1. Office Hours
There are no office hours for this class; however, Professors Fisher & Kuhl are available to respond to questions and to schedule individual appointments through e-mail.

2. Textbook
“The Grant Application Writer’s Workbook” (GAWW) is the required text and you are strongly advised to adhere to the guidance for content and format suggested for grant applications in the GAWW. This includes following the recommended structure for sections of your application down to the level of paragraphs and (in places) even specific sentences. Put simply—the GAWW formula for grant applications works, and still leaves you plenty of room for creativity! There are two versions, one for NIH and one for NSF. We will be working from the NIH version. If you think you will only be using the NSF one during your career, you should purchase that one; however, be sure you have access to the NIH version as well during the course through the buddy system, if no other way. Purchase the text from: http://www.grantcentral.com/.

Please note: Each year the GAWW is revised and updated in accordance with changes in the NIH grant submission and review process. We highly recommend that you purchase the most recent version, even if you have a copy of an earlier edition from having taken the seminar before. This will ensure that we are all working from the same materials during the seminar.

3. Seminar Format
Most meetings of the seminar will be split into 2 parts: (1) lecture and discussion; and (2) small “working group” meetings to present and provide feedback about writing that group members are producing. Membership in the working groups will be assigned by Professors Fisher & Kuhl and remain the same for the duration of the seminar. We will attempt to form working groups based on common areas of interest and diversity of training/career experience.

In addition to seminar meetings and assignments, working groups are expected to meet for a minimum of one hour each week outside of class in order to ensure that all those who are writing grant applications receive weekly feedback. Participation in weekly outside working group meetings is mandatory for all seminar participants.

The final meetings of the seminar are reserved for a mock “study section,” in which we review all of the grant applications that are produced during the term. All seminar participants will participate as grant
reviewers, and all who are working on a grant application will have their application reviewed, regardless of its state completion.

4. Logistics: Use of Dropbox for Posting Assignments and for Accessing Course Materials
Because you will be exchanging critiques with others in your seminar working group, we will be using a Dropbox folder system to facilitate sharing of documents and for posting critiques. You will receive an invitation from Dropbox.Com via email to join the shared folder system. We will orient you to the organization of the folder system during the first class meeting.

5. 1- vs. 3-Credit Options for Graduate Students
This seminar is offered to doctoral students for either 1 or 3 credits, as well as to postdocs and faculty. The major difference between 1 vs. 3 credits is that participants enrolled for 3 credits (and typically postdocs and faculty), will produce a grant application. Students who sign up for the 3-credit option are usually in their 3rd year of a Ph.D. program or beyond. One-credit students can be in any year of their doctoral training. All participants (1 and 3 credit students, postdocs, and faculty) will be actively involved in providing critiques and feedback to others throughout the seminar, and will be learning about the grant writing and review process in detail. Note: many students, postdocs, and faculty take the seminar more than one time, so if you opt for 1 credit, you may take the 3-credit option in future years.

6. Types of NIH Grant Applications Appropriate for This Seminar
Participating 3-credit students, postdocs, and faculty can choose to write any of four types of NIH grants: R21, R03, R01 or NRSA fellowship (pre or postdoctoral). We will be discussing the functions and content of these four types of grants. All require very similar “research strategy” core sections, albeit with differing page lengths related to the different scope (and budget) of the grant mechanism. The “research strategy” of all of these applications include: a specific aims section, sections that cover the significance, innovation, and justification (i.e., background) of the proposed work, in some cases a section on preliminary studies, and finally a section on the research design and methods. In an R21 and R03, the entire research strategy is 7 pages; in an R01 it is 13 pages, and in an NRSA fellowship it is 7 pages (with an additional 6 pages for sections on applicant background and training goals, plus materials from your mentor). You do not need to know the specific grant mechanism for which you will apply before the seminar begins. However, if you are unsure which mechanism you are likely to apply for, it is strongly recommended (if you are a student) to speak either with your faculty advisor or with Phil/Brice as early in the term as possible, as this will affect how you approach your application.

