



Course Syllabus

MEEM 6010 – Engineering Research Communication

Spring 2015

Instructor Information

Instructor: Nancy Barr, MS, ME-EM Communications Advisor
Office Location: 802 ME-EM
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E-mail: nbbarr@mtu.edu
Office Hours: Tuesdays 3 – 4 pm and Thursdays 2 – 3 pm or by appointment

Course Identification

Course Number: MEEM 6010 Engineering Research Communication
Course Name: Engineering Research Communication
Course Location: ME-EM 406
Class Times: Tuesday, 4:05 p.m. to 5:55 p.m.
Prerequisites: Thesis Master's or PhD student status

Course Description/Overview

This course will guide graduate students through the process of publishing research in technical journals and presenting that research at conferences and other venues. Students will receive regular, relevant feedback on their writing and presentation skills and will be expected to provide constructive feedback to their colleagues in the course. The course is designed to help graduate students in engineering with their research-specific communication tasks. Students will work one-on-one with the instructor to complete a journal article, conference paper, proposal, etc., make progress on their dissertation, or other agreed-upon projects. Students will also learn the standard components of advanced writing tasks, including abstracts, literature reviews, CVs, proposals, critiques, and more. Additionally, students will deliver a complete scientific presentation with visual aids in a research colloquium format.

Course Learning Objectives

Upon completion of this course, students will:

1. Have a working knowledge of the process of academic publishing
2. Have an understanding of the composing process and a “toolbox” of methods to get them started with their own writing, suited to their personality and needs.
3. Understand the resources available at research libraries and demonstrate an ability to conduct research for relevant books and articles, using correct citation methods

4. Be able to write a coherent, concise first draft of a research article/proposal defense for faculty review
5. An understanding of the rhetorical concept of audience and will be able to create communication tools to meet the needs of various audiences
6. Understand the purpose and format of a curriculum vitae as demonstrated by preparing one for the course
7. Design visual tools that help audience understanding of complex topics
8. Be able to present their research in a concise 10-minute presentation with visual aids that engage the audience

Course Resources

Course Website(s)

- Canvas<<http://www.mtu.instructure.edu>>

Required Course Text

- *Scientific Writing and Communication: Papers, Proposals, and Presentations*, 1st Edition, by Angelika Hoffman, ©2010 Oxford University Press, ISBN 978-0-19-539005-6 (Abbreviated as SWC below)
- *The Craft of Scientific Presentations: Critical Steps to Success and Critical Errors to Avoid* by Michael Alley, ©2013 Springer, ISBN 978-1441982780 (Abbreviated as CSP below)

Course Fees

None beyond tuition, except for Distance Learning students.

Course Supplies

Daily access to a computer with Internet access and Microsoft Word Notebook and Pen/pencil

Grading Scheme

Grading System

Various short assignments	100	
Research Statement of Purpose	50	
Article Review and presentation	100	A = 900 to 1,000 points
Outline	100	B = 800 to 899 points
Introduction/Mat & Meth	100	C = 799 and below
Results	100	Final grade must be B or better to
Elevator Speech	100	count towards your graduate degree.
Abstract	50	
Curriculum Vitae	50	
Final Presentation	150	
<u>Final Paper</u>	<u>100</u>	
TOTAL	1,000 points	

Late Assignments

No late assignments will be accepted.

Course Policies

1. Attend all class meetings (One excused absence allowed, unless approved by your advisor. To be excused, send an email BEFORE the class period you intend to miss.)
2. Participate in class discussions and in-class writing sessions.
3. Treat your colleagues with respect. Cell phones should be turned off during class. No texting or checking emails. Show respect for your colleagues by participating in the class and listening carefully.
4. Attend required one-on-one conferences with the instructor.

“It is perfectly okay to write garbage—as long as you edit brilliantly.” - C. J. Cherryh (Science fiction and fantasy author)

Collaboration/Plagiarism Rules

All written assignments in the class are **INDIVIDUAL** and are to be submitted through Canvas and in hard-copy format as a Microsoft Word file (Distance Learning students will submit on Canvas only). You may discuss your work with your colleagues and even review each other's work, but you must write your own papers. No exceptions! Any instances of plagiarism will be referred to the Office of Academic Integrity.

University Policies

Student work products (exams, essays, projects, etc.) may be used for purposes of university, program, or course assessment. All work used for assessment purposes will not include any individual student identification.

Michigan Tech has standard policies on academic misconduct and complies with all federal and state laws and regulations regarding discrimination, including the Americans with Disabilities Act of 1990. For more information about reasonable accommodation for or equal access to education or services at Michigan Tech, please call the Dean of Students Office, at (906) 487- 2212 or go to

<http://www.mtu.edu/provost/faculty-resources/syllabus-policies/>

Course Schedule

Week 1

Course introduction
Chapter 1 (SWC) – Prelude
Chapter 2 (SWC) – Individual Words

Week 2

Chapter 3 (SWC) – Word Location
Chapter 4 (SWC) – Technical Sentences
Chapter 5 (SWC) – Special ESL Grammar Problems

HW Due: Research Statement

View all *Tips for ESL Speakers* videos on Canvas

****Wednesday, January 21, is the last day to drop the course with a full refund***

Week 3

Chapter 8 (SWC) – References and Plagiarism
Chapter 9 (SWC) – Figures and Tables
“Reading Critically” PDF by Rebecca Moore Howard

Guest Speaker Sarah Lucchesi, Michigan Tech Reference Librarian (meet in Library 244)

****Friday, January 30, is the last day to drop the course without a grade appearing on the academic record - No Refund***

Week 4

Chapter 6 (SWC) – From Sentences to Paragraphs
Chapter 7 (SWC) – The First Draft

HW Due: Article Review and Presentation

Week 5

Chapter 10 (SWC) – The Introduction
Chapter 11 (SWC) – Materials and Methods Section

HW Due: Your article outline

Week 6

Chapter 1 (CSP) – Introduction to Scientific Presentations
Chapter 2 (CSP) – Speech: The Words You Say

Week 7

Chapter 27 (SWC) – Posters
Chapter 28 (SWC) Oral Presentations
Q & A with panel of ME-EM Graduate Faculty

Week 8

Chapter 12 (SWC) – Results

Chapter 3 (CSP) – Structuring a presentation

Elevator Speech Handout

HW Due: Introduction and Materials & Methods sections of your article

Week 9

Chapter 13 (SWC) – Discussion

HW Due: 2-minute elevator speeches (*in class*)

Week 10

Chapter 14 (SWC) – Abstract

Chapter 15 (SWC) – Titles

Chapter 4 (CSP) – Visual Aids

**Friday, March 27, is the last day to drop full semester courses with a grade of 'W'*

Week 11

Chapter 16 (SWC) – Revising the Manuscript

Chapters 5 and 6 (CSP) – Delivering your presentation

HW Due: Results section of your article

Week 12

Chapter 17 (SWC) – Final Version and Submission

Chapter 29 – Job Applications

HW Due: Conclusions section and Abstract

Week 13 (Class is only one hour)

Presentations

HW Due: CV

Week 14

Presentations

Finals Week

Final Complete Draft of Paper Due (Due Tuesday, April 28, by midnight)