

# HSC3057

## RESEARCH METHODS AND ISSUES IN HEALTH SCIENCE

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CLASS NUMBER: 13110	TUESDAY	4 <sup>TH</sup> PERIOD	10:40A-11:30A	ROOM: HPNP, G-103
CLASS NUMBER: 13112	TUESDAY	5 <sup>TH</sup> PERIOD	11:45A-12:35P	ROOM: HPNP, G-103
CLASS NUMBER: 13113	TUESDAY	8 <sup>TH</sup> PERIOD	3:00P-3:50P	ROOM: HPNP, G-103
CLASS NUMBER: 13111	WEDNESDAY	4 <sup>TH</sup> PERIOD	10:40A-11:30A	ROOM: HPNP, G-103
CLASS NUMBER: 13114	WEDNESDAY	5 <sup>TH</sup> PERIOD	11:45A-12:35P	ROOM: HPNP, G-103
CLASS NUMBER: 13115	WEDNESDAY	8 <sup>TH</sup> PERIOD	3:00P-3:50P	ROOM: HPNP, G-103

### Course Overview

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This course provides an overview of common methodological approaches used for health science research, and learn how to obtain, decipher, and critique research for clinical practice. We will use various instructional methods including online lectures, readings, class discussion, and worksheets.

### Course Objectives

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It is expected that by the end of this course students will be able to:

1. Define the major tenets of quantitative and qualitative research approaches.
2. Compare and contrast the key features of comparison and observational research designs.
3. Determine the appropriate statistical test for parametric and non-parametric studies.
4. Calculate odds ratios and relative risks for observation studies.
5. Interpret test significance, confidence intervals, and effect sizes.
6. Define probabilistic and non-probabilistic sampling techniques.
7. Summarize basic ethical considerations when conducting human subject research.

### Course Materials

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**Textbook** There is no required textbook for this course however students will be required to view all online material including lectures and videos prior to class.

**Technology** Required Equipment: Computer with high-speed internet access, and use of a supported browser with Lockdown Browser capability. To access this course on Canvas, you will use your Gatorlink ID and password to login.

For technical support for this class, please contact the UF Help Desk by:

- Calling (352) 392-HELP (option 2),
- Emailing [learning-support@ufl.edu](mailto:learning-support@ufl.edu), or
- Going to [lss.at.ufl.edu/help.shtm](https://lss.at.ufl.edu/help.shtm)

## Requirements/Evaluation

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**Syllabus Quiz** (3 Points, 3% of Total Grade) Students complete a 9-question syllabus quiz about the course material. Students may take the quiz as many times as necessary to earn the 100%.

**Exams** (25 Points Each, 50% of Total Grade) Students will take 2, 50-question multiple choice exams. All questions will be taken directly from recorded lectures and class discussion; and each question is worth .5 points. Exams will be administered as in-person assembly exams in the HPNP building on Wednesday evenings at 7pm during exam weeks. Exam weeks include week 7 (2/22) and week 15 (4/19). **Any student caught cheating will, at minimum, be referred to the Dean of Students Office, receive a zero on the exam, and have a full-letter grade reduction for the class.**

**Check-In Quizzes** (2 Points Each, 20% of Total Grade) Prior to the week of class, students will complete a 4 question quiz covering that week's material (e.g., lectures, videos). Each quiz is worth 2 points and the lowest quiz grade (of the 11 quizzes taken) will be automatically dropped. Students are free to use their notes and/or reference the recorded lectures to complete the quizzes. There are no time limits for the quizzes, but each quiz is due the Sunday before class by 11:59p.

**Reaction / In-Class Assignments** (2 Points Each, 20% of Total Grade) During the in-person portion of the class, students will engage in either a class discussion or in-class assignment relative to that week's topic. Following class discussions, students will provide their opinion, via a Reaction Assignment, regarding a specific aspect of the conversation. Reaction Assignments must be a minimum of 150 words but do not require any outside sources (as they are your opinion). On non-class discussion days, students will complete an In-Class Assignment where they will first work alone and then with their peers during class to complete the assignment. Following class, each student must upload their own In-Class Assignments to Canvas. Each Reaction / In-Class Assignment is worth 2 points and must be uploaded by 11:59p the day of class. Late Reaction / In-Class Assignments will be accepted 24 hours after the due date for half credit. Only 10 of the 11 Reaction / In-Class Assignments will be needed to fulfill the total points toward your grade. Note: You must attend class to be eligible to upload your Reaction Assignment or In-Class Assignment. **Students who do not attend class but upload a Reaction Assignment or In-Class Assignment will, at minimum, receive a zero for the assignment, lose a full letter grade in the course (minus 10%), and be reported to UF's Dean of Students Office.**

