

**Bi/BE 24: Scientific Writing and Communication for Biological Scientists and Engineers**  
**6 units (3-0-3)**

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T/TH 10:30am – 11:55am  
101 Kerckhoff

**Course Description:**

Writing and presentation skills are an integral part of any scientific pursuit. It is through writing that we are able to communicate our discoveries and findings to both our peers and the world. This course is designed to help you hone your writing skills in several ways. Some of the class material will address general writing concepts in order to give you tools to improve your writing, and some of the course will focus specifically on the scientific writing process and the creation of both a scientific paper and a scientific presentation.

**Course Goals and Objectives:**

- *Learn tools to improve your writing skills*
- *Become familiar with the scientific writing process*
- *Complete a scientific manuscript that is ready for submission to a journal*
- *Design and deliver a scientific presentation*

**Course Policies:**

- Only one absence will be excused.
- You must attend at least one writing meeting that will be scheduled during class.
- You must complete the technical paper, the power point presentation, and deliver the presentation in order to pass this class. Failure to do any one of these three assignments will result in a failing grade.
- Late assignments will be penalized 5 points per day late. In the event of an emergency, please contact me to discuss your situation.
- Respectful behavior for your classmates is expected in this course.
- Plagiarism is a violation of the honor code and will not be tolerated in this class. You can find the plagiarism policy for Caltech at [writing.caltech.edu](http://writing.caltech.edu).

**Grading:**

- Homework Assignments: 25%
- Technical Paper Pieces: 25%
- Final Technical Paper: 25%
- PowerPoint: 10%
- Presentation: 15%

**Recommended Text:**

Day, R.A. & Gastel, B. (2011). *How to write and publish a scientific paper* (7<sup>th</sup> edition). Santa Barbara, CA: Greenwood publishing.

## Course Calendar for Fall 2015

		CLASS			ASSIGNMENTS	DEADLINES
Week	Date	Workshop Topic	Technical Topic	In-Class Work	Due Next Class	Due this Date
1	Sep 29 T	Introduction	Writing Fundamentals	Assessment	Grammar Exercise Writing Exercise	
	Oct 1 Th	Writing Perspective	Writing Fundamentals		Reading Grammar Exercise Writing Exercise <i>Confirm Mentor</i>	
2	Oct 6 T	Grammar Voice in Writing	Literature Review, Endnote Citations, Plagiarism	Discuss Voice in Writing	Reading Grammar Exercise Writing Exercise	Mentor Confirmation Due
	Oct 8 Th	Grammar The Short Story	Introduction to Technical Writing, Focus Sheet, Writing the Introduction		Reading Grammar Exercise Writing Exercise <i>Finish Bibliography</i>	
3	Oct 13 T	Writing Skills The Popular Article	Technical Paper: Methods, Materials, Results	Analyze Popular Article in Pairs	Reading Grammar Exercise	Bibliography for Technical Paper Due
	Oct 15 Th	Writing Skills Popular versus Technical	Technical Paper: Discussion, Analysis	Analyze and Compare Technical Article with Popular Article	Grammar Exercise <i>Write Introduction for Technical Paper</i>	
4	Oct 20 T	Writing Skills Fan Fiction	Technical Paper: Abstract, Title		Reading Grammar Exercise Writing Exercise	Introduction for Technical Paper Due
	Oct 22 Th		Peer Review and Co-Author	Peer Review Introductions	Grammar Exercise <i>Write Technical Paper Outline</i>	
5	Oct 27 T	Grammar and Writing Skills Review	Overview of Complete Paper	Read and Analyze Technical Paper in Class	Study for Midterm	Technical Paper Outline Due
	Oct 29 Th	Midterm: Writing Fundamentals and Essay	Midterm: The Technical Paper		Read 10 Abstracts Bring in the best/worst <i>Write Abstract for Technical Paper</i>	Midterm
6	Nov 3 T		Creating a PowerPoint Presentation	Peer Review Abstracts	<i>Finish First Draft of Technical Paper</i>	Technical Paper Abstract Due
	Nov 5 Th	Communication Skills	Giving a Dynamic Presentation		<i>Create PowerPoint Presentation</i>	First Draft Technical Paper Due

7	Nov 10 T	Correspondence Skills	Giving a Power Point Presentation		Reading Exercise Writing Exercise	
	Nov 12 Th	Writing Meetings		Peer Review PPs	Practice your Presentation	Power Point Presentation Draft Due
8	Nov 17 T	Writing Meetings	Practice Presentations			
	Nov 19 Th		Practice Presentations		<i>Finish Final Draft of Technical Paper</i>	
9	Nov 24 T		Grants and Proposals		<i>Finish Final Draft of PowerPoint Presentation</i>	Final Draft Technical Paper Due
	Nov 26 Th	<i>Thanksgiving</i>	<i>Break:</i>	<i>Enjoy</i>	<i>Your</i>	<i>Weekend</i>
10	Dec 1 T	Class	Presentations			
	Dec 3 Th	Class	Presentations			Final PowerPoint Presentation Due