It is also strongly recommended that students and postdocs schedule regular (i.e., weekly) meetings with their primary advisor during the seminar specifically to shape the content and research design of their application. The primary focus of the seminar is on grantsmanship and crafting scientific ideas into proposal plans, as opposed to thinking about research questions, per se. The agreement of your advisor to work with you is NOT a requirement of the seminar; it is just a really good idea.

Students, please note that if you are planning to submit an NRSA application, you and your mentor will have a significant amount of content to complete over and above the research strategy core sections we’ll be completing in the seminar. Please plan accordingly.

All individuals participating in the seminar should note that there are a number of additional required components of all NIH grant applications that we will not be completing during the seminar. These include the budget, biosketches, human subjects, etc. You should work with the support staff from your
home department or research institute (e.g., CTN, ION, PSI) to complete these materials and to submit the application. *Please notify the support staff with as much advance notice as possible prior to your planned submission deadline, as they are typically facilitating numerous submissions for each deadline.*

**7. Grading**

1 Credit Students
- 25% on in-class attendance, participation, and preparation for each class period
- 50% on the quality of TIMELY written critiques given to fellow seminar members
- 25% on performance during and the written critiques provided for the assigned study section

3 Credit Students
- 25% on in-class attendance, participation and preparation for each class period
- 50% on quality of “research strategy” section of your grant application
- 25% on quality of the TIMELY written critiques and other feedback given to fellow students throughout the term on sections of their grant applications, and on performance and written critique for the assigned study section

**8. Products**

During the seminar you will produce a [Grant Application Portfolio](#)

1 Credit Students:
The Grant Application Portfolio will consist of 3 components:
- A. Grant Application Background Materials (see below for details)
- B. Your written critiques of others’ sections of their applications
- C. Your written critiques of others’ completed grants for the mock grant review

3 Credit Students, Postdocs, & Faculty:
The Grant Application Portfolio will consist of 6 components:
- A. Grant Application Background Materials (see below for details)
- B. Your written critiques of others’ sections of their applications
- C. Your written critiques of others’ completed grants for the mock grant review
- D. Your drafts/revisions of all sections of the grant and written critiques you’ve received
- E. Your completed grant application
- F. Written critiques of your grant application from the mock grant review

**9. Respecting Deadlines and Intellectual Property of Others in the Seminar**

*Whatever you do, don’t miss deadlines!* Everything in this seminar hinges on the schedule we’ve established. *New writing must be posted by Sunday at 11pm, critiques by Tuesday at 5pm.*

Because the seminar involves a great deal of sharing ideas with each other, and also because of the Dropbox file sharing system we will use, it is essential that seminar participants be mindful of, and respect, others’ intellectual property. *It is also recommended that students and postdocs develop a formal agreement with their faculty mentor(s) about ownership of the data and publication rights from data that may be produced via funded proposals.* Doing so in advance of submission can prevent complicated situations from arising in the future.
## Schedule by Week of Topics, In Class Activities, and Assignments

