

 FLORIDA ATLANTIC UNIVERSITY	NEW COURSE PROPOSAL Undergraduate Programs		UUPC Approval <u>1/29/24</u> UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner Posted _____ Catalog _____
	Department Educational Leadership and Research Methodolo College Education <i>(To obtain a course number, contact erudolph@fau.edu)</i>		
Prefix EDF Number 4914	<i>(L = Lab Course; C = Combined Lecture/Lab; add if appropriate)</i> Lab Code	Type of Course <input type="text" value="Lecture"/>	Course Title Exploring Multidisciplinary Research
Credits <i>(See Definition of a Credit Hour)</i> 3	Grading <i>(Select One Option)</i> Regular <input checked="" type="radio"/> Sat/UnSat <input type="radio"/>	Course Description <i>(Syllabus must be attached; see Template and Guidelines)</i> This course guides students through an exploration of the world of academic and applied research, covering concepts that are both common to research in all disciplines and specific to the students' individual research interests. Over the course of the semester, students will identify and connect the unifying principles of research across disciplines, gain content knowledge in their areas of interest, experience firsthand the benefits and challenges of conducting a research study from beginning to end, and become equipped to make an informed decision on how to incorporate research into their academic and professional paths.	
Effective Date <i>(TERM & YEAR)</i> Spring 2024	Prerequisites, with minimum grade* None		Corequisites None
		Registration Controls <i>(Major, College, Level)</i> None	
*Default minimum passing grade is D-. Prereqs., Coreqs. & Reg. Controls are enforced for all sections of course			
WAC/Gordon Rule Course <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to proposal. See WAC Guidelines .		Intellectual Foundations Program (General Education) Requirement <i>(Select One Option)</i> None General Education criteria must be indicated in the syllabus and approval attached to the proposal. See Intellectual Foundations Guidelines .	
Minimum qualifications to teach course Master's level degree and 15 credit hours of content			
Faculty Contact/Email/Phone Tricia Meredith/tmeredi1@fau.edu/*7-4486		List/Attach comments from departments affected by new course None	
Approved by		Date	
Department Chair <u>[Signature]</u>		<u>11/10/23</u>	
College Curriculum Chair <u>[Signature]</u>		<u>11/12/2023</u>	
College Dean <u>[Signature]</u>		<u>11/13/2023</u>	
UUPC Chair <u>Korey Sorge</u>		<u>1/29/24</u>	
Undergraduate Studies Dean <u>Dan Meeroff</u>		<u>1/29/24</u>	
UFS President _____		_____	
Provost _____		_____	

Email this form and syllabus to mjenning@fau.edu seven business days before the UUPC meeting.

**EXPLORING MULTIDISCIPLINARY RESEARCH - 3 CREDITS
COURSE SYLLABUS**

EDF 4914 xxx (insert CRN)

Class time:

Classroom:

Instructor:

Email:

Office:

Phone:

Office hours:

Course Description:

This course guides students through an exploration of the world of academic and applied research, covering concepts that are both common to research in all disciplines and specific to the students' individual research interests. Over the course of the semester, students will identify and connect the unifying principles of research across disciplines, gain content knowledge in their areas of interest, experience firsthand the benefits and challenges of conducting a research study from beginning to end and become equipped to make an informed decision on how to incorporate research into their academic and professional paths.

Learning Goals: Students will...

- Demystify research as a multidisciplinary tool for investigation and review the breadth of topics investigated at FAU and beyond through engagement in class discussions and research paper discussions
- Develop skills to find, read, understand, and critically evaluate the primary research literature
- Become familiar with a wide variety of research methods, theories, and techniques, which will help them decipher which areas pique their interest
- Collaboratively design, perform, analyze, and present a small-scale, observational, group research study
- Create and present a research poster on the findings of their group research project

Required Course Materials:

Readings will be posted on Canvas.

Course Prerequisites and Co-requisite:

None.