**Article Evaluation** (7 Points, 7% of Total Grade) During week 15 (second to last week of class), all students will be assigned an article for which they are expected to familiarize themselves with prior to the last day of class (week 16). During the last day of class, students will critique the methodological quality of the article by answering a series of multiple choice and short-answer questions. Students will be able to use and reference the article for this assignment. Note: You must attend class to be eligible to complete the Article Evaluation. **Students who do not attend class but complete the Article Evaluation will, at minimum, receive a zero for the assignment, lose a full letter grade in the course (minus 10%), and be reported to UF's Dean of Students Office.**

### Point Breakdown / Grading Scale

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Syllabus Quiz	3 Points	A	93-100 Points	=	4.00
Exam 1	25 Points	A-	90-92.9 Points	=	3.67
Exam 2	25 Points	B+	87-89.9 Points	=	3.33
Check-In Quizzes	20 Points	B	83-86.9 Points	=	3.00
Reaction / In-Class Assignments	20 Points	B-	80-82.9 Points	=	2.67
Article Evaluation	7 Points	C+	77-79.9 Points	=	2.33
		C	70-76.9 Points	=	2.00
Total Points	100 Points	D+	67-69.9 Points	=	1.33
		D	63-65.9 Points	=	1.00
Extra Credit	3 Points	E	Less than 63 Points	=	0.00

## General Information and Policies

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### Professionalism

Students are expected to conduct themselves in a professional manner in all communication with the course instructor and teaching assistants. Moreover, students are expected to arrive to class on-time and be respectful during class (e.g., no excessive talking/background distractions, no cell phone use, or distracting classmates).

### Academic Honesty

Students are expected to act in accordance with the University of Florida policy on academic integrity. As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge:

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

You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit 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."*

It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

Violations of the Honor Code at the University of Florida will not be tolerated and will be reported to the Dean of Students Office for consideration of disciplinary action. For additional information regarding Academic Integrity, please see Student Conduct and Honor Code: [www.dso.ufl.edu/sccr/process/student-conduct-honor-code/](http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/).

### Collaboration Policy

Unless otherwise stated by written instructions, the preparation of all coursework should be done individually. If you are unsure about what level of collaboration is appropriate, ask the instructor before beginning any graded assignment.

### Technology Policy

The use of any technology in class, including cell phones, computers, tablets, etc., at any point is strictly prohibited unless students are collaborating on an in-class group assignment, or otherwise instructed by the instructor. All technology should be put away once class starts. Should you need to keep your cell phone on hand due to a personal reason, please inform the instructor prior to class.

### Late Submission Policy

Check-In Quizzes will not be accepted after the deadline unless the student has an excused absence or been granted permission by the instructor. As a reminder, Check-In Quizzes are due the Sunday before the week of class by 11:59p. Conversely, Reaction Assignments and In-Class Assignments will be accepted for half credit (1 point) 24 hours after the due date. All assignments are due the day of class by 11:59p.

It is your responsibility to check that the correct assignment has been submitted to Canvas on time. If you submit the wrong assignment, Canvas allows you to resubmit the correct assignment before the deadline. Submitting the wrong Reaction Assignment and In-Class Assignment will be considered the same as not submitting the assignment at all and you will receive zero credit.

### Make-Up Policy for Excused Absences

Make-ups may be granted for any portion of the class if based upon one of the following circumstances: (a) illness, (b) serious family emergencies, (c) military obligation, (d) religious holidays, (e) participation in official university activities, or (f) court-imposed legal obligations. For circumstances a. and b., students must contact the faculty via email within 48 hours of the missed exam/assignment, and the faculty may request the student provide medical or other forms of documentation to validate the make-up.

For all other circumstances, students must contact the faculty at least 72 hours prior to the anticipated missed day and provide reasonable documentation confirming the obligation/activity. The instructor will provide make-up materials to the student and be given 1 week to complete the make-up.

