

PHARM 5020
Research Design and Scientific Writing
Fall 2019

CLASS DAYS and TIME: Fridays, 9:00 – 11:00 and variable as necessitated by scheduling complications

CLASSROOM: 229B – Pharmacology Large Conference Room

COURSE FACULTY: Charles P France (Director), Gregory T Collins, April L Risinger

OFFICE LOCATION and HOURS: by appointment: 2.209B (CPF), 2.233B (GTC), 5.209S (ALR)

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**READ THIS DOCUMENT CAREFULLY - YOU ARE RESPONSIBLE FOR ITS
CONTENTS.**

COURSE DESCRIPTION AND OBJECTIVES

This course will provide students the opportunity to develop skills in scientific writing and the presentation of research results while emphasizing learning-by-doing-and-redoing. Students are required to write every week with the capstone project comprising a grant application defended in class. One hour per week will be devoted to lecture, discussion, and critique of published work; the other hour will consist of critique and revision of student writing by peers, the Course Director and other faculty. Topics to be covered include the following: 1) fundamentals of writing clearly; 2) principles of revision; 3) effective presentation of data; 4) fundamentals of oral presentations; 5) writing and presenting to the appropriate audience; 6) developing hypothesis and specific aims; 7) writing significance and innovation sections; 8) choosing appropriate methods for the experimental approach; and 9) accepting and offering constructive critiques of one's own and others' writing.

Pre-requisites – None

Semester credit hours – 2

By the end of this course, each student should be able to:

- Read and determine gaps in the scientific knowledge of their field of interest
- Formulate a hypothesis and develop specific aims to test their hypothesis
- Formulate an experimental plan to address the specific aims of the proposal
- Write a six-page NIH-format pre-doctoral grant application
- Create a PowerPoint presentation and give a 15-minute oral defense of their proposal

COURSE ORGANIZATION

The main teaching modalities used in this course include:

- 1) Didactic lectures
- 2) In class discussion and writing activities
- 3) Student oral presentations and discussions

Materials – No special materials are required for this course.

Computer Access – Students will bring computers to work in class and for oral presentations

Reading Assignments – As listed on the class schedule

ATTENDANCE

Students are required to attend all the classes as detailed in the class schedule. There is a deduction of two points for each unexcused absence. Please see grading policy.

TEXTBOOKS

Required: N/A

Recommended: The Grant Application Writer's Handbook; John D Robertson, Stephen W Russell, and David C Morrison; www.grantcentral.com

GRADING POLICIES AND EXAMINATION PROCEDURES

Final proposal: 50 points

Timely submission of written assignments: 20 points*

Class participation: 10 points

Oral presentation: 10 points

Attendance: 10 points**

* 1 point deducted for each late assignment submission. 1 point/day deducted for late submission of final proposal

** 2 points deducted for every unexcused absence

Grading System

A = 90-100% B = 80-89% C = 70-79% F = ≤ 69%

REQUESTS FOR ACCOMODATIONS FOR DISABILITIES

In accordance with policy 4.2.3, **Request for Accommodation Under the ADA and the ADA Amendments Act of 2008 (ADAAA)**, any student requesting accommodation must submit the appropriate request for accommodation under the American with Disabilities Act (ADA, form 100) to his/her appropriate Associate Dean of their School and a copy to the ADA Coordinator. Additional information may be obtained at <http://uthscsa.edu/eo/request.asp>.

ACADEMIC INTEGRITY AND PROFESSIONALISM

Any student who commits an act of academic dishonesty is subject to discipline as prescribed by the UT System Rules and Regulations of the Board of Regents. Academic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an exam for another person, signing attendance sheets for another student, and any act designed to give unfair advantage to a student or the attempt to commit such an act. Additional information may be obtained at

<http://catalog.uthscsa.edu/generalinformation/generalacademicpolicies/academicdishonestypolicy/>

TITLE IX AT UTHSCSA

Title IX Defined:

Title of the Education Amendments of 1972 is a federal law that prohibits sex discrimination in education. It reads, "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance."

University of Texas Health Science Center San Antonio (UTHSCSA) Commitment:

UTHSCSA is committed to maintaining a learning environment that is free from discriminatory conduct based on gender. As required by Title IX, UTHSCSA does not discriminate based on sex in its education programs and activities, and it encourages any student, faculty, or staff member who thinks that he or she has been subjected to sex discrimination, sexual harassment (including sexual violence) or sexual misconduct to immediately report the incident to the Title IX Director. In an emergency, victims of sexual abuse should call 911. For non-emergencies, they may contact UPD at 210-567-2800. Additional information may be obtained at <http://students.uthscsa.edu/titleix/>

EMAIL POLICY

Instructors will be available by email for scheduling office hour visits. Reading assignments will be distributed by email. Drafts will be circulated among faculty and students with Cindal Dominguez (dominguezc3@uthscsa.edu) in copy.

USE OF RECORDING DEVICES

Recording of lectures and other learning activities in this course by any means (e.g., video, audio) is permitted only if approved by the Director or required for compliance with ADA.

ELECTRONIC DEVICES

Computer/tablet use in class is allowed only for participating in classroom activities (e.g., viewing slides presented in lecture). Activities unrelated to course objectives, such as using a cell phone, texting, checking email are strictly prohibited and can be grounds for removal from the classroom.

CLASS SCHEDULE: Research Design and Scientific Writing (Fall 2019)

WEEK	Date	TOPIC	ASSIGNMENT	INSTRUCTOR
1	19 July Friday	Introduction, course overview, and scientific communication	#1 Read recent review and at least 12 important, original papers. Identify 2-3 questions in your field that you can answer. Write 3-page summary plus references (will become <i>Significance</i> and <i>Innovation</i>). Due 15 August	France, Collins, Risinger
2	26 July Friday	NIH grants: structure, format, goals, sections, submission, assignment, review, critique		France
3	2 August Friday	Significance and Innovation		France
4	8 August Thursday	Hypotheses and Specific Aims	#2 Write 1-page Specific Aims - Due 30 August	France
5	15 August Thursday	In class writing: Significance and Innovation , and Specific Aims		France, Collins, Risinger
6	23 August Friday	Student presentations of Specific Aims (15 min)		France, Collins, Risinger
7	30 August Friday	Student presentations of Specific Aims (15 min)		France, Collins, Risinger
8	6 September Friday	Rigor and Reproducibility Plagiarism	#3 Finalize Significance and Innovation -. Due 20 September	Koek France
9	13 September Friday	Research Strategy	#4 Finalize Specific Aims – Due 20 September Write Research Strategy - Due 4 October	France
10	20 September	No Class		
11	27 September Friday	Oral presentation skills In class writing: Research Strategy	#5 Draft of PowerPoint - Due 18 October	France, Collins, Risinger
12	4 October Friday	Abstract/Summary and Narrative	#6 Write Abstract/Summary and Narrative – Due 18 October	France
13	11 October	No Class		
14	18 October	No Class		
15	25 October Friday	In class writing: Research Strategy , Abstract/Summary , and Narrative	#7 Revise Research Strategy , Abstract/Summary , and Narrative	France, Collins, Risinger
16	1 November Friday	Effective use of figures and PowerPoint Introduction to Revision		France
17	8 November	No Class		
18	15 November Friday	Oral presentations #1 (20 min)	#8 Submit final draft version of application to mentor 15 November	France, Collins, Risinger
19	22 November Friday	Oral presentations #2 (20 min)		France, Collins, Risinger
20	26 November	No Class. Application and critique returned to student	#9 Final version due 6 December	