

Departmental Syllabus

Prepared by the Department of Engineering Sciences and Applied Technology

Date of Departmental Approval: February 10, 2017

Date approved by Curriculum and Programs: March 29, 2017

Effective: Fall 2017

1. Course Number: CON121

Course Title: MA State Building Code - Residential

2. Description:

Students develop a working knowledge of the Massachusetts State Building Code for residential properties and learn the process of constructing a residential building from ground to finish with an emphasis on building code requirements. This course is helpful in obtaining information and skills necessary to pass the Massachusetts Restricted - One and Two Family Dwelling Construction Supervisors Exam.

3. Student Learning Outcomes (instructional objectives, intellectual skills):

Upon successful completion of this course, students are able to do the following.

- Recognize the purpose of residential building codes and standards.
- Explain how residential building codes are adopted and enforced.
- Identify the difference between prescriptive and performance based codes and standards.
- Communicate how residential building codes relate to the performance of a structure.
- Justify the benefits of building to code and beyond-code.

4. Credit(s): 3

5. Satisfies General Education Requirement: No

6. Prerequisite(s): None

7. Semester(s) Offered: Varies

8. Suggested General Guidelines for Evaluation:

Course grading procedures and make-up policies are detailed in a student handout. Grades are based on homework; class work and participation; in class tests/quizzes; laboratory work and reports; and a final examination.

9. General Topical Outline (Optional):

Topics include the administration, application and use of the Massachusetts State Building Codes to include: wood, masonry, concrete, energy efficiency, and means of egress.

Topic outline:

- Restricted Construction Supervisor Administrative Responsibilities
- Energy efficiency
- Sitework and Foundations
- Concrete and Masonry
- Moisture Intrusion/protection
- Structural Framing
- Roofing/Exterior Walls
- Doors/Windows
- Interior Environment
- Fire Protection
- Safety

Review of applicable reference documents:

- Code of Federal Regulations (CFR 1926)
- International Energy Conservation Code, 2009
- Massachusetts State Building Code Amendments to the IRC for one- and two- Family Dwellings (780 CMR)
- International Residential Code for one – and two-Family Dwellings, 2009