**BARTON COMMUNITY COLLEGE**

**COURSE SYLLABUS**

1. GENERAL COURSE INFORMATION

Course Number: NATG 1195

Course Title: First Aid and Safety for Natural Gas Technicians

Credit Hours: 3

Prerequisites:

Division/Discipline: Workforce Training and Community Education/Natural Gas Programs

Course Description: This course prepares you to work in and perform routine safety precautions the natural gas in addition to acquiring the knowledge and skills required to help an injured or suddenly ill person before professional emergency care can be provided. Successful completion of this course provides for certification by American Heart Association First Aid; and Adult, Child, and Infant CPR.

1. INSTRUCTOR INFORMATION
2. COLLEGE POLICIES

Students and faculty of Barton Community College constitute a special community engaged in the process of education. The College assumes that its students and faculty will demonstrate a code of personal honor that is based upon courtesy, integrity, common sense, and respect for others both within and outside the classroom.

Plagiarism on any academic endeavors at Barton Community College will not be tolerated. The student is responsible for learning the rules of, and avoiding instances of, intentional or unintentional plagiarism. Information about academic integrity is located in the Student Handbook.

The College reserves the right to suspend a student for conduct that is determined to be detrimental to the College educational endeavors as outlined in the College Catalog, Student Handbook, and College Policy & Procedure Manual. (Most up-to-date documents are available on the College webpage.)

Any student seeking an accommodation under the provisions of the Americans with Disability Act (ADA) is to notify Student Support Services via email at [disabilityservices@bartonccc.edu](mailto:disabilityservices@bartonccc.edu).

1. COURSE VIEWED IN TOTAL CURRICULUM

This course is intended to prepare entry level employees or train incumbent workers in the natural gas transmission and distribution industry to identify and perform routine safety precautions as well as learning the knowledge and skills required to help an injured or suddenly ill person before professional emergency care can be provided. Upon successful completion of the course participants will be prepared to provide emergency care for family members, friends, fellow employees, individuals under your care or supervision, accident victims, people experiencing sudden illnesses, etc.

This course is required by curriculums leading to degrees in Natural Gas Transmission and Distribution and Gas Measurement. This course is considered a general elective toward BCC and KBOR graduation requirements and transfers to most colleges and universities.

1. **ASSESSMENT OF STUDENT LEARNING**

Barton Community College is committed to the assessment of student learning and to quality education. Assessment activities provide a means to develop an understanding of how students learn, what they know, and what they can do with their knowledge. Results from these various activities guide Barton, as a learning college, in finding ways to improve student learning.

Course Outcomes, Competencies, and Supplemental Competencies:

