SCHOOL OF STEM SYLLABUS

TERM:

INSTRUCTOR:

COURSE CODE: CNM-220

OFFICE HOURS:

COURSE TITLE: Construction Codes and Compliance

OFFICE LOCATION:

DAY(S) AND TIME(S):

EMAIL:

LOCATION:

PHONE:

COURSE PREREQUISITE: None

CREDITS: 4

COURSE DESCRIPTION:
This course provides students with a theoretical understanding of how to examine new and old structures to ensure they are built properly and follow applicable building codes and safety regulations. This course provides an introduction to the basics of working in the building inspection field with the knowledge of construction codes, required documentation protocol, and standard practices.

Detailed outline of suggested topics.

STUDENT LEARNING OUTCOMES:

Upon successful course completion, students will be able to:

1. Develop a basic knowledge and concepts related to building codes and system.
2. Identify if construction is in compliance with federal, state & local building codes.
3. Apply safety concepts, regulations and work practices as set forth by OSHA, NESC, ANSI and NFPA
4. Cross-reference the guidelines and specifications as presented in the building codes
5. Recognize the duties of a building inspector and prioritize those inspection items having the greatest impact on the health, protection and safety of building occupants.

TEXTBOOK AND SUPPLEMENTAL MATERIALS:

Proposed student texts
Building Codes Basics: Residential, International Residential Code Stephen A. Van Note; ISBN#978-1435400634

Building Codes Illustrated: A guide to understanding 2015 International Building Code Frank Ching & Steven R Winkel; ISBN-10: 1119150922

The following links are helpful in getting material help for the coursework:

www.https://www.osha.gov/

http://www.nfpa.org/Codes-and-Standards

GRADING POLICY:

Attendance and Participation	**5%**
Assignments	**35%**
Midterm	**30%**
Final Exam	**30%**

SAMPLE COURSE SCHEDULE:

Schedule	**Lecture Topic**	Student Learning Objectives (SLO)
Session 1	Orientation, description of course intent, schedule, expectation from students **Building Construction** 1. Types of Buildings (residential, commercial, industrial) 2. Historical Perspective of building codes 3. Federal, State, & Local Regulations	1, 2
Session 2	**Types of Building Codes**	2, 3

	1. Codes Interpretation and application during design/construction process 2. Types of Building codes 3. Reference Codes 4. Construction Terminologies 5. Zoning Regulations 6. Grand Father Clause, Permitting Process 7. OSHA Regulations	
Session 3	**Case Study Class Project** 1. Group Formation 2. Assigning the Topics 3. Work Strategy 4. Project Deliverables	1 to 5
Session 4	**Inspection & Code Enforcement** 1. Types of building Inspections 2. Role of Inspector 3. Duties of a Building Inspector 4. Different types of building inspections 5. Worker safety plan 6. Personal safety equipment 7. Code Enforcement process. **8.** Sequence of Construction and code enforcement	1, 3, 5
Session 5	**Techniques & Procedures for Code Compliance, Session I** 1. Identify the potential Hazards. 2. Definition of a Potential Hazard 3. Excavation	3, 4

	4. Fall Protection 5. Shoring 6. Hoisting **7.** Techniques and tools to avoid potential hazards	
Session 6	**Techniques & Procedures for Code Compliance, Session II** 1. Identify the potential hazards. 2. Electrical installation and safety protocols 3. Fire Protection **4.** Techniques and tools to avoid potential hazards	3, 4
Session 7	**Techniques & Procedures for Code Compliance, Session III** 1. Identify the potential hazards 2. Scaffold 3. Welding, cutting. 4. Demolition, sand blasting **5.** Techniques and tools to avoid potential hazards	3, 4
Session 8	**Mid Term Test**	1 to 5
Session 9	**Techniques & Procedures for Code Compliance, Session IV** 1. Identify the potential hazards 2. Ladders and Step ladders 3. Cranes and Drilling Rigs' hazards 4. Working close to structures 5. Vibration monitoring requirement for landmark structures 6. Working near a water body 7. Working in confined spaces 8. Working at isolated locations	3, 4

	9. Techniques and tools to avoid potential hazards	
Session 10	**Coordination with Stakeholders** 1. Stakeholders and their role 2. Legal Issues 3. Record keeping and documentation. 4. Enforcement 5. Violation & Citation	2, 3, 4
Session 11	**Handling of Hazardous Material** 1. Identification of hazardous material 2. Types of Hazardous Materials 3. Hazard Identification Codes 4. Hazard Statements 5. Manual and mechanical handling procedures 6. Storage and disposal 7. Required documentation and record keeping	3, 4
Session 12	**HVAC Inspection and code compliance** 1. Compliance with building laws 2. Efficiency compliance 3. Compliance with environmental regulations 4. Appliance Installation and Location 5. Protection from Impact 6. Climate control 7. Ducting system 8. Test and balance reports	3, 4
Session 13	**Elevators Inspection and code compliance**	3, 4

	1. Compliance with building codes 2. Elevator Requirements 3. Types of Elevators 4. Elevator Parts 5. Emergency Communication 6. Compliance with American Disability Act (ADA) **7.** Elevator door and landing compliance	
Session 15	**Final Test**	

HCCC POLICIES, STATEMENTS, AND SERVICES:
https://www.hccc.edu/administration/academic-affairs/syllabus-addendum.html