01 - Define terms related to site development.
NCCTE.IC63.03.02 - Explain factors to be considered when developing a site for residential construction.
NCCTE.IC63.03.03 - Explain the lines, symbols, and features found on site plans.
NCCTE.IC63.03.04 - Explain how to develop a site plan drawing.
NCCTE.IC63.03.05 - Draw a site plan for a residential structural.
NCCTE.IC63.04.00 - Design and draw foundation plans.
NCCTE.IC63.04.01 - Identify terms and definitions relating to foundation design and construction.
NCCTE.IC63.04.02 - Explain use of footings, foundation walls, girders, piers, ventilation, and slab floor/ Foundations.
NCCTE.IC63.04.03 - Design and draw a foundation system.

NCCTE.IC63.05.00 - Design and draw a stair system.
  NCCTE.IC63.05.01 - Identify terms and definitions relating to stair design and construction.
  NCCTE.IC63.05.02 - Identify the parts and standards used to construct a stair system.
  NCCTE.IC63.05.03 - Explain the calculations for rise, run, total rise, total run, and floor cutout.
  NCCTE.IC63.05.04 - Draw plans for stair construction.

NCCTE.IC63.06.00 - Design and draw kitchen cabinet layouts.
  NCCTE.IC63.06.01 - Identify terms and concepts related to kitchen and bath design.
  NCCTE.IC63.06.02 - Explain the elements of kitchen and bath design.
  NCCTE.IC63.06.03 - Describe plans for kitchen cabinet drawings.
  NCCTE.IC63.06.04 - Draw interior elevation plans for kitchens and baths.

Course: Drafting II - Engineering

NCCTE.IV22 - Drafting II - Engineering
  NCCTE.IV22.01.00 - Demonstrate communication, problem solving, and team building skills.
    NCCTE.IV22.01.01 - Demonstrate communication skills.
    NCCTE.IV22.01.02 - Demonstrate problem solving and team building skills.

  NCCTE.IV22.02.00 - Demonstrate 3D solid modeling techniques.
    NCCTE.IV22.02.01 - Explain techniques for creating 3D geometry.
    NCCTE.IV22.02.02 - Explain techniques for modifying and duplicating 3D geometry.
    NCCTE.IV22.02.03 - Construct a 3D solid model.

  NCCTE.IV22.03.00 - Demonstrate basic manufacturing processes.
    NCCTE.IV22.03.01 - Explain the concepts of manufacturing processes.
    NCCTE.IV22.03.02 - Explain the ANSI standards of applying annotations to a drawing that best describes the manufacturing processes.
    NCCTE.IV22.03.03 - Demonstrate the skills needed in applying annotations to a drawing that best describes the manufacturing processes.

  NCCTE.IV22.04.00 - Demonstrate intermediate dimensioning and conventional tolerancing techniques.
    NCCTE.IV22.04.01 - Explain intermediate dimensioning techniques.
    NCCTE.IV22.04.02 - Explain procedures for determining tolerance dimensions.
    NCCTE.IV22.04.03 - Construct drawings that require conventional tolerances.

  NCCTE.IV22.05.00 - Demonstrate the correct techniques for preparing sectional views.
    NCCTE.IV22.05.01 - Explain the concepts and principles of sectional views.
    NCCTE.IV22.05.02 - Construct sectional views.

  NCCTE.IV22.06.00 - Prepare primary auxiliary views.
    NCCTE.IV22.06.01 - Explain the concepts and principles of primary auxiliary views.
    NCCTE.IV22.06.02 - Construct primary auxiliary views.

  NCCTE.IV22.07.00 - Prepare pattern developments.
    NCCTE.IV22.07.01 - Explain techniques and procedures for constructing pattern developments.
NCCTE.IV22.07.02 - Construct pattern developments.

Course: Drafting III - Engineering

NCCTE.IV23 - Drafting III - Engineering
   NCCTE.IV23.01.00 - Demonstrate job-seeking and interview skills.
   NCCTE.IV23.01.01 - Demonstrate job-seeking skills.
   NCCTE.IV23.01.02 - Prepare and participate in a job interview.

NCCTE.IV23.02.00 - Apply the concepts and principles of the engineering design process.
   NCCTE.IV23.02.01 - Explain the linear design process.
   NCCTE.IV23.02.02 - Explain the concurrent engineering design process.
   NCCTE.IV23.02.03 - Apply design concepts and principles to solve problems.

NCCTE.IV23.03.00 - Demonstrate the concepts and principles of constraint-based/parametric solid modeling.
   NCCTE.IV23.03.01 - Explain the terminology related to constraint-based/parametric solid modeling.
   NCCTE.IV23.03.02 - Explain the concepts related to constraint-based/parametric solid modeling.
   NCCTE.IV23.03.03 - Create solid models using a constraint-based/parametric solid modeler.

NCCTE.IV23.04.00 - Construct various types of thread and fastener representations and their annotations.
   NCCTE.IV23.04.01 - Specify threads and fasteners on a technical drawing.
   NCCTE.IV23.04.02 - Construct an assembly drawing requiring the use of fasteners.

NCCTE.IV23.05.00 - Demonstrate working drawing principles and techniques.
   NCCTE.IV23.05.01 - Explain the concepts and principles underlying the creation of detail drawings.
   NCCTE.IV23.05.02 - Explain the concepts and principles underlying the creation of assembly drawings.
   NCCTE.IV23.05.03 - Interpret information on a working drawing.
   NCCTE.IV23.05.04 - Construct working drawings.

NCCTE.IV23.06.00 - Demonstrate basic geometric dimensioning and tolerancing techniques.
   NCCTE.IV23.06.01 - Explain geometric dimensioning tolerancing terms and techniques.
   NCCTE.IV23.06.02 - Construct a drawing with geometric dimensions and tolerances.

NCCTE.IV23.07.00 - Demonstrate portfolio development techniques.
   NCCTE.IV23.07.01 - Describe methods for creating an electronic portfolio.
   NCCTE.IV23.07.02 - Create an electronic portfolio of your engineering graphics work.

Course: Core and Sustainable Construction

NCCTE.2015.IC00 - Core and Sustainable Construction
   NCCTE.2015.IC00.01.00 - Understand Basis Safety (00101-09)

NCCTE.2015.IC00.02.00 - Understand Introduction to Construction Math (00102-09)

NCCTE.2015.IC00.03.00 - Understand Introduction to Hand Tools (00103-09)

NCCTE.2015.IC00.04.00 - Understand Introduction to Power Tools (00104-09)
Masonry I

NCCTE.IC11 - Masonry I
NCCTE.IC11.01.00 - Understand Introduction to Masonry. (Module 28101-04)
NCCTE.IC11.02.00 - Apply Masonry Tools and Equipment Use. (Module 28102-04)
NCCTE.IC11.03.00 - Understand Measurements, Drawings and Specifications. (Module 28103-04)
NCCTE.IC11.04.00 - Apply Mortar Procedures. (Module 28104-04)
NCCTE.IC11.05.00 - Apply Masonry Units and Installation Techniques. (Module 28105-04)

Course: Masonry II

NCCTE.IC12 - Masonry II
NCCTE.IC12.01.00 - Understand Residential Plans and Drawing Interpretation. (Module 28201-05)
NCCTE.IC12.02.00 - Understand Residential Masonry. (Module 28202-05)
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.IC12.03.00 - Apply Grout and Other Reinforcement Processes. (Module 28203-05)
NCCTE.IC12.04.00 - Apply Metalwork in Masonry. (Module 28204-05)
NCCTE.IC12.05.00 - Understand Introduction to Weatherization. (Module 59101-10)

Course: Masonry III
NCCTE.IC13 - Masonry III
NCCTE.IC13.01.00 - Apply Advanced Laying Techniques. (Module 28205-05)
NCCTE.IC13.02.00 - Apply Construction Techniques and Moisture Control Procedures. (Module 28206-05)
NCCTE.IC13.03.00 - Apply Construction, Inspection, and Quality Control Processes. (Module 28207-05)

Course: Carpentry I
NCCTE.IC21 - Carpentry I
NCCTE.IC21.01.00 - Understand Orientation to the Trade. (Module 27101-06)
NCCTE.IC21.02.00 - Understand Building Materials, Fasteners, and Adhesives. (Module 27102-06)
NCCTE.IC21.03.00 - Apply Hand and Power Tools. (Module 27103-06)
NCCTE.IC21.04.00 - Understand Reading Plans and Elevations. (Module 27104-06)
NCCTE.IC21.05.00 - Understand Introduction to Concrete, Reinforcing Materials, and Forms. (Module 27108-06)
NCCTE.IC21.06.00 - Apply Floor System Construction Procedures. (Module 27105-06)
NCCTE.IC21.07.00 - Apply Wall and Ceiling Framing Procedures. (Module 27106-06)
NCCTE.IC21.08.00 - Apply Basic Stair Layout. (Module 27110-06)

Course: Carpentry II
NCCTE.IC22 - Carpentry II
NCCTE.IC22.01.00 - Apply Roof Framing Procedures. (Module 27107-06)
NCCTE.IC22.02.00 - Apply Roofing Applications. (Module 27202-07)
NCCTE.IC22.03.00 - Understand Thermal and Moisture Protection. (Module 27203-07)
NCCTE.IC22.04.00 - Understand Introduction to Weatherization. (Module 59101-10)
NCCTE.IC22.05.00 - Apply Windows and Exterior Doors Installation. (Module 27109-06)
NCCTE.IC22.06.00 - Apply Exterior Finishing. (Module 27204-07)
Course: Carpentry III
NCCTE.IC23 - Carpentry III
NCCTE.IC23.01.00 - Understand Commercial Drawing. (Module 27201-07)
NCCTE.IC23.02.00 - Apply Cold-Formed Steel Framing Construction Method. (Module 27205-07)
NCCTE.IC23.03.00 - Apply Drywall Installations. (Module 27206-07)
NCCTE.IC23.04.00 - Apply Drywall Finishing Procedures. (Module 27207-07)
NCCTE.IC23.05.00 - Apply Doors and Door Hardware Installation. (Module 27208-07)
NCCTE.IC23.06.00 - Apply Windows, Door, Floor, and Ceiling Trim Procedures. (27210-07)

Course: Electrical Trades I
NCCTE.IC41 - Electrical Trades I
NCCTE.IC41.01.00 - Understand Orientation. (Module 26101-08)
NCCTE.IC41.02.00 - Understand Electrical Safety. (Module 26102-08)
NCCTE.IC41.03.00 - Understand Introduction to Electrical Circuits. (Module 26103-08)
NCCTE.IC41.04.00 - Understand Electrical Theory. (Module 26104-08)
NCCTE.IC41.05.00 - Understand Introduction to the National Electric Code. (Module 26105-08)
NCCTE.IC41.06.00 - Apply Device Boxes to Structure. (Module 26106-08)
NCCTE.IC41.07.00 - Apply Hand Bending Techniques. (Module 26107-08)
NCCTE.IC41.08.00 - Apply Raceways and Fittings to Structure. (Module 26108-08)
NCCTE.IC41.09.00 - Understand Introduction to Weatherization. (Module 59101-10)