1. Describe the responsibility people have towards providing first aid and emergency care for injured or suddenly ill individuals.
2. Discuss the importance of obtaining consent to provide emergency care.
3. Discuss the standards to follow when establishing rapport with an injured or ill victim.
4. Discuss the special needs and considerations in regards to caring for children, senior citizens, and people with disabilities.
5. Discuss the knowledge, skills, and equipment require to prepare for emergencies that might arise in a delay-help situation.
6. Demonstrate the importance of early first aid and emergency care intervention in regards to injuries and sudden illnesses.
7. Identify the four life-threatening conditions.
8. Identify the four life-threatening viruses that can be transmitted when providing emergency care.
9. List six guidelines for preventing disease transmission.
10. Identify and describe the three emergency action steps.
11. Identify the seven important questions to be answered when surveying an injury scene.
12. Explain the different measures to follow when controlling various injury scenes.
13. Describe and demonstrate the steps followed when completing both the primary and secondary surveys completed on an injured or ill victim.
14. Outline the steps or procedures to follow when providing basic life support.
15. Demonstrate basic knowledge and skills required to render first aid and treatment in regard to rescue breathing and CPR
16. Define and recognize breathing emergencies.
17. Describe the care for a person experiencing respiratory distress.
18. Describe the purpose of rescue breathing.
19. Describe when and demonstrate how to provide rescue breathing for an adult, child, and infant.
20. Identify five causes of choking for adults, children, and infants.
21. Describe the care for conscious and unconscious choking for adult, child, and infant victims.
22. Define and recognize cardiovascular emergencies.
23. Describe the purpose and physiological function of CPR.
24. Explain and demonstrate how to administer CPR to adults, children, and infants.
25. List the conditions in which a rescuer may stop CPR.
26. Demonstrate when and how to utilize an AED.
27. Identify controllable and uncontrollable cardiovascular risk factors.
28. Demonstrate basic knowledge and skills required to render first aid and treatment in regard to internal breathing and shock.
29. Describe and demonstrate the steps to control bleeding.
30. Identify signs and symptoms of internal bleeding.
31. Describe and demonstrate the steps to care for internal bleeding victims.
32. Describe three significant conditions that can result in shock.
33. List the significant signs and symptoms of shock.
34. Demonstrate without critical error bleeding control and shock management care for a victim exhibiting shock signs and symptoms
35. Demonstrate basic knowledge and skills required to render first aid and treatment in regard to wounds and burns.
36. List the signs and symptoms of closed wounds.
37. Identify and demonstrate the care of the various open wounds.
38. Identify and care for an infected wound.
39. List four sources of burns.
40. Discuss the identification and assessment of thermal burns.
41. Explain the rule of nines and when to activate the EMS system for burn care.
42. Describe how to provide for proper management of thermal burns.
43. Discuss the importance of appropriately recognizing chemical burns, and the steps specific to their management.
44. Discuss the recognition, effects, and management of electrical shock (burns).
45. Demonstrate the methods used to properly apply selected bandages.
46. Demonstrate basic knowledge and skills required to render first aid and treatment in regard to musculoskeletal and internal injuries.
47. Describe the four significant musculoskeletal injuries.
48. Describe the significant signs and symptoms of musculoskeletal injuries.
49. Describe the general management plan for selected musculoskeletal injuries.
50. Discuss when a musculoskeletal injury requires immobilization.
51. Demonstrate how to appropriately apply various splints.
52. Describe how to recognize and care for injuries to the upper extremity.
53. Describe how to recognize and care for injuries to the lower extremity.
54. Describe how to recognize and care for serious injuries to the head, neck, and low back.
55. Describe and demonstrate how to effectively immobilize a victim's head and spine.
56. Describe how to recognize and care for external injuries to the chest, abdomen, and pelvis.
57. Describe how to recognize and care for internal injuries to the chest, abdomen, and pelvis.
58. Demonstrate basic knowledge and skills required to render first aid and treatment in regard to stroke and seizure.
59. Identify the general signs and symptoms of sudden illnesses.
60. List general guidelines of care for someone who suddenly becomes ill.
61. Describe how to recognize and care for a person who becomes dizzy or faints.
62. Describe how to recognize and care for a person suspected of having a diabetic emergency.
63. Describe how to recognize and care for a person having a seizure.
64. List and define the causes of a stroke.
65. Describe how to recognize and care for a person suspected of having a stroke.
66. List ways to reduce the risk of stroke or transient ischemic attack (TIA).
67. Demonstrate basic knowledge and skills required to render first aid and treatment in regard to poison, stings, and bites.
68. List the ways poisons enter the body.
69. List ways to prevent the ingestion, inhalation, or absorption of poisons.
70. Identify signs and symptoms of poisoning.
71. Describe the role of a poison control center (PCC).
72. Identify the signs and symptoms of anaphylaxis.
73. Demonstrate the treatment steps of providing care to a victim in anaphylaxis.
74. Describe how to recognize the signs and symptoms of the most common types of bites and stings.
75. List ways to protect a person from insect and tick bites.
76. Describe how to care for an insect, spider, and scorpion sting.
77. Describe how to care for a tick bite.
78. Describe how to care for snakebites.
79. Describe how to care for domestic or wild animal bites.
80. Describe how to care for human bites.
81. Demonstrate basic knowledge and skills required to render first aid and treatment in regard to extreme heat and cold.
82. Describe the factors related to temperature regulation of the human body.
83. Describe the recognition, prevention, and management of heat cramps.
84. Describe the recognition and management of heat exhaustion.
85. Describe the recognition and management of heat stroke.
86. Describe the recognition and management of general, severe, and immersion hypothermia.
87. Describe the recognition and management of frostbite.
88. Outline measures a person can take to help prevent and cold-related illness.
89. Describe measures that can be followed to protect a victim from heat or cold.
90. Demonstrate basic knowledge and skills required to render first aid and treatment in regard to moving a patient.
91. List four situations in which an emergency move of a victim is necessary.
92. List five limitations you should be aware of before you attempt to move someone.
93. Describe eight guidelines you should follow when moving someone.
94. Demonstrate how to perform four emergency moves.
95. Identify the most appropriate emergency move for a victim of suspected head of spine injury.
96. Describe the characteristics of hydrocarbon.
97. Explain the differences between gas and liquid in terms of hydrocarbon weight.
98. Describe the safety principles of excavation.
99. Explain the purpose and timeframes of OneCall.
100. Explain the four different soil classes.
101. Explain proper sloping for each soil type.
102. Explain proper shoring rules and regulations.
103. Describe proper confined space procedures.
104. Explain proper egress procedures.
105. Explain the purpose of atmospheric testing and proper testing procedures.
106. Explain the purpose of having a fire and traffic watch and proper watch procedures.
107. Describe the appropriate application of jobsite safety techniques, personal protective equipment (PPE), and regulatory entities as it applies to the natural gas industry.
108. Perform a jobsite safety analysis.
109. Describe proper use and care of personal protective equipment
110. Define Occupational Safety & Health Administration (OHSA) regulations pertaining to excavating and confined space.
111. Define Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) regulations as it applies to the natural gas industry.
112. INSTRUCTOR'S EXPECTATIONS OF STUDENTS IN CLASS
113. TEXTBOOKS AND OTHER REQUIRED MATERIALS
114. REFERENCES
115. METHODS OF INSTRUCTION AND EVALUATION

###### **ATTENDANCE REQUIREMENTS**

1. COURSE OUTLINE