



SCHOOL OF ENGINEERING AND APPLIED SCIENCES

AMS 571 –Research Methods in Technology Management
Fall 2019

INSTRUCTOR INFORMATION

Mahtab Orooji, Ph.D

Office Hours: TR 10:30 am- 1:00 pm or by appointment

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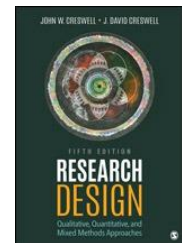
COURSE INFORMATION

Credit Hours: 3

Catalog Description: A comprehensive study of research methods and experimental design applicable to industrial and technical operations. This course includes a review of basic statistics, quality control techniques, and quality assurance. This course satisfies the University Research Tool requirement for MS Engineering Technology Management majors. The course supports the development of knowledge needed for the thesis or graduate project. Students must attain a minimum grade of B in the course. It should be completed within the first 15 hours of the graduate program.

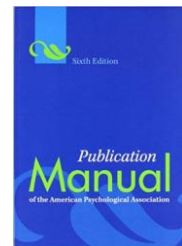
Required Textbook

- Research design:
Qualitative, quantitative, and mixed methods approaches
ISBN: 9781544338422
Publisher: Thousand Oaks, CA: Sage
Authors: Creswell, J. W., & Creswell, J. D.
<https://us.sagepub.com/en-us/nam/research-design/book255675>



Highly Recommended Textbook

- Publication Manual (6th ed.)
ISBN: 9781433805615
American Psychological Association (2010)
<https://us.sagepub.com/en-us/nam/research-design/book255675>



Course Objectives / Learning Outcomes & Overview

Upon completion of the course, the student should be able to:

- Comprehend nature of research and the essential features of research design
- Critique the basic frameworks for quantitative, qualitative, and mixed methods research
- Select the key process elements of research for a project or thesis
- Deduce the correct use of form and style used for research papers and theses
- Demonstrate competency in the use of the APA style documentation system
- Formulate a research proposal for a graduate thesis

Course Topics

The purpose of this course is to provide an overview of research design. This overview consists of understanding the preliminary considerations that go into selecting a qualitative, quantitative, or mixed methods research design. These include knowing the definition for these different approaches, considering philosophical worldviews, reviewing the literature, understanding the use of theory, anticipating ethical issues, and developing writing strategies. We will discuss the process of research as it relates to each approach. This process includes writing an introduction, specifying a purpose statement, and developing research questions and/or hypotheses. This course will also discuss the methods and procedures for quantitative, qualitative, and mixed methods studies.

COURSE STRUCTURE AND DESIGN

The course will consist of readings from the assigned text and other supplemental materials, assigned homework, discussion of course content, the development of thesis proposal content, and the development of proposal drafts.

Assigned Readings

The textbooks and supplemental readings provide the content to support your success in completing homework assignment, discussions, development of thesis proposal content, and the development of proposal drafts.

Quizzes

Quizzes will be given from assigned textbook chapters and assigned supplemental materials associated with the given topic. Quizzes assess your knowledge of the thesis writing process, research design methods, and thesis procedure protocols.

Discussions

Online sessions will be geared to address questions and thoughts regarding the readings, and discuss ideas and theories. These discussions will be graded for participation, content, writing, and sources.

Research Rationale

Students will be expected to have a fundamental understanding of the research design frameworks through the development of a research rationale section to be incorporated into the proposal draft document.

Thesis Draft Proposal

Students will submit a draft of their thesis research proposal that will incorporate what you learned during the course. This draft will be comprised of the first three chapters of a complete thesis.

Thesis Draft Proposal

Students will submit a final draft of their thesis research proposal that will incorporate what they learned during the course. The final thesis proposal should build on the research rational and draft proposal.

Grading

Course Grade Distribution		Grade Scale	
Quizzes	10%	A, Outstanding	90-100%
Discussion Board Contributions	15%	B, Commendable	80-89.99%
Research Rationale	10%	C, Competent	70-79.99%
Thesis Proposal Drafts	25%	D, Deficient	60-69.99%
Thesis Final Proposal	40%	F, Unacceptable	0-59.99%
Total	100%		

COURSE POLICIES

Attendance Policies/Performance Expectations:

Web delivery/ no classroom attendance requirement. Must meet established deadlines.

I strongly encourage you to remain actively involved in this course. Some suggestions for doing this are:

- 1) Check your WKU email and Blackboard regularly for course announcements and information;
- 2) Stay abreast of all due dates as they are added to the course schedule on Blackboard;
- 3) Contribute regularly and effectively to the online discussions;
- 4) Complete all work on time and to the very best of your ability.

Expectations

All deliverables should be completed in order to pass the course. All assignments must be submitted on time-for this course. Any assignments submitted after scheduled due dates will not be accepted unless prior arrangements have been made with the instructor. Students should work independently on assignments unless the instructor gives prior permission for collaboration. Presenting the words, ideas, or expressions of another person in any form and claiming them as one's own is plagiarism and will not be tolerated. The claim of ignorance is no excuse.

Late Work

As a general rule, no late work is accepted. If you think you need an extension, you must contact me before the assignment is due. In some cases, I may grant a resubmission of work that does not meet the minimum standard. However, students should expect a reduction in the grade for late or resubmitted work. I realize that some life circumstances may be unavoidable, but recognize that you can always drop a course for extenuating circumstances such as the death of a family member. All other circumstances are per my discretion. Family or work commitments and schedule conflicts are generally not good reason for extensions.

E-Mail

Subject line must contain the course number and one or two word issue.

Example: AMS571- Draft Proposal

E-mail is a professional conversation with your professor. *It is not texting.* I expect you to present your questions and/concerns in a professional manor. *An unprofessional e-mail will not get a response.*

General communication and expectations

Students will communicate with the instructor using the learning management system Blackboard or other communication media such as e-mail. My availability during the week is from 8:00 AM to 4:00 PM CST M-F with limited availability on the weekends. *An unprofessional e-mail will not get a response.*

Access to a late-model computer with standard business software and an Internet connection is required. This is a paperless course module. This course module and all associated communication within or as part of should adhere to the WKU Information Technology Acceptable Use Policy. All assignments and related documents will be submitted on-line via Blackboard. Students must make prior arrangements before submitting hard copy reports or papers. If you have problems transmitting information, telephone or e-mail immediately, and we'll get the problem solved.

File Naming:

All files submitted for grading should have the following file naming format:

Course number_Last_First_Assignment.ext (no spaces)

Example: AMS571_Orooji_Mahtab_Draft Proposal.pdf

Academic Honesty

All Western Kentucky University policies are in effect. All work must reflect APA citation standards. All your work must be your own, unless I authorize collaboration, in which case you must, in writing, acknowledge the help you have received. Presenting the words, ideas, or expressions of another person in any form and claiming them as one's own is plagiarism and will not be tolerated. The claim of ignorance is no excuse. (See academic offenses in the WKU student handbook.) The University Catalog states, "Students who commit any act of academic dishonesty may receive from the instructor a failing grade in that portion of the coursework in which the act is detected or a failing grade in the course module without possibility of withdrawal."

ADA Accommodation Statement:

In compliance with University policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Student Accessibility Resource Center located in Downing Student Union, 1074. SARC can be reached by phone number at 270-745-5004 [270-745-3030 TTY] or via email at sarc.connect@wku.edu.

Please do not request accommodations directly from the professor or instructor without a faculty notification letter (FNL) from The Student Accessibility Resource Center.

Title IX Misconduct/Assault Statement:

Western Kentucky University (WKU) is committed to supporting faculty, staff and students by upholding WKU's Title IX Sexual Misconduct/Assault Policy (#0.2070) at

<https://wku.edu/eoo/documents/titleix/wkutitleixpolicyandgrievanceprocedure.pdf> and

Discrimination and Harassment Policy (#0.2040) at

https://wku.edu/policies/hr_policies/2040_discrimination_harassment_policy.pdf

Under these policies, discrimination, harassment and/or sexual misconduct based on sex/gender are prohibited. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to the Title IX Coordinator, Andrea Anderson, 270-745-5398 or Title IX Investigators, Michael Crowe, 270-745-5429 or Joshua Hayes, 270-745-5121.