

MSE 6754 | Georgia Institute of Technology | Fall 2022

Tue & Thu 9:30 - 10:45 | D.M. Smith 11

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Office: 255 Love | Office hours by appointment

Course Description

This course focuses on advanced skills in writing and editing; designing visuals; and creating and delivering presentations. Students will learn the fundamentals of writing clear and concise engineering prose and will produce professional documents based on their current research.

Applying principles of effective editing, students will analyze documents and edit them for clarity and coherence. Another element of the course will be designing effective visuals to use in documents and electronic presentations. Finally, students will gain experience creating and delivering a three-minute thesis (3MT) presentation and a conference style presentation, both in electronic media and other forms, and will evaluate the presentations of their peers. Each presentation will have a specific purpose defined and the presentations will be recorded so that students can evaluate their own presentations and assess their progress.

Course Requirements

Overall, students will need to be active participants in the classroom: in-class discussion, editing, writing, peer reviewing, workshops, and presenting will be required. There will be in-class writing and editing exercises, in-class peer review of writing, editing, and presentations; homework in the form of reading and short editing assignments; a draft of an Introduction or Literature Review (suitable as a portion of a dissertation (or other) proposal or a research article); two formal presentations with slides—one for a non-technical audience (3 min. + Q & A) and another one crafted for a conference audience (10 min. + 5 min. Q & A); other shorter presentations; and written self-evaluations of oral presentations.

Each presentation will be recorded so that students can critique their own performance for their self-evaluation write-up. Students will be required to buy an SD HC I card (of at least 4 GB and rated class 10) to record their presentations. I use a SanDisk, SD HC I (10)— the camera name and model is Canon HD, VIXIA HF E 500.

Students will be required to keep before and after versions of their presentations and send them to me when they submit their self-evaluation.

All reading assignments are posted on Canvas as PDF files.

Grading

Though peer evaluations will be done on many assignments, the peer review score will not be considered when assigning the grade. I will be the final determiner of the grades for any in-class work, quizzes, tests, presentations, and papers. Active participation is part of your grade, which

includes all in-class activities or out of class assignments, including peer reviews, self- evaluations, and all formal assignments.

There will be no final.

Final grade will be based on the following assignment groups:

Attendance	20%
Preps for in-class exercises	15%
Writing assignments	25%
3MT	20%
Conference-style presentation	20%
Total	100%

Electronic Devices in Class

This is a small interactive class during which you will be expected to be fully engaged in discussion. Only use your devices to take notes (and this will rarely be necessary), to take pictures of the white board, or to do some other class activity that is requested. Please do not email, text, or otherwise do non-class activity on your devices. I expect that the majority of the time your devices will be stowed during class.

Attendance

Attendance is required for all classes. Missing class means you miss assignments that may or may not be able to be made-up. Students who know that they will miss a class to attend a conference or out of town professional interview must inform me well before the date. Each unexcused absence will lower a student's final grade by ½ a letter grade. Excused absences require documentation and a student may only have 2 excused absences during a semester.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services at (404)894-2563 or <http://disabilityservices.gatech.edu/>, as soon as possible, to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs. If needed, I will make classroom accommodations for students with documented disabilities. These accommodations must be arranged in advance and in accordance with the Office of Disability Services (<http://disabilityservices.gatech.edu/>).

Help Create Resistance to Sexual Harassment

MSE is committed to a community that actively resists sexual and gender harassment. If you see or experience any of the following: sexual harassment, domestic and dating violence, sexual assault and stalking, resources are available:

- **Confidential VOICE Advocates** (www.voice.gatech.edu) can provide support 24/7 and explore resources and options. If after hours, call GTPD dispatcher at 404-894-2500 and ask to speak

to the On-Call VOICE Advocate. You do not need to make a report nor provide any information other than your phone number for a VOICE advocate to contact you.

- Sexual violence or harassment can be reported directly to Georgia Tech's **Title IX Coordinator**, James Newsome, (404) 385-5583 burnsnewsome@gatech.edu.

Faculty, Staff and TAs are mandatory reporters and are required to inform the Title IX Coordinator should they become aware that you or any student has experienced sexual violence or sexual harassment.

