

**HSC 3057**  
**Research Methods and Issues in Health Science**  
**Spring Semester 2008**

Instructor: Mary Hennessey, PhD, CRC; Teaching Assistant: Michael Moorhouse, MS, CRC

Time: Tuesday, Period 6 (12:50 – 1:40) and Thursday, Period 6-7 (12:50 pm – 2:45)

Classroom Location: HPNP Auditorium

Office hours: by appointment

Office location: HPNP 4179

Contact information: Dr. Hennessey [mlhennes@phhp.ufl.edu](mailto:mlhennes@phhp.ufl.edu); 352-273-6594;

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### **Course Objectives**

The major goal of this course is to provide a didactic environment conducive for students to acquire skills that will enable them to:

1. Understand basic research concepts, including design and statistics;
2. Comprehend and critique journal articles;
3. Prepare and conduct a research project proposal;
4. Apply findings to clinical settings;
5. Understand program evaluation.

### **Textbook**

Essentials of Research Design and Methodology by Marczyk, De Matteo, and Festinger. Other readings may be assigned as they pertain to the lecture materials.

### **Lecture Schedule**

Students should **review materials prior to lectures** so that they can participate in open discussions. The following schedule should be followed unless otherwise informed:

Tuesday, January 8	Introduction to class, review of syllabus
Thursday, January 10	Scientific method, APA style
Tuesday, January 15	Form research groups; Discuss and choose research topic; Sign up for specific poster presentation day.
Thursday, January 17	Guest speaker Nancy Schaefer – How to conduct a literature review; Chapter 2
Tuesday, January 22	In-class work assignment: Literature review

Thursday, January 24	Inferential statistics; Normal distributions; Type I & II errors; Significance level; Effect size; Chapter 3 <b>Journal Critique 1 due</b>
Tuesday, January 29	Inferential statistics; Normal distributions; Type I & II errors; Significance level; Effect size (continued); Chapter 4
Thursday, January 31	Setting up a research study: Hypothesis; IV & DV; Power analysis
Tuesday, February 5	In-class work assignment: Identifying study
Thursday, February 7	Ethical considerations for research; Chapter 8 <b>Journal critique 2 due</b>
Tuesday, February 12	Internal validity; Threats to internal validity; Chapter 6
Thursday, February 14	Experimental designs; Quasi-experimental designs; Single subject designs
Tuesday, February 19	In-class work assignment: Internal validity
Thursday, February 21	External validity; Threats to external validity; Random selection vs. random assignment; Sampling techniques; Chapter 5
Tuesday, February 26	In-class work assignment: Study designs
Thursday, February 28	Group work day for presentations
Tuesday, March 4	Review for midterm exam
Thursday, March 6	Midterm exam
Tuesday, March 11	Spring Break
Thursday, March 13	Spring Break
Tuesday, March 18	In-class work assignment: External validity <b>Journal Critique 3 due</b>
Thursday, March 20	Construct validity; Threats to construct validity
Tuesday, March 25	In-class work assignment: Construct validity
Thursday, March 27	Qualitative research
Tuesday, April 1	Statistical conclusion validity; Threats to statistical conclusion validity

Thursday April 3	Selecting the appropriate statistical analysis; Chapter 7
Tuesday, April 8	In-class work assignment: Statistical conclusion validity
Thursday, April 10	Poster Presentations/Poster evaluations (Day 1)
Tuesday, April 15	Program evaluation; CIPP Model
Thursday, April 17	Poster Presentations/ Poster Evaluations (Day 2)
Tuesday, April 22	Review for final exam
Finals Week	<b>Final Exam - Thursday, May 1st @ 8:30a.m. - 10:25 a.m. in HPNP Auditorium</b>

### Grading Policy

The following point schedule will be maintained during this class:

1. A **midterm examination** will be completed, which is worth **25 points**. It will be multiple-choice in format and will cover everything discussed in class from January 10<sup>th</sup> through February 28<sup>th</sup>.
2. A **non-cumulative final examination** will be completed, which is worth **25 points**. It will be multiple-choice in format and will cover everything discussed in class from March 18<sup>th</sup> through April 15<sup>th</sup>.
3. A **group presentation** will be completed, which is worth **20 points**. Groups will be formed within class and will work together to create and present a research proposal, including all aspects of the research methodology. **This will require research and preparation time outside of the designated lecture times.** Presentations will be given on April 10<sup>th</sup> and April 17<sup>th</sup>.
4. **Three journal article critiques** will be completed, **each worth 5 points**. The specific journal articles will be posted by APA citation. Students will locate the article, read it, and write a **one-page critique**. It will include a summary of the research, the strengths of the study, and the weaknesses of the study. **These will have assigned due dates and will be collected in lecture.**
5. **Five hours of research experience** will be completed, **each worth 1 point**. Research experience will include any of the following: participation in the PHHP Research Participation Pool, participation in the HSC Library classes, or participation in any research seminar offered in the Health Science Center. **All seminars must be approved by the instructor prior to attendance.** Announcements of upcoming seminars will be provided in lecture on a weekly basis. **No additional hours can be counted towards the final grade.** The final date that documentation is due is April 22<sup>nd</sup>.
6. **Each in-class work assignment is worth 2 points for a maximum of 10 points. You may receive up to 4 points of extra credit for the two additional in-class work assignments.** No other means of extra credit should be anticipated other than that mentioned below. Grade curving will not occur in this

class, although exam questions that are significantly missed by the class (bad questions) will be excluded from the potential points.

<b>Two exams @ 25 points each -</b>	<b>50 points</b>
<b>One group presentation @ 20 points -</b>	<b>20 points</b>
<b>Three journal article critiques @ 5 points each -</b>	<b>15 points</b>
<b>Five in-class work assignments @ 2 points each -</b>	<b>10 points</b>
<b>Five hours of research experience @ 1 point each -</b>	<b>5 points</b>
<b>Total possible points:</b>	<b>100 points</b>

### **Extra Credit**

Extra credit of **1 point** will be given for the best poster presentation on each of the two days and an additional **point** will be given to the group with the best poster out of those two presentations.

### **Make-up Examination Policy**

Only **prior arrangement** will serve as a viable reason to take an exam early. An **official medical excuse is required to permit a make-up examination**. The official medical excuse must be presented within two days after being released from medical treatment in order to receive a make-up examination. **Examinations missed for any other reasons will result in receiving a grade of zero for the examination missed.**

### **General Class Policy**

**You are future health care professionals.** All students are responsible for lecture notes for each class period. Class attendance is expected and will be the only guaranteed way to pass this course. **Cell phones should be either turned off or switched to vibrate in the event that an important call cannot be missed.** Cheating and plagiarism will not be tolerated and the strictest penalty will be requested. **Do not give any reason to suspect.**

### **Student Counseling Services**

Students may occasionally have personal issues that arise in the course of pursuing higher education or that may interfere with their academic performance. Students facing problems are encouraged to seek confidential assistance at the University of Florida Counseling Center, 352-392-1575, or Student Mental Health Services, 352-392-1171. Crisis intervention is always available 24/7 from the Alachua County Crisis Center, 352-264-6789.

### **Students with Disabilities**

Students with disabilities requiring accommodations should inform the Instructor. Reasonable accommodations will be provided in accordance to the Students with Disabilities Office guidelines.

### **Honor Code**

We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standard of honesty and integrity.

### **Note**

This syllabus is subject to change as needed to cover all the required materials of this course in the time frames given for this class.