Course: Electrical Trades II
NCCTE.IC42 - Electrical Trades II
NCCTE.IC42.01.00 - Understand Conductors and Cables. (Module 26109-08)
NCCTE.IC42.02.00 - Understand Construction Drawings. (Module 26110-08)
NCCTE.IC42.03.00 - Understand Residential Electric Services. (Module 26111-08)
NCCTE.IC42.04.00 - Apply Electrical Test Equipment Usage. (Module 26112-08)
NCCTE.IC42.05.00 - Understand Alternating Current (A/C) Theory. (Module 26201-08)
NCCTE.IC42.06.00 - Apply Grounding and Bonding Techniques. (Module 26209-08)
NCCTE.IC42.07.00 - Understand Motors: Theory and Application. (Module 26202-08)

NCCTE.IC42.08.00 - Apply Electric Lighting to Structures. (Module 26203-08)

Course: Electrical Trades III

NCCTE.IC43 - Electrical Trades III

NCCTE.IC43.01.00 - Apply Conduit Bending Techniques. (Module 26204-08)

NCCTE.IC43.02.00 - Apply Pull and Junction Boxes to Structure. (Module 26205-08)

NCCTE.IC43.03.00 - Apply Conductor Installations. (Module 26206-08)

NCCTE.IC43.04.00 - Apply Cable Tray to Structure. (Module 26207-08)

NCCTE.IC43.05.00 - Apply Conductor Terminations and Splices. (Module 26208-08)

NCCTE.IC43.06.00 - Apply Circuit Breakers and Fuses. (Module 26210-08)

NCCTE.IC43.07.00 - Understand Control Systems and Fundamental Concepts. (Module 26211-08)

Course: Cabinetmaking I

NCCTE.IM21 - Cabinetmaking I

NCCTE.IM21.01.00 - Demonstrate basic business meeting skills and goal setting.

NCCTE.IM21.01.01 - Demonstrate basic business meeting skills.

NCCTE.IM21.01.02 - Establish personal and organizational goals.

NCCTE.IM21.02.00 - Identify terms, skill requirements and employment opportunities.

NCCTE.IM21.02.01 - Describe work performed in the trade, recognizing basic skills and physical requirements.

NCCTE.IM21.02.02 - Describe materials, processes, and categories of products produced.

NCCTE.IM21.02.03 - Identify student requirements for successful participation in the cabinetmaking program.

NCCTE.IM21.03.00 - Define, discuss and interpret basic safety associated in a school shop and workplace after review of the prerequisite safety courses.

NCCTE.IM21.03.01 - Recognize terms associated with work safety.

NCCTE.IM21.03.02 - Identify common hazards in the workplace.

NCCTE.IM21.03.03 - Identify safety gear, protective garments, and safety equipment.

NCCTE.IM21.03.04 - Identify personal and general safety rules.

NCCTE.IM21.03.05 - Explain OSHA MSDS sheets.

NCCTE.IM21.03.06 - Recognize right to know regulations.

NCCTE.IM21.03.07 - Discuss safety requirements before using hand or power tools.

NCCTE.IM21.03.08 - Describe a safety checklist.

NCCTE.IM21.03.09 - Discuss safety requirements for applying finish.

NCCTE.IM21.04.00 - Demonstrate the various units of measurement and layout tools used in the trade.

NCCTE.IM21.04.01 - Identify basic units of the standard (US) measurement system.
NCCTE.IM21.04.02 - Perform basic mathematical calculations.
NCCTE.IM21.04.03 - Identify measurement and layout tools.
NCCTE.IM21.04.04 - Use selected measurement and layout tools.

NCCTE.IM21.05.00 - Describe the basic types of materials.
NCCTE.IM21.05.01 - Recognize characteristics of softwoods and hardwoods.
NCCTE.IM21.05.02 - Recognize the physical characteristics of plywood products.
NCCTE.IM21.05.03 - Identify characteristics of solid and panel stock.

NCCTE.IM21.06.00 - Identify basic hand tools.
NCCTE.IM21.06.01 - Identify sawing tools.
NCCTE.IM21.06.02 - Identify shaving and scraping tools.
NCCTE.IM21.06.03 - Identify selected fastening and assembly tools.

NCCTE.IM21.07.00 - Demonstrate the safe and proper use of power tools.
NCCTE.IM21.07.01 - Operate the router safely.
NCCTE.IM21.07.02 - Operate the sabre/jig saw safely.
NCCTE.IM21.07.03 - Operate the power drill safely.
NCCTE.IM21.07.04 - Operate the power sanders safely.
NCCTE.IM21.07.05 - Operate the plate/biscuit jointer safely.
NCCTE.IM21.07.06 - Use the table saw for basic operations.
NCCTE.IM21.07.07 - Use the radial arm saw for basic operations.
NCCTE.IM21.07.08 - Use the bandsaw for basic operations.
NCCTE.IM21.07.09 - Use the drill press for basic operations.
NCCTE.IM21.07.10 - Identify the jointer.
NCCTE.IM21.07.11 - Identify the planer.
NCCTE.IM21.07.12 - Identify the disc sander.
NCCTE.IM21.07.13 - Identify the lathe.
NCCTE.IM21.07.14 - Identify the power miter saw.
NCCTE.IM21.07.15 - Describe the use of a portable circular saw.

Course: Cabinetmaking II
NCCTE.IM22 - Cabinetmaking II
NCCTE.IM22.01.00 - Demonstrate communication, problem solving, and team building skills.
NCCTE.IM22.01.01 - Demonstrate communication skills.
NCCTE.IM22.01.02 - Demonstrate problem solving and team building skills.

NCCTE.IM22.02.00 - Identify terms, skill requirements and employment opportunities.
NCCTE.IM22.02.01 - Describe work performed in the trade, recognizing basic skills and physical requirements.
NCCTE.IM22.02.02 - Describe materials, processes, and categories of products produced.
NCCTE.IM22.02.03 - Identify student requirements for successful participation in the furniture and cabinetmaking program.
NCCTE.IM22.02.04 - Discuss the current and historical significance of the furniture and cabinetmaking trade.

NCCTE.IM22.03.00 - Define, discuss and interpret basic safety associated in a school shop and workplace.
after review of the prerequisite safety courses.

NCCTE.IM22.03.01 - Explain terms associated with work safety.
NCCTE.IM22.03.02 - Discuss common hazards in the workplace.
NCCTE.IM22.03.03 - Demonstrate use of safety gear, protective garments, and safety equipment.
NCCTE.IM22.03.04 - Discuss personal and general safety rules.
NCCTE.IM22.03.05 - Demonstrate how to properly use fire extinguishers.
NCCTE.IM22.03.06 - Discuss safety requirements before using hand or power tools.
NCCTE.IM22.03.07 - Explain a safety checklist.
NCCTE.IM22.03.08 - Discuss OSHA, MSDS, and right to know regulations.

NCCTE.IM22.04.00 - Demonstrate the various units of measurement and layout tools used in the trade.
NCCTE.IM22.04.01 - Apply basic units of measurement including standard.
NCCTE.IM22.04.02 - Perform basic mathematical calculations.
NCCTE.IM22.04.03 - Describe the proper use of measurement and layout tools.
NCCTE.IM22.04.04 - Use selected measurement and layout tools.

NCCTE.IM22.05.00 - Describe the basic types of materials.
NCCTE.IM22.05.01 - Discuss characteristics of softwoods and hardwoods.
NCCTE.IM22.05.02 - Explain the physical characteristics of plywood products.
NCCTE.IM22.05.03 - Describe characteristics of solid and panel stock.
NCCTE.IM22.05.04 - Discuss factors that affect the appearance and stability of wood.
NCCTE.IM22.05.05 - Recognize lumber and plywood grading and marketing terminology.
NCCTE.IM22.05.06 - Discuss furniture and cabinetmaking materials and laminates.

NCCTE.IM22.06.00 - Demonstrate the safe and proper use of stationary power equipment.
NCCTE.IM22.06.01 - Operate the following power saws: table saw, radial arm saw, and band saw safely.
NCCTE.IM22.06.02 - Operate the following surfacing equipment: planer, jointer, and stationary power sander safely.
NCCTE.IM22.06.03 - Operate the shaper safely.
NCCTE.IM22.06.04 - Operate the drill press safely.

NCCTE.IM22.07.00 - Demonstrate the safe and proper use of portable power tools.
NCCTE.IM22.07.01 - Operate the portable circular saw safely.
NCCTE.IM22.07.02 - Operate the router safely.
NCCTE.IM22.07.03 - Operate the saber saw safely.
NCCTE.IM22.07.04 - Operate the power drill safely.
NCCTE.IM22.07.05 - Operate the power sander safely.
NCCTE.IM22.07.06 - Operate the plate/biscuit joiner safely.
NCCTE.IM22.07.07 - Operate the pneumatic nailer safely.

Course: Cabinetmaking III
NCCTE.IM23.00 - Cabinetmaking III
NCCTE.IM23.01.00 - Demonstrate communication, problem solving, and team building skills.
NCCTE.IM23.01.01 - Demonstrate communication skills.
NCCTE.IM23.01.02 - Demonstrate problem solving and team building skills.
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NCCTE.IM23.02.00 - Identify terms, skill requirements, and employment opportunities.
NCCTE.IM23.02.01 - Describe work performed in the trade, recognizing basic skills and physical requirements.
NCCTE.IM23.02.02 - Describe materials, processes, and categories of products produced.
NCCTE.IM23.02.03 - Identify student requirements for successful participation in the furniture and cabinetmaking program.
NCCTE.IM23.02.04 - Discuss the current and historical significance of the furniture and cabinetmaking trade.

NCCTE.IM23.03.00 - Define, discuss, and interpret basic safety associated in a school shop and workplace after review of the prerequisite safety courses.
NCCTE.IM23.03.01 - Explain terms associated with work safety.
NCCTE.IM23.03.02 - Discuss common hazards in the workplace.
NCCTE.IM23.03.03 - Demonstrate use of safety gear, protective garments, and safety equipment.
NCCTE.IM23.03.04 - Discuss personal and general safety rules.
NCCTE.IM23.03.05 - Demonstrate how to properly use fire extinguishers.
NCCTE.IM23.03.06 - Discuss safety requirements before using hand or power tools.
NCCTE.IM23.03.07 - Explain a safety checklist.
NCCTE.IM23.03.08 - Discuss OSHA, MSDS, and right to know regulations.

