MPHS Master of Population Health Sciences

M19 601 Grant writing: applying clinical and population health methods (3 credits)

Spring 2021 (01/19/21 – 5/10/21)
Tuesdays, 1:00 to 4:00 pm
Location: Virtual course

INSTRUCTOR
Siobhan Sutcliffe, PhD, sutcliffes@wustl.edu

OFFICE HOURS
By appointment

PREREQUISITES
Introductory Epidemiology and Biostatistics courses
(M19-501, M19-502, M19-511, and M19-512, or equivalent)

TARGET AUDIENCE
This course is required for clinical residents, fellows, and junior faculty who are pursuing an MPHS degree. It is optional for medical student MPHS candidates.

COURSE DESCPRITION & OBJECTIVES
This course provides students with the opportunity to apply methods and principles learned in previous MPHS classes to the development of a grant application. Students prepare this application on a research question of their own choosing and in the format expected for National Institutes of Health (NIH) R03, R21, or K grant applications (research plan only). Students also have the opportunity to evaluate research proposals for scientific merit.

COMPETENCIES
- Apply clinical and population health methods to a research question of students' own choosing.
- Be familiar with the key principles in developing a grant application for submission to NIH or other similar funding agencies, including content, format, and style.
- Be familiar with the NIH grant review process.
- Conduct a critical review of a grant according to NIH procedures and scoring, and partake in constructive discussions with other reviewers to reach consensus on a priority score for funding.

GRADING
Your grade will be based on:
- **Final grant application submission (50%)**
  As NIH is the largest US research funder, each student is expected to develop a grant proposal that meets the R03, R21, or K requirements for NIH. Students will prepare this grant application on a research question of their own choosing, using clinical and population health methods learned in previous MPHS courses. The grant should be written in NIH format and should include a cover letter or form; project summary or abstract; project narrative or relevance; detailed budget and budget justification; biosketches; research plan; and human subjects and clinical trials information, including all relevant attachments. Resources and equipment pages are not required for the grant submission.

- **Draft grant component submission (10% of grade)**
  To help students submit their final grant application on time, drafts of each grant component will be due before the final grant application deadline. These drafts will not be graded, but will serve to keep students on track for timely submission of their final grant application. Students will receive 2% each for handing in five draft components on time.

- **Written critique of a grant proposal (20% of grade)**
  Peer review is a critical part of the grant review and funding process. Each student will submit his/her grant proposal for review by the course instructor and two classmates. Writing a thoughtful, concise review is an essential part of the peer review process.

- **Class participation (20% of grade)**
  All students are expected to engage actively and professionally in classroom discussions and grant critiques. Students should be prepared to ask questions, raise concerns, present their preliminary work, and interact with fellow students during each class.

Grading Scale
A+: 97-100; A: 93-96; A-: 90-92; B+: 87-89; B: 83-86; B-: 80-82; C+: 77-79; C: 73-76; C-: 70-72

ATTENDANCE AND PARTICIPATION
Class attendance is required. As a courtesy to other students, you are expected to arrive on time. More than two unexcused absences from class may result in a lowered grade. Readings assigned for each class should be read ahead of the class and students should be prepared to discuss the material from readings.

POLICY ON LATE ASSIGNMENTS
Late assignments will result in a deduction of one grade point (A+ down to A) for each day late (including weekends) unless prior approval is obtained from the instructor or a compelling situation prevents prior approval (i.e. documented health issues or family emergencies).

ASSIGNMENTS & DUE DATES

Week	Date	Topic	Assignment Due	Readings
Class 1	Jan. 19	Lecture: Overview of NIH grant format Lecture: Grant writing experiences: from pilot to U grants *Dr. Allison King*		
Class 2	Jan. 26	Lecture: Finding funding opportunities Scope of projects Lecture: Resident grant-writing and research experiences *Dr. Jennifer Yu*		
Class 3	Feb. 2	Lecture: Specific aims Lecture: Responding to reviewer critiques *Dr. Su-Hsin Chang*	E-mail Dr. Sutcliffe a brief description of your proposed study before the start of class (1pm)	Read two specific aims page examples before class
Class 4	Feb. 9	Lecture: Budget overview, budget justification, and grant staffing *Rob Gatewood, Aleksandra Klim, and Jennifer Tappenden*		
Class 5	Feb. 16	Lecture: Budget pages and justification continued Significance and innovation Group discussion: Review of draft specific aims	Upload draft specific aims to wustl box by 1pm	Read Ratner and Parrish grant aims, significance, and innovation sections before class
Class 6	Feb. 23	Lecture: Mybibliography resources and biosketches *Amy Suiter* Lecture: Approach: Preliminary studies Group discussion: Review of draft specific aims		
Class 7	Mar. 2	Lecture: Approach: Study design Group discussion: Review of draft significance and innovation sections	Upload draft significance and innovation sections to wustl box before 1 pm	
Class 8	Mar. 9	Lecture: Approach: Statistical analysis Group discussion: Review of preliminary studies section and personal biosketches	Upload draft preliminary studies sections and personal biosketch to wustl box before 1 pm	
Class 9	Mar. 16	Lecture: Human subjects and clinical trials information Group discussion: Review of draft approach section	Upload draft approach section to wustl box before 1 pm	

