21G.225 (Graduate students)   **Spring 2021**   **21G.226 (undergraduates)**

Advanced Workshop in Writing for Science & Engineering: ESL

Section (1) T/Th 9-10:30 am   Jane Dunphy
    https://mit.zoom.us/j/97375323725   dunphy@mit.edu

Section (2) T/Th 3:00-4:30 pm
    https://mit.zoom.us/j/98302428136

Key dates: Add Date/change to/from P/D/F (F 03/19); Drop Date (Th 04/29); Last class (05/20)--no assignments will be accepted (even for partial credit) after this date.

Who is this subject designed for? If you are a junior, senior or graduate student in the sciences or engineering at MIT **and** if your general English skills are advanced but you want to build confidence, fluency, and accuracy in academic/disciplinary writing, 21G.225/226 is the right place for you. This workshop is grounded in current applied linguistics and genre research; and it provides the opportunity to analyze, practice and receive feedback on many of the types of professional and academic documents that you will write in your engineering or science studies and careers. *You will find the workshop most productive if you are already engaged in a research project; you can then use the literature and data related to your own research in the course assignments*.

What do we do in class? The remote workshop content builds cumulatively; each module, class session, or assignment builds on the one before. Class members use their own disciplinary studies and research as the content for most tasks. They are frequently the authors of the work under review and are occasionally responsible for leading group discussions and making short presentations. Regular attendance, timely completion of assignments, and constructive participation throughout the semester are crucial to the learning process and to the success of the workshop.

What outcome can you expect?
In 21G.225/226, you can expect to improve efficiency and fluency through drafting, revising, and sharing in the writing process. You will learn how to anticipate readers' needs and meet their expectations. You will become familiar with appropriate genre conventions in your discipline. You will sharpen your editing skills to increase flexibility and accuracy in sentence structure and word choice, and you will develop confidence in yourself as a global professional.

Constructive preparation and participation throughout the semester in the group analyses, discussions and exercises that take place in and outside of class is crucial to the learning process and to the success of the workshop. As a result, I expect all participants to register for grades or for P/D/F.

If you expect to have difficulty this semester being punctual, preparing for and attending almost every class, and completing assignments on time, you should plan to take 21G.225/226 another semester.

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What are the required texts and materials?
1. Class Stellar site (**ST**). The Zoom meeting room link for each section is provided at the top of this syllabus and on the Stellar homepage.
2. Dunphy, J. The Spring 2021 *21G.225/226 Course Workbook* (**CW** on **ST**)
3. A published journal paper, preferably <u>not</u> a review paper or Letter**,** written in English by top researchers in your field (maybe your advisor?) in a refereed disciplinary **academic** journal or in *Nature*. You will use this paper as your model paper (**MP**).
- Your **MP** *must* include the following: an abstract; subheadings; figures and/or tables, diagrams, schema, and equations, as appropriate to the discipline; and references. Send the link to me; keep the link handy for yourself, so you have ready access to this research paper in <u>every</u> 21G.225/226 class. Your **(MP)** will serve as a baseline reference for discussions about disciplinary and stylistic norms.

4. Caplan, N. *Grammar Choices for Graduate & Professional Writers* (**Caplan** chapters on **ST**)
5. An on-line folder labelled 21G.225/226 to hold e-materials (e.g. graded assignments and communications) that will allow you easy access throughout the semester.

What can students do on their own to build writing skills?
Students in this workshop are encouraged to be independent analysts and learners. In addition to the assigned tools we use for class, you are expected to do the following:

(1) Use your word processing **spell-check** tools. You can find errors easily and use the find/search/replace/dictionary functions to make dedicated spell-checking an easy task.

(2) Consult with peer tutors in the Engineering CommLabs (mitcommlab.mit.edu) or with professional writers at the Writing and Communication Center (cmsw.mit.edu/writing-and-communication-center/) for help with any writing task.

(3) Take advantage of the many "recommended" extra materials for each topic covered, provided in each Stellar folder. These materials will not be assigned as homework but do provide interesting and relevant content to support our class activities.

(4) Explore some of the resources recommended below (or their equivalents). For example, you can use concordance software to determine most frequent word choices in your field.

