COURSE OUTLINE
Fire Inspector 1

Course Description
FS 125. Fire Inspector 1. 3 hours credit. This course will enable the student to conduct a building inspection, communicate fire prevention recommendations to property owners, and preplan for effective action during fires and emergencies.

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

Butler-assessed Outcomes
The intention is for the student to be able to:
1. Conduct a fire safety inspection.
2. Develop communication skills with the public.
3. Preplan for fires and emergencies.

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 areas:

Analytical Thinking Skills
- Problem solving - Through quickly and effectively identifying solutions for any situation that has to do with fire safety, the student will develop problem solving skills.

Major Summative Assessment Task(s)
These learning outcomes and the Learning PACT skills will be demonstrated by:
1. Completing a fire safety inspection of a building and communicating fire prevention recommendations to the building owner and/or occupants in preparation for the NFPA 1031 certification exam.

Skills or Competencies
Actions that are essential to achieve the course outcomes:
1. Explain the authority and responsibilities of the fire inspector
2. List and explain inspection procedures
3. Describe the principles of combustion and fire hazard recognition
4. Discuss site construction related to occupancy and emergency egress
5. Describe fire protection systems
6. Identify hazardous materials and explain safe storage and handling principles

Learning Units
I. Duties and authority
   A. Public organizations
B. Private organizations
C. Inspectors
D. Categories of inspections
E. Legal guidelines for inspections
F. Professional development
G. Types of laws
H. Legal status of inspectors
I. Liability considerations
J. Outside technical assistance
K. Right of entry

II. Standards, codes and permits
A. NFPA
B. ASTM International
C. Underwriters Laboratories Inc.
D. American National Standards Institute
E. Standards Council of Canada
F. Current codes and standards
G. Consistent codes and standards
H. Performance-based options
I. Local code development process
J. Code adoption process
K. Code modification and appeals procedures
L. Code enforcement
M. Permits

III. Fire behavior
A. Science of fire
B. Fire development in a compartment
C. Fire control theory

IV. Construction types and occupancy classifications
A. United States construction
B. Canadian construction
C. Assembly occupancies
D. Business occupancies
E. Educational occupancies
F. Factory/industrial occupancies
G. Institutional occupancies
H. Residential occupancies
I. Storage occupancies
J. Utility/miscellaneous occupancies
K. Multiple-use occupancies

V. Building construction
A. Materials
1. Wood
2. Masonry
3. Concrete
4. Steel
5. Other metals
6. Glass
7. Gypsum board
8. Plastic
9. Fabric

B. Structures
   1. Concrete
   2. Steel-framed
   3. Masonry
   4. Wood

VI. Components of building construction
   A. Walls
   B. Roofs
   C. Floors
   D. Ceilings
   E. Stairs
   F. Doors
   G. Fire doors
   H. Windows
   I. Interior finishes
   J. Building services

VII. Means of egress
   A. Elements
   B. Components
   C. Exit illumination and marking
   D. Occupant loads
   E. Means of egress determinations

VIII. Water supply distribution systems
   A. Public water supply systems
   B. Private water supply systems
   C. Water supply analyses

IX. Water-based fire suppression systems
   A. Automatic sprinkler systems
   B. Water spray fixed systems
   C. Foam-water systems
   D. Standpipe and hose systems
   E. Stationary fire pumps
   F. Inspection and testing
X. Special-agent fire-extinguishing systems and extinguishers
   A. Classification system
   B. Dry-chemical fire-extinguishing systems
   C. Wet-chemical fire-extinguishing systems
   D. Clean-agent fire-extinguishing systems
   E. Carbon dioxide fire-extinguishing systems
   F. Foam fire-extinguishing systems
   G. Portable fire extinguishers

XI. Fire detection and alarm systems
   A. Fire alarm control panels
   B. Power supplies
   C. Automatic alarm-initiating devices
   D. Fixed-temperature heat detectors
   E. Rate-of-rise heat detectors
   F. Smoke detectors
   G. Flame detectors
   H. Fire-gas detectors
   I. Combination detectors
   J. Water-flow devices
   K. Tamper switches

XII. Fire hazard recognition
   A. Unsafe behaviors
   B. Unsafe conditions
   C. Hazardous processes

XIII. Site access
   A. Fire lanes and fire apparatus access roads
   B. Construction and demolition sites
   C. Structure access barriers

XIV. Hazardous materials
   A. Descriptions
   B. Identification
   C. Storage and transport containers
   D. Inspection concerns

XV. Plans review and field verifications
   A. Plans review process
   B. Plan views and system plans
   C. Systematic plans review
   D. Field verification procedures

XVI. Inspection Procedures
   A. Interpersonal communication
B. Preparation  
C. Follow-up inspections  
D. Emergency planning and preparedness  
E. Complaint management  
F. Administrative duties

**Learning Activities**
Activities will include, but not limited to, class discussions, lectures, classroom exercises, course projects and field trips.

**Grade Determination**
The student will be graded on completion of the assessment tasks, assignments, and examinations.