



MERCER
COUNTY COMMUNITY COLLEGE

COURSE OUTLINE

Course Number	Course Title	Credits
FIR 110	Fire & Code Enforcement 1	7
Hours: 6 Lecture, 2 Lab Lecture/Lab/Other	Co- or Pre-requisite: N/A	Implementation Semester & Year January 2022

Catalog description:

This course acquaints the student with the history, theory and practice of fire prevention and code enforcement. Topics include relevant codes, recognition of fire hazards, and implementation of an inspection program. This program meets the 104-hour requirement for eligibility to take the New Jersey Division of Fire Safety Fire Inspector examination. Successfully passing the examination leads to the New Jersey Division of Fire Safety Fire Inspector certification.

General Education Category:

[Not GenEd](#)

Choose an item.

Course coordinator:

James McCann, (609) 799-3245 or mccannj@mccc.edu

Required texts & Other materials:

ICC Code, 2006 edition.

NJ Uniform Fire Code (available from the NJ Division of Fire Safety only, call (609)633-6106)

IFSTA, Fire Inspection & Code Enforcement, 8th edition

Course Student Learning Outcomes (SLO):

Upon successful completion of this course the student will be able to:

1. Have an understanding and appreciation for the important role that fire codes, building codes and code enforcement officials play in terms of public safety. *(ILG # 1, 7; PLO # 1)*
2. Understand the basic principles of life safety for buildings required by the New Jersey Uniform Fire Code and other life safety codes. *(ILG # 1, 10; PLO # 4, 7)*
3. Be familiar with the content and format of the New Jersey Uniform Fire Code with the goal of having the capability of using these codes as reference tools for building inspections. *(ILG # 10; PLO # 4, 7)*
4. Recognize and identify a protected means of egress from a building for the buildings occupants, fire resistance and fire resistant materials and construction, and classification of structures. *(ILG # 2,10,11; PLO # 6)*
5. Have the fundamental knowledge, skills, and abilities to effectively and confidently conduct a systematic building fire safety inspection. *(ILG # 10, 11; PLO # 6)*
6. Identify the inherent risks in buildings that lack complete active and passive fire protection. *(ILG # 7, 10, 11; PLO # 3)*
7. To present to the student the fire prevention code and building code requirements for most the most common occupancies: residential, apartment, mercantile, commercial, industrial, health care facilities and hotels. *(ILG # 1, 10; PLO # 6)*
8. Understand the role of fire officials in fire investigations regarding investigation techniques, documentation, preserving evidence, interviewing individuals and overall processes. *(ILG # 1, 2; 9, 10, 11 PLO # 2)*
9. Recognize terrorism at the awareness level. *(ILG # 10, 11; PLO # 6)*
10. Pass the NJDFS Fire Inspector examination. *(ILG # 10; PLO 1)*

Course-specific Institutional Learning Goals (ILG):

Institutional Learning Goal 1. Written and Oral Communication in English. Students will communicate effectively in both speech and writing.

Institutional Learning Goal 2. Mathematics. Students will use appropriate mathematical and statistical concepts and operations to interpret data and to solve problems.

Institutional Learning Goal 5. Social Science. Students will use social science theories and concepts to analyze human behavior and social and political institutions and to act as responsible citizens.

Institutional Learning Goal 7. History. Students will understand historical events and movements in World, Western, non-Western or American societies and assess their subsequent significance.

Institutional Learning Goal 9. Ethical Reasoning and Action. Students will understand ethical frameworks, issues, and situations.

Institutional Learning Goal 10. Information Literacy: Students will recognize when information is needed and have the knowledge and skills to locate, evaluate, and effectively use information for college level work.

Institutional Learning Goal 11. Critical Thinking: Students will use critical thinking skills understand, analyze, or apply information or solve problems.

Program Learning Outcomes for (PLO)

1. Discuss the history, support organizations, resources, incident management, training, and emergency operations and relate how each plays a role within the fire service.
2. Define and use basic terms and concepts associated with the chemistry and dynamics of fire.
3. Apply principles of hydraulics, building construction, strategy, and tactics to fire ground operations.
4. Communicate the relationship of fire prevention and fire inspection.
5. Demonstrate the importance of public education in relation to fire prevention.
6. Evaluate facilities to appraise code compliance and potential hazards, building construction issues, and presence of appropriate fire protection systems to help ensure life safety both pre-incident and during an incident.
7. Employ safe work practices using recognized standards and regulations.

Units of study in detail – Unit Student Learning Outcomes:

Students will understand, interpret and use the curriculum for the New Jersey Fire Inspector Course as noted in the state curriculum modules. The course material will cover knowledge and understanding of the New Jersey Uniform Fire Code in preparation for the NJDFS New Jersey Fire Inspector exam.