What are some recommended materials? (available on the course Stellar site, on line or in the MIT library collection, accessible electronically)
Alley, M. *The Craft of Scientific Presentations* and *The Craft of Scientific Writing*
Azar, B. *Chartbook: A Reference Grammar*
Braun, S. *Links and references for corpora and corpus analysis:*
Colwords. Vocabulary building site with quizzes: http://www.colwords.com/
    Corpus and concordancing software: http://corpus.byu.edu/coca/
        and http://www.lextutor.ca/concordancers/concord_e.html
Diwan, Aysha. *Communication Skills for the Biosciences: A Graduate Guide.*
Doumont, Jean-Luc. *Trees, Maps and Theorems*
Duke University. *Graduate School Academic Writing Resource:*
        https://cgi.duke.edu/web/sciwriting/index.php
Fogarty, Mignon. *Grammar Girl: Quick & Dirty Tips*:
        http://www.quickanddirtytips.com/grammar-girl
Gillett, Andy. *Using English for Academic Purposes*: http://www.uefap.com/

Grammar-Quizzes.com
Irish, R. *Writing in Engineering: A Brief Guide*
mathcomm.org. *Collection of resources for communicating about mathematics*.
MIT, *Academic Integrity*. http://integrity.mit.edu
Morley, John. Academic Phrasebank: http://www.phrasebank.manchester.ac.uk/
Perfect English Grammar: http://www.perfect-english-grammar.com/
Pitici, M. (Ed). *Best Writing on Mathematics* (annual)
Roland & Pardue. *Writing in Biology: A Brief Guide*
Swales, J. & C. Feak. *Academic Writing for Graduate Students (3rd edition)*
U. Manchester, *Academic Phrasebook*: http://www.phrasebank.manchester.ac.uk/
U. Toronto, *Advice on Academic Writing*: http://www.writing.utoronto.ca/advice
William, J. Style: *Ten Lessons in Clarity & Grace*

What is the grading policy in 21G.225/226? Twenty percent (20%) of your grade is based on punctuality, attendance, preparation (e.g., familiarity with the assigned materials), informed and constructive contributions to discussions, and **on time** completion of assignments. Please be familiar with the course schedule, read the assigned passages in the materials *in the numbered order in which they are listed*, consider the tasks for in-class discussion that are provided in the **CW** and come to each class prepared to contribute. Those who do not prepare, contribute constructively to discussions, complete (and hand in) assignments on time and attend class regularly **will not** receive an A for the course.

Note: You may welcome to register P/D/F for the subject if you think you will have trouble meeting the course expectations.

Your grade will be calculated according to the following criteria, based on a point system:

(1) Punctuality, attendance, preparation and participation   **(20%)**

You are expected to
- Come on time to (almost) every class;
- Take responsibility for any *unavoidable tardiness or absences* by notifying me in advance whenever possible, and by consulting with a classmate to learn what was covered in the class you missed.
- Prepare for class by doing the assigned readings and exercises for informed in-class discussion;
- Contribute constructively to positive class dynamics;
- Hand in each assignment on its due date, unless you have made other arrangements with me in advance.

2) Short exercises (5)   **(10%)**

You are expected to prepare and hand in short assignments that provide practice in strategy (designing the best approach for your readers and purposes), retrieving and summarizing key information, and building fluency and accuracy. These exercises build on each other and are

integrated into classroom practices. They do not serve their purpose if they are submitted late. *Always* use the spell-check tool before you share any document with any reader.

3) Open-book quizzes (5)   **(10%)**
These short assessments are completed outside of class time and generally take 15-30 minutes to complete.

4) Memos (2)   **(10%)**
Memos should be typed in 12-point Times New Roman font, on standard 8.5 X 11" paper with single spacing. Memo formatting conventions require the author, audience, purpose and date information in the headings. Please include page numbers on all documents longer than one page. *Always* use the spell-check tool before you share any document with any reader.

5) Short formal papers (3)   **(30%)**
All shorter papers should have 1.5 spacing. Each short paper will require revisions. If you receive a grade of "C" (7/10) or lower on any of the three shorter formal papers, you are encouraged to submit a third draft. Rewrites are due the next class. Your new grade will be a combination of the original grade and the grade received for the third submitted draft.

6) Final long paper   **(20%)**
The final paper will provide an opportunity to showcase how your academic writing has developed over the semester. There will be no opportunity to rewrite the final project, worth 25%. However, each of you will have at least one scheduled appointment with me for feedback on your final project in progress.
                                Total: **100%**

What is the relation between points and grades at MIT?

94 & above=A	90-93=A-	86-89=B+	83-85=B	80-82=B-
76-79=C+	73-75=C	70-72=C-	60-69=D	Below 60 = F

What are the specifications (specs) for major assignments?
All papers and reports are expected to conform to the following conventions:
- Type-written in 12-point Times New Roman font or Calibri font; no cover page is needed
- Printed on standard 8.5 X 11" paper with 1.5" spacing; 1.5" top/bottom paper margins; 1" side margins.
  - Paginated if longer than one page.
  - Text non-right justified.
- Spell-checked

Why are these specifications important?
Times New Roman 12-point font at 1.5 spacing is the norm for hard copy text because it allows for easy reading and for written comments. Because we will be doing our peer reviews via Zoom this semester, you may prefer to use Calibri as a more screen-friendly font. Either of these two font types is acceptable in 21G.225/226. The font size and line spacing are very important to reader-friendliness, as you can see in the two passages below.

