

**MULTIDISCIPLINARY RESEARCH METHODS 1 - FALL 20xx, 1 CREDIT
COURSE SYLLABUS**

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| EDF 2911 xxx (insert CRN) | Class time: | Classroom: |
| Instructor: | Email: Phone: | Office: Office hours: |

Course Overview:

This course allows students to build common research skills and receive guidance in finding a faculty research mentor. It is *inclusive* of multiple disciplines and methodologies, as opposed to a comprehensive survey, and will cover material that is both common to research in all disciplines and specific to the students' research interests. Over the course of the semester, students will begin to build basic research knowledge and skills common to all disciplines. They will also begin to hone their own research interests and identify potential research mentors.

Learning Goals:

- Understand what research is and what it looks like in multiple fields and at multiple career stages through participation in discussions with guest researchers
- Learn the basic components of research ethics in order to relate research ethics to your own research and infer ethical decisions in case studies
- Apply strategic literature search techniques to find primary research articles that pertain to your areas of interest
- Improve skills in efficiently reading, comprehending, and critiquing the primary literature
- Critique the primary research literature by recognizing research "red flags" and evaluating the logical framework
- Critically evaluate information presented on the internet, in the news, and research literature
- Refine personal research and academic interests and begin to apply concepts learned in class to one's own research path
- Integrate effective oral presentation skills when developing/preparing for a talk
- Learn about research opportunities at FAU and other affiliated institutions and connect with potential research mentors

Required Course Materials:

1. A research notebook
2. Oppenheimer, D. G. and Grey, P. H. Getting In: The Insider's Guide to Finding the Perfect Undergraduate Research Experience. Gainesville, FL: Secret Handshake Press. 2015.
3. Required readings: will be distributed in class and on Canvas and include the sources listed in the "Selected Readings and Resources" section below

Course Prerequisites and Co-requisite:

1. Multidisciplinary Introduction to Research
* The prerequisite (Introduction to Research) may be waived given demonstrated skill in peer-reviewed literature search, comprehension, and analysis as well as research ethics.

Course Policies and Procedures:

A. Course Evaluation: The course grade will be determined from student participation during class and on-time completion of assignments. Assignment due dates will be announced in class and on Canvas and submitted through Canvas. No late work will be accepted. To receive credit for an assignment, you must complete it to the best of your ability and submit it on time. All grades will be posted to Canvas.

Graded assignments and associated points:

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| Short writing assignments | (6*10pts) 60 pts |
| Bibliography and research paper pdfs | (3*20pts) 60 pts |
| 2 Research workshop reflections | (2*10pts) 20 pts |
| In-class participation and proper preparation for guest lecture discussions | 30 pts |
| Research Ethics module | 10 pts |
| Final presentation | 40 pts |
| Total | 220 pts |

Assignment descriptions:

Short writing assignments: Summarize, reflect on, and critique aspects of topics discussed in class by providing well-thought-out, revised, logical paragraphs. Length and specific writing prompt will be provided for each particular assignment.

Bibliography and research paper pdfs: Find, read, understand, and critically analyze peer reviewed research publications using the skills gained in this course. Provide an annotated bibliography matching the template provided to you and submit pdfs of the papers you chose.

2 Research workshop reflections: Attend a minimum of two research related workshops or seminars before the last day of the class. Submit a 1 paragraph summary of each workshop along with comments on what new things you learned and how the workshop/seminar has bettered you as a researcher.

In-class participation and proper preparation for guest lecture discussions: Participate often in class discussion by giving feedback and asking questions. Also, in preparation for guest lectures, research the guest lecturer's professional background and publications. Develop a few questions ahead of time. Engage with the guest lecturer during their visit.

Research ethics module: Complete CITI responsible conduct in research (RCR) training (recommended) to obtain the certification. Alternative assignment: complete one of the research ethics interactive training modules "The Lab" or "The Clinic" at <https://ori.hhs.gov/> and submit your completion certificate.

Final presentation: In a 10 to 12-minute oral presentation, introduce us to your potential or confirmed research mentor. Provide the background on the topic that they research, the methodology that they use, and some of their main, recent findings. Then, give an update of your status in pairing with that mentor, what project you will be working on, and what your next steps will be.

B. Grading Scale: The following scale will be used for computing the final grade.

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| A | 90 -100% |
| B | 80 - 89% |
| C | 70 - 79% |
| D | 60 - 69% |
| F | less than 60% |

C. Attendance Policy:

Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance.

Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.

If a student must miss a class, documentation must be provided to the instructor by the next class period, or the student's participation grade will be impacted. Only 1 excused absence is permitted; more than one absence will result the loss of 1 letter grade per absence.

D. Classroom Etiquette Policy: University policy on the use of electronic devices states: "In order to enhance and maintain a productive atmosphere for education, personal communication devices, such as cellular telephones and pagers, are to be disabled in class sessions." You may be asked to leave the class session for noncompliance.