NCCTE.IM23.04.00 - Identify basic wood fasteners and hardware.
NCCTE.IM23.04.01 - Identify nail styles and sizes.
NCCTE.IM23.04.02 - Identify basic wood screw styles and sizes.
NCCTE.IM23.04.03 - Select appropriate decorative and assembly hardware.

NCCTE.IM23.05.00 - Identify basic adhesives, gluing equipment, and clamping fixtures.
NCCTE.IM23.05.01 - Demonstrate the properties of basic adhesives used for joining wood.
NCCTE.IM23.05.02 - Demonstrate correct use of selected clamping fixtures.

NCCTE.IM23.06.00 - Develop a basic project plan.
NCCTE.IM23.06.01 - Develop and interpret basic plan drawings.
NCCTE.IM23.06.02 - Develop a bill of materials.
NCCTE.IM23.06.03 - Develop a set of specification sheets.
NCCTE.IM23.06.04 - Determine appropriate dimensions, shapes, and sizes for project components using trade mathematics.

NCCTE.IM23.07.00 - Demonstrate the materials and processes required for pre-finishing.
NCCTE.IM23.07.01 - Demonstrate basic techniques for preparing surfaces for finishing.
NCCTE.IM23.07.02 - Identify abrasives.
NCCTE.IM23.07.03 - Demonstrate proper use of abrasives.

NCCTE.IM23.08.00 - Design and construct a cabinetmaking product.
NCCTE.IM23.08.01 - Design and estimate a project including flow chart procedures.
NCCTE.IM23.08.02 - Identify, select, use appropriate joinery and perform basic assembly techniques.
NCCTE.IM23.08.03 - Construct project components.
NCCTE.IM23.08.04 - Assemble project components.
NCCTE.IM23.08.05 - Identify inlay and banding.
NCCTE.IM23.09.00 - Demonstrate the materials and processes required for basic finishing.
NCCTE.IM23.09.01 - Discuss different types of stains.
NCCTE.IM23.09.02 - Demonstrate proper staining techniques.
NCCTE.IM23.09.03 - Prepare and apply final finish.

Course: Electronics I
NCCTE.IM31 - Electronics I
   NCCTE.IM31.01.00 - Understand basic electrical theory and magnetism.
   NCCTE.IM31.02.00 - Understand basic electrical safety, the use of electronic equipment, and electronic components.
   NCCTE.IM31.03.00 - Apply procedures used in ohms law and other basic mathematics for Electronics.
   NCCTE.IM31.04.00 - Understand electronic measurements used in DC Electronics.
   NCCTE.IM31.05.00 - Apply procedures used in series, parallel, and series/parallel circuits.

Course: Electronics II
NCCTE.IM32 - Electronics II
   NCCTE.IM32.01.00 - Apply procedures used in numbering systems and conversions.
   NCCTE.IM32.02.00 - Understand block diagrams
   NCCTE.IM32.03.00 - Understand Test Equipment & Measurements and safety precautions used in digital electronics.
   NCCTE.IM32.04.00 - Understand theory of digital logic functions and circuitry.
   NCCTE.IM32.05.00 - Understand digital computer electronics.

Course: Electronics III
NCCTE.IM33 - Electronics III
   NCCTE.IM33.01.00 - Understand Principles of Alternating Current including components and terms.
   NCCTE.IM33.02.00 - Apply Principles of Inductance.
   NCCTE.IM33.03.00 - Apply Principles of Capacitance.
   NCCTE.IM33.04.00 - Understand AC Generator and Motor Theory.
   NCCTE.IM33.05.00 - Apply RC, RL, and RCL Principles and general Mathematics and Formulas used in AC.
   NCCTE.IM33.06.00 - Understand Cabling, Test Equipment & Measurements, and Basic Electrical Safety Precautions.
Course: Electronics IV
   NCCTE.IM34 - Electronics IV
       NCCTE.IM34.01.00 - Understand Diodes.
       NCCTE.IM34.02.00 - Apply procedures used with Transistors and Thyristors.
       NCCTE.IM34.03.00 - Understand Integrated Circuits, Optoelectronic Devices, and Power Supplies and Test Equipment & Measurements used in Analog.
       NCCTE.IM34.04.00 - Apply Mathematics and Formulas used in Analog.
       NCCTE.IM34.05.00 - Understand Amplifiers, Operational Amplifiers, and Oscillators.
       NCCTE.IM34.06.00 - Understand Filters and Wave-shaping Circuits.

Course: Metals Manufacturing Technology I
   NCCTE.IM41 - Metals Manufacturing Technology I
       NCCTE.IM41.01.00 - Apply business meeting procedures and analyze goals.
           NCCTE.IM41.01.01 - Understand basic business meeting procedures.
           NCCTE.IM41.01.02 - Apply basic business meeting procedures.
           NCCTE.IM41.01.03 - Analyze personal and organizational goals.
       NCCTE.IM41.02.00 - Understand machining technology.
           NCCTE.IM41.02.01 - Remember the history of machine technology.
           NCCTE.IM41.02.02 - Understand machining processes, CNC equipment, and the role of the machinist.
           NCCTE.IM41.02.03 - Remember occupations in machining technology.
       NCCTE.IM41.03.00 - Apply shop safety procedures.
           NCCTE.IM41.03.01 - Summarize general safety rules and procedures for the machine shop.
           NCCTE.IM41.03.02 - Apply general safety rules and regulations in the shop environment.
       NCCTE.IM41.04.00 - Apply measuring procedures and concepts of metal characteristics.
           NCCTE.IM41.04.01 - Remember measuring tools, their parts, and uses.
           NCCTE.IM41.04.02 - Understand the use of measuring tools.
           NCCTE.IM41.04.03 - Apply measuring procedures with various tools.
           NCCTE.IM41.04.04 - Understand key characteristics of basic metals.
       NCCTE.IM41.05.00 - Interpret information found on typical blueprints.
           NCCTE.IM41.05.01 - Remember different line types, symbols, and title block information.
           NCCTE.IM41.05.02 - Interpret drawings dimensioned in fractional and decimal inches.
       NCCTE.IM41.06.00 - Apply layout procedures.
           NCCTE.IM41.06.01 - Remember layout tools and equipment.
           NCCTE.IM41.06.02 - Understand layout procedures.
           NCCTE.IM41.06.03 - Apply layout procedures.
       NCCTE.IM41.07.00 - Apply procedures for using machine shop hand tools.
NCCTE.IM41.07.01 - Remember machine shop hand tools.
NCCTE.IM41.07.02 - Understand procedures for selecting, using, and maintaining hand tools.
NCCTE.IM41.07.03 - Apply procedures for selecting, using, and maintaining hand tools.

NCCTE.IM41.08.00 - Apply procedures for drilling operations.
NCCTE.IM41.08.01 - Remember drilling machines and tools.
NCCTE.IM41.08.02 - Understand procedures for drilling operations and safety.
NCCTE.IM41.08.03 - Apply procedures for drilling operations.

NCCTE.IM41.09.00 - Apply procedures for offhand grinding.
NCCTE.IM41.09.01 - Understand procedures for offhand grinding operations and safety.
NCCTE.IM41.09.02 - Apply procedures for offhand grinding operations.

NCCTE.IM41.10.00 - Apply procedures for sawing, cutoff machines, and band machining operations.
NCCTE.IM41.10.01 - Remember types of sawing, cutoff machines, and band machining equipment and components.
NCCTE.IM41.10.02 - Understand procedures for sawing, cutoff machines, and band machining operations and safety.
NCCTE.IM41.10.03 - Apply procedures for sawing, cutoff machines, and band machining operations.

NCCTE.IM41.11.00 - Apply procedures for turning operations.
NCCTE.IM41.11.01 - Remember lathe parts and accessories.
NCCTE.IM41.11.02 - Understand procedures for turning operations and safety.
NCCTE.IM41.11.03 - Apply procedures for turning operations.

NCCTE.IM41.12.00 - Apply procedures for milling operations.
NCCTE.IM41.12.01 - Remember mill parts and accessories.
NCCTE.IM41.12.02 - Understand procedures for milling operations and safety.
NCCTE.IM41.12.03 - Apply procedures for milling operations.

Course: Metals Manufacturing Technology II
NCCTE.IM42 - Metals Manufacturing Technology II
NCCTE.IM42.01.00 - Apply communication, problem solving, and team building procedures.
NCCTE.IM42.01.01 - Understand communication, problem solving, and team building procedures.
NCCTE.IM42.01.02 - Implement communication, problem solving, and team building procedures.

NCCTE.IM42.02.00 - Apply shop safety rules and regulations.
NCCTE.IM42.02.01 - Understand general shop safety rules, OSHA regulations, and MSDS.
NCCTE.IM42.02.02 - Apply general safety rules and regulations in the shop environment.
NCCTE.IM42.02.03 - Apply site-specific safety rules and procedures.

NCCTE.IM42.03.00 - Apply drawing information.
NCCTE.IM42.03.01 - Understand detail, subassembly, and assembly drawings.
NCCTE.IM42.03.02 - Understand the basic procedures involved in geometric dimensioning and tolerancing.
NCCTE.IM42.03.03 - Apply drawing information to machine a part.
NCCTE.IM42.04.00 - Apply procedures to parts inspection.
NCCTE.IM42.04.01 - Remember various types of precision measuring instruments.
NCCTE.IM42.04.02 - Understand procedures for precision measuring.
NCCTE.IM42.04.03 - Apply precision measuring procedures using various measuring tools.
NCCTE.IM42.04.04 - Remember basic SPC (Statistical Process Control) terms and charts.

NCCTE.IM42.05.00 - Apply proper fastening procedures.
NCCTE.IM42.05.01 - Remember types of fasteners.
NCCTE.IM42.05.02 - Understand how fasteners are used.
NCCTE.IM42.05.03 - Apply proper fastening procedures.

NCCTE.IM42.06.00 - Apply advanced turning procedures on the lathe.
NCCTE.IM42.06.01 - Remember the components, the safe use, and maintenance of lathes.
NCCTE.IM42.06.02 - Understand advanced setup procedures for turning.
NCCTE.IM42.06.03 - Apply procedures for off-hand grinding to sharpen cutting tools.
NCCTE.IM42.06.04 - Apply advanced turning procedures.

NCCTE.IM42.07.00 - Apply advanced procedures on the mill.
NCCTE.IM42.07.01 - Remember the components, the safe use, and maintenance of mills.
NCCTE.IM42.07.02 - Understand procedures for advanced setups on mills.
NCCTE.IM42.07.03 - Apply advanced milling procedures.