Abstract in 12-point Times New Roman font with 1.5 spacing (= reader-friendly)

Recent work shows that it is possible to learn a fixed-length representation of the semantic and phonetic structure of a spoken word. The learned vectors are used to improve performance of downstream applications such as speech recognition. In this paper, we propose a graphical model to learn at the same time the semantic and phonetic structures along with the speaker identity. Furthermore, the model is capable of embedding information at designated locations. Another favorable property of our new graphical model is that it is able to generate data conditionally. Thus, the model and learned representations can be applied in data augmentation.

Abstract in 10-point Times New Roman font with single spacing (not reader-friendly)

Recent work shows that it is possible to learn a fixed-length representation of the semantic and phonetic structure of a spoken word. The learned vectors are used to improve performance of downstream applications such as speech recognition. In this paper, we propose a graphical model to learn at the same time the semantic and phonetic structures along with the speaker identity. Furthermore, the model is capable of embedding information at designated locations. Another favorable property of our new graphical model is that it is able to generate data conditionally. Thus, the model and learned representations can be applied in data augmentation.

What kinds of papers do we write? Details of three shorter, formal paper assignments

Formal Paper #1: Writing for the public *(10 % of final grade)*
Increasingly, scientists and engineers need to educate the public about the relevance of their research and justify the funding they receive. Consider the examples of writing for this purpose that you have read on Stellar and that we have discussed in class. How can you "deconstruct" the complexity of your highly specialized research focus to demonstrate its broader importance in your field and in people's lives? Write a short article (~500-750 words) that motivates non-specialist readers to care enough about the topic to keep reading from the title through the end. Ensure that the context, content, style and tone are appropriate for the intended audience.

- Via e-mail, distribute a copy to each member of your editing group (see **ST** Peer Review folder) and to me *at least 18 hours* before class.

Formal Paper #2: Introducing your professional self in correspondence *(10% of final grade)*
Writing about research is a central task in academic and professional life. Even when we are not writing extensive reports and papers for publication, we must frequently share research information in different forms, e.g., summaries, graphic representations of data, memos (e-mail or hard copy), presentations and correspondence. For this assignment, write one of the following:
1. Letter applying for a post-doctorate fellowship
2. Cover letter suitable for a faculty or research position in a professional environment

3. Cover letter suitable for an internship position
4. Personal statement for graduate program admission or for a fellowship.

Note: Letters and memos are single-spaced. Please include the ad/job description/prompt with your best draft.

- Via e-mail, distribute a copy to each member of your editing group and to me *at least 18 hours* before class.

Formal Paper #3: Introducing material *(10% of final grade)*
As we have discussed in class, abstracts and introductions are common features of professional documents in science and engineering. However, the building blocks for these sections vary depending on the discipline and the genre (the document's key purpose and form). For this assignment, write an abstract (maximum one page) and an introduction (two-three pages) suitable for a technical report, proposal, research paper or short thesis to be read by an expert in your discipline. Remember: the length of these genres varies depending on the context. Be sure to include a document title, internal citations and a reference section in Paper #3.

- Via e-mail, distribute a copy to each member of your editing group and to me *at least 18 hours* before class.

Final Paper *(20% of final grade)*
This final assignment provides the chance to combine what you have learned, practiced and produced this semester in a final formal document that (1) is designed for an expert in your field, or in a closely related discipline and (2) can be used in a context outside of 21G.225/226. Your final project can be one of the following:

- Master's or Ph.D. thesis proposal (or part of a proposal)
- Review or research paper you are writing for another course this semester
- Literature review on an anticipated research topic
- Review or research paper for publication
- New UROP report or other substantial lab report on current/recent research
- Part of an undergraduate thesis or a Master's or Ph.D. thesis to be submitted in the future
- Other projects may be approved with sufficient advance notice. See me if you are having trouble anticipating a topic for the final project. Do not wait until the end of the semester!

Specifications for the final paper
The paper must be 10 to 20 pages long (1.5 spacing, single column), not counting the references and appendices. A part of the paper may consist of writing you have done for class during the semester, but *the final paper must include at least 50% new material*, excluding References and Appendices. The paper must incorporate headings, figures, tables, equations and citations appropriately into the text according to the conventions in your discipline (e.g., those shown in your MP).

What is our homework schedule? The detailed schedule of topics and homework assignments for each class session over the entire semester provides details about (1) the materials that you are expected *to study* and (2) the assignments that you need *to submit*. This schedule is posted on the course Stellar site in the Syllabus folder. I urge you to print out a copy and keep it near your computer so you can consult it at a glance.

