

Systematic Review Methods

MMC 6936 Special Topics
GMS 5905 Biomed Sci Special Topics
Communicore-104
Tuesdays, 11:45-2:45

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COURSE OVERVIEW

In this course, we will examine and practice the science and rigorous methodology of conducting a systematic review, using the PRISMA guidelines. Systematic reviews are considered to be one of the highest levels of evidence quality and are important studies in their own right. Each of you will finish the course 1) as a critical **consumer** of systematic reviews; and 2) equipped with the skills and experience necessary to **produce** your own systematic review. This course will prepare you to conduct a systematic review, which is more likely to be publishable as a stand-alone paper than a narrative review. The final products of the course will be: 1) participation and potential authorship in a collaborative in-class, team-based systematic review; and 2) your own systematic review protocol with a timeline and plan for completing the review.

COURSE GOALS

The course has two overlapping goals. For the first part, we will work on becoming critical consumers of systematic reviews through reading chapters of the textbook and reading and critiquing published systematic reviews. The second part of the course will be very hands-on, resulting in you being able to develop your own systematic review. We will work together in two teams to conduct systematic review(s) of a particular research question, while you are also working individually on producing your own protocols. Many students have taken their protocols and used them as a part of their dissertation.

ASSIGNMENTS AND WEIGHTING

Readings Discussion: 15% of final grade

Each week you will have class readings (chapters or published reviews). We will discuss these in class, so I expect you to come to class having read these. In preparing for these discussions, be prepared to speak to three things: *what you learned, what surprised you, and what questions you still have.*

Presentations: 10% each x 2 = 20% of final grade

Each of you will need to choose two systematic reviews to read and present to the class. These are noted on the course schedule as “first presentations” and “second presentations.” The expectations for the second presentations will be higher, as you will know more about systematic review by that time. You will do a presentation in class and submit a copy of the presentation via Canvas.

Class Project: 35% of final grade

A major part of this class will be participating in the method of a systematic review – from research question to data extraction. We will split into two review teams. Each student will receive a grade for this project based on both what is accomplished by the group and their participation, as rated by themselves and their group members. By the end of the class, the teams will have of the work done on the review(s) and can take them forward to publication over the summer or next fall.

Final Paper: 30% of final grade

As the final product of the class, each of you will write your own protocol for a systematic review, according to the structure on Prospero. Depending on the content of the review and when you are starting the review, you may also decide to post the review protocol on Prospero. As part of this process, you will each participate in a roundtable discussion to get feedback on your ideas and subsequently give a short presentation of your protocol to the class. I will share more specific details about the grading when the assignment is explained in class.

GRADING SCALE

A 93-100%

A- 90-92%

B+ 87-89%

B 83-86%

B- 80-82%

C+ 77-79%

C 73-75%

C- 70-72%

D+ 67-69%

D 63-66%

D- 60-62%

Failure 0-59%

CLASS STRUCTURE

Generally, we will start each class period with a discussion of the assigned readings. Each week we will engage in some sort of practical activity or work on our class systematic review projects. I've outlined the readings, activities, and tasks for each week below. However, the activities on the course schedule are subject to change as needed given the direction of the class projects.

COURSE MATERIALS

There are three primary resources for our class readings:

Gough, Oliver & Thomas (2017). An Introduction to Systematic Reviews, 2nd Edition. London: Sage. This is abbreviated on the course schedule as "ISR."

Boland, Cherry and Dickson, Editors. (2017). *Doing a Systematic Review: A Student's Guide. London: Sage.* This is abbreviated on the course schedule as "DSR."

There will also be a few readings posted on the course Canvas site. See last page of this document.

OTHER INFORMATION

Attendance

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

Accommodations

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Course Evaluations

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

Honesty Policy

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Conduct Code specifies a number of behaviors that are in violation of this code and the possible sanctions. If you have any questions or concerns, please consult with the instructor.

