

**Department of Health Outcomes and Policy  
College of Medicine  
University of Florida**

***GMS 6885: Research Designs in Health Outcomes and Policy***

**Class Schedule:** Spring 2017  
**Location:** HPNP Room G-108 and Online  
**Time:** Periods 8-9 Tuesdays (3-4:30 pm)  
**Credit Hours:** 3 hours

**Course Director:** Stephanie A. S. Staras, MSPH, PhD  
**Office Hours:** Mondays 2-4 pm, anytime by appointment, by email, or after class

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**Course Description**

This graduate level course provides an overview of the research design of observational and experimental studies common in studies of health outcomes and policy. This course will provide students foundational understanding of designs and explore rationales for choosing a specific research design. The course will provide foundation for the HOP advanced methods and policy electives.

**Course Objectives**

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

1. Demonstrate a fundamental understanding of key concepts for health outcomes research designs including individual randomized trials, group randomized trials, quasi-experimental studies, cohort and longitudinal studies, case-control designs, and descriptive studies.
2. Compare and contrast research design for a given health outcomes and hypotheses.
3. Identify a research design from a description of the main elements
4. Design a research study for a given health outcomes research question.

**Course Procedure**

The course is design to provide students with a basic understanding of research study designs. Each week students will complete a learning exercise (e.g., reading, web site field trip, research design exercise), complete an evaluation (e.g., quiz, study design practice, or discussion), and participate in class activities (e.g., discussion, lectures, and website field trips).

**Prerequisites**

GMS 6861 Applied Biostatistics I and GMS 6851 Health Outcomes Research, Program Evaluation, and Implementation Science.

**Required text**

Essentials of Epidemiology in Public Health. Ann Aschengrau and George R. Seage III ISBN-13: 978-1284028911

## Student Course Requirements

The following will be used to assess students' progress in achieving the course objectives.

### 1. Weekly evaluation activities (70% of total grade)

Each week, students will complete an evaluation activity prior to attending class. Unless an in-class discussion, evaluation activities are due at **11:59 pm Monday**. The type of activity will rotate between quizzes, an in-class discussion forum, and a study design activity.

- a. **Syllabus and Prerequisite Quiz – (2% of total grade)** For week 1, students will complete two brief quizzes: one on the syllabus and the other on prerequisite content. Participation in each quiz will be worth one point for a total of 2 points. On the prerequisite quiz, students will receive full credit regardless of answers.
- b. **Quizzes – (8% of total grade)** During 4 weeks, the evaluation assignment will be a two-question quiz based on the learning assignment for that week. Each question will be worth one point of the final grade for a total of 8 points (4 weeks \* 2 points). All quiz questions will be multiple response option type questions. Quizzes must be completed by 11:59 pm on the Monday prior to the relevant class. *Students will receive full credit for the lowest quiz grade; thus, essentially students may skip one quiz.*
- c. **Discussions – (20% of total grade)** During 4 weeks, the evaluation assignment will be participation in an in-class discussion. Participation in a discussion is worth 5 points for a total of 20 points assigned to discussions (4 weeks \* 5 points).

Requirements for the discussion:

- 1) Discussions will take place in class.
- 2) Each student is required to make two unique comments based on the week's learning assignment: one conclusion and one question.
- 3) Students must respond to at least two other students' comments.
- 4) Students must respond to other student's comments on their comment

Rules for the discussion forums:

- 1) All comments should be supported with evidence
- 2) Keep one point per comment
- 3) Be constructive! Disagreement is good, but please be respectful of others.
- 4) Do not spare complements. Be encouraging.
- 5) Practice good etiquette: Do not make inflammatory or accusatory remarks. Profanity and personal attacks are strictly prohibited.
- 6) Have fun!

- c. **Study design activities – (40% of total grade)** During 4 weeks, each student will complete a study design activity by providing short answers to questions for a scenario that leads you to creating a specific study. Each study design is worth 10 points for a total of 40 points (4 weeks \* 10 points). Upon completion of each answer, students will receive sample answers so they can adjust their design as needed. Study designs will be graded on conceptual understanding and accuracy based on the study design evaluation rubric. Activities must be completed by 11:59 pm the Monday prior to the relevant class.

