

MTR 6230: Writing an NIH Grant

Spring 2023

Class will take place on:

Wednesdays, January 18th – April 19th, 11:00am-1:00pm via Zoom

In person (8030 Maloney Bldg, HUP): April 19th (Faculty Study Section)

Zoom Information:

Link to join class: TBA

Passcode: TBA

Instructor Information:

Course Director:

Karen Teff, Ph.D. | Email: Karen.Teff@pennmedicine.upenn.edu

Course Coordinator:

Megan Maxwell | Email: mmaxwell@upenn.edu

Description:

This course will provide a comprehensive overview of the grant writing process: fundamentals of good grant writing, general preparation of grant application (e.g. specific aims, research strategy, budgets, analysis of reviews and strategies of rebuttal and re-application), identifying RFAs, study sections, interacting with program officers and Scientific Review Officers (SROs), research strategy and detailed descriptions of the different types of funding mechanisms (e.g. R01, R21, K99/R00). While all grant mechanisms will be discussed, the class will focus on those relevant to the participants. To familiarize the participants with the NIH review process, their applications will undergo peer review as well as a Faculty Mock Study Section at the end of the course. This course is expected to provide the foundation of any grant proposal, in terms of writing skills. It will be mandatory for all students to submit the intermediate proposals, and the final proposal. The participants will be drafting, revising, and working one-on-one with their peers and the course director to improve their proposal. The course will provide hands-on experience drafting the specific aims, significance, and innovation sections, through peer and faculty evaluation.

Content and Evaluation:

Students will demonstrate that they understand the key elements and considerations in writing an NIH grant through attendance and participation and submission of assignments. All students will submit their grant proposal through assignments in Canvas by 11:59pm on the deadline. Submitting the portions of the grant on the designated dates, participating in peer review and the faculty mock study section are mandatory.

- **Attendance & Participation** – 20%
- **Building and Refining Your NIH Grant** – 40%
 - Students are required to submit the below assignments to Canvas. Students will peer review each other's grants in their own 'study section' since a key approach to learning is through analyzing and critiquing the work of others.
 - Specific Aims (1 page) + Significance + Innovation (Max 4 pages in all) – due Feb 8, 2023
 - Completion of Review Rubric for two peer proposals -due February 15,2023
 - Grant Application: From Specific Aims to Research Strategy– due Mar 8, 2023
 - Completion of Review Rubric for two completed peer proposals-due Mar 15, 2023
 - Revised Complete Application after Peer Review– due April 5th, 2023
- **Final Submission (20%) & Faculty Review (20%)**
 - Students will submit their final grant submission to be reviewed by faculty in advance of the Faculty Mock Study Section. Due to time limitations only 50% of the grants after peer review will be taken forward for a faculty

review. The reviews will be discussed in a Mock Study Section. They will be given as much individual attention as is possible.

- Final Grant Submission for faculty review – due Apr 5, 2023

Course Policies and Procedures

Attendance:

Classes will be held virtually except for the faculty study section, which will be in person. The attendance for peer reviews and the faculty mock study section are **mandatory**, so students should make sure they are available. Students are expected to join the faculty study section in person. Students are expected to attend *and participate* in all classes. If for any reason a student will not be in class, they should contact the Course Director prior to class to alert them of the absence and plan to make up course content. Attendance will be taken at the beginning of each class, please make sure to be on time to be counted as present. If you anticipate being late to class, then please contact the Course Director and Coordinator. Part of class attendance consists of using your camera each class. If you experience technical issues, please let the course director know.

If a class date conflicts with a holiday or religious observance, please contact the Course Director & Coordinator. If an assignment is due during this time, please work with the Course Director and Course Coordinator to identify an alternative due date.

Online Learning Environment:

All students taking an online course with ITMAT should ensure that their learning environment is appropriate for the online setting and is free from distractions to themselves and other students. If a student finds themselves in an environment that may be distracting to others, we ask that you blur your video background to minimize this distraction. If you find that you are distracted, please make sure to message the course director and let them know your situation. This does not excuse you from participating nor does it allow you to turn your video off indefinitely, rather it is meant to provide insight. All students are expected to fully participate per the program participation policy.

Academic Policies:

As a student at The University of Pennsylvania, you are required to uphold the [Code of Academic Integrity](#). Specifically, this means materials that you submit either online or in person should be independent works created by you that uphold all tenets of academic integrity (i.e. do not cheat, fabricate, or plagiarize, amongst others). We encourage you to reach out to the course director or coordinator if you are not clear on what potential violations are.

Course Management System - Canvas:

All course materials (ppts, announcements, lecture recordings) and assignments will be posted on Canvas. Contact the Course Coordinator with questions. [Log in](#) with Pennkey.

Course Evaluation

Course evaluations are completed in the BLUE system. These are a required part of course participation. An email from the BLUE team will be sent to students with a link and directions on how to complete the course evaluation(s).

Student Disabilities Services:

The University of Pennsylvania provides reasonable accommodations to students with disabilities who have self-identified and been approved by the office of Student Disabilities Services (SDS). Please make an appointment to meet with SDS as soon as possible in order to discuss your accommodations and your needs. If you have not yet contacted SDS, and would like to request accommodations or have questions, you can make an appointment by calling SDS 215.573.9235. The office is located in the Weingarten Learning Resources Center at Hamilton Village, 220 S 40th St., Suite 260. Please use the [MyWeingartenCenter](#) portal to schedule appointments with staff. All services are confidential.

Course Schedule

Class will take place on Wednesdays, from 11:00am-1:00pm. Please block your calendars.

<u>Date</u>	<u>Topic</u>	<u>Facilitator</u>
Jan 18	Introduction to the Course: Class Intros & Expectations Review of NIH system, IC assignment, Dual Assignment, Selecting a study section	Karen Teff, PhD
Jan 25	Negotiating the NIH: Decisions Prior to Submission Grant mechanisms, ESI status, Single vs. Multiple-PI, Interacting with the NIH	Karen Teff, PhD
Feb 1	Specific Aims, Significance and Innovation Sections	Karen Teff, PhD
Feb 8	Building the Research Strategy: Background, Research Plan, Preliminary Data, Figures, Budget, Assignment Due: Specific Aims + Significance + Innovation Sections of Proposal	Karen Teff, PhD
Feb 15	Class Discussion of Specific Aims Assignment Due: Fill out Review Rubric for Specific Aims, Significance and Innovation for assigned peer proposals and be prepared to discuss in class	Karen Teff, PhD
Feb 22	Session with a Scientific Review Officer at the NIH	Raul Rojas, PhD Center for Scientific Review, NIH
Mar 1	Issues Specific to Clinical Studies/Trials Questions on Research Plan Section	Karen Teff, PhD
Mar 8	Other Research Plan Sections: Vertebrate animals, Resource Sharing, Data Management plan, Letters of Support Assignment Due: Complete Grant Application: From Specific Aims to Research Plan Section	Karen Teff, PhD
Mar 15	Peer Review Assignment Due: Completion of Review Rubric for completed assigned proposal and class discussion	Karen Teff, PhD
Mar 22	Peer Review Continued if necessary Optional: Submission of revised application after peer review	Karen Teff, PhD
Mar 29	So, Your Grant Didn't Get into the Pay Line? What to do next Optional: Submission of revised application after peer review	Karen Teff, PhD
Apr 5	So, You Get Your Grant! Now What? Post-Review tasks Assignment Due: Final Grant Application to be Reviewed by Faculty Mock Study Section	Karen Teff, PhD
Apr 12	No Class	
Apr 19	Faculty Mock Study Section *In Person – 8030 Maloney Bldg, HUP*	