Class 10	Mar. 23	Lecture: Abstract, cover letter, etc Group discussion: Review of draft human subjects section	Upload draft human subjects section to wustl box before 1 pm
Class 11	Mar. 30	Lecture: Peer review process and grant critiques Mock study section of a practice grant Group discussion: Review of budgets and budget justifications; Question and answer period	
Class 12	Apr. 6	Free class to work on grant proposal	
Class 13	Apr. 13	Free class to work on grant proposal	
	Apr. 19	----------	Grant can be e-mailed to Dr. Sutcliffe to check for errors
Class 14	Apr. 20	Free class to work on grant proposal	Upload final grant proposals to wustl box by 4pm
Class 15	Apr. 27	Mock study section of peer grants	Upload grant critiques to wustl box by 1pm
Class 16	May 4	Mock study section of peer grants	

DROP DATES

You may drop for any reason during the course of the semester. However, you may only receive a partial or no tuition reimbursement depending upon how far into the semester you drop the course. See the MPHS Student Handbook. Late withdrawals will appear on your transcript as a withdrawal.

MPHS Academic Policy Guidelines:

Guidelines regarding MPHS course registration and enrollment, grades, tuition obligation, and academic leave are consolidated in the **MPHS Student Handbook**. Please review this document.

MPHS Guidelines for Academic and Non-Academic Transgressions:

By registering for this course you have agreed to the terms of the **MPHS Academic Integrity Policy, outlined below and in more detail in the MPHS Student Handbook**. Please review this policy before submitting your first graded assignment.

Academic Integrity/Plagiarism Policy:

- Academic dishonesty is a serious offense that may lead to probation, suspension, or dismissal from the University. Academic dishonesty includes plagiarism (the use of someone else's ideas, statements, or approaches without proper citation). Academic dishonesty also includes copying information from another student, submitting work from a previous class for a new grade without prior approval from your instructor, cheating on exams, etc. You are responsible for reviewing WashU's academic integrity resources to become aware of all the actions that constitute academic dishonesty.
- All instances of academic dishonesty will be reported to the Office of the Registrar for investigation and potential disciplinary action. In addition, the instructor will make an independent decision about the

student's grade on any assignment in question. The MPHS process regarding academic dishonesty is described in the MPHS Student Handbook

DISABILITY RESOURCES

It is the goal of Washington University to assist students with disabilities in removing the barriers their disabilities may pose and provide support in facing the challenge of pursuing an education at Washington University.

Washington University recognizes and accepts its professional, legal and moral responsibility to avoid discrimination in the acceptance and education of qualified students with disabilities and to provide reasonable accommodations to such students consistent with the principles embodied in the law. These guidelines apply to students seeking admittance as well as to those who become disabled while they are enrolled.

Washington University makes every effort to insure that all qualified applicants and students can participate in and take full advantage of all programs and opportunities offered within the university. Washington University encourages and gives full consideration to all applicants for admission. Washington University does not discriminate in access to its programs and activities on the basis of age, sex, sexual orientation, race, disability, religion, color or national origin.

To learn more about services provided to students with disabilities, initiate the process of formal documentation and/or to arrange for accommodations, please review the Disability Resources for the Med School at the start of the course.

MENTAL HEALTH RESOURCES

Mental Health Services' professional staff members work with students to resolve personal and interpersonal difficulties, many of which can affect the academic experience. These include conflicts with or worry about friends or family, concerns about eating or drinking patterns, and feelings of anxiety and depression. See: shs.wustl.edu/MentalHealth.

SEXUAL ASSAULT RESOURCES

You can also speak confidentially and learn about available resources by contacting Dr. Gladys Smith, PhD, Sexual Violence Prevention Therapist and Licensed Psychologist at the Medical Campus, (314) 362-2404. Additionally, you can report incidents to the Office of Student Affairs or by contacting WUSM Protective Services 314-362-4357 or your local law enforcement agency.

BIAS RESOURCES

The University has a process through which students and staff who have experienced or witnessed bias, prejudice or discrimination against a student can report their experiences to the University's Bias Report and Support System (BRSS) team. For details see: diversityinclusion.wustl.edu/brss/.

Office of the Associate Vice Chancellor for Diversity, Equity and Inclusion (DEI)

The DEI Training Team designs, facilitates and leads diversity education programming for faculty, staff and students on a wide range of topics including: creating a climate of respect, the value of diversity and the role of biases in our day-to-day lives.
diversity.med.wustl.edu/training/

The Office of Diversity Programs promotes diversity among and prepares medical students to lead in a global society. A priority for the Office of Diversity Programs is to cultivate and foster a supportive campus climate for

students of all backgrounds, cultures and identities.
mddiversity.wustl.edu/

The Diversity and Inclusion Student Council promotes an inclusive campus environment for all School of Medicine students.
sites.wustl.edu/disc/

The Office for International Students and Scholars embraces the university's mission of welcoming promising students from around the world.
wumma.wustl.edu/