Course Description

Introduces research methods in psychology. The primary emphasis is on behavioral research, but the approach can be applied in other fields as the broad basis of scientific thinking.

Course Textbook


Course Learning Outcomes

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

1. Discuss the scientific method and its components.
2. Differentiate between descriptive and experimental research methods and their components.
3. Identify and evaluate the ethical principles governing research in psychology, including the role of the IRB, use of informed consent, debriefing, and the use of passive and active deception in research.
4. Identify the main characteristics of qualitative and quantitative research methods.
5. Compare and contrast types of research including naturalistic observation, types of observation in the laboratory, experimental approaches, and use of surveys. This may include analysis of the strengths and limitations of each of these types of research.
6. Differentiate between types of assessment measures including self-report, standardized, open-ended, fixed-choice, and personality tests.
7. Discuss the different types of validity and reliability in research.
8. Define and differentiate between various types of research designs including randomized and non-randomized experiments, within subject, factorial, and between subject designs, time series design, interrupted time series design, single case experimental research design, longitudinal research, and cross-sectional research.
9. Analyze types of samples and sampling, conditions that pose threats to internal validity, and the third variable issues in research.
10. Understand and apply statistical concepts and interpretation of data related to research including margin of error, error of estimate, interval estimates, use of graphs and tables to display frequencies, measures of central tendency, confidence interval, normal distribution, correlations, scatter plot, confidence interval, null hypothesis testing, Type I and Type II errors, one-tailed and two-tailed p values, effect size, and statistical power.

Prerequisite(s)

MAT 1302 - Algebra I or equivalent

PSY 1010 - General Psychology or equivalent

Credits

Upon completion of this course, the students will earn three (3) hours of college credit.
Course Structure

1. **Unit Learning Outcomes**: Each unit contains Unit Learning Outcomes that specify the measurable skills and knowledge students should gain upon completion of the unit.
2. **Unit Lesson**: Each unit contains a Unit Lesson, which discusses lesson material.
3. **Reading Assignments**: Each unit contains Reading Assignments from one or more chapters from the textbook.
4. **Supplemental Readings**: Supplemental Readings are provided in the Units IV and VI study guides to aid students in their course of study.
5. **Suggested Further Readings**: Suggested Further Readings are listed in Units I-III and VII-VIII study guides. The readings themselves are not provided in the course, but students are encouraged to read the resources listed if the opportunity arises as they have valuable information that expands upon the lesson material.
6. **Key Terms**: Key Terms are intended to guide students in their course of study. Students should pay particular attention to Key Terms as they represent important concepts within the unit material and reading.
7. **Discussion Boards**: Discussion Boards are part of all CSU term courses. More information and specifications can be found in the Student Resources link listed in the Course Menu bar.
8. **Learning Activities (Non-Graded)**: These non-graded Learning Activities are provided in Units I-VIII to aid students in their course of study.
9. **Unit Assessments**: This course contains four Unit Assessments, one to be completed at the end of Unit I, IV, VI, and VII. Assessments are composed of multiple-choice questions, matching questions, and written response questions.
10. **Unit Assignments**: Students are required to submit for grading Unit Assignments in Units II, III, V, VII, and VIII. Specific information and instructions regarding these assignments are provided below. Grading rubrics are included with the Unit II, III, V, VII, and VIII Assignments. Specific information about accessing these rubrics is provided below.
11. **Ask the Professor**: This communication forum provides you with an opportunity to ask your professor general or course content related questions.
12. **Student Break Room**: This communication forum allows for casual conversation with your classmates.

CSU Online Library

The CSU Online Library is available to support your courses and programs. The online library includes databases, journals, e-books, and research guides. These resources are always accessible and can be reached through the library webpage. To access the library, log into the myCSU Student Portal, and click on “CSU Online Library.” You can also access the CSU Online Library from the “My Library” button on the course menu for each course in Blackboard.

The CSU Online Library offers several reference services. E-mail (library@columbiasouthern.edu) and telephone (1.877.268.8046) assistance is available Monday – Thursday from 8 am to 5 pm and Friday from 8 am to 3 pm. The library’s chat reference service, Ask a Librarian, is available 24/7; look for the chat box on the online library page.

Librarians can help you develop your research plan or assist you in finding relevant, appropriate, and timely information. Reference requests can include customized keyword search strategies, links to articles, database help, and other services.

