

STS 205-001: Introduction to Research Methods

Monday/Wednesday 8:30 – 9:50 AM

CKB 314

Instructor: Dr. Regina Collins

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Office: Fenster 479

Office Hours: By Appointment

Prerequisites: HUM 101 and 102 or equivalent

Course Description

This course is intended to give first- and second-year undergraduate students an understanding of what research is, what it is used for, how it is conducted, and how it is reported. It provides an overview of applying the scientific method to real-life research, including ethical concerns, qualitative and quantitative methods (and how and when they should be used), and how to critically evaluate published research findings.

There may be **some class meetings** during the semester when we will meet virtually to host a faculty guest lecturer. This will be announced in advance with an email link sent out as confirmation. Please be sure to check your emails in advance. During guest lectures, you will be expected to:

- Have your camera on and be present
- Listen attentively to the guest speaker
- Ask questions/engage with the guest speaker

Students who do not join the virtual meetings or who do not have their camera on for the duration of the guest lecture will be marked as absent and will receive a zero for participation that day.

Learning Objectives

By the end of this course, students will be able to:

- Identify a research problem
- Identify and mitigate ethical issues associated with a research project
- Conduct a thorough literature review and critique published research
- Develop research questions and hypotheses
- Develop interview questions and conduct a semi-structured interview
- Develop survey questions and conduct a basic analysis of survey data
- Determine which type of data is most appropriate to answer the research questions
- Assess multiple formats for organizing, developing, and presenting research

Required Readings:

Materials for assigned readings will be provided. There is no textbook required for this class.

Course Requirements

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| • Participation | 10% |
| • Citation Chaining | 10% |
| • Research Topic Slides | 5% |
| • Interview | 5% |
| • Midterm Exam | 10% |
| • Survey | 10% |
| • Literature Review | 20% |
| • Research Proposal | 30% |

Late Assignment Submissions

Assignments will lose one grade for every day they are late (A to A-, A- to B+). Assignments will not be accepted more than one week late.

Grading Scale

- 90-100 = A
- 85-89 = B+
- 80-84 = B
- 75-79 = C+
- 70-74 = C
- 60-69 = D
- < 60 = F

Academic Integrity

Students are expected to follow the University Code on Academic Integrity. Plagiarism will not be tolerated. All cases of suspected plagiarism/cheating will be reported to the Dean of Students for investigation. For details, see <http://www.njit.edu/academics/integrity.php>

Technology Rules and Participation Expectations

Students may use technology (i.e., laptops, tables, phones) in this course for class-related activities only. Texting, using social media, playing games, etc. interrupts the flow of discussion, distracts other students, and will inevitably embarrass you when I have to call you out. During guest lectures, students are expected to be actively engaged, and various methods will be employed to assess engagement.

AI Usage

You are welcome to use AI tools such as ChatGPT to generate ideas or get answers to questions. However, any assignment submitted that is suspected of being completely generated by AI will not be graded. The student will have the option to receive a failing grade on that assignment or resubmit it with a resulting loss in grade.

Students with Disabilities or Special Needs

Students who have disabilities or special needs should contact NJIT's Office of Accessibility Resources and Services to help procure accommodations in completing coursework.

Class Schedule (Subject to Change)

Week 1: Welcome and Course Overview and Introductions

- 9/4/2024 – Overview of the course, introductions, and “What is research?”

Week 2: Research Foundations

- 9/9/2024 – What Drives Research?
- 9/11/2024 – Research Topics and questions
- 9/16/2024 – Discussion forum: Post your preliminary research topic and questions

Week 3: Vocabulary of Research

- 9/16/2024 – Vocabulary of Research
- 9/18/2024 – Matching Data with Research Questions
- 9/23/2024 – Research topic and questions due (3 slides)

Week 4: The Ethics of Research

Required reading:

- [Resnik, “What is Ethics in Research & Why is it Important?”](#)
- 9/23/2024 – Ethics
- 9/25/2024 – Bad Research

Week 5: Hypotheses, Errors, and Operationalizing Variables

- 9/30/2024 – Research Questions, Hypotheses, and Errors
- 10/2/2024 – Operationalizing Variables
- 10/7/2024 – Discussion forum: Research Questions

Week 6: Survey Research

- 10/7/2024 – Survey research
- 10/9/2024 – Sampling

Week 7: Midterm

- 10/14/2024 – Midterm Review
- 10/16/2024 – Midterm

Week 8: Literature Review

- 10/21/2023 – Citation Chaining assignment explained
- 10/27/2023 – Conducting a Literature Review

Week 9: Designing a Research Project (continued)

- 10/28/2024 – Writing Interview Questions
- 10/29/2024 – Discussion forum: Draft Interview Questions
- 10/30/2024 – Conducting an Interview
- 11/4/2024 – Citation Chaining Assignment due

Week 9: Interviewing

- 11/4/2024 – Interviewing Part 1 (in-class assignment – unexcused absences will result in a 0 for this assignment)
- 11/6/2024 – Interviewing Part 2 (in-class assignment – unexcused absences will result in a 0 for this assignment)

Week 10: Quantitative Analysis

- 11/11/2024 – Statistical Tests (Normal distributions, Central Limit Theorem)
- 11/13/2023 – Compiling and Analyzing Survey Data

Week 11: Using SPSS

- 11/18/2024 – Analysis of survey data and SPSS
- 11/20/2023 – SPSS

Week 12: Research Proposal Data Collection

- 11/25/2024 – Review of Research Questions and Hypotheses
- 11/27/2024 – **NO CLASS! Happy Thanksgiving!**

Week 13: Funding Research & Research Opportunities

- 12/2/2024 – Funding Research
- 12/4/2023 – Opportunities to get involved in research at NJIT

Week 14:

- 12/9/2024 – Last class