Course Policies and Procedures:

A. Course Evaluation: The course grade will be determined from student participation during class, classroom assessments, 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 quizzes/assignments and associated points:

Assignment name	Points	Individual / Group Assignment
Article/podcast reflections	25 pts	Individual

Literature search and research paper analysis templates (6 * 15 pts each)	90 pts	Individual
Group-led paper discussion	50 pts	Group
Research methods “mega-quiz”	30 pts	Individual
Group research project	45 pts	All assignments submitted individually except for final poster file
Peer evaluations	20 pts	Individual
Presentation of group research poster	80 pts	Group
Total	340 pts	

Assignment descriptions:

Article/podcast reflections: In this assignment, you will summarize, reflect on, and critique aspects of the assigned article or podcast by providing well-thought-out, revised, logical paragraphs. Length and specific writing prompt will be provided for each assignment.

Literature search and research paper analysis templates: You will conduct a literature search. The tasks will include finding, reading, understanding, and critically analyzing peer reviewed research publications assigned using the skills gained in this course. You will submit a research paper analysis using the template provided to you.

Group-led paper discussion: This assignment will require you to collaborate with your assigned group member(s) to choose 2 recent, peer reviewed research papers that incorporate your common interests. The instructor will select one of the papers and assign it to the entire class to read, analyze, and critically analyze. On your scheduled presentation day, your group will lead a prepared class discussion on your paper and related materials that you sourced.

Research methods “mega-quiz”: You will have the opportunity to demonstrate your understanding of research methods, theories, techniques, and terminology during this knowledge-check.

Group research project: In this project you will collaboratively design, perform, analyze, and present an original, small-scale, research study with your assigned group. Data collection may include readily observable qualitative or quantitative measures (e.g. pedestrian path usage, classroom assessment uses, bird species surveys, etc...) or data from open-source repositories (e.g. climate.gov maps and data, Inaturalist, nest/critter/zoo cams, Google Trends, NIH *All of Us* Research Hub, etc...).

Research-focused student learning outcomes involved in this project:

1. Knowledge:
 - a. Find and use scholarly resources, including peer reviewed journal articles.
 - b. Understand, analyze, evaluate, and build on the background scholarly literature pertaining to your project and discipline.
 - c. Appropriately incorporate the proper vocabulary pertaining to your research topic.
 - d. Describe, compare, contrast, and critique key theoretical frameworks applicable to your project.
2. Formulate Questions:
 - a. Explicitly state your research question that addresses an identified gap in the current research.
 - b. Justify your rationale for why it is important to address this question/problem.
3. Plan of Action:
 - a. Describe or diagram your plan for answering your research. It should be clear and concise and based on relevant and current methodologies within your discipline.

4. Critical Thinking:
 - a. Assess previous literature critically to determine its strengths and pitfalls and how that relates to your proposed project.
 - b. Analyze the relationship between your data and research question.
 - c. Interpret your findings, making sure to address any unexpected results.
 - d. Anticipate potential future outcomes from your project.
 - e. Recognize and disclose potential sources of error in your interpretation of the data.
5. Ethics:
 - a. Learn the key concepts pertaining to research integrity and become familiar with the related groups and resources available at FAU.
 - b. Identify research ethics considerations/concerns in your own project. With the help of the instructor, formulate your research plan based on these considerations.
 - c. It is strongly recommended that students complete the Responsible conduct of research (RCR) certificate through the CITI training of academic research on-line at <http://www.fau.edu/graduate/events/citi-training.php>. Students are also encouraged to attend FAU OURI workshops on topics related to responsible conduct of research. Information on OURI workshops can be found here http://www.fau.edu/ouri/student_workshops.php

Presentation of group research poster: Prepare a research conference poster that effectively communicates the background literature, methods, results, and implications of your group research project. Implement best practices in delivering oral presentations when presenting your research poster to the class. This preparation process will allow you to immerse yourselves in an actual research project presentation, requiring you to integrate organization and communication skills while sharing your research with peers.

Research-focused student learning outcomes involved in this presentation:

6. Communication:
 - a. Construct a poster and deliver an accompanying oral presentation that targets an educated, non-expert audience.
 - b. Visually communicate your research results using graphs, charts, and tables.
 - c. Incorporate presentation guidelines provided by the instructor on content and formatting and construct a well-organized, informative, and engaging presentation.
 - d. Properly reference previous studies pertaining to your project.

Peer evaluations: Evaluate your group members' contribution on the group research project and poster presentation.

*A note on group work: all group members are expected to contribute equally and will receive individual grades for their work.

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

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.

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. Code of Academic Integrity 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. 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.

