Keck School of Medicine of USC

Course number: ADSC 505a: Research Methods in Addiction Science
Units: 4
Term—Day—Time: Wednesdays 12:00p-2:50p
Location: DMC 260

Course Coordinator: Jessica Barrington-Trimis, PhD, MS, MA
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Office Hours: By appointment
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Course Overview

Introduces research in addiction sciences through directed readings, live lectures, and development of an independent research project. This is the first of a 2-part course series. _Subsequent enrollment in ADSC505b (Spring semester) is strongly recommended._

Course Description

Addiction science is the transdisciplinary scientific study of the nature, causes, consequences, prevention, intervention, and treatment of the broad spectrum of addiction-related problems. Addiction science also bridges the gap between science, practice, and policy, to educate and be educated by those impacted by the addictions. Addiction science spans the study of all addictive behaviors, substance and nonsubstance, acknowledging both the common and unique elements across different manifestations of the disease. It takes a real-world approach, recognizing that addictive behaviors exist within a complex environment involving commercial-economic, political, cultural, and social forces.

This course serves as an introduction to research in the addiction sciences and is the first in a series of two classes. Students will learn about each phase of the research process through directed readings outside of class, and short in-person lectures on each topic, with an opportunity to apply learning directly through development of an independent research project. The course will begin by discussing initial development of research ideas and hypothesis generation, including review of the literature. Students will then develop a testable research question related to addiction science and will design an observational study to test this research question. To help solidify and formulate the background, hypothesis, and research plan, students will develop a grant application to describe their study, which will serve as the final project for this course. The course will also include instruction in ethical issues in the addiction science, including in obtaining IRB approval for research.

Justification for the Course

This course is intended to be a practical, applied course to introduce students to research in addiction science and required for students in the planned M.S. in Addiction Science program.

Learning Objectives

At the conclusion of this course, students will be able to:
1. Review the scientific literature on a given topic in addiction science and summarize what is known
2. Develop a testable research question

3. Design a study to test this research question
4. Develop survey instruments to collect data
5. Prepare and submit an IRB protocol through the USC system to secure approval for the proposed study
6. Develop a grant application to request funding for the proposed study

These objectives are linked to the assignments for this course, including IRB submission, design of a study to test a specified research question, and development of a grant application. Upon completion of this course, students will be well prepared to contribute to the development and implementation of research studies in addiction science under the limited guidance of a mentor or supervisor.

Prerequisite(s): None
Co-Requisite(s): ADSC501: Foundations in Addiction Science
Concurrent Enrollment: ADSC501: Foundations in Addiction Science
Recommended Preparation: None

Content Warning

The course readings and classroom discussions will often focus on mature, difficult, and potentially challenging topics. As with any course dealing with substance use, misuse and addiction, course topics may at times be political *and* personal. Readings and discussions might trigger strong feelings. Some students might have emotional responses to the readings while others might have emotional responses to peers' understanding of the readings. The instructors and students are responsible for creating a space that is both intellectually rigorous and respectful. Above all, students are expected to be respectful (even when they strongly disagree) and be mindful of the ways that their identities position them in the classroom.

Technological Proficiency and Hardware/Software Required

This course requires use of Blackboard and Microsoft Word

USC Technology Support Links

Zoom information for students
Blackboard help for students
Software available to USC Campus

Required Materials

This course will use the following texts, which are available from the bookstore or online. Additional copies of each text are available in the library.

Texts:
1. Addiction Research Methods. 2010. Edited by Peter G. Miller PG, John Strang, and Peter M Miller ISBN: 978-1-4051-7663-7
2. Research Methods for the Behavioral Sciences. 6th Edition. 2018. Frederick J Gravetter and Lori-Ann B. Forzano. ISBN: 978-1-337-61331-6

Additional readings for this course will be posted on Blackboard.

