

Research Methods & Scientific Paper Writing (BME-8990, 3 CrHr)

Course Outline Fall-Winter 2019-2020

Course Description

The goal of this course is to help students with scientific engineering research method and effective paper writing skills.

Course Objectives

Learning typical research method steps and scientific, effective writing and presenting skills for a scientific audience.

Detailed Course Content

Part 1: Research Methods

- Research Basics
- Structuring a Research Projects
- Research Ethics
- Data Collection
- Data Analysis
- Research Dissemination

Part 2: Effective Writing & Presenting

- Rules of Effective Writing
 - Work on examples/Assignments
- The skeleton of a research paper/presentation
- Golden rules of a good scientific paper writing
 - Work on Examples/Assignments
- Rules of writing a Proposal

Instructional Methods

The course will be delivered in PowerPoint presentation and examples as well as many in-class working examples. Students must participate in-class discussion identifying the issues in the presented examples.

Instructor: Dr. Zahra Moussavi

Office hours: by appointment

Couse Materials: Lecture notes and “Research Methods” by Nicholas Walliman (available online) & “Scientific Writing 2.0” by Jean-Luc Lebrun

Evaluation

The final course grade will be determined by the student's performance on the following:

Component	Value	Details
Part I Exam	40%	Short-answer + multiple-choice questions
In-Class Participation and Presentation	20%	5-min Presentation on a topic related to student's research
Part II Exam	40%	A 200 word essay on a given topic in class + correcting a text, identifying its issues.

Academic Integrity

Students are expected to conduct themselves in accordance with the highest ethical standards of the Profession of Engineering, and to evince academic integrity in all their pursuits and activities at the university. As such, in accordance with Section 7.1 of the General Academic Regulations and Requirements of the University of Manitoba, students are reminded that plagiarism or any other form of cheating in examinations, assignments, laboratory reports or term tests is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university). A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty.