**NIH Predoctoral Fellowship (F31) Writing**

**Fall Semester, 2022**

**Rutgers University Psychology Department**

**Course Information:**

Rutgers Course Number: 16:830:504 Grant Writing

Date and Time: Fridays 10 AM – 1:00 PM

Index Number: 16248

Location: **Psychology Room 307 (Moved from 333)**

**Instructor:**

Dr. David J. Barker

Email: David.Barker@rutgers.edu

Office: Psych 322 (Busch Campus)

Office Hours: By virtual appointment.

**Textbook:** [NIH Instructions for the F31](https://grants.nih.gov/grants/how-to-apply-application-guide/forms-g/fellowship-forms-g.pdf)

You need to be incredibly familiar with the F31 instructions before writing your grant. **Your homework before coming to class is to have read the F31 instructions**. The instructions seem very long at face value, but you will soon find that the total amount of reading is much lower than you would expect. For example, some sections are specific to work with humans or animals.

**NOTE: The F31 format is mirrored by many predoctoral fellowships. To participate in the course, you need not submit an F31, but you must identify a grant that you will apply for.**

**Goals for the course:** The goal of this course is to learn about the NIH grant writing and review process, as well as to provide dedicated time to work on a grant and an opportunity for feedback across your writing process.

**Canvas:** The course has a dedicated Canvas site. All registered students should be automatically added to the site. Please contact me if this is not the case. This site contains all of the required resources for the course. Also, Canvas will be used for announcements and other class communications.

**Evaluation:** You will be graded based on the submission of key documents related to the F31 proposal over the course of the semester. The versions you are graded on may not be the final versions, however the timeline for their submission is meant to keep you on track to submit your award. A complete (first) draft is due at each of the indicated time points below.

**There are a total of 200 points available, with 10 points for minor documents and 25 points for major documents:**

1. **Project Summary/Abstract (10 points)**
2. **Project Narrative (10 points)**
3. Bibliography (Not Graded)
4. **Facilities and Other Resources (10 points)**
5. **Equipment (10 points)**
6. **Biosketch(es) (25 points)**
7. **Applicant’s background and Goals for Fellowship Training (25 points)**
8. **Specific Aims (25 points)**
9. **Research Strategy (25 points)**
10. **Respective Contributions (10 points)**
11. **Selection of Sponsor and Institution (10 points)**
12. **Responsible Conduct of Research (10 points)**
13. Sponsor/Co-Sponsor Information (Not graded)
14. Institutional Environment and Commitment to Training (Not Graded)
15. Letters supporting the application (Not Graded)
16. **Vertebrate Animals/Humans Subjects (10 points)**
17. **Select Agent Research (10 points)**
18. **Resource Sharing (10 points)**

**Academic Integrity**

All students are required to comply with the University’s Academic Integrity Policy, as presented at http://academicintegrity.rutgers.edu. Any plagiarism or other forms of academic integrity violations will be treated in accordance with University Policy.

**Course Schedule**

**September 9th**

Intro to the course and the F31-We will discuss how the course will run and read an example clinical (human) and preclinical (vertebrate animal) F31 as a class. This will provide you with an overview of the things you need in order to submit the grant. We will also learn about how to find funding opportunities, to determine which institute (s) might fund you, and to find a program official to help with your application.

At the end of the class, Zsofia Pal (Business Manager, Psychology) will discuss with all of us how to navigate the bureaucracy. This includes registering in RAPSS, eRA commons, and what things you need to do first (Hint: Budget!)

**Homework: Set up a meeting with the business official to develop your budget, register for eRA commons and RAPSS. Lastly, schedule a meeting with your advisor for next week!**

**September 16th**

Meet with your mentor(s)! This week is an **independent week (no class meeting)** to meet with your primary mentor, meet with others that might support your application, and ask some important questions to get you started. Note, the idea is that the meetings with your advisors and potential training mentors will take at least as much time as class would. Don’t squander the time!

1. Will you support my application and provide a sponsor statement?
   1. **Deadline of October 28th for a draft.**
2. What will your project look like? What data will be used?
   1. **Write down some potential Aims (generally 2-3 Aims for the F31; The rule of thumb is one per year)**
3. What kind of training will you receive?
   1. **Make a list of what you will receive training in and who will be a part of the team that trains you.**
   2. **Your training team will typically provide you with letters of support that go in your application and an NIH Biosketch. Ask now! This includes a letter of institutional support from your chair or program director.**
4. Who will provide your recommendation letters?
   1. **You need at least three confidential letters of recommendation that do NOT go inside of your application. These individuals cannot have a role in your application.**
   2. **Make a list of who you will ask for letters and email them now.**
5. What materials do you have that I can reference?
   1. **Ask for a prior F31, R01, R21, or another NIH/NSF grant that you can read (and read or review together).**
   2. **Many sections will be very similar across grants: 1) Facilities and other resources, 2) Equipment, 3) Select agent research, 4) Resource sharing**

**Homework: Find the name and contact information for at least one program official (PO), the name of at least one study section, and a list of 5 NIH grants from the reporter that are similar to the kind of work you plan to perform. Email your PO to set up a meeting for after October 7th.**

**September 23rd**

Discussing the life cycle of a grant.We will discuss the suggested planning cycle for a grant. Also, Brad Cooke who has worked as a program official at the NIH (NIDDK) will come and help to run a mock study section so that you can understand how grants are reviewed and ask questions about the process. Drs. Bieszczad, James, Hamilton, and Kleiman will serve as study section members and Q&A panelists to discuss your questions about the review process.

**Homework: Draft a copy of 1) Facilities and other resources, 2) Equipment, 3) Select agent research and 4) resource sharing based on your advisors prior grants or guidance.**

**September 30th**

Tiling Tree for Aim Ideas. We will use this week as a group to pick aims from each person in the class, identify the main question of interest, and then use brainstorming techniques to work backward towards possible solutions.  
  
**What do you want to study? What techniques can address your question? Who can provide training in those techniques?**

**October 7th**

Pitch your aims. The specific aims are the most important part of your F31. This week you will pitch your specific aims via a short PowerPoint. Alongside each aim, you should include what the training component will be, and who will help provide that training. We will then discuss the aims as a class to determine if they are independent, how much the training extends your current training, and other relevant factors to give feedback.

**Homework: First draft of aims page written. Outline your research strategy and begin writing it.**

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**WORKSHOP WEEKS: In the weeks following, we will start each class by reviewing the directions for each section, reading examples from other applications to gain some insight into different styles and approaches, and discussing strategies. We will then spend time working on in class reviews of completed documents and spend any remaining time remaining after our review period to work on the next document.  
  
Grants are a language, and the goal across these weeks is to help you become ‘fluent’, to develop your own style, and to perfect each of your documents to ensure the final produce is the best possible product you can submit.**

**October 14th**

Workshop week: Developing your Biosketch.

**In Class Review: Find a peer with similar expertise and critically peer-review your aims.**

Is the writing clear? Does the title reflect the work? Does is capture your attention? Does the aims page mention training? **Homework: Write a first draft of your Biosketch.**

**October 21st**

Workshop week: Background and goals for fellowship training (Training plan)

We will start by reviewing the directions for the training plan and discussing the main goals of the sections associated with your training.

**In Class Review: Biosketch ‘speed-dating’- Rapid read by others and make suggestions.**

Does the individual portray themselves in a positive manner? Does the Biosketch make the individual look ‘attractive’ to reviewers? Are there writing errors?

**Homework: Write a first draft of your training plan and obtain the first draft of the sponsor/co-sponsor statement from your advisor.  
  
October 28th**

Workshop week: Research Strategy

**In Class Review: Small group—compare and contrast different approaches used for the final training plan. Write a list of sub-sections you found useful to revise your own.**

**Homework: Check in on all of your letters and references, including a letter of institutional support from your department chair or program director. Finish your research strategy over the next three weeks**

**November 4th**

Workshop week: Responsible Conduct of Research and Selection of Sponsor and Institution

**In Class Review: Small groups to brainstorm ideas and researching resources.**

We will discuss the concept of Power Analysis and learn to calculation numbers of experimental subjects. We will also work as a group to identify classes, workshops, or programs that might bolster your application.

**Homework: Write a draft of the responsible conduct of research and selection of sponsor documents. Start your vertebrate animals section.**

**November 11th**

**SOCIETY FOR NEUROSCIENCE- NO CLASS**

**November 18th**

Workshop week: The odds and ends

We will work on the project narrative, project summary, respective contributions, and references (including discussing reference managers and requirements from PubMed Central).

**In Class Review: Consistency/concreteness check. Meet with your peer partner (similar expertise) and spend time reading over all of your documents.**

Partners: Make a list of the proposed training concepts as you read. Help verify that the milestones are concrete (when will training happen? What are the benchmarks?), and that the proposals are consistent across the statements by your partner, their PI, and their mentoring committee.

**Homework: Finish your vertebrate animals or human subjects section.**

**November 25th**

**THANKSGIVING BREAK- NO CLASS**

**December 2nd**

Final Peer Review.We will break into pairs 2-3 times and provide comments on everyone’s final applications before the submission deadlines. **Pairs will start with individuals that have dissimilar expertise (if a naïve person gets it, anyone will)**. The goal will be to catch typos, inconsistencies, and other last-minute problems.

**December 9th**

Submissions Complete! First, CELEBRATE!!! We will talk about your experiences, what you learned, the course structure, etc.

**For reference, the F31 deadline for the Fall of 2022 is December 8th. This means that the ORSP Deadline is December 1st  to have all documents uploaded in a draft form (budget and justification are critical!). The “the final science” is due by noon on December 6th, and revisions must be in by the morning of December 8th. See the rule below:**

**The ORSP Deadline (The so-called 5/2 rule):**

* All administrative items are required in their final version, with placeholders for the final science, by 12pm noon five (5) business days before the sponsor deadline.
* The proposal in its final form for submission to the sponsor, including the final science, is due by 12pm noon two (2) business days before the sponsor deadline.
* Once our team reviews the proposal, the Grant Specialist may request changes to the administrative and/or scientific components of the proposal in line with all applicable university and sponsor policies. All changes requested by our office must be completed and returned to us no later than 9am Eastern Time on the day of the sponsor deadline
* [See the full policy here](https://research.rutgers.edu/research-sponsored-programs/proposal-and-submission-preparation/proposal-deadlines)

**Tips and Pointers**

* This application focuses on training!
  + What new techniques will I learn for each aim? These can be analytical approaches, new techniques, etc.
* Aims make or break you.
  + The Specific Aims page is perhaps the most important piece of your application. Reviewers form their first impressions based on this one page of text.
* Grantsmanship, grantsmanship, grantsmanship.
  + There is a strategy for every grant that often involves thinking through your experiments in order to justify each decision, propose rigorous experimental designs, and to try and address any weaknesses you have by adding a positive spin. You may not follow through with everything but showing that you have identified how to do these things is sometimes the most important part.
* **Communicate with your business office and the office of research and sponsored programs!**
  + The people in the business office and grants office are your best allies and they are here to help. An open line of communication with them is important and it is also very important that you respect their time. This doesn’t mean leaving them alone, but rather staying on top of deadlines, communicating where your application is along the process, and ensuring that you prioritize communication at every stage.
* Lab funding matters!
  + An F31 is not meant to fund your whole research project and Reviewers will look at the funding your PI has.
* Stay grounded
  + Your plan can be ambitious, but not too ambitious. You can’t receive adequate training if you start out with a plan that is doomed to fail.
* Hit problems head on
  + If you have skeletons in your closet, it may be worth an early discussion with a program official (PO) regarding how you can address these. This might be grades, changes in labs, etc.
* Consistency counts
  + Start early, read your documents often, seek repeated feedback, and write consistently. Writing your first grant is HARD, but I promise that you will get out of it what you put into it.
* Training is more than just the classroom and the lab
  + Propose presentations at conferences.
  + Find co-mentors that can help you in areas you struggle with (time-management, leadership, etc.)