



FORS 6111

Fundamentals of Research Methods

Fall Semester 2017

Professor: Sheree Hughes-Stamm, PhD

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Class hours: Wed 12 - 1pm

Office Hours: Wednesdays 11 am – 4pm (other times by e-mail appointment)

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Classroom: CFS 104

SUGGESTED TEXTBOOK

- Scientific Writing and Communication: Papers, Proposals and Presentations by Angelika H. Hofmann. Oxford University Press. 3rd Edition.

COURSE DESCRIPTION

This is a graduate seminar course in forensic science for all second year students enrolled in the Master of Science in Forensic Science. The series will focus on improving student research design, basic statistics and scientific writing skills.

COURSE OBJECTIVES

The purpose of the research methods course is to help students develop their scientific research methods skills in preparation for their capstone research projects. This course will assist students with research design, hypothesis testing, sources of error, analytical thinking, basic statistics and computer programs for statistical analysis and database referencing, problem-solving, scientific writing skills and broadening their scope of understanding. Indeed, the interaction between researchers and students will help to understand the scientific method, evaluate the different hypotheses, comprehend the relevance of the actual research and improve their scientific writing skills. Students are given the opportunity to engage in active discussion about the different ongoing research projects and data they collect as part of their capstone projects in order to better understand and apply the theory delivered in this class.

COURSE REQUIREMENTS

Examinations and Assignments

Students will be required to prepare several pieces of assessment:

Students are required to actively participate in the Research methods series by engaging in the learning process, developing research outlines, completing scientific writing exercises, hand-on computer workshops, and other activities directed by the instructor.

Students must prepare a research outline paper and a formal research poster based on their Capstone project data. Templates will be provided for both documents. In addition, students will also write various sections of a journal manuscript based on their capstone research.

There will be no final examination.

Assessment	Due Date	Weighting (%)
Research Outline	Week 5	15
Scientific Writing Exercise - words	Week 7	10
Scientific Writing Exercise - references	Week 7	10
Capstone Intro	Week 10	15
Capstone M&M	Week 12	15
Poster	Week 15	35

GRADING

This is a “W” course which means that at least 50 percent of your course grade will derive from writing activities designed to help you master course objectives

Final grades will be based upon the following scale: 90 plus average an “A”; 80 to 89 a “B”; 70 to 79 a “C”; and below 70 an “F”. Students should not count on a curve of the final grade. The instructor reserves the right to modify the grading scheme to accommodate for a missed test or final examination in extenuating circumstances.

The instructor reserves the right to assign a final exam grade of 0% should he/she deem the absence was not properly handled or was unjustified. Appeals will be handled in accord with University Policy Statement 900823, Academic Grievance Procedures for Students.

MAKE-UP EXAMS

There will be no exams for this course.

STUDENT ACADEMIC POLICIES

Attendance policy

Attendance will be recorded in keeping with University policy. Students are expected to attend class. Class attendance requirements will be followed in accordance with Academic Policy Statement 800401. In accordance with university policy, students will not be penalized for absences of up to three hours as long as examinations and other assigned work have not been missed. If a student is absent it is their responsibility to obtain the class material and remain current with information distributed during class. Occasionally changes in schedule may be announced in class. *These changes apply to all students, even those who were absent from class.* One letter grade may, at the discretion of the instructor, be deducted from students' final grade if they miss more than four classes. There will be no distinctions between "excused" and "unexcused" absences. Students are expected to be on time to class. After the beginning of the class, late students may be counted as absent.

Policies concerning Attendance, Academic Honesty, Disabled Student and Services for Disabled Students, and Absences on Religious Holy days may be found at: <http://www.shsu.edu/dept/academic-affairs/aps/aps-students.html>

Use of Cell & Smart Phones, PDA's & Similar Devices: Engaging in voice communication using a cell phone or similar communication device during class is prohibited. Leaving the classroom to receive a phone call is prohibited, except with prior approval of the instructor for urgent communications. Device sound alerts should be turned off during class. Engaging in text communication during class is discouraged, although non-disruptive occasional use is permitted. Persistent or extended texting is, however, not allowed. Per University policy communication using any electronic device during an in-class examination is prohibited.

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Course Schedule*

Week	Date	Lecture	Topic
1	23rd August	Research Methods - I	Introduction & Types of Research, Literature, Significance
2	28th August	Endnote Training	
3	4th September	Research Methods - II	Scientific Method, Hypothesis testing & Logical reasoning
4	11th September	Research Methods - III	Developing a framework for research design; variables
5	18th September	Scientific Writing - I	Words, sentences, paragraphs
6	25th September	Scientific Writing - II	Abstract, Referencing & Plagiarism
7	2nd October	SDL - Exercise Sheet & Referencing	
8	9th October	Scientific Writing - III	Introduction, Material & Methods
9	16th October	Scientific Writing - IV	Results, Figures & Tables, Discussion
10	23rd October	Posters	How to write a poster
11	30th October	Responsible Conduct in Research	IRB training
12	6th November	Statistics for forensic science I	Basic Statistics
13	13th November	Statistics for forensic science II	Basic Statistics in excel workshop
14	20th November	THANKSGIVING	
15	27th November	Poster Viewing & Evaluation	
16	4th December	EXAM WEEK	

Research Methods

I – Scientific Method, Measurement & variables

II – Hypothesis testing & Logical reasoning

III - Developing a framework for research design

Scientific Writing

I – Words, Sentences, Paragraphs

II - Abstract, Referencing & Plagiarism

III - Introduction, Material & Methods

IV - Results, Figures & Tables, Discussion