

ADDIS ABABA UNIVERSITY
ADDIS ABABA INSTITUTE OF TECHNOLOGY
SCHOOL OF MECHANICAL AND INDUSTRIAL ENGINEERING

Module Title: Research Methodology **Module Number:** MIEG 7091 **Credit Hours (ECTS):** 3(7)

Instructor: Dr. Daniel Tilahun

Module Description

The course introduces basic concepts of research, research design, data analysis and ethical issues in the conduct of research. It helps in the development of analytical and critical evaluation skills of published literature and provides a framework for successful development of written and oral thesis presentations or similar academic materials.

This course helps the students to actively participate in the seminar by formulating research topics, reviewing literatures, selecting appropriate research method(s) as part of their MSc thesis proposal. The progress of the seminar and the literature review results will be reported and presented regularly to the instructor and the group. The course enables the students to apply established writing styles to prepare and report research work.

Module Outline

1. Fundamentals of Research
2. Types of Research
3. Research Process/Research Proposal Development
4. Research Design
5. Research Ethics
6. Research Communication (Reporting Research Findings)

References:

1. Zegeye Abiy et.al, *Introduction to Research Methods-Preparatory Module for AAU Graduate Program*, Sept. 2009
2. Blumberg B. et.al, *Business Research Methods*, 3rd Ed., Mc Graw Hill Education, 2008

3. Creswell, J. W. *Research design: Qualitative, quantitative and mixed method approaches*. 4th Ed. Thousand Oaks, CA: Sage, 2014.
4. Marczyk, G. & De Matteo, *Essentials of Research Design and Methodology*. New Jersey: John Wiley & Sons, Inc.
5. Mitchell, M.L. & Jolley, J.M. *Research Design*, 5th Ed, Wadsworth: Thomson, 2004

Teaching Methods:

- Lectures
- Group Discussions
- Seminar

Minimum attendance requirement:

- Minimum of 75% lecture attendance and 100 % in Group Discussion

Assessment/ Evaluation:

- Group Discussion 10%
- Proposal Writing 20%
- Written Report and Presentation 20%
- Literature Review 20%
- Final Exam..... 30%