

New Graduate Course Proposal

Form Procedure

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Course Title

Course Title: * Construction Safety

Proposed Banner Abbreviation: * Construction Safety

Banner limit of 30 characters, including punctuation, spaces, and special characters.

Department/Committee Information

The main contact person for the Graduate Curriculum Committee should fill out this form.

Requestor Name: * Nirajan Mani

Members of the Graduate Curriculum Committee: Dr. Nirajan Mani, Dr. Wayne Whitfield, Dr. Soumitra Basu, Dr. Abdel Gabar Mustafa, Dr. Hong Yu

Department / Unit Developing: * Engineering Technology

Chair of Department for Program: * Nirajan Mani Chair Email: * Nirajan Mani nmani@fitchburg

Academic Dean of Department or Program: * Margaret Hoey Academic Dean E-mail: * <Dr. Hoey> mhoey@fitchburg

Program Chair Yes
 No
The Program Chair for this request is among the people listed above.

Course Information

Course Description

* The course includes the application of management principles, communication and human relations factors, safety/health rules, industry and federal standards, accident investigation, and technical issues especially within the job planning and construction phases.

Rationale and expected outcomes of offering the Course

* Students will be provided an understanding of safe work practices, mandatory training, record keeping and maintenance of records, compliance with OSHA worker safety and environmental safety laws inspection procedures, and penalties for lack of conformance to safety laws. Students will also learn procedures for recognizing hazards, CPR, site safety meetings, and accident investigations. Students are required to complete and present a report on a project consisting of a complete corporate safety plan and a site-specific safety plan containing a hazard analysis of an actual project. It also deals with industry and federal standards for health and safety issues in the construction industry.

Expected Outcomes:

1. Demonstrate construction safety in an increasingly challenging and changing environment
2. Describe the roles of organizations and personnel involved in major construction projects and explain how each affects site safety
3. Demonstrate how site safety programs can be coordinated among the many contractors on a construction site to provide the overall safety
4. Explain the legal aspects including liability and regulatory requirements of construction safety
5. Examine many technical issues in construction, particularly the requirements and applications of safety planning in the early job phases.

Number of Credits: * 3

Discipline Prefix or Prefixes:

* CMGT

Brief rationale if more than one prefix:

Level of Course:

* 7000
 8000
 9000

Brief rationale for level choice::

* Graduate level course

The course will be:

Requirement
 Elective

Elective or Requirement Note/Special:

Is there a similar undergraduate course?

* Yes
 No

How does this graduate course differ from the undergraduate one?

Construction Safety and Risk Management (CMGT 3035) is undergraduate level course. Construction Safety (CMGT 7XXX) provides more in-depth knowledge than CMGT 3035.

Does this course affect offerings in any other department or program?

* Yes
 No

Course Enollment

Expected Average Enrollment:

* 12

This course is a replacement for:

Course # / Name

Has the course been offered previously as a "Topics" course?

* Yes
 No

Is this an Extended Campus Course?

* Yes
 No

Which semester will this course be offered for the first time?:

* Fall 2023

How often thereafter to be offered?:

* Every two years

Course Requirements

Prerequisite course(s) if any:

Additional Requirements

Laboratory Hours:

Fieldwork Hours:

Pre-Practicum Hours:

Practicum Hours:

Other Requirements (specify):

Graduate Standing

Syllabus Upload

New Course Syllabus Upload:

MSCM_Syllabus_Safety_Final.pdf

Signatures

*Click on the **Submit Form** button at the bottom of the page after you have signed the form. You should receive an email confirmation that your signature has been completed.*

...3334353538

Nirajan Mani

03/21/2022

Requester Signature

Date

...3035313537

Nirajan Mani

04/18/2022

Department Chair Approval

Date

Academic Dean Signature

Date

SGOCE Dean Signature

Date

Approval of the Graduate Council Date

Approval of the President Date

Notification

Reviewed by the Registrar: _____

Reviewed by the Library: _____

Retired form

SGOCE Admin. Assistant
Signature

Electronically signed by Denise Bertrand on 05/01/2022 1:03:11 PM



School of Graduate Online and Continuing Education (SGOCE)
Department of Engineering Technology
SYLLABUS
FALL 2023