## 2. Student Research Project (30% of total grade)

Students will create a 5 page, double-spaced, description of a health outcomes and policy research study of their interest. The assignment will be described in depth during class 1. Briefly, descriptions should cover the STROBE (<http://www.strobe-statement.org/>) or CONSORT (<http://www.consort-statement.org/>) checklist materials in title, abstract, introduction, and methods. Students should cite at least 20 references in a standard and consistent format. Grades will be assigned based on the research project rubrics. Final student projects must be uploaded by April 24, 2017 at 11:59 pm.

### Grading policy.

Grades will be assigned as follows:

Letter Grade	Grade Points	Grade Percentage
A	4.0	94-100
A-	3.67	90-93
B+	3.33	87-89
B	3.0	83-86
B-	2.67	80-82
C+	2.33	77-79
C	2.0	73-76
C-	1.67	70-72
D+	1.33	67-69
D	1.0	63-66
D-	.67	60-62
E	0	59 and below

## Course Outline

Week	Date	Major Topic	Learning Assignment	In-class activities	Evaluation Assignment
1	1/10/17	Introduction to the Course	♦ Reading Ch. 2, 3, 12	♦ Course overview lecture ♦ Student Research Project assigned	♦ Pre-requisites Quiz ♦ Syllabus Quiz
2	1/17/17	What is HOP research	♦ Reading Ch. 1 & 6 ♦ PCORI methodology Ch 1	♦ HOP research design lecture	♦ Discussion 1 ( <i>in-class</i> )
3	1/24/17	Causation	♦ Reading Ch. 15 ♦ Elovainio 2011 ♦ Asking focused questions	♦ Causation lecture	♦ Discussion 2 ( <i>in-class</i> )
4	1/31/17	Study Designs	♦ Grimes 2002 overview ♦ McKee 1999 ♦ Observational Studies in Learning Health Systems video	♦ Design a study	♦ Quiz 1
5	2/7/17	Individual Randomized Trials	♦ Ch 7 ♦ Rochwell 2005	♦ RCT lecture ♦ Consort checklist ♦ Consort checklist example	♦ Discussion 3 ( <i>in-class</i> )

6	2/14/17	Group Randomized Trials	<ul style="list-style-type: none"> <li>◆Murray 1998</li> <li>◆Consort checklist</li> </ul>	<ul style="list-style-type: none"> <li>◆RCT lecture</li> <li>◆Discuss study design 1</li> </ul>	◆Study Design Activity 1
7	2/21/17	Quasi-experimental studies	<ul style="list-style-type: none"> <li>◆Petticrew 2005</li> <li>◆Wagenaar &amp; Komro 2013 CH 14</li> <li>◆Staras 2016</li> </ul>	◆Quasi lecture	◆Quiz 2
8	2/28/17	Cohort and longitudinal studies	<ul style="list-style-type: none"> <li>◆Ch. 8</li> <li>◆Ch 10 pages 265-270 and 274-275</li> <li>◆Cohort study example</li> <li>◆STROBE checklist</li> </ul>	<ul style="list-style-type: none"> <li>◆Framingham Heart Study website field trip</li> <li>◆Discuss study design 2</li> </ul>	◆Study Design Activity 2
	3/7/17	Spring Break			
9	3/14/17	Case-control Design	<ul style="list-style-type: none"> <li>◆Ch. 9</li> <li>◆Ch 10 pages 271-273 and 276-283</li> <li>◆Case-control study example</li> <li>◆STROBE checklist</li> </ul>	◆Discuss study design 3	◆Study Design Activity 3
10	3/21/17	Descriptive studies	<ul style="list-style-type: none"> <li>◆Grimes 2002</li> <li>◆Ecologic study example</li> <li>◆STROBE checklist</li> </ul>	◆NHANES website field trip	◆Quiz 3
11	3/28/17	Choosing a Design	<ul style="list-style-type: none"> <li>◆PCORI methodology</li> <li>◆Appendix D-4</li> </ul>	<ul style="list-style-type: none"> <li>◆Design lecture</li> <li>◆Discuss study design 4</li> </ul>	◆Study Design Activity 4
12	4/4/17	Meta-Analyses	<ul style="list-style-type: none"> <li>◆IOM Standards for Systematic Review</li> <li>◆Finding the evidence 1-3</li> <li>◆PRISMA checklist</li> </ul>	◆Meta-analysis lecture	◆Quiz 4
13	4/11/17	Patient Centered Outcomes Research and Implementation Science	<ul style="list-style-type: none"> <li>◆PCORI research in action</li> <li>◆Glasgow 2012</li> <li>◆Bakken 2009</li> <li>◆Duflo talk</li> </ul>	◆D&I lecture	◆Discussion 4 ( <i>in class</i> )
14	4/18/17	<i>Student Research Project</i>		◆Student Research Project Q and A	◆Student Research Project Due 4/24/17 at 11:59 pm