NCCTE.IM42.08.00 - Apply procedures for CNC programming.
NCCTE.IM42.08.01 - Understand standard G & M codes and positioning theory.
NCCTE.IM42.08.02 - Apply procedures for writing CNC turning or milling programs.
NCCTE.IM42.08.03 - Apply procedures for simulating CNC turning or milling programs.
NCCTE.IM42.08.04 - Apply procedures for running a CNC program.
NCCTE.IM42.08.05 - Apply procedures for developing a CAD/CAM program.

NCCTE.IM42.09.00 - Apply oxy-fuel gas and arc welding equipment procedures.
NCCTE.IM42.09.01 - Understand welding processes and safety procedures.
NCCTE.IM42.09.02 - Apply Shielded Metal Arc Welding (SMAW) equipment and Gas Metal Arc Welding (GMAW) equipment setup and operational procedures.
NCCTE.IM42.09.03 - Apply oxy-fuel gas equipment setup and operational procedures.

Course: Welding Technology I
NCCTE.IM61 - Welding Technology I
NCCTE.IM61.01.00 - Understand Safety and Health of Welders.
NCCTE.IM61.01.01 - Understand common hazards in welding.
NCCTE.IM61.01.02 - Understand proper personal protection used in welding.
NCCTE.IM61.01.03 - Understand how to avoid welding fumes.
NCCTE.IM61.01.04 - Understand the causes of accidents.
NCCTE.IM61.01.05 - Understand uses for material safety data sheets.
NCCTE.IM61.01.06 - Understand safety techniques for storing and handling cylinders.
NCCTE.IM61.01.07 - Understand how to avoid electric shock when welding.
NCCTE.IM61.01.08 - Understand proper material handling methods.
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.IM61.02.00 - Understand Drawing and Welding Interaction - Part I.
NCCTE.IM61.02.01 - Understand a welding detail drawing.
NCCTE.IM61.02.02 - Understand lines, material fills, and sections.
NCCTE.IM61.02.03 - Understand object views.
NCCTE.IM61.02.04 - Understand welding dimensioning.
NCCTE.IM61.02.05 - Understand notes and bill of materials.
NCCTE.IM61.02.06 - Understand the basic elements of a welding detail drawing.
NCCTE.IM61.02.07 - Understand how to sketch or draw basic welding drawings.

NCCTE.IM61.02.08 - Understand Drawing and Welding Interaction - Part II.
NCCTE.IM61.03.01 - Understand the various parts of a welding symbol.
NCCTE.IM61.03.02 - Understand fillet and groove weld symbols.
NCCTE.IM61.03.03 - Understand how to read welding symbols on drawings, specifications, and welding procedure specifications.
NCCTE.IM61.03.04 - Understand how to interpret welding symbols from a print.

NCCTE.IM61.04.00 - Apply Manual Oxyfuel Gas Cutting (OFC).
NCCTE.IM61.04.01 - Apply procedures to use of oxyfuel cutting equipment.
NCCTE.IM61.04.02 - Apply procedures to set up oxyfuel equipment.
NCCTE.IM61.04.03 - Apply procedures to light and adjust an oxyfuel torch.
NCCTE.IM61.04.04 - Apply procedures to shut down oxyfuel cutting equipment.
NCCTE.IM61.04.05 - Apply procedures to disassemble oxyfuel equipment.
NCCTE.IM61.04.06 - Apply procedures to change cylinders.
NCCTE.IM61.04.07 - Apply procedures to perform oxyfuel cutting on straight line and square shapes, piercing and slot cutting, bevels, washing, and gouging.
NCCTE.IM61.04.08 - Apply procedures to operate a motorized, portable oxyfuel gas cutting machine.
NCCTE.IM61.04.09 - Apply Mechanized Oxyfuel Gas Cutting (OFC).

NCCTE.IM61.05.00 - Understand Base Metal Preparation.
NCCTE.IM61.05.01 - Understand how to clean base metal for welding or cutting.
NCCTE.IM61.05.02 - Understand joint design.
NCCTE.IM61.05.03 - Understand joint design considerations.
NCCTE.IM61.05.04 - Understand how to mechanically bevel the edge of a mild steel plate.
NCCTE.IM61.05.05 - Understand how to thermally bevel the end of a mild steel plate.
NCCTE.IM61.05.06 - Understand how to select the proper joint design based on a welding procedure specification (WPS) or instructor direction.

NCCTE.IM61.06.00 - Apply Shielded Metal Arc Welding.
NCCTE.IM61.06.01 - Apply procedures to set up shielded metal arc welding (SMAW) equipment.
NCCTE.IM61.06.02 - Apply procedures to describe methods of striking an arc.
NCCTE.IM61.06.03 - Apply procedures to properly strike and extinguish an arc.
NCCTE.IM61.06.04 - Apply procedures to describe causes of arc blow and wander.
NCCTE.IM61.06.05 - Apply procedures to make stringer, weave, and overlapping beads.
NCCTE.IM61.06.06 - Apply procedures to make fillet welds in the following positions: Horizontal (2F), Vertical (3F), Overhead (4F).

NCCTE.IM61.07.00 - Understand Shielded Metal Arc Welding - Equipment and Setup.
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.IM61.07.01 - Understand shielded metal arc welding (SMAW) safety.
NCCTE.IM61.07.02 - Understand welding electrical current.
NCCTE.IM61.07.03 - Understand welding power supplies and their characteristics.
NCCTE.IM61.07.04 - Understand how to set up welding power supplies.
NCCTE.IM61.07.05 - Understand how to set up a machine for welding.
NCCTE.IM61.07.06 - Understand tools used for weld cleaning.

NCCTE.IM61.08.00 - Understand Shielded Metal Arc Electrodes.
NCCTE.IM61.08.01 - Understand factors that affect electrode selection.
NCCTE.IM61.08.02 - Understand the American Welding Society (AWS) and the American Society of Mechanical Engineers (ASME) filler metal classification system.
NCCTE.IM61.08.03 - Understand different types of filler metals.
NCCTE.IM61.08.04 - Understand the storage and control of filler metals.
NCCTE.IM61.08.05 - Understand filler metal traceability requirements and how to use applicable code requirements.
NCCTE.IM61.08.06 - Understand how to select the proper electrode for an identified welding task.

Course: Welding Technology II
NCCTE.IM62 - Welding Technology II
NCCTE.IM62.01.00 - Understand Safety and Health of Welders.
NCCTE.IM62.01.01 - Understand common hazards in welding.
NCCTE.IM62.01.02 - Understand proper personal protection used in welding.
NCCTE.IM62.01.03 - Understand how to avoid welding fumes.
NCCTE.IM62.01.04 - Understand the causes of accidents.
NCCTE.IM62.01.05 - Understand uses for material safety data sheets.
NCCTE.IM62.01.06 - Understand safety techniques for storing and handling cylinder.
NCCTE.IM62.01.07 - Understand how to avoid electric shock when welding.
NCCTE.IM62.01.08 - Understand proper material handling methods.

NCCTE.IM62.02.00 - Apply Manual Plasma Arc Cutting - PAC.
NCCTE.IM62.02.01 - Apply procedures to set up plasma arc cutting equipment.
NCCTE.IM62.02.02 - Apply procedures to set the amperage and gas pressures or flow rates for the type and thickness of metal to be cut.
NCCTE.IM62.02.03 - Apply procedures to square-cut metal using plasma arc cutting equipment.
NCCTE.IM62.02.04 - Apply procedures to bevel-cut metal using plasma arc equipment.
NCCTE.IM62.02.05 - Apply procedures to pierce and cut slots in metal using plasma arc cutting equipment.
NCCTE.IM62.02.06 - Apply procedures to dismantle and store equipment.

NCCTE.IM62.03.00 - Understand Welding Inspection and Testing.
NCCTE.IM62.03.01 - Understand codes governing welding.
NCCTE.IM62.03.02 - Understand weld imperfections and their causes.
NCCTE.IM62.03.03 - Understand nondestructive examination practices.
NCCTE.IM62.03.04 - Understand welder qualification tests.
NCCTE.IM62.03.05 - Understand the importance of quality workmanship.
NCCTE.IM62.03.06 - Understand common destructive testing methods.
NCCTE.IM62.03.07 - Understand how to visually inspection fillet welds.
NCCTE.IM62.04.00 - Understand Joint Fit-Up and Alignment.
NCCTE.IM62.04.01 - Understand job code specifications.
NCCTE.IM62.04.02 - Understand how to use fit-up gauges and measuring devices to check joint fit-up.
NCCTE.IM62.04.03 - Understand distortion and how it is controlled.
NCCTE.IM62.04.04 - Understand how to fit up joints using plate and pipe fit-up tools.
NCCTE.IM62.04.05 - Understand how to check for joint misalignment and poor fit-up before and after welding.

NCCTE.IM62.05.00 - Apply Shielded Metal Arc Welding - Groove Welds and Backing.
NCCTE.IM62.05.01 - Apply procedures to prepare groove welds.
NCCTE.IM62.05.02 - Apply procedures to prepare groove welds with backing.
NCCTE.IM62.05.03 - Apply procedures to set up shielded metal arc welding (SMAW) equipment for making V-groove welds.
NCCTE.IM62.05.04 - Apply procedures to perform SMAW for V-groove welds with backing in the following positions: Flat (1G), Horizontal (2G), Vertical (3G), Overhead (4G).

NCCTE.IM62.06.00 - Apply Shielded Metal Arc Welding - Open V-Groove Welds
NCCTE.IM62.06.01 - Apply procedures to prepare shielded metal arc welding (SMAW) equipment for open-root V-groove welds.
NCCTE.IM62.06.02 - Apply procedures to perform open-root V-groove welds in the following positions: Flat (1G), Horizontal (2G), Vertical (3G), Overhead (4G).

Course: Welding Technology III
NCCTE.IM63 - Welding Technology III
NCCTE.IM63.01.00 - Understand Safety and Health of Welders.
NCCTE.IM63.01.01 - Understand common hazards in welding.
NCCTE.IM63.01.02 - Understand proper personal protection used in welding.
NCCTE.IM63.01.03 - Understand how to avoid welding fumes
NCCTE.IM63.01.04 - Understand the causes of accidents.
NCCTE.IM63.01.05 - Understand uses for material safety data sheets.
NCCTE.IM63.01.06 - Understand safety techniques for storing and handling cylinders.
NCCTE.IM63.01.07 - Understand how to avoid electric shock when welding.
NCCTE.IM63.01.08 - Understand proper material handling methods.

NCCTE.IM63.02.00 - Understand Gas Tungsten Arc Welding & Flux Cored Arc Welding - Equipment and Filler Metals.
NCCTE.IM63.02.01 - Understand gas metal arc welding (GMAW) and flux-cored arc welding (FCAW) safety.
NCCTE.IM63.02.02 - Understand the characteristics of welding current and power sources.
NCCTE.IM63.02.03 - Understand the use of GMAW and FCAW equipment: Spray transfer, Globular, Short circuiting, and Pulse.
NCCTE.IM63.02.04 - Understand the use of GMAW and FCAW shielding gases and filler metals.
NCCTE.IM63.02.05 - Understand how to set up GMAW and FCAW equipment and identify tools for weld cleaning.