In-Class Recording Policy

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A "class lecture" is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To "publish" means to

share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

Course Schedule

Week	In Class	Due
1 – August 24	Intro to Class and Systematic Reviews Presentation 1 Assignment and Sign up	
2 – August 31	Readings Discussion <u>Practical Session:</u> The Anatomy of a Systematic Review (Chewning et al.) <u>Practical Session:</u> Discovering Prospero (bring laptop)	<i>ISR Chapters 1-3</i> <i>DSR Chapter 1</i> <i>Page et al., 2021</i>
3 – September 7	Readings Discussion Presentation 1 <u>Team Project (TP):</u> Form Teams and Topic Discussion <u>Guest Speakers</u> Devyn Mullis, PhD (qualitative SR) Amanda Kastrinos, PhD (methods SR) Easton Wollney, PhD (measurement SR)	<i>ISR 4</i> <i>DSR 2-3</i> <i>Thomas et al., 2017</i>
4 – September 14	<u>Guest Speaker:</u> UF Health Librarian Readings Discussion Presentation 1 <u>TP:</u> Finalize Topic(s)	<i>ISR 5 (to p. 119)</i> <i>DSR 4</i>
5 – September 21	Readings Discussion Presentation 1 <u>TP:</u> Finalize Searches, Assign Protocol, Assign group roles Presentation 2 Assignment and Sign up	<i>Peterson et al., 2017</i> <i>Shen at al., 2018</i>

6 – September 28	<p>Reading Discussion</p> <p><u>Practical Sessions:</u> Abstract Coding in Covidence and Full-Text Screening in Covidence</p> <p><u>TP:</u> Work on protocols</p>	<p><i>ISR 5 (p. 119-122)</i></p> <p><i>DSR 5</i></p> <p><i>Bylund et al., in press</i></p>
7 – October 5	<p>Reading Discussion</p> <p>Discuss Final Protocol Assignment</p> <p>Presentation 2</p> <p><u>Practical Session:</u> Data Extraction</p> <p><u>TP:</u> Work as needed, including protocol. (Goal: Ready to start searches)</p>	<p><i>ISR 6-8</i></p> <p><i>DSR 6</i></p>
8 – October 12	<p>No in-person class meeting</p> <p><u>TP:</u> Protocol due</p>	
9 – October 19	<p>No in-person class meeting (ICCH)</p> <p><u>TP:</u> Complete search & upload abstracts</p>	
10 – October 26	<p>Reading Discussion</p> <p>Presentation 2</p> <p>Practical Session: Quality Assessments</p> <p><u>TP:</u> Work as needed (Goal: Pilot abstract screening process)</p>	<p><i>ISR 10</i></p> <p><i>DSR 7</i></p>
11 – November 2	<p>Presentation 2</p> <p>Interpreting Meta-analyses</p> <p><u>TP:</u> Work as needed. (Goal: Abstract screening done).</p>	<p><i>DSR 8</i></p>
12 – November 9	<p>Reading Discussion</p> <p>TP: Work as needed. (Goal: Work on full text screening)</p>	<p><i>DSR 11</i></p>

13 – November 16	Reading Discussion <u>TP:</u> Work as needed (Goal: finish abstract screening/conflicts; make plan for full text screening)	<i>DSR 9, 10</i>
14 – November 23	Thanksgiving Break: No in-person class meeting	
15 – November 30	Individual Protocol Topics Roundtable <u>TP:</u> Work as needed (Goal: Pilot data extraction). Full Text Screening Should be done by today.	
16 – December 7	Individual Protocol Final Presentations Teams present to each other <u>TP:</u> Each group meet with Dr. Bylund: Report on accomplishments; Tasks and timelines for moving forward.	

Final Project Dates

By December 14:

Each group should submit:

- 1) Finalized PRISMA-P Protocol
- 2) PRISMA flow chart
- 3) Email outlining the plan for taking the paper forward (with all cc-d on it)

*As soon as that is turned in, I will send each member a 360 survey about their group experience.

By December 14:

Individual final written protocol due (on Canvas)

Other Course Readings

Page M J, McKenzie J E, Bossuyt P M, Boutron I, Hoffmann T C, Mulrow C D et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews *BMJ* 2021; 372 :n71

Thomas A, Lubarsky S, Durning SJ, Young ME. Knowledge Syntheses in Medical Education: Demystifying Scoping Reviews. *Acad Med*. 2017 Feb;92(2):161-166.

Peterson EB, Ostroff JS, DuHamel KN, D'Agostino TA, Hernandez M, Canzona MR, Bylund CL. Impact of provider-patient communication on cancer screening adherence: A systematic review. *Prev Med*. 2016 Dec;93:96-105.

Shen MJ, Peterson EB, Costas-Muñiz R, Hernandez MH, Jewell ST, Matsoukas K, Bylund CL. The Effects of Race and Racial Concordance on Patient-Physician Communication: A Systematic Review of the Literature. *J Racial Ethn Health Disparities*. 2018 Feb;5(1):117-140.

Bylund et al, in press.