How do we use the course e-workbook (CW)? The 21G.225/226 workbook is used in every class. Some practice exercises included in **CW** will be assigned to prepare outside of class as homework and will be listed in your homework schedule in the homework column (on the right). These exercises will occasionally be submitted to Jane as e-mail attachments on the dates indicated in the course schedule. But most of the tasks, exercises, and activities will be done in class time, and you will need to have access to your responses in class. When preparing, you may want to print out the **CW** section for each class, make notes with your responses, and have them available for class discussion.

The course content builds cumulatively. Each module or assignment builds on those before. We start with a focus on writing for less-specialized readers and progress through the semester to genres suitable for expert readers within a particular discipline.

With a few exceptions, the *Table of Contents* shows the topics in the order in which we cover them. Note that the *Appendix on Language Trouble-spots* at the end of the workbook contains materials on grammar and vocabulary that we can integrate into our class activities as needed and that you can consult individually, as needed.

Read through the entire *Table of Contents* early in the semester so that you can use the materials out of sequence if needed in your communication activities elsewhere in your MIT communities.

What does the course Stellar site contain? The course Stellar site also contains a variety of materials, some of which are assigned and numbered (as listed in your course homework schedule in the right column). You should read or view them in the order in which they appear.

With a few exceptions, the Stellar folders are organized according to Week, Class # and Topic in the order in which we will cover them during the semester.

For those with time to explore more, the Stellar folders contain a variety of recommended, but not assigned, materials for reference. Be familiar with the topics and order of the site's folders.

What are the course take-aways? The workshop involves the completion of many small reading and writing tasks in addition to the longer papers. You will occasionally do short in-class written texts. A commitment to preparing for class and completing all the assignments will ensure that *you will be a more flexible reader and writer by the end of the semester*, able to

1. Describe your general approach to writing tasks and identify ways that you are improving efficiency.
2. Define the roles that writer, audience and purpose play in any communication strategy.
3. Define "writer-responsible" cultures and how the audience expectations within these cultures differ from those of "reader-responsible" cultures.
4. Understand the relationship between audience, purpose and document style/genre.
5. Read more efficiently within your discipline.
6. Understand and use document features—font, space, color--to meet reader expectations
7. Describe the difference between the "topic" and the "key message" of a document.
8. Define and provide examples of "professional" style in English scientific and technical writing.
9. Identify some major factors that reduce reader-friendliness in a text or presentation.
10. Incorporate principles of "power proofreading" into your writing activities.
11. Identify and demonstrate best practices for writing effective memos.
12. Identify and explain some tips for writing effective job application letters.
13. Identify and explain some tips for writing effective proposals.
14. Follow the basic recipe for effective informative abstracts.
15. Follow the basic recipe for effective descriptive abstracts.
16. Follow the basic recipe for effective introductions.
17. Construct an effective data commentary in your discipline.
18. Follow the main guidelines for incorporating tables and figures into written papers and reports.
19. Follow the main guidelines for incorporating equations into written papers and reports.
20. Understand what constitutes, and know how to avoid, plagiarism in Anglo-American countries.
21. Practice "defensive documentation" in your writing and presentations.
22. Make and respond to referee's comments on a journal paper in progress.
23. Design an effective presentation for a listening audience.
24. Follow the main guidelines for designing effective visual aids for presentations.
25. Understand how to handle question & answer sessions in presentations.

Editing for Accuracy: Correction Symbols
I will be using these symbols to provide feedback on your document drafts. Please refer to this list as you read the feedback and make the appropriate revisions.

I. Global errors *(more serious errors that can impede understanding)*

(^)	missing word/phrase/punctuation
(prep)	wrong preposition
(vf)	wrong verb form (passive/active, perfect, progressive, modal, conditional)
(vt)	wrong verb tense
(wf)	wrong word form (noun/verb forms; adjective/adverb forms)

(wo)   wrong word order
(ww)   wrong word choice

II. Local errors (distracting errors that may not impede understanding*)*

(art)   problem with article use (the/a, 0)
(awk)   awkward expression (not standard English)
(s-pl)   inaccurate singular/plural noun forms (e.g., book/books; equipment)
(s-v)   missing subject-verb agreement (e.g., Data are . . .; Research is. . . .)

III. Mechanical and stylistic errors

~~word~~   omit unnecessary or redundant text
/ /   needs conceptual or grammatical parallelism
"   "   same problem as above

(→)   incorrect placement of phrase or clause

(?)   problem with coherence or logic (one idea does not lead to another)

(uc/lc)   problem with upper/lower case; make a letter capital (upper case, uc) or lower

          case (lc)

(punct)   problem with punctuation, resulting in comma splices, run-ons, fragments

(sp)   spelling mistake

¶   new paragraph needed
co   coherence need
_ _ _ _   ignore my changes