NEW JERSEY FIRE INSPECTION CERTIFICATION TRAINING COURSE

Total Time	Module Time	Subject
3 hrs.	3 hrs.	Module 1 - Introduction & History of Code Enforcement (Supports SLO 1) <ul style="list-style-type: none"> ❖ Course Materials ❖ Grading ❖ Attendance ❖ Quiz's & Testing ❖ History of Fire Prevention/Code Enforcement ❖ Basic fire chemistry
	2 hrs.	<ul style="list-style-type: none"> ❖ <i>Code Book Assembly</i>
9 hrs.	6 hrs.	Module 2 - The Theory of Fire Code Enforcement (Supports SLO 1, 2) <ul style="list-style-type: none"> ❖ Building and fire Codes ❖ Building classifications ❖ Code applications
	6 hrs.	Module 3 - Code Administrative requirements (Supports SLO 3, 7) <ul style="list-style-type: none"> ❖ Classification of Use groups ❖ Model Codes, adopted code, reference codes
		Module 3 - Code Administrative requirements (Supports SLO 3, 7) <ul style="list-style-type: none"> ❖ UFC-NJ Use Groups, Life Hazard Uses ❖ Relation to Building Code ❖ UCC regulations & subcodes
12 hrs.	3 hrs.	Module 4 - Legal Aspects (Supports SLO 1, 3, 7) <ul style="list-style-type: none"> ❖ N.J.S.A. Uniform Fire Safety Act Statutes ❖ N.J.A.C. Introduction 5;70-1 & 2 & 5;71-3
15 hrs.	3 hrs.	Module 5 - Referenced Standards (Supports SLO 1, 2, 3, 7) <ul style="list-style-type: none"> ❖ Difference between a code and a standard ❖ When to apply referenced standards ❖ How to apply NFPA reference standards ❖ Breakdown of a NFPA Standards, Guides & Manuals ❖ Overview of NFPA Standards, ANSI, ASME, NIOSH, BOCA, ICC
33 hrs.	6 hrs.	Module 6 - Inspection Overview (Supports SLO 5) <ul style="list-style-type: none"> ❖ Ethics and demeanor ❖ Pre-inspection preparation ❖ Right of entry and methods ❖ Interviewing ❖ Documentation methods ❖ On-site record reviews ❖ Sampling and testing ❖ Report content ❖ The inspector as a witness

Total Time	Module Time	Subject
77 hrs.	6 hrs.	Module 14 - Retrofit Code (Supports SLO 3) <ul style="list-style-type: none"> ❖ History of the Retrofit provisions ❖ NFPA Life Safety Code 101 background ❖ Relationship to the UCC ❖ When Retrofit applies ❖ Historic structures ❖ Fire protection plans ❖ Specific Subchapter 4 requirements
83 hrs.	6hrs.	Module 15 - Inspection Skills & Tools (Supports SLO 5) <ul style="list-style-type: none"> ❖ Types of inspections ❖ Purpose of inspections ❖ Applying the "Three Es" of fire prevention ❖ Inspection equipment and tools ❖ Inspector health and safety ❖ Issuing violation notices
90 hrs.	3 hrs.	Module 16 - Practical Evolutions (Supports SLO 2, 3, 4, 5, 6, 7) <ul style="list-style-type: none"> ❖ Students to be taken on a guided field inspection of a multi occupancy structure (or multiple structures of various uses). Students are to apply observation and documentation skills. Students are to identify hazards and verbally describe code problems. Exact citations not required during this evolution and instructor is to reinforce observations and point out hazards missed ❖ Students are to be provided a guided inspection of a fire sprinkler system including main drain and inspector test outlet flows ❖ Students are to be provided a guided inspection of a fire pump installation ❖ Students are to conduct hands-on water flow tests
93 hrs.	3hrs.	Module 17 - Current Code Changes (Supports SLO 3) <ul style="list-style-type: none"> ❖ Utilizing material from current Code Update Seminar, as provided by the Division, review current code issues and changes with the students ❖ CEU Program requirements
96 hrs.	3 hrs.	Module 18 - Fire Investigation (Supports SLO 8) <ul style="list-style-type: none"> ❖ Review duties of fire officials to investigate fires ❖ types of investigations ❖ Basic fire investigation techniques ❖ Scene approach and documentation; ❖ Interviewing victims, witnesses, and responders ❖ Preserving evidence, legal aspect of evidence collect, working with other agencies. Requesting assistance ❖ Documentation processes
102 hrs.	6 hrs.	Module 19 - Terrorism Awareness (Supports SLO 9) <ul style="list-style-type: none"> ❖ Overview of Terrorism ❖ History ❖ Intelligence gathering ❖ Situational Awareness ❖ Hazardous Materials & CBRNE Awareness ❖ Visual indicators of production ❖ Clan lab hazards, types and clean-up ❖ Pro, Con's & Ramifications of becoming an agent for Law Enforcement
102 hrs		Total required instructional hours
104 hrs	2 hrs.	Final exam
104 hrs		Total required hours

Optional add-ons		
108 hrs.	6 hrs.	Module 20 – Emergency Planning and Preparedness <ul style="list-style-type: none"> ❖ Classroom review of slides representing hazards/violations with students identifying the problem and providing exact code citations to support conclusion ❖ Large loss or multiple fatality fire code history analysis ❖ Legal Liability ❖ Relationship to other government agencies ❖ LEA operations ❖ Local government operations ❖ Use of the internet
	4.0 hrs	Ride-a-long (optional)
118 hrs.		Total hours

Evaluation of student learning: Students will be evaluated for mastery of learning objectives by methods of evaluation to be determined by the instructor. Periodic tests or quizzes as well as a final exam may be utilized. Other methods such as a research or group projects are encouraged.