

**SRM 600-702 – Introduction to Graduate Research Summer 2022**  
**Lowry Campus, July 15-17 And July 29-31, 2022**

**Instructor:**

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**Purpose of the Course:**

The purpose of this course is to provide an overview of and introduction to basic concepts and terminology used in conducting educational and behavioral research.

**Course Objectives:**

Following completion of this course, students should be able to:

- Define basic terminology and concepts associated with research
- Describe the steps and decisions involved in planning, designing, and implementing a research study
- Compute and interpret basic descriptive statistics
- Identify researchable topics and issues within the field of public health
- Critically evaluate published research reports
- Write a research proposal to include introduction, literature review, rationale for the study, description of the design, sample selection, instrumentation/materials, data collection procedures, and data analysis procedures.

**OPTIONAL Textbook:**

Ary, D., Jacobs, L. C., Sorenson Irvin, C. K., & Walker, D. (2013). *Introduction to Research in Education* (10<sup>th</sup> ed.). Boston: Cengage Learning.

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**Course Schedule:**

**July 15**

Evening session

Topics: Overview of the Course  
Introduction to the Scientific Method and Basic Research Concepts/Terminology  
Preview of the Research Process  
Identifying a Researchable Problem  
Optional Reading: Chapter 1

**July 16**

Morning session

Topics: Refining the Topic of Study  
Searching and Reviewing the Literature  
Justifying the Need for a Study  
Research Questions/Hypotheses  
Optional Reading: Chapters 3-5

Afternoon session

Topics: Principles of Experimental Design  
Types of Experimental Designs  
Optional Reading: Chapters 10-11

**July 17**

Morning session

Topics: Ex Post Facto Research  
Correlational Research  
Survey Research  
Optional Reading: pages Chapters 12-14

Afternoon session

Topics: Survey Research – cont'd  
Qualitative Research  
Selecting the Appropriate Design  
Optional Reading: Chapters 2 and 16  
**Exam 1**

**Optional INTERIM Readings: Chapters 20 - 21**

**July 29**

Evening session

Topics: Descriptive Statistics  
Standard Scores  
Correlation  
Optional Reading: Chapter 6  
**Exam I due**

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**July 30**

Morning session

Topics: Sample Selection  
Logic of Sampling Error  
Principles and Concepts of Inferential Statistics  
Different Types of Inferential Statistics  
Optional Reading: Chapter 7; handout

Afternoon session

Topics: Qualitative Data Analysis  
Types of Measures  
Optional Reading: pages 220 – 223, Chapters 15 and 17

**July 31**

Morning session

Topics: Measurement Validity and Reliability  
Locating and Evaluating Measures  
Optional Reading: Chapter 9; handout

Afternoon session

Topics: **Proposal Presentations, Final Exam**

**June 5 – Final Written Research Proposal due**

**Grading and Course Requirements:**

Grades will be based on classroom participation (30%), completion of in-class and homework assignments (20%), two exams (5% each), a proposal presentation (10%), and a written research proposal (30%). All written assignments will be typed and double-spaced preferably according to some accepted editorial style such as APA style.

**Class participation and completion of in-class assignments.** Class participation comprises attendance, evidence of appropriate class preparation (i.e., reading assigned materials prior to class), and active participation in class activities. In addition, you will be asked to complete additional assignments during the 2 weekend sessions, some of which will be completed during class and some of which will require out-of-class work, e.g., library searches, etc.

**Exams.** One exam will be take-home, to be completed by the beginning of the final week (July 29). For the first exam, you may use any "non-human" resource, i.e., you may consult textbooks, journal articles, library resources, and/or class notes, but may **not** discuss the exam in any way with other people, including people either within or outside the class. The other exam will be an exam in which you will work as a team to find answers. The exams will consist of mostly essay-type conceptual questions requiring you to apply concepts to real and/or hypothetical research situations.

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**Research proposal.** Working in small groups, you are to propose a study, which you could conceivably implement at some point in the future. The proposal should include a background/rationale for the study, research questions or hypotheses, description of intended subjects, instrumentation (measures), data collection procedures, and proposed data analyses. The proposal should be written in APA (or another accepted style) and should be around 7 - 10 pages in length. We will discuss possible ideas for studies in class. Specific criteria for the written proposal, which is due August 3, are included in the course materials.

**Proposal presentation.** On the last afternoon of class, your group will present your proposed study to the class. Given the short duration of this course, it is expected that your presentation will be fairly informal but should include sufficient information that your classmates have a clear understanding of what you plan to do and why.

**University Policies:**

It is the policy and practice of the University of Northern Colorado to create inclusive learning environments. Please go to [https://www.unco.edu/center-enhancement-teaching-learning/teaching-resources/syllabus\\_statements.aspx](https://www.unco.edu/center-enhancement-teaching-learning/teaching-resources/syllabus_statements.aspx) to learn more about such topics as Disability Resources, Title IX, Academic Integrity, Attendance, Equity and Inclusion, Food Insecurity and Basic Needs, Land Acknowledgement, Name/Pronoun in Use, the Writing Center, Covid-19, and other topics as they are added.