

New Graduate Course Proposal

Form Procedure

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Course Title

Course Title: * Research Methodology for CM

Proposed Banner Abbreviation: * Research Methodology for CM

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

* This course includes research methods and current research topics in construction management areas. It covers resources of research results, analysis of existing research, and development of preliminary proposal.

Rationale and expected outcomes of offering the Course

* This course introduces and discusses approaches, strategies, and data collection methods relating to research in engineering and construction management. Students will consider how to select the appropriate methodology for use in a study to be performed. Students will learn how to collect data based on different data collection methods, construct these tools, and pilot them before they become ready for use. This course elucidates the requirements for an academic work, considering aspects related to language, writing style, and lay-out. To culminate this final stage, students will learn to write a comprehensive research proposal (thesis and/or special project report) that may be conducted in the future.

Expected Outcomes:

1. Understand the concept of research and specific topics in the areas of CM;
2. Understand the elements of research design;
3. Carry out research projects using ethical principles and methods;
4. Develop effective search and analytical evaluation skills of the published literature;
5. Analyze research products (e.g. reports, proposals, papers, and theses);
6. Communicate written and verbal presentation of academic materials

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::

The course will be: Requirement Elective Elective or Requirement Note/Special:

Is there a similar undergraduate course? * Yes No

Does this course affect offerings in any other department or program? * Yes No

Course Enrollment

Expected Average Enrollment: *

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?: * How often thereafter to be offered?: *

Course Requirements

Prerequisite course(s) if any:

Additional Requirements Laboratory Hours: Fieldwork Hours:
 Pre-Practicum Hours: Practicum Hours:

Other Requirements (specify):

Syllabus Upload

New Course Syllabus Upload: MSCM_Syllabus_Research_Methodology_CM_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.*

...3532353239
Nirajan Mani _____ 03/15/2022
 Requester Signature Date

...3931353534
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 1:09:31 PM



School of Graduate Online and Continuing Education (SGOCE)
Department of Engineering Technology
SYLLABUS
Spring 2024

Class Information:

Course: CMGT 8XXX (Research Methodology for CM)
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)

Textbook:

Research Methodology
Authors: C.M. Chaudhary
Publisher: RSBA Pub
ISBN: 13: [9788176114370](https://www.isbn-international.org/product/9788176114370)

References:

- Strunk, W.Jr. and White, E.B. (2000). “The Elements of Style”, Third Edition, Longman, NY. Fowler, F.J. (2001). “Survey Research Methods”, Third Edition, Applied social research method series Volume 1, Sage Publications, California.
- Singleton, Jr., R.A., Straits, B.C. (2005). Approaches to Social Research, New York, Oxford University Press.
- Yin, R. K., (2002). “Case Study Research. Design and Methods”, Third Edition, Applied social research method series Volume 5, Sage Publications, California.
- Creswell, J.W. (2003). “Research Design: Qualitative, Quantitative, and Mixed Methods Approaches”, Second Edition, Publications, California.
- Alley, M. (2003). “The Craft of Scientific Presentations Critical Steps to Succeed and Critical Errors to Avoid”, Springer-Verlag New York, LLC.

Supplementary Materials: Handout materials will be provided by instructor

Catalog Description:

This course includes research methods and current research topics in construction management areas. It covers resources of research results, analysis of existing research, and development of preliminary proposal.

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

Required Skills: Students are expected to be proficient on statistics or business statistics

Course Objectives:

This course introduces and discusses approaches, strategies, and data collection methods relating to research in engineering and construction management. Students will consider how to select the appropriate methodology for use in a study to be performed. Students will learn how to collect data based on different data collection methods, construct these tools, and pilot them before they become ready for use. This course elucidates the requirements for an academic work, considering aspects related to language, writing style, and lay-out. To culminate this final stage, students will learn to write a comprehensive research proposal (thesis and/or special project report) that may be conducted in the future.

Students Learning Outcomes:

Student will:

1. Understand the concept of research and specific topics in the areas of CM;
2. Understand the elements of research design;
3. Carry out research projects using ethical principles and methods;
4. Develop effective search and analytical evaluation skills of the published literature;
5. Analyze research products (e.g. reports, proposals, papers, and theses);
6. Communicate written and verbal presentation of academic materials

Learning Outcomes Assessment:

Assessment tools for the above learning outcomes include homework & quizzes (outcomes: 1 to 4), research project (outcomes: 5, 6), 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.

- Research Methodology: A review of the Fundamentals
- Mechanics and Elements of Research (Ethical Issues, Research Design)
- Research Problem
- Literature Review
- Research Hypotheses
- Research Approaches
- Research Strategies
- Data Collection and Analysis Methods
- Sampling Design
- Statistical Analysis
- Academic Writing and Research Project Organization
- Presentations and Oral Communications

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.

(Note: It is recommended that students back up all of their work on a flash drive.)

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	Fundamentals of Research Methodology	
Week 2	Mechanics and Elements of Research	<i>Homework 1 due</i>
Week 3	Research Problem	
Week 4	Literature Review	<i>Homework 2 due</i>
Week 5	Research Hypotheses	<i>Quiz 1 due</i>
Week 6	Research Approaches	<i>Assign Final Project</i>
Week 7	Research Strategies	<i>Exam I due</i>
Week 8	Data Collection and Analysis Methods	
Week 9	Sampling Design	<i>Homework 3 due</i>
Week 10	Statistical Analysis	
Week 11	Academic Writing and Research Project Organization	<i>Homework 4 due</i>
Week 12	Academic Writing and Research Project Organization	
Week 13	Presentations and Oral Communications	<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.