Missed Exams/Check-In Quizzes, or failure to upload Reaction Assignments/In-Class Assignments due to severe weather or poor internet connectivity will be reviewed on a case by case basis. If you are unable to access consistent internet, please email the instructor ahead of time (if possible); otherwise email the instructor at the earliest time possible.

### **Positionality Statement**

As a white, heterosexual, cisgender, able-bodied male, I recognize that my privilege insulates me from experiencing social and systemic discrimination, racism, oppression, rejection, or micro aggressions that many people have and continue to experience in their daily lives. This privilege is an inescapable part of my “identity” – something that has allowed me to never have to prove myself because of my sex, or be uneasy walking into a room where no one looks like me, or deny my authentic self for fear that family and friends will reject me. Moreover, my privilege has allowed me to navigate life largely unaffected by discriminatory practices, prejudicial policies, and implicit/explicit bias.

My lens, my values, my motivations have all been heavily influenced by my upbringing and my own lived experiences related to self-worth and inferiority. It is these experiences that drive me to champion diversity, equity, and inclusion inside and outside the classroom. I believe that we are all an intersection of vertical and horizontal identities that should be celebrated and affirmed, rather than hidden or oppressed. To that end, I strive to make safe and affirming spaces for all students regardless of race, ethnicity, sexual orientation, gender identity, or disability status; and hope to grow by becoming more educated and better understanding of the impact of social injustices.

### **Inclusive Learning Environment Policy**

The College of Public Health and Health Professions believes in human dignity and respect for the individual. As we share our personal beliefs inside or outside of the classroom, it is always with the understanding that we value and respect diversity of background, experience, and opinion, where every individual feels valued. We believe in, and promote, openness and tolerance of differences in ethnicity and culture, and we respect differing personal, spiritual, religious and political values. We further believe that celebrating such diversity enriches the quality of the educational experiences we provide our students and enhances our own personal and professional relationships. We embrace The University of Florida’s Non- Discrimination Policy, which reads, “The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans’ Readjustment Assistance Act.” If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see your instructor or refer to the Office of Multicultural & Diversity Affairs website: [www.multicultural.ufl.edu](http://www.multicultural.ufl.edu).

### **Accommodations for Students with Disabilities**

If you require classroom accommodation because of a disability, it is strongly recommended you register with the Dean of Students Office <http://www.dso.ufl.edu> within the first week of class or as soon as you believe you might be eligible for accommodations. The Dean of Students Office will provide documentation of accommodations to you, which you must then give to me as the instructor of the course to receive accommodations. Please do this as soon as possible after you receive the letter. Students with disabilities should follow this procedure as early as possible in the semester. The College is committed to providing reasonable accommodations to assist students in their coursework.

### **Counseling & Wellness**

Students sometimes experience stress from academic expectations and/or personal and interpersonal issues. If you find yourself facing issues that have the potential to or are already negatively affecting your coursework, you are encouraged to talk with an instructor and/or seek help through University resources available to you.

- The Counseling and Wellness Center (352) 392-1575 offers a variety of support services such as psychological assessment and intervention and assistance for math and test anxiety. Visit their web site for more information:

[www.counseling.ufl.edu](http://www.counseling.ufl.edu). Online and in-person assistance is available.

- U Matter, We Care website: [www.umatter.ufl.edu/](http://www.umatter.ufl.edu/). If you are feeling overwhelmed or stressed, you can reach out for help through the You Matter We Care website, which is staffed by Dean of Students and Counseling Center personnel.
- The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at (352) 392-0627 or check out the web site at: [www.shcc.ufl.edu/](http://www.shcc.ufl.edu/).
- Crisis intervention is always available 24 hours a day, 7 days a week from the Alachua County Crisis Center at: [www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx](http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx), or call (352) 264-6789.

Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone so do not be afraid to ask for assistance.