Unit Assignments

Unit II PowerPoint Presentation

Choose one of the four experiments discussed in Nelson’s (2012) article located in the Required Reading section of your Unit II Study Guide. Develop a PowerPoint Presentation that addresses the following points related to the experiment chosen:

1. Identify ethical principles violated.
2. Determine if informed consent was utilized appropriately. What could have been done differently?
3. Identify whether active or passive deception was used in the experiment, and discuss if it was harmful to subjects.
4. How could debriefing have been used in the experiment?
5. Would an institutional review board have approved this experiment? Why, or why not?
6. Define plagiarism and address how it could damage the integrity of the experiment. Address how plagiarism can be avoided in research.
Your PowerPoint Presentation should have a minimum of 12 slides and use outside sources to support your ideas. At minimum, the textbook and the Nelson (2012) article should be used. All sources used should be cited according to proper APA standards. Be sure to include cover and reference slides, and use the slide notes function to explain slide contents as necessary.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

**Unit III Article Review**

Use the CSU Online Library to find a research article on eating disorders. The article must come from a scholarly, peer-reviewed journal. Choose an article that reviews either a qualitative or quantitative research study. (You may not use any of the articles identified in the Suggested Further Reading section of your study guide.)

- Identify the type of study chosen (qualitative or quantitative).
- Identify the main characteristics of this type of research study evident in the article chosen.
- Identify limitations in the research study chosen and how they could be addressed by the researchers.
- Was the study done in a laboratory setting or a naturalistic setting? Discuss the differences between both types of research settings.
- Define reactive and nonreactive observation. Did the study utilize either one? If so, how?
- Define systematic observation, and address how it was used in the study you chose.

The assignment should be completed as a Word document, and contain a title page, at least two pages of text, and a reference page. Format the assignment, all citations, and references in APA style.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

**Unit V Case Study**

Review each of the cases below, then in a minimum of 200 words per case, identify the following for each case:

1. Did the case utilize a randomized or non-randomized experiment? Explain.
2. What design was used in the study? Please choose from the following list:
   - within subject designs
   - factorial designs
   - between subject designs
   - time series design
   - interrupted time series design
   - single case experimental research design?
3. What threats to internal validity, if any, are present? Explain.
4. In the example, was there a third variable problem? If so, define the third variable problem in the specific case.
5. Did the case use longitudinal or cross-sectional research?

**Case 1:** Dr. Watts is studying the effects of cognitive-behavioral therapy on depression in battered women. He recruits 100 women for his study from the community by placing an ad in the local newspaper. The women are randomly assigned to one of two groups; one group receives treatment with cognitive-behavioral therapy, and the second group does not receive therapy. Twenty women withdraw from the study before it has concluded.

**Case 2:** Mavis is interested with how children develop play strategies at different points throughout early childhood development. She designs a research study that looks at 30 children over a period of five years. The children were recruited from a local daycare where Mavis works. Children were assigned to one of three groups based on age: Group 1 (age 6 months-12 months), Group 2 (age 12 months 1 day-24 months), and Group 3 (age 24 months-36 months). The children were observed during recess every six months for a five year period.

**Case 3:** Dr. Little designs a research study that looks at the effects of a new antipsychotic medication on individuals diagnosed with Schizophrenia. He recruits 500 participants for his study from seven local mental health outpatient programs. He assigns participants to one of two groups: Group A (treated with new medication) or Group B (treated with an existing medication). Participants are assigned to one of the groups by randomly selecting a number from a box. Odd numbers were placed in Group A, and even numbers were placed in Group B.
**Case 4:** Mary wants to understand how women experience childbirth. She decides to speak with one woman at a local hospital maternity unit who has agreed to an interview. Mary uses a semi-structured interview to gather information from the woman about her delivery experience.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

**Unit VII Assignment**

Creating and Utilizing Graphs to Display Data

Follow the below instructions:

- Go to [https://www.samhsa.gov/data/sites/default/files/NSDUHresultsPDFWHML2013/Web/NSDUHresults2013.pdf](https://www.samhsa.gov/data/sites/default/files/NSDUHresultsPDFWHML2013/Web/NSDUHresults2013.pdf) to review how data is represented in the *2013 National Survey on Drug Use and Health: Summary of National Findings*.
- Create your own graph based on the information found within the tables on pp. 107-112 of the National Survey (Tables 8.1-8.6). Choose data from the tables that you think should be clarified or would be better suited in a graph. You do not have to use all the data that is presented in the tables.
- The purpose of this activity is to practice representing your data graphically, so make sure your graph is readable and in a format that is easily understandable.
- Explain what the data represents in your graph (hint: the verbiage underneath the tables in the national survey is a great example).
- In approximately one page, discuss how central tendency, confidence interval, and normal distribution might be utilized by a researcher utilizing this data.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

**Unit VIII PowerPoint Presentation**

Imagine you are a research associate at a local non-profit organization. Your organization has hired you to conduct a research study on the effect of drug use in adolescent peer relationships. However, the organization knows little about research and has asked that you develop a presentation for the Board of Directors.