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<thead>
<tr>
<th>Date</th>
<th>Topics for the Day</th>
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<tbody>
<tr>
<td>1/6</td>
<td>WEEK 1</td>
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<td><strong>NOTE:</strong> additional assignments for those taking the course for 3 credits are in italics</td>
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|      | Organizational meeting; Overview of the seminar; Overview of the Specific Aims section; Assignment to working groups | 1. **Orientation:**  
a. Description of class content and goals.  
b. Review of syllabus.  
c. Expectations for 1 and 3 credit students.  
d. Orientation to course Dropbox folders for file sharing and access to course materials  
e. Overview of assignments and deadlines  
2. **Lecture:** Specific Aims  
3. Announcement of working groups  
4. **Breakout rooms:** working group introductions and scheduling of weekly outside meeting times; time permitting each working group member presents and receives feedback on bulleted outline of Specific Aims, with the remainder of feedback occurring during weekly outside meeting time. | 1. Review Chapter 7, Read Chapters 6 & 8 of GAWW.  
2. **Transform bulleted outline of Specific Aims into first draft of Specific Aims section and post in your Dropbox folder by Sunday 11 pm** (name document with clear nomenclature, e.g., *FisherAims1.0*)  
3. After 11pm on Sunday, complete assigned critiques of other working group members’ Specific Aims drafts, and post in applicant’s Dropbox folder **no later than 5pm Tuesday** (name document with clear nomenclature, e.g., *FisherAims1.0_KuhlCritique*) |
| 1/13 | WEEK 2 | | |
|      | The Significance and Innovation Sections | 1. **Lecture:** Significance and Innovation sections, including discussion of literature review and preliminary results  
2. **Discussion:** Volunteers present their first draft of Specific Aims to the whole class for feedback  
3. **Breakout rooms:** Working group participants each present and receive feedback on Specific Aims first drafts, with the remainder of feedback occurring during weekly outside meeting time. | 1. Read Chapters 9 & 10 of GAWW.  
2. **Complete first draft of Significance section and post in appropriate Dropbox folder by Sunday 11pm**  
3. After 11pm on Sunday, complete assigned critiques of other working group members’ Significance section drafts and post in applicant’s Dropbox folder **no later than Tuesday 5pm** |
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| 1/20  | WEEK 3 Conceptual models; Review of Progress on Specific Aims and Significance sections | 1. **Lecture:** Conceptual models  
2. **Discussion:** Review of writing progress on Specific Aims and Significance sections; Q&A  
3. **Discussion:** Volunteers present first draft of Significance section to the whole class for feedback  
4. **Breakout rooms:** Working group participants each present and receive feedback on Significance section first drafts, with the remainder of feedback occurring during weekly outside meeting time | 1. *Complete first draft of Innovation section and post in appropriate Dropbox folder by Sunday 11pm*  
2. After 11pm on Sunday, complete assigned critiques of other working group members’ Innovation section drafts and post in applicant’s Dropbox folder no later than Tuesday 5pm |
| 1/27  | WEEK 4 The Approach Section                                                        | 1. **Lecture:** The Approach Section  
2. **Discussion:** Volunteers present first draft of Innovation to the whole class for feedback  
3. **Breakout rooms:** Working group participants each present and receive feedback on Innovation section first drafts, with the remainder of feedback occurring during weekly outside meeting time | 1. Read Chapter 11 of GAWW  
2. *Complete bulleted outline of Approach section and post in appropriate Dropbox folder by Sunday 11pm*  
3. After 11pm on Sunday, complete assigned critiques of other working group members’ bulleted outlines of Approach sections and post in applicant’s Dropbox folder no later than Tuesday 5pm |
| 2/3   | WEEK 5 Writing a Successful NRSA Application                                       | 1. **Lecture:** NRSA Overview  
2. **Discussion:** Review of writing progress, Q&A  
3. **Discussion:** Volunteers present bulleted outlines of Approach sections to the whole class for feedback  
4. **Breakout rooms:** Working groups participants each present and receive feedback on Approach bulleted outlines, with the remainder of feedback occurring during weekly outside meeting time | 1. Read GAWW Chapters 1-3  
2. Watch NIH video on “*What Happens to Your Grant Application*”  
3. *Begin transforming bulleted outline of Approach into first draft of Approach section and post in appropriate Dropbox folder by Sunday 11pm* |
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| 2/10  | WEEK 6 What You Need to Know to Get Funded                                          | 1. **Lecture**: Overview of NIH submission, review, and funding process  
2. **Discussion**: Volunteers present first draft of Approach sections to the whole class for feedback  
3. **Breakout rooms**: Working group participants each present and receive feedback on first draft of Approach section with the remainder of feedback occurring during weekly outside meeting time | 1. **Complete first draft of Approach section and post in appropriate Dropbox folder by Sunday 11pm**  
2. **Complete NIH Grant Application Background Materials and post in Dropbox folder no later than Tuesday 2/24 at 5pm (due in 2 weeks)**  
3. **Submit questions for Q&A with funded researchers to Dropbox excel file no later than Sunday at 11pm**                                                                                                                                                                                                                   |
| 2/17  | WEEK 7 Q&A with Funded Researchers                                                  | 1. **Discussion**: Q&A with NIH-funded researchers  
2. **Discussion**: Continued presentations of first drafts of Approach sections to the whole class for feedback  
3. **Breakout rooms**: Working group participants each present and receive feedback on progress on first drafts of Approach sections with the remainder of feedback occurring during weekly outside meeting time | 1. **Complete final drafts of Specific Aims, Significance, and Innovation section and post in appropriate Dropbox folder by Sunday 11pm**  
2. After 11pm on Sunday, complete assigned critiques of other working group members’ Specific Aims, Innovation, and Approach final drafts and post in applicant’s Dropbox folder no later than Tuesday 5pm                                                                                                                                 |
| 2/24  | WEEK 8 Grant Application Background Materials Review; Overview of the NIH Grant Review Process | 1. **Discussion**: Review Grant Application Background Materials  
2. **Lecture**: Grant review process overview, including grant review criteria  
3. **Discussion**: Volunteers present final drafts of Aims, Significance, or Innovation to the whole class for feedback  
4. **Breakout rooms**: Working group participants each present and receive feedback on final drafts of Aims, Sig, Innovation with the remainder of feedback occurring during weekly outside meeting time | 1. Read GAWW Chapter 5  
2. **Complete final draft Approach and post in appropriate Dropbox folder by Sunday 11pm**  
3. After 11pm on Sunday, complete assigned critiques of other working group members’ final drafts and post in applicant’s Dropbox folder no later than Tuesday 5pm                                                                                                                                     |
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| 3/3  | WEEK 9 Preparation for study section; Responding to reviews and submitting revised applications | 1. **Discussion**: Mock Grant Review Prep  
   a. Preparation for study section (description of how it will run)  
   b. Assignment of reviewers to grant applications  
  2. **Lecture**: So you didn’t get funded 😞😞😞: Making sense of reviewer feedback and how to address it in a revised application  
  3. **Discussion**: Volunteers present final drafts of Approach sections to the whole class for feedback  
  4. **Breakout rooms**: Working group participants each present and receive feedback on final draft of Approach sections with the remainder of feedback occurring during weekly outside meeting time | 1. Complete and email your reviews to Brice and Phil **no later than Sunday at 11pm** |
| 3/10 | WEEK 10 Mock Study Section                                                          | 1. Grant reviews                                                          | 1. Revise and finalize reviews email to Brice and Phil **no later than Sunday at 11pm** |
| 3/17 | FINALS WEEK Study Section Part II If needed                                        | 1. Grant reviews, continued                                               | 1. Revise and finalize reviews email to Brice and Phil **no later than Sunday at 11pm** |
GRANT APPLICATION BACKGROUND MATERIALS Components