Description of Assessments and Alignment Grid

Grant Application: The grant application will be in the format of an NIH R03 proposal, including an Abstract (30 lines), a 1-page Specific Aims page, a 6-page Research Strategy, and References. Specific details on preparation of the grant application will be provided to students, and guidance for how to complete each section will be covered in depth prior to submission. Grant applications will be completed in groups of 3-5 students.

IRB Submission: All students will be required to submit an IRB proposal for their study through the USC Mock-IRB submission system. Students will complete required Human Subjects, HIPAA, and Good Clinical Practice trainings through CITI prior to submission of the IRB.

Study Design: Students will design a study (proposed in the Grant Proposal assignment, with further detail provided on the IRB). The study will be an observational human subjects study, with a specific research question to be answered. Studies will be designed by groups of 3-5 students. Students will be responsible for design of a questionnaire and selection of a study population (via USC or Prolific).

In class immersive learning activities: Attendance at all classes is expected. Participation will include asking and answering questions and being actively involved in the discussion and any immersive learning activities that take place during class time. It is expected that students complete the assigned reading prior to the lecture and be prepared to discuss background, current understanding, treatments, and gaps in knowledge for the topic in each lecture. Most of the course will use a flipped classroom approach wherein students will view a recorded lecture ahead of class thus, allowing class time for discussions. The readings assigned outside of class are a critically important component of the course and are essential material.

Format Requirements
Students are expected to carefully follow the format requirements below for all submissions. Any variation will result in lost points or no credit.
- Margins = 0.5 inch
- Font type = Arial
- Font size = 11 point
- Single spaced, with one space or 6pt font spacing between paragraphs
- Include citations
    - Citation managers (e.g., EndNote or Zotero) can be very helpful!
- Filename should have your last name and first name (e.g. Trojan_Tommy_ShortEssay1)
- Submit as a word document or PDF (.doc, .docx, .pdf; no other formats accepted)

Grading Breakdown
Grades will be recorded in the Blackboard gradebook. Evaluation will be based on submission of a grant application, IRB submission, and development of a study. The contribution of each component is listed below:

Learning Objective	Assignment/Assessment
1. Review the scientific literature on a given topic and summarize what is known	In class immersive learning activities and Study Design Assignment
2. Develop a testable research question	In class immersive learning activities and Study Design Assignment
3. Design a study to test this research question	In class immersive learning activities and Study Design Assignment
4. Prepare and submit an IRB protocol through the USC system to secure approval the proposed study	In class immersive learning activities and IRB Submission Assignment
6. Develop a grant application to request funding for the proposed study	In class immersive learning activities and Grant Application Assignment

Assignment	% of Grade
Grant Application (including drafts and final versions of all components)	30
IRB Protocol (and training)	20
Study Design (including research area, lit review, research question, study design)	20
In class immersive learning activities	15
Final Presentation	15
Total	**100**

*each assignment listed in 'assignments due' will be assigned a point value and will be calculated toward final grades in the appropriate category above

Grading Scale

Course final grades will be determined using the following scale. I reserve the right to move the grading scale down (i.e., making "92" an A) but not up (i.e., making "97" an A). _In graduate school, a "B" is a passing grade._

A   95-100
A-   90-94
B+   87-89
B   83-86
B-   80-82
C+   77-79
C   73-76
C-   70-72
D   60-69
F   59 and below

Course Specific Policies

Assignment Submission
All assignments should be submitted through Blackboard.

Grading Timeline
All graded work will be returned no later than 2 weeks from the submission deadline, and usually within 1 week.

Late Work
Turning in assignments late results in challenges with timely grading. However, I understand that life happens and there may be situations where you need an extension. In such circumstances, please request an extension as early in advance as you can. I would much rather grade excellent work that is a little late than poor work turned in on time, acknowledging that this is a balance and that having students turn in late assignments make it hard to keep the course organized and on pace. The maximum penalty for late assignments will be a 15-percentage point reduction in your grade for that assignment, but I reserve the right to waive this penalty.