E. Student Honor Policy: Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see University Regulation 4.001.

http://www.fau.edu/ctl/4.001_Code_of_Academic_Integrity.pdf

F. Disabilities Statement: In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however disability services are available for students on all campuses. For more information, please visit the SAS website at www.fau.edu/sas/.

G. Counseling and Psychological Services (CAPS) Center: Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their

ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to <http://www.fau.edu/counseling/>.

H. SPOT Evaluation:

At the end of the semester, SPOTs (Student Perception of Teaching forms) are to be completed online. Faculty no longer provide paper SPOTs in class at the end of the semester. Please remember to complete the SPOTs for the classes in which you are enrolled. In order to complete the SPOT, please go to <https://spot.fau.edu>. The instructor will provide in-class time at the end of the semester for you to complete the SPOT in class using your smartphone, tablet, or laptop.

I. Important Dates:

The instructor reserves the right to make changes to this schedule at any time. Changes may be announced via Canvas and/or verbally in class. This schedule also includes dates based upon the current university academic calendar. You are responsible for checking the academic calendar on the university website for any changes during the academic term.

University-set dates:

First day of classes:

Last day to drop/add:

Last day to withdraw from course:

Spring Break/Holidays:

Last day of classes:

Schedule of course topics:

| Week | Dates | Topic | Homework (due following Thursday night) |
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| 1 | 1/12 | Course introduction, discuss class expectations Discuss research interests and previous experience | <ul style="list-style-type: none"> • Read syllabus • Articulate your research interests and any previous research experience |
| 2 | 1/19 | <ul style="list-style-type: none"> • Research lecture by instructor • Discussion on how to narrow & define your research interests | <ul style="list-style-type: none"> • Find and read 2 recent news articles pertaining to your research interests • Briefly summarize, compare, and contrast the articles; make some preliminary discipline-related conclusions related to their findings |
| 3 | 1/26 | Library workshop on finding primary literature | <ul style="list-style-type: none"> • Find and read 2 articles related to your topic • Create an annotated bibliography of these 2 articles using the provided template |
| 4 | 2/2 | <ul style="list-style-type: none"> • Review on finding primary literature • Discussion on comprehending and evaluating primary literature | <ul style="list-style-type: none"> • Find 2 more articles, read them, and add them to your annotated bibliography • Research speaker for next week |
| 5 | 2/9 | Guest research talk: | Find 2 more articles, read them, and add them to your annotated bibliography |
| 6 | 2/16 | Discussion on finding, contacting, and meeting with potential mentors | <ul style="list-style-type: none"> • Create a list of 6-8 potential research mentors • Write a draft of your initial email to 1 of those faculty members |
| 7 | 2/23 | Discussion on professionalism in research | Summarize your section and discuss your top 3 “take-aways” for how the principles we discussed will impact your research experience |
| 8 | 3/2 | Research ethics discussion | <ul style="list-style-type: none"> • Complete CITI RCR training (recommended) to obtain certification • Alternative assignment: complete one of the research ethics interactive training modules “The Lab” or “The Clinic” at https://ori.hhs.gov/ • Research speaker for next week |
| 9 | 3/9 | Spring Break | |
| 10 | 3/16 | Guest research talk | <ul style="list-style-type: none"> • Send at least 2 mentor emails • Prepare to discuss the status of your mentor search next session |
| 11 | 3/23 | Discussion on creating and delivering effective oral presentations | Begin working on your final presentation |
| 12 | 3/30 | Attend the FAU Undergraduate Research Symposium | <ul style="list-style-type: none"> • Write a 1 paragraph summary and reflection on each of 2 presentations you saw • Prepare & practice your presentation |

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| 13 | 4/6 | Student presentations | Prepare & practice your presentation |
| 14 | 4/13 | Student presentations | Prepare & practice your presentation |
| 15 | 4/20 | Student presentations | Notify instructor of your research plans |

Selected Readings and Resources List:

- Raff, J. 2013. How to read and understand a scientific paper: a guide for non-scientists. Published on <https://violentmetaphors.com>.
- A rough guide to spotting bad science. 2014 Compound Interest. www.compoundchem.com.
- Professionalism. WebGURU: Guide for Undergraduate Researchers. <http://www.webguru.neu.edu/professionalism>. Accessed 9/8/16.
- Schwartz, M. 2008. The importance of stupidity in scientific research. Journal of Cell Science. 121(11): 1771.
- CITI Program. Responsible conduct in research course. <https://about.citiprogram.org/en/homepage/>.
- The Office of Research Integrity. <https://ori.hhs.gov/>
- Resnick, D. 2015. What is Ethics in Research & Why is it Important? National Institute of Environmental Health Sciences. <https://www.niehs.nih.gov/research/resources/bioethics/whatis/>. Accessed 4/12/17.