1. Go to [http://grants.nih.gov/grants/grant_basics.htm](http://grants.nih.gov/grants/grant_basics.htm) and poke around. Write a few notes on what you found interesting or what you want to book mark. *Complete in a one-pager documenting completion of the grants basics exercise.*

2. Using Chapter 1 of GAWW and the Internet, decipher the following acronyms: NIH, NIMH, NICHD, NIA, NIDA, CSR, NoA, PO, SRA, PI, co-I, co-PI, RFA, PA, FOA, RPG (R01), SRG (study section), PDRP. Be sure to “click” on anything you don’t really understand and read about it. *Complete a one-pager documenting completion of each of these tasks.*

3. Choosing at least one NIH Institute, find, download, and skim their strategic plan, especially those areas relevant to your research: *Cut and paste this strategic plan into your portfolio.*

4. Learn about what grants are out there. First go to the grants planning application website and read through that page. Then go to the grants.gov website and look for opportunities. That will be overwhelming. So then go to NIH and NSF and then within each of these agencies to the areas that deal with your areas of research (NIMH, NICHD for example).

- [http://grants.nih.gov/grants/planning_application.htm#search](http://grants.nih.gov/grants/planning_application.htm#search)
- [https://www.grants.gov/web/grants/search-grants.html](https://www.grants.gov/web/grants/search-grants.html)

*Cut and paste descriptions of at least 5 opportunities (PAs or RFAs you found that fit your interest areas).*

5. Log on to the NIH RePORTER ([http://projectreporter.nih.gov/reporter.cfm](http://projectreporter.nih.gov/reporter.cfm)) and search for grants in your area (remember, you may want to search by the names of major researchers in your area). *Write a one pager about what you learned from RePORTER.*