Conference Space Rescue 1

Course Description
FS 146. Confined Space Rescue 1. 1 hour credit. Prerequisite: FS 141 and FS 142 both with a C or better. This course will enable the student to identify and demonstrate skills and techniques proficiently as a confined space entrant, attendant, and as part of a confined space rescue team. The student will demonstrate basic fundamentals of confined space rescue, such as identifying hazards, confined space classifications, and the roles and responsibilities of confined space team members. The student will demonstrate pre-entry procedures, use of appropriate personal protective equipment, and various monitoring equipment.

Required Materials
For complete material(s) information, refer to https://bookstore.butlercc.edu

Butler-Assessed Outcome
The intention is for the student to be able to
1. Demonstrate the job performance skills outlined in the National Fire Protection Association 1006 and 1670 standards.

Learning Outcomes
The intention is for the student to be able to
1. Identify various types of areas that constitute a confined space; permit required and non-permitted confined spaces and their hazards.
2. Utilize atmosphere monitoring equipment.
3. Ventilate a confined space safety.
4. Identify the requirements and roles of rescue service personnel: Entrant, Attendant, and Rescuer, as defined in 29 CFR 1910.140.
5. Identify the fundamentals of rescue activities during confined space emergencies, including the incident management system.

Learning PACT Skills that will be developed and documented in this course
Through involvement in this course, the student will develop ability in the following PACT skill area(s):

Analytical Thinking Skills
- Problem solving - Through design and implementation of an Incident Action Plan, the student will identify the need for a confined space rescue, prioritize the solvable steps of the rescue, and then implement the Incident Action Plan to conduct a confined space rescue.

Technology Skills
Discipline-specific technology – Through the use of rescue equipment, tools, and personal protective equipment, the student will demonstrate appropriate selection and application of equipment and tools.

Major Summative Assessment Task(s)
These Butler-assessed Outcome(s) and Learning PACT skill(s) will be demonstrated by

Skills or Competencies
These actions are essential to achieve the course outcomes:
1. Identify a confined space hazard
   A. Implement Incident Command System
   B. Develop an Incident Action Plan
2. Demonstrate pre-entry procedures
   A. Isolation
      1. Limit access to site
      2. Utility control: Lock out – tag out system
   B. Use of ventilation systems
   C. Use of monitoring devices
      1. Radiological monitoring
      2. Combustible Gas Indicator
      3. Oxygen saturation level
      4. Toxic Gas Indicator
   D. Selection and use of personal protective equipment
      1. Thermal protection
      2. Fall protection
      3. Respiratory protection.

Learning Units
I. Confined Space Rescue Entry Table
   A. Overview of OSHA 29 CFR 1910.40
   B. Overview of NFPA 1006 and 1670

II. Hazards of confined spaces
   A. Identification of a confined space
   B. Hazardous atmospheres
   C. Electrical and mechanical hazards
   D. Physical safety hazards
   E. Thermal hazards

III. Confined space classifications
   A. Pre-entry inspection and documentation
   B. Permit required confined spaces
   C. Non-permit confined spaces
IV. Roles and responsibilities of confined space entry personnel
   A. Incident management system
   B. Incident commander
   C. Entry supervisor
   D. Attendant
   E. Authorized entrants
   F. Rescue teams

V. Pre-entry procedures
   A. Isolation
   B. Atmospheric monitoring
   C. Ventilation

VI. Personal protective equipment
   A. Proper selection of personal protective equipment
   B. Chemical protective clothing
   C. Thermal protection
   D. Respiratory protection

VII. Monitoring equipment
   A. Atmospheric monitors
   B. Combustible Gas Indicator
   C. Radiological monitoring
   D. Colormetric tubes
   E. Photo Ionizing Detectors

Learning Activities
Activities will include, but not be limited to, class discussion, lectures, course projects, and practical skill evolutions designed to give the student an understanding of the NPFA 1006, 1670 and 29 CFR 1910.146.

Grade Determination
The student will be evaluated through written exams, skills proficiency assessments, and other methods of evaluation at the discretion of the instructor.