NCCTE.IM63.03.00 - Apply Flux Cored Arc Welding.
NCCTE.IM63.03.01 - Apply procedures to perform GMAW-S (short-circuit) multiple-pass fillet welds on
carbon steel plate coupons in multiple positions, using solid or composite wire and shielding gas.

**NCCTE.IM63.03.02** - Apply procedures to perform GMAW-S (short-circuit) multiple-pass V-groove welds on carbon steel plate coupons in multiple positions (with or without backing), using solid or composite wire and shielding gas.

**NCCTE.IM63.03.03** - Apply procedures to perform GMAW spray fillet and V-groove welds on carbon steel plate coupons in multiple positions (with or without backing), using solid or composite wire and shielding gas.

**NCCTE.IM63.03.04** - Apply procedures to perform FCAW multiple-pass fillet welds on carbon steel plate coupons in multiple positions, using flux-cored wire and, if required, shielding gas.

**NCCTE.IM63.03.05** - Apply procedures to perform FCAW multiple-pass V-groove welds on carbon steel plate coupons in multiple positions (with or without backing), using flux-cored wire and, if required, shielding gas.

**NCCTE.IM63.04.00** - Understand Gas Tungsten Arc Welding - Equipment and Filler Metal.

**NCCTE.IM63.04.01** - Understand gas tungsten arc welding (GTAW) safety.

**NCCTE.IM63.04.02** - Understand the function of GTAW equipment.

**NCCTE.IM63.04.03** - Understand the function of GTAW filler metals.

**NCCTE.IM63.04.04** - Understand the function of GTAW shielding gases.

**NCCTE.IM63.04.05** - Understand how to set up GTAW equipment.

**NCCTE.IM63.05.00** - Apply Gas Tungsten Arc Welding - Plate.

**NCCTE.IM63.05.01** - Apply procedures to build a pad in the flat position with stringer beads using GTAW and carbon steel filler metal.

**NCCTE.IM63.05.02** - Apply procedures to perform multiple-pass GTAW fillet welds on carbon steel plate coupons in the following positions, using carbon steel filler metal: 1F, 2F, 3F, and 4F.

**NCCTE.IM63.05.03** - Apply procedures to perform multiple-pass GTAW V-groove welds on carbon steel plate coupons in the following positions, using carbon steel filler metal: 1G, 2G, 3G, and 4G.

Course: EMT 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

**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
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

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: EMT II
NCCTE.IP22 - EMT II
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

NCCTE.IP22.00.00 - COMPREHENSIVE CONTENT IP21 EMT I

Course: Fire Fighter Technology I
NCCTE.2015.IP31 - Fire Fighter Technology I
  NCCTE.2015.IP31.01.00 - Fire Department Orientation (FIP# 3001)

NCCTE.2015.IP31.02.00 - Health and Wellness (FIP# 3024)

NCCTE.2015.IP31.03.00 - Fire Behavior (FIP# 3004)

NCCTE.2015.IP31.04.00 - Personal Protective Equipment (FIP# 3006)

NCCTE.2015.IP31.05.00 - Fire Hose, Streams, & Appliances (FIP# 3011)
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2015.IP31.06.00 - Portable Fire Extinguishers (FIP# 3005)

NCCTE.2015.IP31.07.00 - Foam Fire Streams (FIP# 3016)

NCCTE.2015.IP31.08.00 - Emergency Medical Care (FIP# 3016)

NCCTE.IP31 - Fire Fighter Technology I
NCCTE.IP31.01.00 - Fire Department Orientation and Safety FIP# 3323

NCCTE.IP31.02.00 - Fire Prevention, Education, and Cause FIP# 3321

NCCTE.IP31.03.00 - Fire Alarms and Communications FIP# 3303

NCCTE.IP31.04.00 - Fire Behavior FIP# 3304

NCCTE.IP31.05.00 - Personal Protective Equipment FIP# 3306

NCCTE.IP31.06.00 - Portable Fire Extinguishers FIP# 3305

NCCTE.IP31.07.00 - Fire Hose, Streams, & Appliances FIP# 3311

Course: Fire Fighter Technology II
NCCTE.2015.IP32 - Fire Fighter Technology II

NCCTE.2015.IP32.01.00 - Building Construction (FIP# 3022)

NCCTE.2015.IP32.02.00 - Ropes (FIP# 3009)

NCCTE.2015.IP32.03.00 - Alarms & Communications (FIP# 3003)

NCCTE.2015.IP32.04.00 - Forcible Entry (FIP# 3007)

NCCTE.2015.IP32.05.00 - Ladders (FIP# 3010)

NCCTE.2015.IP32.06.00 - Ventilation (FIP# 3008)

NCCTE.2015.IP32.07.00 - Loss Control (FIP# 3014)

NCCTE.IP32 - Fire Fighter Technology II
NCCTE.IP32.01.00 - Ropes FIP# 3309

NCCTE.IP32.02.00 - Ladders FIP# 3310

NCCTE.IP32.03.00 - Forcible entry FIP# 3307

NCCTE.IP32.04.00 - Ventilation FIP# 3308

NCCTE.IP32.05.00 - Water supply FIP# 3318
Course: Fire Fighter 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)

NCCTE.IP33 - Fire Fighter Technology III
    NCCTE.IP33.01.00 - Emergency Medical Care FIP# 3316
    NCCTE.IP33.02.00 - Rescue FIP# 3317
    NCCTE.IP33.03.00 - Fire Control FIP# 3313
    NCCTE.IP33.04.00 - Salvage FIP# 3314
    NCCTE.IP33.05.00 - Overhaul FIP# 3315
    NCCTE.IP33.06.00 - Building Construction FIP# 3322

Course: Introduction to Trade and Industrial Education
NCCTE.IU10 - Introduction to Trade and Industrial Education
    NCCTE.IU10.01.00 - Understand technology and its relationship to the world of work.
        NCCTE.IU10.01.01 - Understand technology and its characteristics.
        NCCTE.IU10.01.02 - Understand the universal systems model.
        NCCTE.IU10.01.03 - Understand how technology affects skilled trades, industry, and work.
        NCCTE.IU10.01.04 - Explain the evolution and influence of technology.
        NCCTE.IU10.01.05 - Explain how technology relates to mathematics and scientific research.
        NCCTE.IU10.01.06 - Explain how trends in technology drive trends in trade and industrial careers.
        NCCTE.IU10.01.07 - Apply a procedure to create a career development plan.
    NCCTE.IU10.02.00 - Understand the need for a safe and an effective workplace.
        NCCTE.IU10.02.01 - Understand safety procedures in the world of work.
        NCCTE.IU10.02.02 - Understand leadership skills and team building.
        NCCTE.IU10.02.03 - Apply procedure to demonstrate leadership skills and team building.
        NCCTE.IU10.02.04 - Understand 21st Century skills.
**NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS**

**NCCTE.IU10.02.05** - Apply procedure to demonstrate 21st Century skills.

**NCCTE.IU10.03.00** - Understand the concepts of a formal problem-solving method.
  **NCCTE.IU10.03.01** - Understand the concepts of problem solving and troubleshooting.
  **NCCTE.IU10.03.02** - Apply a procedure used for problem solving or troubleshooting.
  **NCCTE.IU10.03.03** - Understand research and development strategies.
  **NCCTE.IU10.03.04** - Apply procedures used in research and development strategies.

**NCCTE.IU10.04.00** - Apply procedures used in the design process.
  **NCCTE.IU10.04.01** - Understand terms and procedures involving measurement tools.
  **NCCTE.IU10.04.02** - Apply procedures used in measuring techniques.
  **NCCTE.IU10.04.03** - Understand terms and procedures utilized in technical sketching.
  **NCCTE.IU10.04.04** - Apply procedures used in technical sketching utilizing orthographic and pictorial layout.
  **NCCTE.IU10.04.05** - Understand processes used in computer modeling.
  **NCCTE.IU10.04.06** - Apply procedures to use computers as a design tool including modeling.

**NCCTE.IU10.05.00** - Apply procedures used in principles and elements of design.
  **NCCTE.IU10.05.01** - Understand the principles and elements of design.
  **NCCTE.IU10.05.02** - Apply a procedure to create a product based on the principles and elements of design.

**NCCTE.IU10.06.00** - Apply procedures to communicate effectively in the world of work.
  **NCCTE.IU10.06.01** - Understand characteristics needed to communicate effectively in a technological world.
  **NCCTE.IU10.06.02** - Apply a procedure to create a technical report.
  **NCCTE.IU10.06.03** - Apply a procedure to deliver an oral presentation.
  **NCCTE.IU10.06.04** - Apply a procedure to create a skills related portfolio.

**NCCTE.IU10.07.00** - Understand the different areas within Trade and Industrial Education.
  **NCCTE.IU10.07.01** - Understand general concepts related to the world of work. (overview)
  **NCCTE.IU10.07.02** - Understand the concepts and principles of electronic communication systems.
  **NCCTE.IU10.07.03** - Apply procedures used in electronic communication systems.
  **NCCTE.IU10.07.04** - Understand processes used for graphic design.
  **NCCTE.IU10.07.05** - Apply procedures used in graphic design.
  **NCCTE.IU10.07.06** - Understand the concepts and principles of computer engineering and networking.
  **NCCTE.IU10.07.07** - Apply procedures used in computer engineering and networking.
  **NCCTE.IU10.07.08** - Understand the concepts and principles of drafting.
  **NCCTE.IU10.07.09** - Apply procedures used in drafting.
  **NCCTE.IU10.07.10** - Understand the concepts and principles of transportation systems.
  **NCCTE.IU10.07.11** - Apply procedures used in transportation systems.
  **NCCTE.IU10.07.12** - Understand the concepts and principles of manufacturing systems.
  **NCCTE.IU10.07.13** - Apply the concepts and principles of manufacturing systems.
  **NCCTE.IU10.07.14** - Understand the concepts and principles of advanced manufacturing.
  **NCCTE.IU10.07.15** - Apply procedures used in advanced manufacturing.
  **NCCTE.IU10.07.16** - Understand the concepts and principles of structural systems.
  **NCCTE.IU10.07.17** - Apply procedures used in masonry.
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.IU10.07.18 - Apply procedures used in carpentry.
NCCTE.IU10.07.19 - Apply procedures used in cabinetmaking.
NCCTE.IU10.07.20 - Apply procedures used in electrical trades.
NCCTE.IU10.07.21 - Understand contemporary Issues: green energy, sustainability.