Schedule of course topics:

Week	Dates	Topic	Homework – details posted on Canvas
1	Aug xx	Course introduction, discuss class expectations Discuss research in a multidisciplinary context, including the cross-cutting concepts and practices	<ul style="list-style-type: none"> • Read syllabus • Articulate what you are interested in researching and why • Podcast reflection
2	Sept x	Pathways into academia Spotting Bad Science Types of Scientific Evidence How to perform a literature search How to read a journal article Journal article publication process	<ul style="list-style-type: none"> • Using the guidance provided in class, read and analyze the selected research paper • Complete analysis template
3	Sept x	Introduction to Research Methods Introduction & Theory Ethics Sampling Experimental Design Statistics Research Methods Mega Quiz	<ul style="list-style-type: none"> • Literature search assignment • Prepare for research Mega-quiz • Podcast reflection
4	Sept xx	Group Paper Project <ul style="list-style-type: none"> • Chose Paper • Read and Analyze Paper • Group 1 Research Paper Presentation (end of week) 	<ul style="list-style-type: none"> • Research speaker for next week • Read analyze group 1 research paper • Prepare for group paper presentation
5	Sept xx	Read and Analyze Paper Group 2 Research Paper Presentation	<ul style="list-style-type: none"> • Research speaker for next week • Read analyze group 2 research paper • Prepare for group paper presentation
6	Sept xx	Read and Analyze Paper Group 3 Research Paper Presentation	<ul style="list-style-type: none"> • Research speaker for next week • Read analyze group 3 research paper • Prepare for group paper presentation • Podcast reflection
7	Oct x	Read and Analyze Paper Group 4 Research Paper Presentation	<ul style="list-style-type: none"> • Research speaker for next week • Read analyze group 4 research paper • Prepare for group paper presentation
8	Oct xx	Read and Analyze Paper Group 5 Research Paper Presentation	<ul style="list-style-type: none"> • Research speaker for next week • Read analyze group 5 research paper • Prepare for group paper presentation
9	Oct xx	Group Observational Research Project <ul style="list-style-type: none"> • Observational Research / Research from data repositories • Idea generation • Idea formulation • Developing your research question 	<ul style="list-style-type: none"> • Meet with group, decide on research project topic and question(s), formulate the plan for data collection • Find, read, and incorporate relevant research literature into your project
10	Oct xx	Group Observational Research Project (cont.) <ul style="list-style-type: none"> • Observational Research • Idea generation 	<ul style="list-style-type: none"> • Meet with group, revise plan, research question(s), and plan for data collection as needed

		<ul style="list-style-type: none"> Idea formulation 	<ul style="list-style-type: none"> Continue to find, read, and incorporate relevant research literature into your project Complete paper analysis template on papers specific to the group project
11	Nov x	Data collection Introduction to descriptive and inferential statistics Data cleaning, summarizing, and analysis	<ul style="list-style-type: none"> Combine, clean, and summarize data collected by each of the group members after each day of data collection
12	Nov xx	Data collection (cont.) Data analysis (cont.) Poster creation	<ul style="list-style-type: none"> Combine, clean, and summarize data collected by each of the group members after each day of data collection Begin to develop research poster using guidance provided in class and on canvas
13	Nov xx	Data collection (cont.) Data analysis (cont.) Continue poster creation	<ul style="list-style-type: none"> Combine, clean, and summarize data collected by each of the group members after each day of data collection Continue to develop research poster using guidance provided in class and on canvas
14	Nov xx	No class – Thanksgiving break	
15	Dec x	Poster presentations	<ul style="list-style-type: none"> Submit poster file Present final poster to the class, answer questions from the class and grading panel Submit peer evaluations

Selected Readings and Resources List:

- FAU Library. Creating a Search Strategy. <https://libguides.fau.edu/webeval/search-strategies>.
- 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.
- The Laboratory Notebook. WebGURU: Guide for Undergraduate Researchers. <http://www.webguru.neu.edu/professionalism>.
- SPSS Tutorials. <https://www.spss-tutorials.com/basics/>.
- Zielinska, E. 2011. Poster Perfect: How to drive home your science with a visually pleasing poster. The-scientist.com. <http://www.the-scientist.com/?articles.view/articleNo/31071/title/Poster-Perfect/>.
- 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/>.