### **Policy Related to Guests Attending Class**

Only registered students are permitted to attend class. However, we recognize that students who are caretakers may face occasional unexpected challenges creating attendance barriers. Therefore, by exception, a department chair or his or her designee (e.g., instructors) may grant a student permission to bring a guest(s) for a total of two class sessions per semester. This is two sessions total across all courses. No further extensions will be granted. Students are responsible for course material regardless of attendance. For additional information, please review the Classroom Guests of Students policy: <http://facstaff.php.ufl.edu/services/resourceguide/getstarted.htm>

### **Online Faculty Course Evaluations**

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Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give professional and respectful feedback is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

## Calendar

\*Subject to Change

Week 1	Before Class	Nothing Required
	During Class	Review Syllabus
	After Class	<b>Complete Syllabus Quiz</b>
Week 2	Before Class	<b>Watch: Spanning the Research Spectrum: Quantitative and Qualitative Research</b> <b>Watch: Basic Research Variables</b> <b>Watch: Last Week Tonight with John Oliver</b> <b>Complete Quiz 1</b>
	During Class	Discussion 1: Why Humans Are Bad At Research
	After Class	<b>Submit Reaction Assignment 1</b>
Week 3	Before Class	<b>Watch: General Designs for Examining Causality (Levels of Evidence)</b> <b>Watch: Choosing A Casual Research Design to Compare Groups</b> <b>Complete Quiz 2</b>
	During Class	In-Class Assignment 1: Identify the <i>General</i> Research Design
	After Class	<b>Complete and Upload In-Class Assignment 1</b>
Week 4	Before Class	<b>Watch: Searching Databases</b> <b>Watch: Clinical Trial Phases</b> <b>Complete Quiz 3</b>
	During Class	Discussion 2: Evidence Based Medicine in a World of Mis/Disinformation
	After Class	<b>Submit Reaction Assignment 2</b>
Week 5	Before Class	<b>Watch: True Experimental and Quasi-Experimental Designs</b> <b>Watch: Threats to Internal Validity</b> <b>Complete Quiz 4</b>
	During Class	In-Class Assignment 2: Experimental Designs and Threats
	After Class	<b>Complete and Upload In-Class Assignment 2</b>
Week 6	Before Class	<b>Watch: Observational Designs</b> <b>Complete Quiz 5</b>
	During Class	In-Class Assignment 3: Calculating OR/RR
	After Class	<b>Complete and Upload In-Class Assignment 3</b>
Week 7	Before Class	Study
	During Class	Optional Review Session
	After Class	<b>Exam 1: Wednesday at 7p</b>

Week 8	Before Class	<b>Watch: Measurement Scales</b> <b>Watch: Types of Data</b> <b>Complete Quiz 6</b>
	During Class	Discussion 3: Why Most Tests You've Taken Are Flawed
	After Class	<b>Submit Reaction Assignment 3</b>
Week 9	Before Class	<b>Watch: Sampling Strategies</b> <b>Complete Quiz 7</b>
	During Class	In-Class Assignment 4: Sampling
	After Class	<b>Complete and Upload In-Class Assignment 4</b>
Week 10	<i>Spring Break</i>	
Week 11	Before Class	<b>Watch: Choosing the Correct Statistical Test</b> <b>Complete Quiz 8</b>
	During Class	In-Class Assignment 5: Choosing the Correct Statistical Test
	After Class	<b>Complete and Upload In-Class Assignment 5</b>
Week 12	Before Class	<b>Watch: Statistical Significance Testing</b> <b>Watch: Confidence Intervals and Effect Sizes</b> <b>Complete Quiz 9</b>
	During Class	In-Class Assignment 6: Interpreting Results
	After Class	<b>Complete and Upload In-Class Assignment 6</b>
Week 13	Before Class	<b>Watch: Qualitative Research</b> <b>Watch: Conducting Interviews or Focus Groups</b> <b>Complete Quiz 10</b>
	During Class	Discussion 4: Henrietta Lacks and the Ethical Use of Biological Specimens
	After Class	<b>Submit Reaction Assignment 4</b>
Week 14	Before Class	<b>Watch: Research Ethics</b> <b>Complete Quiz 11</b>
	During Class	Discussion 5: Are Demographic Variables Limiting?
	After Class	<b>Submit Reaction Assignment 5</b>
Week 15	Before Class	Study
	During Class	Optional Review Session
	After Class	<b>Exam 2: Wednesday at 7p</b>
Week 16	Before Class	Review Assigned Article
	During Class	<b>Complete Article Evaluation</b>
	After Class	Nothing Required