Course: Automotive Brakes
NCCTE.IT12 - Automotive Brakes
   NCCTE.IT12.101.00 - Understand Brake System Fundamentals.
   NCCTE.IT12.102.00 - Understand Master Cylinder.
   NCCTE.IT12.103.00 - Understand the Power Assist System.
   NCCTE.IT12.104.00 - Understand Disc Brakes.
   NCCTE.IT12.105.00 - Read Micrometers.
   NCCTE.IT12.106.00 - Understand Drum Brakes.
   NCCTE.IT12.107.00 - Understand Brake Fluid and Bleeding Brake Systems.
   NCCTE.IT12.108.00 - Understand Park Brake.
   NCCTE.IT12.109.00 - Understand Brake Lines and Hoses.
   NCCTE.IT12.110.00 - Understand Wheel Bearing Service and Adjustment.
   NCCTE.IT12.111.00 - Understand Antilock Brakes and Traction Control Systems.
   NCCTE.IT12.112.00 - Understand Brake Diagnosis Procedures.

Course: Automotive Computer System Diagnostics
NCCTE.IT13 - Automotive Computer System Diagnostics
   NCCTE.IT13.201.00 - Understand the Scan Tool.
   NCCTE.IT13.202.00 - Apply procedures to program a vehicle using a scan tool.
   NCCTE.IT13.203.00 - Apply procedures to test the Scan Tool System.
   NCCTE.IT13.204.00 - Apply procedures to use the Scan Tool for Troubleshooting.
   NCCTE.IT13.205.00 - Apply procedures to use the Scan Tool Onboard Diagnostics and OBD-II.

Course: Automotive Electrical
NCCTE.IT14 - Automotive Electrical
   NCCTE.IT14.01.00 - Understand Batteries.
NCCTE.IT14.02.00 - Understand Battery Testing.

NCCTE.IT14.03.00 - Understand the Starting System.

NCCTE.IT14.04.00 - Understand the Charging System.

NCCTE.IT14.05.00 - Understand Atoms.

NCCTE.IT14.06.00 - Understand Voltage.

NCCTE.IT14.07.00 - Understand Ohm.

NCCTE.IT14.08.00 - Understand Digital Multimeters and Measurements.

NCCTE.IT14.09.00 - Understand Electrical Symbols and Wiring Diagrams.

NCCTE.IT14.10.00 - Understand Power.

NCCTE.IT14.11.00 - Understand Magnetism.

NCCTE.IT14.12.00 - Understand Series Circuits.

NCCTE.IT14.13.00 - Understand Parallel Circuits.

NCCTE.IT14.14.00 - Understand Circuit Components.

Course: Automotive Electrical Advanced

NCCTE.IT15 - Automotive Electrical Advanced

NCCTE.IT15.01.00 - Understand Semiconductors.

NCCTE.IT15.02.00 - Understand Transistors.

NCCTE.IT15.03.00 - Understand Capacitors.

NCCTE.IT15.04.00 - Understand Computer Components.

NCCTE.IT15.05.00 - Understand Serial Communication.

NCCTE.IT15.06.00 - Understand Inputs.

NCCTE.IT15.07.00 - Understand Outputs.

Course: Introduction to Automotive Service

NCCTE.2015.IT11 - Introduction to Automotive Service

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 Preparation
NCCTE.2015.IT11.06.00 - Understand Engine Repair
NCCTE.2015.IT11.07.00 - Understand Automatic Transmission/Transaxle
NCCTE.2015.IT11.08.00 - Understand Manual Drive Train & Axles
NCCTE.2015.IT11.09.00 - Understand Suspension & Steering
NCCTE.2015.IT11.10.00 - Understand Brakes
NCCTE.2015.IT11.11.00 - Understand Electrical/Electronic Systems
NCCTE.2015.IT11.12.00 - Understand Heating & Air Conditioning
NCCTE.2015.IT11.13.00 - Understand Engine Performance

NCCTE.IT11 - Introduction to Automotive Service
NCCTE.IT11.01.00 - Understand Automotive Technology Careers.
NCCTE.IT11.02.00 - Understand Shop and Personal Safety.
NCCTE.IT11.03.00 - Understand Cleaners and Lubricants.
NCCTE.IT11.04.00 - Understand Tools and Equipment.
NCCTE.IT11.05.00 - Understand Vehicle Service Preparation.
NCCTE.IT11.06.00 - Understand Engine Repair.
NCCTE.IT11.07.00 - Understand Automatic Transmission/Transaxle.
NCCTE.IT11.08.00 - Understand Manual Drive Train & Axles.
NCCTE.IT11.09.00 - Understand Suspension & Steering.
NCCTE.IT11.10.00 - Understand Brakes.
NCCTE.IT11.11.00 - Understand Electrical/Electronic Systems.
NCCTE.IT11.12.00 - Understand Heating & Air Conditioning.
NCCTE.IT11.13.00 - Understand Engine Performance.

Course: Automotive Service I
NCCTE.IT16 - Automotive Service I
   NCCTE.IT16.01.00 - Understand Engine Repair.
   NCCTE.IT16.02.00 - Understand Automatic Transmission/Transaxle.
   NCCTE.IT16.03.00 - Understand Manual Drive Train & Axles.
   NCCTE.IT16.04.00 - Understand Suspension & Steering.
   NCCTE.IT16.05.00 - Understand Brakes.
   NCCTE.IT16.06.00 - Understand Electrical/Electronic Systems.
   NCCTE.IT16.07.00 - Understand Heating & Air Conditioning.
   NCCTE.IT16.08.00 - Understand Engine Performance.

Course: Automotive Service II
NCCTE.IT17 - Automotive Service II
   NCCTE.IT17.01.00 - Understand Engine Repair.
   NCCTE.IT17.02.00 - Understand Automatic Transmission/Transaxle.
   NCCTE.IT17.03.00 - Understand Manual Drive Train & Axles.
   NCCTE.IT17.04.00 - Understand Suspension & Steering.
   NCCTE.IT17.05.00 - Understand Brakes.
   NCCTE.IT17.06.00 - Understand Electrical/Electronic Systems.
   NCCTE.IT17.07.00 - Understand Heating & Air Conditioning.
   NCCTE.IT17.08.00 - Understand Engine Performance.

Course: Automotive Service III
NCCTE.IT18 - Automotive Service III
   NCCTE.IT18.01.00 - Understand Engine Repair.
   NCCTE.IT18.02.00 - Understand Automatic Transmission/Transaxle.
   NCCTE.IT18.03.00 - Understand Manual Drive Train & Axles.
   NCCTE.IT18.04.00 - Understand Suspension & Steering.
NCCTE.IT18.05.00 - Understand Brakes.

NCCTE.IT18.06.00 - Understand Electrical/Electronic Systems.

NCCTE.IT18.07.00 - Understand Heating & Air Conditioning.

NCCTE.IT18.08.00 - Understand Engine Performance.

Course: Auto Service I
NCCTE.2015.IT16 - Automotive Service I
   NCCTE.2015.IT16.01.00 - Understand Engine Repair.

   NCCTE.2015.IT16.02.00 - Understand Automatic Transmission/Transaxle.

   NCCTE.2015.IT16.03.00 - Understand Manual Drive Train & Axles.

   NCCTE.2015.IT16.04.00 - Understand Suspension & Steering.

   NCCTE.2015.IT16.05.00 - Understand Brakes.

   NCCTE.2015.IT16.06.00 - Understand Electrical/Electronic Systems.

   NCCTE.2015.IT16.07.00 - Understand Heating & Air Conditioning.

   NCCTE.2015.IT16.08.00 - Understand Engine Performance.

Course: Auto Service II
NCCTE.2015.IT17 - Automotive Service II
   NCCTE.2015.IT17.01.00 - Understand Engine Repair.

   NCCTE.2015.IT17.02.00 - Understand Automatic Transmission/Transaxle.

   NCCTE.2015.IT17.03.00 - Understand Manual Drive Train & Axles.

   NCCTE.2015.IT17.04.00 - Understand Suspension & Steering.

   NCCTE.2015.IT17.05.00 - Understand Brakes.

   NCCTE.2015.IT17.06.00 - Understand Electrical/Electronic Systems.

   NCCTE.2015.IT17.07.00 - Understand Heating & Air Conditioning.

   NCCTE.2015.IT17.08.00 - Understand Engine Performance.

Course: Auto Service III
NCCTE.2015.IT18 - Automotive Service III
   NCCTE.2015.IT18.01.00 - Understand Engine Repair.
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

NCCTE.2015.IT18.02.00 - Understand Automatic Transmission/Transaxle.

NCCTE.2015.IT18.03.00 - Understand Manual Drive Train & Axles.

NCCTE.2015.IT18.04.00 - Understand Suspension & Steering.

NCCTE.2015.IT18.05.00 - Understand Brakes.

NCCTE.2015.IT18.06.00 - Understand Electrical/Electronic Systems.

NCCTE.2015.IT18.07.00 - Understand Heating & Air Conditioning.

NCCTE.2015.IT18.08.00 - Understand Engine Performance.

Course: Network Engineering Technology I

NCCTE.2017.II11.01.00 - Understand how to explore the network.

NCCTE.2017.II11.02.00 - Understand how to configure a network operating system.

NCCTE.2017.II11.03.00 - Apply procedures for network protocols and communications.

NCCTE.2017.II11.04.00 - Apply procedures for network access.

NCCTE.2017.II11.05.00 - Apply procedures for ethernet.

NCCTE.2017.II11.06.00 - Understand the network layer.

NCCTE.2017.II11.07.00 - Understand IP addressing.

NCCTE.2017.II11.08.00 - Apply procedures for subnetting IP networks.

NCCTE.2017.II11.09.00 - Understand the transport layer.

NCCTE.2017.II11.10.00 - Understand the application layer.

NCCTE.2017.II11.11.00 - Apply procedure to build a small network.

Course: Network Engineering Technology II

NCCTE.2017.II12.01.00 - Understand routing concepts.

NCCTE.2017.II12.02.00 - Understand static routing.

NCCTE.2017.II12.03.00 - Apply procedures for dynamic routing.

NCCTE.2017.II12.04.00 - Apply procedures for switched networks.
NCCTE.2017.II12.05.00 - Apply procedures for switch configuration.

NCCTE.2017.II12.06.00 - Understand VLANs.

NCCTE.2017.II12.07.00 - Understand access control lists

NCCTE.2017.II12.08.00 - Apply procedures for DHCP.

NCCTE.2017.II12.09.00 - Understand NAT for IPv4.

NCCTE.2017.II12.10.00 - Apply procedures for device discovery, management, and maintenance.