Academic integrity

A grade of zero will be applied to submitted work that does not comply with the USC standards of academic conduct. Such work may not be resubmitted for a new grade. This includes ALL instances of plagiarism or AI use, including from prior students who have taken the class, and published or unpublished material from any source taken verbatim or partly verbatim without explicit acknowledgement of source. I have ZERO tolerance for failing to meet the basic standard of academic integrity at the masters level of education.

Attendance and Classroom Norms

You are expected to attend all class sessions, on time, for the entire course of the class, and should be prepared to discuss the reading assignment. We will have many in class activities, and this is where a lot of feedback will be given on your assignments. Full and enthusiastic participation in all in-class immersion learning activities is expected. In the event of an unavoidable absence, it is your responsibility to contact me to discuss an alternative assignment to make up points for the in-class immersion learning activity. Missing 4 or more classes this semester will result in an automatic deduction of 10% from your final grade.

Zoom

Zoom will be available for individuals who are unable to attend class for a valid reason (e.g., you are sick… please do not come to class sick…). Please notify me in advance of the start of class if you will be attending via zoom. For those attending by zoom, please have your camera on during the class session. If for any reason you are unable to have your camera on, please notify me by email prior to the start of class.

Course evaluation

Multiple surveys will gather student opinions about the course: we will have short surveys every ~month (or more often), informal discussions about how the class is going, a mid-semester evaluation, and the standard USC course evaluation survey at the end of the semester. Your opinion is valued and can make a difference in how this course is conducted; please give your honest and constructive recommendations.

Course Schedule: A Weekly Breakdown

This course is an applied research methods course that is designed to prepare students for all aspects of research in the addiction sciences. The course will follow the general steps in designing and implementing a research study, including presentation of results.

Week	Date	Subject	In Class Activities (not bold)	Assignments Due
1	8/23/23	**Introduction to the Course and Reviewing Scientific Literature**	-Decide on research topic (generally) -Download EndNote -Form groups for research project and brainstorm research ideas	
2	8/30/23	**Reviewing the Scientific Literature**	-Decide on research focus (generally) -Find 6-8 scientific articles and review	**Group assignment & research area**
3	9/6/23	**Developing a Testable Research Question**	-Develop 3 testable research questions, with hypotheses	**Literature review**
4	9/13/23	**Types of Studies**	-Select final research question -For each type of study, develop a study that you could conduct to test your research question	**Draft of 3 research questions**
5	9/20/23	**Designing a Study – Part 1**	-Design an observational human subjects study to test your research question. -Describe recruitment of participants, participant characteristics, exposure variable, outcome variable, other variables to include in your study	**Final research question**
6	9/27/23	**Designing a Study – Part 2**	-Presentation of study design	**Draft of study design**
7	10/4/23	**Developing a Grant Application (DGA) – Overview**	-Review prior grant applications	**Final version of study design**
8	10/11/23	**DGA – Specific Aims**	-Develop specific aims for study	

9	10/18/23	DGA – Specific Aims (part 2)	-Presentation and review of specific aims	Draft of Specific Aims
10	10/25/23	DGA – Approach	-Develop draft of approach	**Final version of Specific Aims**
11	11/1/23	**DGA – Significance, Innovation, and all the other pieces**	-Draft of grant application due in 2 weeks	**Draft of approach section**
12	11/8/23	**Introduction to IRB Protocols**	-Overview of the IRB process, iStar system, and importance of IRB	
13	11/15/23	**Preparing and Submitting IRB Protocols**	-Draft IRB protocol (all sections)	**Draft of grant application (all sections)** **IRB training (HS and CITI)**
14	11/22/23	**No Class (Thanksgiving Break)**		
15	11/29/23	**Study Section What to Expect in ADSC 505b**	-Mock review of all grant proposals -Next steps for Session 2 (ADSC505b)	**IRB protocol (submit to iStar)**
16	**FINALS DAY TBD**	**Final Presentations / Final Grant Proposal Due**		

Statement on Academic Conduct and Support Systems

Statement from USC:
The University of Southern California is foremost a learning community committed to fostering successful scholars and researchers dedicated to the pursuit of knowledge and the transmission of ideas. Academic misconduct is in contrast to the university's mission to educate students through a broad array of first-rank academic, professional, and extracurricular programs and includes any act of dishonesty in the submission of academic work (either in draft or final form).