Website: For more information about MSE CRSH, click the link:

<https://www.mse.gatech.edu/values/crsh>

Schedule

Week 1

Tue, Aug. 23: Introducing the course, and ourselves.

Thu, Aug. 25: Writing in science

Read before class: "Writing in Science" & "Science Writing as Storytelling" (Schimel).

Nature Physics editorial "Elements of Style."

Week 2

Tue, Aug. 30: Communicating with children and non-technical audiences. Or just clearly. Read before class: "How to Write a *Frontiers for Young Minds* Article." Take (informal) notes on the points you find most important and/or surprising. Submit your notes on Canvas, and bring them with you to class.

And also read through these two articles on science topics for young readers, one on quasi crystals and another one on acoustic levitation, pay attention to how the authors explain scientific concepts and their research work to a young audience.

Thu, Sep. 1: No class meeting, individual work at home. Draft a 300-600-word text similar to the articles from the *Frontiers for Young Minds* journal that is either a detailed explanation of one particular concept relevant to your own research, or an overview of your larger research project. In both cases, include not just descriptions/explanations of the concepts or projects, but also what makes the concepts/work interesting and important. Submit on Canvas by Sep 9 EOD.

Week 3

Tue, Sep. 6: Sentence-level clarity: Actions

Read before class: "Lesson 3: Actions" (Williams).

Thu, Sep. 8: Sentence-level clarity: Characters

Read before class: "Lesson 4: Characters" (Williams)

Week 4

Tue, Sep. 13: Sentence-level clarity: Cohesion and coherence

Read before class: "Lesson 5: Cohesion and Coherence" (Williams).

Thu, Sep. 15: Sentence-level clarity: Emphasis

Read before class: "Lesson 6: Emphasis Download Lesson 6: Emphasis " (Williams)

Week 5

Tue, Sep. 20: Peer feedback passage in-class workshop. Prepare and submit on Canvas your passages for workshopping, bring 2-3 hard copies with you to class. Submit the passages revised based on your partner's feedback on Canvas by Sep. 27th.

Thu, Sep. 22: Story Structure (OCAR)

Read before class: Schimel, chapter 4

Week 6

Tue, Sep. 27: The Opening

Read before class: Schimel, chapter 5

Thu, Sep. 29: The Funnel

Read before class: Schimel, chapter 6

Week 7

Tue, Oct. 4: Individual work at home, no class meeting: Draft (rewrite) ~400-600-word Introduction

Thu, Oct. 6: Peer-review & workshop your Introductions in class. Submit to Canvas, before class, the Introduction you'll bring for workshopping in class, and by next Wednesday (10/12) also the revised version (modified based on feedback you receive in class); latter submission here.

Week 8

Tue, Oct. 11: The Challenge

Read before class: Schimel, chapter 7

Thu, Oct. 13: Resolution

Read before class: Schimel, chapter 9

Week 9

Tue, Oct. 18: FALL BREAK, no class

Thu, Oct. 20: Internal Structure of an Article & Paragraphs

Read before class: Schimel, chapters 10 & 11

Week 10

Tue, Oct. 25: Lecture on effective oral presentations

Thu, Oct. 27: Draft your 3MT presentations: individual work at home, no class meeting.

Week 11

Tue, Nov. 1: Peer feedback workshop: 3MT

Thu, Nov. 3: 3MT Presentations: Group 1

Week 12

Tue, Nov. 8: 3MT Presentations: Group 2

Thu, Nov. 10: Draft your conference-style presentations: individual work at home, no class meeting.

Week 13

Tue, Nov. 15: Draft your conference-style presentations: individual work at home, no class meeting.

Thu, Nov. 17: Conference-style presentations: in-class peer feedback workshop.

Week 14

Thu, Nov. 22: Conference-style presentations: Group 1.

Thu, Nov. 24: THANKSGIVING BREAK

Week 15

Tue, Nov. 29: Conference-style presentations: Group 2.

Thu, Dec. 1: Conference-style presentations: Group 3.

Week 16

Tue, Dec. 6: Unfinished business and/or end-of-semester reflections