Course: Network Engineering Technology III
NCCTE.II13 - Cisco Network Engineering Technology III
   NCCTE.II13.01.00 - Introduction to Scaling Networks

   NCCTE.II13.02.00 - LAN Redundancy
   NCCTE.II13.03.00 - Link Aggregation
   NCCTE.II13.04.00 - Wireless LANs
   NCCTE.II13.05.00 - Adjust and Troubleshoot Single-Area OSPF
   NCCTE.II13.06.00 - Multiarea OSPF
   NCCTE.II13.07.00 - EIGRP
   NCCTE.II13.08.00 - EIGRP Advanced Configurations and Troubleshooting
   NCCTE.II13.09.00 - IOS Images and Licensing

Course: Network Engineering Technology IV
NCCTE.II14 - Cisco Network Engineering Technology IV
   NCCTE.II14.01.00 - Hierarchical Network Design

   NCCTE.II14.02.00 - Connecting to the WAN
   NCCTE.II14.03.00 - Point-to-Point Connections
   NCCTE.II14.04.00 - Frame Relay
   NCCTE.II14.05.00 - Network Address Translation for IPv4
   NCCTE.II14.06.00 - Broadband Solutions
   NCCTE.II14.07.00 - Securing Site-to-Site Connectivity
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

Course: Public Safety II
NCCTE.2015.IP12 - IP12 - Public Safety II
   - Disaster Preparedness
   - Fire Safety and Utility Controls
   - Disaster Medical Operations – Part I
   - Disaster Medical Operations – Part II
   - Light Search and Rescue Operations
   - CERT Organization
   - Disaster Psychology
   - Terrorism and CERT
   - Course Review, Final Exam, Disaster Simulation

Course: Advanced Manufacturing I
NCCTE.2016.IM11 - Advanced Manufacturing I
   - Apply Safety Standards to Manufacturing Processes and Production (MSSC-M1)
   - Work in a Safe and Productive Manufacturing Workplace
   - Perform safety and environmental assessments
   - Perform emergency drills and participate in emergency teams
   - Identify unsafe conditions and take corrective action
   - Provide safety training for all employees
   - Train personnel to use equipment safely
   - Suggest processes and procedures that support safety of work environment
   - Fulfill safety and health requirements for maintenance, installation, and repair
   - Monitor safe equipment and operator performance
   - Utilize effective, safety-enhancing workplace practices

   - Apply Quality practices and Measurement to Manufacturing Processes and Production (MSSC-M2)
   - Participate in periodic or statistically based internal quality audit activities
   - Check and document calibration of gages and other data collection equipment
   - Suggest continuous improvements
   - Inspect materials and product/process at all stages to ensure they meet
specifications

- Document the results of quality tests (NCCTE.2016.IM11.02.05)
- Communicate quality problems (NCCTE.2016.IM11.02.06)
- Take corrective actions to restore or maintain quality (NCCTE.2016.IM11.02.07)
- Record process outcomes and trends (NCCTE.2016.IM11.02.08)
- Identify fundamentals of blueprint reading (NCCTE.2016.IM11.02.09)
- Use common measurement systems and precision measurement tools (NCCTE.2016.IM11.02.10)

Course: Advanced Manufacturing II

- Apply Manufacturing Processes and Production Standards (MSSC-M3)
  - Identify customer needs (NCCTE.2016.IM12.01.01)
  - Determine resources available for the production process (NCCTE.2016.IM12.01.02)
  - Set up and verify equipment for the production process (NCCTE.2016.IM12.01.03)
  - Set team production goals (NCCTE.2016.IM12.01.04)
  - Make job assignments (NCCTE.2016.IM12.01.05)
  - Coordinate work flow with team members and other work groups (NCCTE.2016.IM12.01.06)
  - Communicate production and material requirements and product specifications (NCCTE.2016.IM12.01.07)
  - Perform, monitor and document the process to make the product (NCCTE.2016.IM12.01.08)
  - Document product and process compliance with customer requirements (NCCTE.2016.IM12.01.09)
  - Prepare final product for shipping or distribution (NCCTE.2016.IM12.01.10)

- Apply Maintenance Awareness Standards to Manufacturing Processes and Production (MSSC-M4)
  - Perform preventive maintenance and routine repair (NCCTE.2016.IM12.02.01)
  - Monitor indicators to ensure correct operations (NCCTE.2016.IM12.02.02)
  - Perform all housekeeping to maintain production schedule (NCCTE.2016.IM12.02.03)
  - Recognize potential maintenance issues with basic production systems, including knowledge of when to inform maintenance personnel about problems with (NCCTE.2016.IM12.02.04)

Course: Computer Engineering Technology I

- Understand PC Hardware used in computer industry.
  - Configure settings and use BIOS/UEFI tools on a PC (NCCTE.2016.II21.01.01)
  - Explain the importance of motherboard components, their purpose, and properties (NCCTE.2016.II21.01.02)
  - Compare and contrast various RAM types and their features (NCCTE.2016.II21.01.03)
  - Install and configure PC expansion cards (NCCTE.2016.II21.01.04)
  - Install and configure storage devices and use appropriate media (NCCTE.2016.II21.01.05)
  - Install various types of CPUs and apply the appropriate cooling methods (NCCTE.2016.II21.01.06)
  - Compare and contrast various PC connection interfaces, their characteristics and purpose (NCCTE.2016.II21.01.07)
  - Install a power supply based on given specifications (NCCTE.2016.II21.01.08)
  - Select the appropriate components for a custom PC configuration, to meet customer specifications or needs (NCCTE.2016.II21.01.09)
  - Compare and contrast types of display devices and their features (NCCTE.2016.II21.01.10)
NCCTE.2016.II21.01.11 - Identify common PC connector types and associated cables.
NCCTE.2016.II21.01.12 - Install and configure common peripheral devices.
NCCTE.2016.II21.01.13 - Install SOHO multifunction device / printers and configure appropriate settings.
NCCTE.2016.II21.01.14 - Compare and contrast differences between the various print technologies and the associated imaging process.
NCCTE.2016.II21.01.15 - Perform appropriate printer maintenance.

NCCTE.2016.II21.02.00 - Understand Networks used in the computer industry.
NCCTE.2016.II21.02.01 - Identify the various types of network cables and connectors.
NCCTE.2016.II21.02.02 - Compare and contrast the characteristics of connectors and cabling.
NCCTE.2016.II21.02.03 - Explain the properties and characteristics of TCP/IP.
NCCTE.2016.II21.02.04 - Explain common TCP and UDP ports, protocols, and their purpose.
NCCTE.2016.II21.02.05 - Compare and contrast various WiFi networking standards and encryption types.
NCCTE.2016.II21.02.06 - Install and configure SOHO wireless/wired router and apply appropriate settings.
NCCTE.2016.II21.02.07 - Compare and contrast Internet connection types, network types, and their features.
NCCTE.2016.II21.02.08 - Compare and contrast network architecture devices, their functions, and features.
NCCTE.2016.II21.02.09 - Use appropriate networking tools.

NCCTE.2016.II21.03.00 - Understand Mobile Devices used in the computer industry
NCCTE.2016.II21.03.01 - Install and configure laptop hardware and components.
NCCTE.2016.II21.03.02 - Explain the function of components within the display of a laptop.
NCCTE.2016.II21.03.03 - Use appropriate laptop features.
NCCTE.2016.II21.03.04 - Explain the characteristics of various types of other mobile devices.
NCCTE.2016.II21.03.05 - Compare and contrast accessories & ports of other mobile devices.

NCCTE.2016.II21.04.00 - Apply Procedures use to troubleshoot computer hardware and networks
NCCTE.2016.II21.04.01 - Troubleshoot common problems related to motherboards, RAM, CPU and power with appropriate tools.
NCCTE.2016.II21.04.02 - Troubleshoot hard drives and RAID arrays with appropriate tools.
NCCTE.2016.II21.04.03 - Troubleshoot common video, projector and display issues.
NCCTE.2016.II21.04.04 - Troubleshoot wired and wireless networks with appropriate tools.
NCCTE.2016.II21.04.05 - Troubleshoot and repair common mobile device issues while adhering to the appropriate procedures.

Course: Computer Engineering Technology II
NCCTE.2016.II22 - II22 - Computer Engineering Technology II
NCCTE.2016.II22.01.00 - Apply procedures used in Windows operating systems
NCCTE.2016.II22.01.01 - Compare and contrast various features and requirements of Microsoft Operating Systems (Windows Vista, Windows 7, Windows 8, Windows 8.1).
NCCTE.2016.II22.01.02 - Install Windows PC operating systems using appropriate methods.
NCCTE.2016.II22.01.03 - Apply appropriate Microsoft command line tools.
NCCTE.2016.II22.01.04 - Use appropriate Microsoft operating system features and tools.
NCCTE.2016.II22.01.05 - Use Windows Control Panel utilities
NCCTE.2016.II22.01.06 - Install and configure Windows networking on a client/desktop.
NCCTE.2016.II22.01.07 - Perform common preventive maintenance procedures using the appropriate Windows OS tools.

NCCTE.2016.II22.02.00 - Apply procedures used in non-window based operating systems
NCCTE.2016.II22.02.01 - Identify common features and functionality of the Mac OS and Linux operating systems.
NCCTE.2016.II22.02.02 - Setup and use client-side virtualization.
NCCTE.2016.II22.02.03 - Identify basic cloud concepts.
NCCTE.2016.II22.02.04 - Summarize the properties and purpose of services provided by networked hosts.
NCCTE.2016.II22.02.05 - Identify basic features of mobile operating systems.
NCCTE.2016.II22.02.06 - Install and configure basic mobile device network connectivity and email.
NCCTE.2016.II22.02.07 - Summarize methods and data related to mobile device synchronization.

NCCTE.2016.II22.03.00 - Understand computer security
NCCTE.2016.II22.03.01 - Identify common security threats and vulnerabilities.
NCCTE.2016.II22.03.02 - Compare and contrast common prevention methods.
NCCTE.2016.II22.03.03 - Compare and contrast differences of basic Windows OS security settings.
NCCTE.2016.II22.03.04 - Deploy and enforce security best practices to secure a workstation.
NCCTE.2016.II22.03.05 - Compare and contrast various methods for securing mobile devices.
NCCTE.2016.II22.03.06 - Use appropriate data destruction and disposal methods.
NCCTE.2016.II22.03.07 - Secure SOHO wireless and wired networks.