This course will follow the expectations for academic integrity as stated in the USC Student Handbook. All students are expected to submit assignments that are original work and prepared specifically for the course/section in this academic term. You may not submit work written by others or "recycle" work prepared for other courses without obtaining written permission from the instructor(s). Students suspected of engaging in academic misconduct will be reported to the Office of Academic Integrity.

Other violations of academic misconduct include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage. Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences.

Since creating, analytical, and critical thinking skills are part of the learning outcomes of this course, all assignments should be prepared by the student working individually or in groups. Students may not have another person or entity complete any substantive portion of the assignment. Developing strong competencies in these areas will prepare you for a competitive workplace. Therefore, using AI-generated tools is prohibited in this course, will be identified as plagiarism, and will be reported to the Office of Academic Integrity.

The impact of academic dishonesty is far-reaching and is considered a serious offense against the university and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

For more information about academic integrity see the student handbook or the Office of Academic Integrity's website, and university policies on Research and Scholarship Misconduct.

Course Content Distribution and Synchronous Session Recordings Policies:
USC has policies that prohibit recording and distribution of any synchronous and asynchronous course content outside of the learning environment.

Recording a university class without the express permission of the instructor and announcement to the class, or unless conducted pursuant to an Office of Student Accessibility Services (OSAS) accommodation. Recording can inhibit free discussion in the future, and thus infringe on the academic freedom of other students as well as the instructor. (Living our Unifying Values: The USC Student Handbook, page 13).

Distribution or use of notes, recordings, exams, or other intellectual property, based on university classes or lectures without the express permission of the instructor for purposes other than individual or group study. This includes but is not limited to providing materials for distribution by services publishing course materials. This restriction on unauthorized use also applies to all information, which had been distributed to students or in any way had been displayed for use in relationship to the class, whether obtained in class, via email, on the internet, or via any other media. (Living our Unifying Values: The USC Student Handbook, page 13).

Students and Disability Accommodations:
USC welcomes students with disabilities into all of the University's educational programs. The Office of Student Accessibility Services (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at osas.usc.edu. You may contact OSAS at (213) 740-0776 or via email at osasfrontdesk@usc.edu.

Support Systems:
Counseling and Mental Health - *(213) 740-9355 – 24/7 on call*
Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

988 Suicide and Crisis Lifeline - *988 for both calls and text messages – 24/7 on call*
The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline is comprised of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new, shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1 (800) 273-8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

Relationship and Sexual Violence Prevention Services (RSVP) - *(213) 740-9355(WELL) – 24/7 on call*
Free and confidential therapy services, workshops, and training for situations related to gender- and power-based harm (including sexual assault, intimate partner violence, and stalking).

Office for Equity, Equal Opportunity, and Title IX (EEO-TIX) - *(213) 740-5086*
Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

Reporting Incidents of Bias or Harassment - *(213) 740-5086 or (213) 821-8298*
Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

[The Office of Student Accessibility Services (OSAS)](#) *- (213) 740-0776*
OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

[USC Campus Support and Intervention](#) *- (213) 740-0411*
Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

[Diversity, Equity and Inclusion](#) *- (213) 740-2101*
Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

[USC Emergency](#) *- UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call*
Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

[USC Department of Public Safety](#) *- UPC: (213) 740-6000, HSC: (323) 442-1200 – 24/7 on call*
Non-emergency assistance or information.

[Office of the Ombuds](#) *- (213) 821-9556 (UPC) / (323-442-0382 (HSC)*
A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

[Occupational Therapy Faculty Practice](#) *- (323) 442-2850 or* otfp@med.usc.edu
Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.