Class Information:

Course: CMGT 7XXX (Construction Safety)
Credits: 3
Class Modality: Online
Class Start Date: TBD
Class End Date: TBD

Instructor Information:

Dr. Nirajan Mani
Office: CNIC 209A
Phone: 978-665-4843
Email: nmani@fitchburgstate.edu
Office Hours: M/W (11:00 A. M. – 12:15 P. M.) (By Appointment)

Recommended Reference Books and Materials:

Construction Safety and Health (2nd Ed.)
Author: David L. Goetsch
Publisher: Pearson
ISBN-13: 978-0-13-237469-9

Construction Safety Management and Engineering (2nd ed.)
Author: Darryl C. Hill
Publisher: American Society of Safety Engineers
ISBN-13: 978-1885581778

29 CFR 1926 OSHA Construction Industry Regulations or www.osha.gov

Supplementary Materials: Handout materials will be provided by instructor

Catalog Description:

The course includes the application of management principles, communication and human relations factors, safety/health rules, industry and federal standards, accident investigation, and technical issues especially within the job planning and construction phases.

Prerequisite: Graduate student standing required unless otherwise agreed upon by instructor.

Course Objectives:

Students will be provided an understanding of safe work practices, mandatory training, record keeping and maintenance of records, compliance with OSHA worker safety and environmental safety laws inspection procedures, and penalties for lack of conformance to safety laws. Students will also learn procedures for recognizing hazards, CPR, site safety meetings, and accident investigations. Students are required to complete and present a report on a project consisting of a complete corporate safety plan and a site-specific safety plan containing a hazard analysis of an actual project. It also deals with industry and federal standards for health and safety issues in the construction industry.

Students Learning Outcomes:

Student will have:

1. Demonstrate construction safety in an increasingly challenging and changing environment
2. Describe the roles of organizations and personnel involved in major construction projects and explain how each affects site safety
3. Demonstrate how site safety programs can be coordinated among the many contractors on a construction site to provide the overall safety
4. Explain the legal aspects including liability and regulatory requirements of construction safety
5. Examine many technical issues in construction, particularly the requirements and applications of safety planning in the early job phases.

Learning Outcomes Assessment:

Assessment tools for the above learning outcomes include homework & quizzes (outcomes: 1 to 4), project (outcomes: 3, 5), and exams (outcomes: 1, 2, 3, 4).

Instructor Availability:

Instructor will be available during weekdays to respond your questions or concern via university email. Please contact instructor via university email if you have any questions or concern to avoid spam issue. However, this is an online class, we will use Google Meet / Hangouts for all student requested meetings.

Instructional Strategies:

The course will be conducted in an online format. This class may use lectures, demonstrations, self-guided study, group discussions, collaborative learning groups, and presentations to cover the topics in this course. PowerPoint presentations, computer applications, etc. may be utilized. Some independent learning is expected of the students; they should complete assigned readings prior to each class session and actively engage in discussions and activities to facilitate their understanding of classroom presentations. Every effort will be made to meet the individual needs and various learning styles of the course participants. It is most important that you inform the instructor at the beginning of the semester of any particular unique needs.

Course Topics:

The following topics will be covered in the course. The following listing is a general indication of the order of their coverage. However, faculty instructor reserves the right to change the order of coverage

and the topics to be covered based upon the class's performance and interests.

- Introduction & Construction Safety in General
- Construction Safety Program
- Costs of Accidents, Causation of Accidents, Ethics
- Workers' Compensation in Construction
- OSHA Compliance
- Contractor Selection
- Safety Plans & Hazard Analysis
- Accident Analysis & Emergency Response
- Preventing Workplace Violence & Promoting Safety
- Safety Training and Regulatory Requirements
- Fall Prevention and Protection
- Safety Plans for Excavation, Concrete, and Steel Erection Activities
- Mechanical Systems & Electrical Safety
- Hazardous Materials and Confined Spaces

Grading System:

Range	Letter Grade	Quality Points
95 - 100	A	4.0
92 - 94	A-	3.7
89 - 91	A- / B+	3.5
86 - 88	B+	3.3
83 - 85	B	3.0
80 - 82	B-	2.7
77 - 79	B- / C+	2.5
74 - 76	C+	2.3
71 - 73	C	2.0
0 - 70	C-	0
Withdrawn		W
Incomplete		IN
In-Progress		IP
Audit		AU
Satisfactory		S
Unsatisfactory		U

** Grades that fall between intervals will be rounded to the higher number.*

Evaluation Criteria:

Quizzes	10%
Homework	30%
Exam I	20%
Exam II	20%
Project	20%

** The instructor reserves the right and the responsibility for adjusting these items and their weights as necessary to meet specific situations as they may arise.*

Student Responsibilities and Class Requirements:

Each student is responsible for completing all course requirements and for keeping up with all activities of the course. Students are required to complete all assigned homework, quizzes, exams, and project work by the given deadline.

Policy on Assignments:

All assignments must be turned in on the blackboard on Sundays per the documented dates in the syllabus. Feedback to your submissions will be posted on the blackboard within 72 hours (96 hours for a class of 60 or more students) after the weekly submission due date and time. It means that if you chose to submit your assignment early, it will be graded at the scheduled time and not before. Work submitted after due date will receive a grade of zero. All assignments must conform to APA writing style and include a reference list (not a work cited or bibliography).

Students with extenuating circumstances, such as a medical emergency or other emergencies must provide written proof of such event, and report such events within 24 hours and make arrangement to complete assignments in a timely manner. Failure to do so will result in a penalty up to 50%. Make up examinations (if part of course) will only be offered at the discretion of the instructor.

Technology Initiatives:

Users of the Fitchburg State University computer systems are subject to all applicable federal, state, and international computer laws. Questions regarding regulations may be directed to the office of Information Technology Systems.

Students will utilize technology as:

- A research tool; (a means of discovering current trends and substantive research articles in education)
- A communication method
- An enhancement tool for the design of PowerPoint presentations (for recorded presentations-individual/group)

Fitchburg State University Library Online Services:

The Fitchburg State University Library online services may be accessed through the Fitchburg State University Homepage <https://library.fitchburgstate.edu/>. Students may access any of several full-text online databases. Passwords are available to students by calling 978.665.3063. Students may access the Fitchburg State University Career Service and Counseling Services Center via the college's homepage at <https://www.fitchburgstate.edu/student-support/career-support/career-resources>.

Disabilities Accommodation:

Students requiring course alterations or accommodations due to a disability or emergency medical condition, should inform instructor as soon as possible. You should also work with the Disability Services Office (978-665-4020). They will provide you with the forms needed to determine the particular accommodations that your situation merits.

University Academic Dishonesty Policy:

Fitchburg State University's policy on Academic Dishonesty will be enforced in this course.

Please refer to the university catalog on this policy. Plagiarism and cheating are inexcusable. Any instance of plagiarism or cheating will result in lowered grade and possible failing the course.

Tentative Schedule:

Week	Topics	Remarks
Week 1	Introduction & Construction Safety in General	
Week 2	Construction Safety Program	<i>Homework 1 due</i>
Week 3	Costs of Accidents, Causation of Accidents, Ethics	
Week 4	Workers' Compensation in Construction	<i>Homework 2 due</i>
Week 5	OSHA Compliance	<i>Quiz 1 due</i>
Week 6	Contractor Selection	<i>Assign Final Project</i>
Week 7	Safety Plans & Hazard Analysis	<i>Exam I due</i>
Week 8	Accident Analysis & Emergency Response	
Week 9	Safety Training and Regulatory Requirements	<i>Homework 3 due</i>
Week 10	Preventing Workplace Violence & Promoting Safety: Fall Prevention and Protection	
Week 11	Safety Plans for Excavation, Concrete, and Steel Erection Activities	<i>Homework 4 due</i>
Week 12	Mechanical Systems & Electrical Safety	
Week 13	Hazardous Materials and Confined Spaces	<i>Quiz 2 due</i>
Week 14	Project Week / Recorded Project Presentation	<i>Project Report & Presentation due</i>
Week 15	Final Exam	<i>Exam II due</i>

Note: The instructor reserves the right to modify this syllabus and schedule.