NCCTE.2016.II22.04.00 - Apply procedures to troubleshoot software issues
NCCTE.2016.II22.04.01 - Troubleshoot PC operating system problems with appropriate tools.
NCCTE.2016.II22.04.02 - Troubleshoot common PC security issues with appropriate tools and best practices.
NCCTE.2016.II22.04.03 - Troubleshoot common mobile OS and application issues with appropriate tools.
NCCTE.2016.II22.04.04 - Troubleshoot common mobile OS and application security issues with appropriate tools.
NCCTE.2016.II22.04.05 - Given a scenario, troubleshoot wired and wireless networks with appropriate tools.
NCCTE.2016.II22.04.06 - Given a scenario, troubleshoot operating system problems with appropriate tools.
NCCTE.2016.II22.04.07 - Given a scenario, troubleshoot common security issues with appropriate tools and best practices.
NCCTE.2016.II22.04.08 - Given a scenario, troubleshoot, and repair common laptop issues while adhering to the appropriate procedures.
NCCTE.2016.II22.04.09 - Given a scenario, troubleshoot printers with appropriate tools

NCCTE.2016.II22.05.00 - Apply operational procedures used in the computer industry
NCCTE.2016.II22.05.01 - Use appropriate safety procedures.
NCCTE.2016.II22.05.02 - Apply the appropriate controls used with potential environmental impact
NCCTE.2016.II22.05.03 - Summarize the process of addressing prohibited content/activity, and explain
privacy, licensing, and policy concepts.

**NCCTE.2016.II22.05.04** - Demonstrate proper communication techniques and professionalism.
**NCCTE.2016.II22.05.05** - Explain the troubleshooting theory.

**Course:** Adobe Visual Design

**NCCTE.2016.II31 - 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.
- **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 - 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

**NCCTE.2016.II33 - II33 - Adobe Video Design**
- **NCCTE.2016.II33.01.00** - Understand project requirements for video projects
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

**Course:** Public Safety I

- **NCCTE.2016.IP11** - 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:** Digital Media

- **NCCTE.2016.IA31** - IA31 - Digital Media
  - **NCCTE.2016.IA31.01.00** - Understand digital media and the relationship to society.
  - **NCCTE.2016.IA31.02.00** - Understand concepts and methods used to create digital graphics.
  - **NCCTE.2016.IA31.03.00** - Understand concepts and methods used to create digital animation.
  - **NCCTE.2016.IA31.04.00** - Understand concepts and methods used to create digital audio.
  - **NCCTE.2016.IA31.05.00** - Understand concepts and methods used to create digital video.
  - **NCCTE.2016.IA31.06.00** - Understand basic concepts and methods used to create websites.
Course: Advanced Digital Media
NCCTE.2016.IA32 - IA32 - Advanced Digital Media
  NCCTE.2016.IA32.01.00 - Apply procedures for career planning and digital media portfolio creation.
  NCCTE.2016.IA32.02.00 - Apply project management, research, and communication procedures in digital media.
  NCCTE.2016.IA32.03.00 - Apply production methods to create digital imaging and design projects.
  NCCTE.2016.IA32.04.00 - Apply production methods to create digital animation.
  NCCTE.2016.IA32.05.00 - Apply production methods to create digital media audio projects.
  NCCTE.2016.IA32.06.00 - Apply production methods to create digital media video projects.
  NCCTE.2016.IA32.07.00 - Apply production methods to design and develop websites.

Course: Law and Justice I
NCCTE.2016.IP41 - 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.2016.IP42 - IP42 - Law and Justice II
  NCCTE.2016.IP42.01.00 - Understand Careers in Law and Justice
NCCTE.2016.IP42.02.00 - Understand the History & Structure of the American Legal System
NCCTE.2016.IP42.03.00 - Understand Federal & State Criminal Law
NCCTE.2016.IP42.04.00 - Understand Constitutional Law
NCCTE.2016.IP42.05.00 - Understand Criminal Procedures
NCCTE.2016.IP42.06.00 - Understand Pre-Trial Procedures and Examinations
NCCTE.2016.IP42.07.00 - Understand Juries, Trial Procedures and Examinations
NCCTE.2016.IP42.08.00 - Understand Post Trial Legal Procedures
NCCTE.2016.IP42.09.00 - Understand Civil Law
NCCTE.2016.IP42.10.00 - Apply standards from ICS 300 - Intermediate Incident Command System
NCCTE.2016.IP42.11.00 - Apply procedures in Advanced Policing

Course: Emergency Management I
NCCTE.2016.IP51 - IP51 - Emergency Management I
NCCTE.2016.IP51.01.00 - Understand fundamental components of Emergency Management.
   NCCTE.2016.IP51.01.01 - IS-1: Emergency Manager: An Orientation to the Position
   NCCTE.2016.IP51.01.02 - IS-22: Are You Ready?
   NCCTE.2016.IP51.01.03 - IS-120: An Introduction to Exercises

NCCTE.2016.IP51.02.00 - Apply procedures for emergency planning and effective leadership of volunteers.
   NCCTE.2016.IP51.02.01 - IS-235: Emergency Planning
   NCCTE.2016.IP51.02.02 - IS-240: Leadership & Influence
   NCCTE.2016.IP51.02.03 - IS-241: Decision-Making and Problem-Solving
   NCCTE.2016.IP51.02.04 - IS-242: Effective Communication
   NCCTE.2016.IP51.02.05 - IS-244: Developing and Managing Volunteers
   NCCTE.2016.IP51.02.06 - S-288: The Role of Voluntary Agencies in Emergency Management

NCCTE.2016.IP51.03.00 - Apply procedures assess damage, coordinate aid, and manage threats and risks.
   NCCTE.2016.IP51.03.01 - IS-559: Local Damage Assessment
   NCCTE.2016.IP51.03.02 - IS-701: Multiage Coordination System (MACS) Course
   NCCTE.2016.IP51.03.03 - IS-702: NIMS Public Information Systems
   NCCTE.2016.IP51.03.04 - IS-703: NIMS Resource Management
   NCCTE.2016.IP51.03.05 - IS-706: NIMS Intrastate Mutual Aid, an Introduction
   NCCTE.2016.IP51.03.06 - IS-775: EOC Management and Operations
   NCCTE.2016.IP51.03.07 - IS-910.a: Emergency Management Preparedness Fundamentals
   NCCTE.2016.IP51.03.08 - IS-2001: Threat and Hazard Identification and Risk Assessment (THIRA)
NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

Course: Emergency Management II

NCCTE.2016.IP52 - IP52 - Emergency Management II
  NCCTE.2016.IP52.01.00 - Apply procedures for emergency response and mitigation.
    NCCTE.2016.IP52.01.01 - G-386: Mass Fatalities Incident Response
    NCCTE.2016.IP52.01.02 - IS-393: Introduction to Hazard Mitigation
    NCCTE.2016.IP52.01.03 - G-393: Mitigation for Emergency Managers

NCCTE.2016.IP52.02.00 - Apply procedures to respond to hazardous weather.
  NCCTE.2016.IP52.02.01 - IS271: Anticipating Hazardous Weather and Community Risk
  NCCTE.2016.IP52.02.02 - G-271: Hazardous Weather and Flooding Preparedness

NCCTE.2016.IP52.03.00 - Apply procedures to communicate in emergency response situations.
  NCCTE.2016.IP52.03.01 - IS-247: Integrated Public Alert and Warning System - (IPAWS)
  NCCTE.2016.IP52.03.02 - G-272: Warning Coordination and Communication

NCCTE.2016.IP52.04.00 - Apply procedures to operate an emergency response center.
  NCCTE.2016.IP52.04.01 - G-775: Emergency Operations Center (EOC) Management and Operations
  NCCTE.2016.IP52.04.02 - G-557: Rapid Needs Assessment
  NCCTE.2016.IP52.04.03 - G-191: ICS/EOC Interface

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.
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.
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: Woodworking III
NCCTE.2018.IM23 - Woodworking III
NCCTE.2018.IM23.01.00 - Understand the cabinetmaking industry, and health and safety hazards and safe practices.
NCCTE.2018.IM23.01.01 - Understand creating a portfolio.
NCCTE.2018.IM23.01.02 - Understand advanced education options.
NCCTE.2018.IM23.01.03 - Understand employability skills.
NCCTE.2018.IM23.01.04 - Understand credentials and certifications.
NCCTE.2018.IM23.01.05 - Understand Personal Protective Equipment.
NCCTE.2018.IM23.01.06 - Understand OSHA.
NCCTE.2018.IM23.01.07 - Understand SDS (MSDS).
NCCTE.2018.IM23.01.08 - Understand hazardous conditions.
NCCTE.2018.IM23.01.09 - Understand guards and shielding.

NCCTE.2018.IM23.02.00 - Apply advanced design and layout procedures.
   NCCTE.2018.IM23.02.01 - Apply woodworking drawings.
   NCCTE.2018.IM23.02.02 - Apply architectural standards.
   NCCTE.2018.IM23.02.03 - Apply cabinetry planning and design.
   NCCTE.2018.IM23.02.04 - Apply digital design.

NCCTE.2018.IM23.03.00 - Apply materials and characteristics.
   NCCTE.2018.IM23.03.01 - Apply lumber and millwork.
   NCCTE.2018.IM23.03.02 - Apply panel products.
   NCCTE.2018.IM23.03.03 - Apply laminate and veneers.
   NCCTE.2018.IM23.03.04 - Apply cabinetmaking hardware.

NCCTE.2018.IM23.04.00 - Apply advanced use of hand tools.
   NCCTE.2018.IM23.04.01 - Apply sharpening skills.
   NCCTE.2018.IM23.04.02 - Apply advanced hand tool use.
   NCCTE.2018.IM23.04.03 - Apply hand tool maintenance.

NCCTE.2018.IM23.05.00 - Apply advanced use of portable power tools.
   NCCTE.2018.IM23.05.01 - Apply sawing tools.
   NCCTE.2018.IM23.05.02 - Apply surfacing tools.
   NCCTE.2018.IM23.05.03 - Apply fastening and assembly tools.

NCCTE.2018.IM23.06.00 - Apply advanced use of stationary power tools.
   NCCTE.2018.IM23.06.01 - Apply the use of jigs and fixtures.
   NCCTE.2018.IM23.06.02 - Apply basic maintenance.
   NCCTE.2018.IM23.06.03 - Apply advanced setup techniques.

NCCTE.2018.IM23.07.00 - Apply finishing processes.
   NCCTE.2018.IM23.07.01 - Apply abrasive grits.
   NCCTE.2018.IM23.07.02 - Apply advanced finishing processes.

NCCTE.2018.IM23.08.00 - Apply advanced cabinet construction and assembly techniques.
   NCCTE.2018.IM23.08.01 - Apply advanced woodworking joints.
   NCCTE.2018.IM23.08.02 - Apply cabinet door types and construction.
   NCCTE.2018.IM23.08.03 - Apply cabinet drawer types and construction.
   NCCTE.2018.IM23.08.04 - Apply veneers and plastic laminates.

Course: Drafting III Engineering

NCCTE.2018.IV23 - 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: Engineering

NCCTE.2018.IV22 - 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.

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.