



suggestions and tips that help you present your work as an outstanding rigorous poster and PowerPoint presentation. You should look upon me as someone to bounce ideas off as well. I do have high expectations of you and my goal is to help you meet your fullest potential. But, you have to do your job and do it very well. I do expect that you already possess strong self-motivation and a high enthusiasm for research and the scientific discovery process. With this in mind, this course will expect you to perform very independently, yet collaboratively. Sharing of ideas and resources will be constantly encouraged.

Writing and communicating science is not easy and, in that respect, you are very much a beginner. Although we will formally only meet once a week (and that too not every week), I will expect that you will spend between 5-8 hours every week on writing your thesis. To succeed, you have a four-fold task ahead of you. Firstly, with the help of my workshops and past thesis examples, you will write an initial thesis draft by the ninth week of this semester based on what you have collected as your data towards your senior thesis thus far. I will grade this initial thesis in terms of its acceptability as an initial draft before any revision, which in my books is simply “your best effort without the benefit of direct review of your written work by others”. Secondly, you will formally engage in a collaborative peer appraisal process of each other’s thesis through a series of group meetings. These “reviews” will be the most important source of critical feedback of your work aimed solely at improving and revising your thesis. As you will realize, on top of helping you write better manuscripts, my job is to help you learn to give critical feedback in positive ways to your peers (a skill that you will exercise often throughout your professional life) and I will grade your ability to engage in effective peer review. Thirdly, based on the peer review process, you will submit a revised thesis that I will grade once again, this time for your ability to incorporate the suggestions your peer group recommended. Lastly, I will require that you present your thesis in a poster format at the end of this semester, which I will grade in lieu of a final exam, and present a talk at the Argonne National Symposium for undergraduate Research on October 24.

You will experience tremendous freedom in this course, but with this freedom comes a need for responsibility and maturity. While, you can indeed do superbly well, you can just as easily slack off. Given that you are such talented seniors, I don’t intend to “be on your back” about your work. Instead, I encourage you to fly high in this course by meeting the challenges ahead and come up on top with flying colors.

## **READINGS**

No required text. But, I highly recommend you to read the following book that you may borrow from my office whenever you wish to consult it. I first used it when I was an undergraduate and I have used it as a reference ever since. I will refer to it often in this course.

**How to Write and Publish a Scientific Paper** (5<sup>th</sup> edition), by Robert Day.

## **GRADING**

Attendance & Participation	10%
Thesis Initial Draft	20%
Peer Reviewer Performance	10%
Thesis Final Draft	20%
Poster & Argonne Presentation	40%
<b>Total</b>	<b>100%</b>

## BIO493 SCHEDULE

<u>Week</u>	<u>Date</u>	<u>Topic</u>
Week 1	-	NO CLASS; Pick up Syllabus & Readings for Discussion on Week 3
Week 2	Sept 5	What to get Out of Workshops? How Thesis Review Work? Critical Comparative Reading of a Senior Thesis & A Primary Article <b>Discussion Topic:</b> <i>Title, Abstract, &amp; Bibliography Workshop</i>
Week 3	Sept 12	Title and Abstracts Due <b>Discussion Topic:</b> <i>The Introduction &amp; Methods Workshop</i> <i>Begin writing Introduction/Methods</i>
Week 4	Sept 19	Bibliography Due <b>Discussion Topic:</b> <i>The Results &amp; Discussion Workshop</i> <i>Begin writing Results/Discussion</i>
Week 5	Sept 26	Introduction/Methods Pre-Drafts Due <b>Discussion Topic:</b> <i>Creating Effective PowerPoint Thesis Presentations</i>  <b>**Poster submission deadline: Argonne Symposium**</b>
Week 6	Oct 3	Results/Discussion Pre-Drafts Due <b>Discussion Topic:</b> <i>Creating Effective Research Posters</i>
Week 7	Oct 10	NO CLASS      Write thesis & Prepare Poster
Week 8	Oct 17	NO CLASS      Write thesis & Prepare Poster
Week 9	Oct 24	NO CLASS      Write thesis & Prepare Poster  <b>Present Posters at the 14<sup>th</sup> Annual Argonne Symposium for Undergraduates in Science, Engineering &amp; Mathematics (Argonne, IL)</b>
Week10	Oct 31	<b>Thesis Pre-Drafts Due!</b>
Week 11	Nov 7	Thesis Peer Review
Week 12	Nov 14	Thesis Peer Review
Week 13	Nov 21	Thesis Peer Review
Week 14	Nov 27	Work on your thesis draft
Week 15	Dec 5	Work on your thesis draft
Week 16	Exam Week	<b>BIO492 Senior Research Colloquium (Johnson Atrium)</b> <b>THESIS FINAL DRAFT DUE!</b> (This presentation will be a preview of what you might present at one or more of several scientific meetings that you may be invited to attend this upcoming spring semester), potentially among them: 16 <sup>th</sup> Annual Chicago Signal Transduction Meeting (Chicago, IL) May 2004 Lake Forest College Student Symposium (Lake Forest, IL) April 2004 17 <sup>th</sup> National Council of Undergraduate Research (Utah, Salt Lake City) March 2004 National meetings