## **Course Policies**

### **Class Participation:**

Class participation is mandatory. Excused absences follow the criteria of the graduate catalog (i.e., illness, serious family emergencies, special curricular requirements, military obligation, severe weather conditions, religious holidays, participation in official University activities, and court-imposed legal obligations). Communicate your inability to attend class to the instructor prior to the missed class.

### **Assignment Policy:**

A penalty of 10% per day (maximum of two days) shall be assessed on assignments turned in late. Non-participation in discussions will earn a grade of zero.

### **Policy on Make-Up Work:**

Students are allowed to make up work only as the result of illness or other unanticipated circumstances. In the event of such emergency, documentation will be required in conformance with university policy. Work missed for any other reason will earn a grade of zero.

### **Policy on Style for Citation and Plagiarism:**

The two key purposes of citation are to 1) give appropriate credit to the authors of information, research findings, and/or ideas (and avoid plagiarism) and 2) facilitate access by your readers to the sources you use in your research.

Quotations: When directly quoting an outside source, the borrowed text, regardless of the amount, must be surrounded by quotation marks or block quoted. Quoted text over two lines in length should be single-spaced and indented beyond the normal margins. Every quote must include a source—the author, title, volume, page numbers, etc.—whether an internal reference, footnote, or endnote is used in conjunction with a bibliography page.

Paraphrasing or Citing an Idea: When summarizing an outside source in your own words or citing another person's ideas, quotation marks are not necessary, but the source must be included. This includes, but is not confined to, personal communications from other students, faculty members, experts in the field, summarized ideas from published or unpublished resource, and primary methods derived from published or unpublished sources. Use the general concept of “when in doubt – cite.”

Plagiarism is a serious violation of the academic honesty policy of the College. If a student plagiarizes others' material or ideas, he or she may receive an “E” in the course. The faculty member may also recommend further sanctions to the Dean, per College disciplinary action policy. Generally speaking, the three keys of acceptable citation practice are: 1) thoroughness, 2) accuracy, and 3) consistency. In other words, be sure to fully cite all sources used (thoroughness), be accurate in the citation information provided, and be consistent in the citation style you adopt. All references should include the following elements: 1) last names along with first and middle initials; 2) full title of reference; 3) name of journal or book; 4) publication city, publisher, volume, and date; and 5) page numbers referenced. When citing information from the Internet, include the WWW address at the end, with the “access date” (i.e., when you obtained the information), just as you would list the document number and date for all public documents. When citing ideas or words from an individual that are not published, you can write “personal communication” along with the person's name and date of communication.

## **UF Policies**

### **University Policy on Accommodating Students with Disabilities:**

Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

### **University Policy on Academic Misconduct:**

Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at <https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code>.

**\*\*Etiquette: Communication Courtesy:** All members of the class are expected to arrive to class on time, turn off your cell phone (unless on call), contribute to class conversation, avoid side conversations, be attentive in class, stay for the entire class, and follow rules of common courtesy in all class communications with the instructor and with the other students.

**Getting Help:** The University of Florida has several resources to help you. A good summary with web links is available at <http://www.distance.ufl.edu/getting-help> for:

- Counseling and Wellness resources
- Disability resources
- Resources for handling student concerns and complaints
- Library Help Desk support

Should you have any complaints with your experience in this course please visit <http://www.distance.ufl.edu/student-complaints> to submit a complaint.