The presentation should include a brief overview of the proposed study as well as the following points:

1. What is a null hypothesis? Develop a null hypothesis for your study.
2. What potential effects do Type I and Type II errors have on your research? How will you avoid them?
3. Define one-tailed and two-tailed p-values, and discuss how they are applicable or not to your study.
4. Identify how effect size and statistical power are relevant to your research, and why.

The presentation should be completed using PowerPoint. Include a minimum of 8-10 slides, excluding the title and reference slides. Cite and reference all sources in APA style.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

**APA Guidelines**

The application of the APA writing style shall be practical, functional, and appropriate to each academic level, with the primary purpose being the documentation (citation) of sources. CSU requires that students use APA style for certain papers and projects. Students should always carefully read and follow assignment directions and review the associated grading rubric when available. Students can find CSU’s Citation Guide by clicking [here](https://www.samhsa.gov/data/sites/default/files/NSDUHresultsPDFWHML2013/Web/NSDUHresults2013.pdf). This document includes examples and sample papers and provides information on how to contact the CSU Success Center.

**Grading Rubrics**

This course utilizes analytic grading rubrics as tools for your professor in assigning grades for all learning activities. Each rubric serves as a guide that communicates the expectations of the learning activity and describes the criteria for each level of achievement. In addition, a rubric is a reference tool that lists evaluation criteria and can help you organize your
efforts to meet the requirements of that learning activity. It is imperative for you to familiarize yourself with these rubrics because these are the primary tools your professor uses for assessing learning activities.

Rubric categories include: (1) Discussion Board, (2) Assessment (Written Response), and (3) Assignment. However, it is possible that not all of the listed rubric types will be used in a single course (e.g., some courses may not have Assessments).

The Discussion Board rubric can be found within Unit I’s Discussion Board submission instructions.

The Assessment (Written Response) rubric can be found embedded in a link within the directions for each Unit Assessment. However, these rubrics will only be used when written-response questions appear within the Assessment.

Each Assignment type (e.g., article critique, case study, research paper) will have its own rubric. The Assignment rubrics are built into Blackboard, allowing students to review them prior to beginning the Assignment and again once the Assignment has been scored. This rubric can be accessed via the Assignment link located within the unit where it is to be submitted. Students may also access the rubric through the course menu by selecting “Tools” and then “My Grades.”

Again, it is vitally important for you to become familiar with these rubrics because their application to your Discussion Boards, Assessments, and Assignments is the method by which your instructor assigns all grades.

**Communication Forums**

These are non-graded discussion forums that allow you to communicate with your professor and other students. Participation in these discussion forums is encouraged, but not required. You can access these forums with the buttons in the Course Menu. Instructions for subscribing/unsubscribing to these forums are provided below.

[Click here for instructions on how to subscribe/unsubscribe and post to the Communication Forums.](#)

**Ask the Professor**

This communication forum provides you with an opportunity to ask your professor general or course content questions. Questions may focus on Blackboard locations of online course components, textbook or course content elaboration, additional guidance on assessment requirements, or general advice from other students.

Questions that are specific in nature, such as inquiries regarding assessment/assignment grades or personal accommodation requests, are NOT to be posted on this forum. If you have questions, comments, or concerns of a non-public nature, please feel free to email your professor. Responses to your post will be addressed or emailed by the professor within 48 hours.

Before posting, please ensure that you have read all relevant course documentation, including the syllabus, assessment/assignment instructions, faculty feedback, and other important information.

**Student Break Room**

This communication forum allows for casual conversation with your classmates. Communication on this forum should always maintain a standard of appropriateness and respect for your fellow classmates. This forum should NOT be used to share assessment answers.

**Grading**

<table>
<thead>
<tr>
<th>Rubric Category</th>
<th>Weight (%)</th>
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<tbody>
<tr>
<td>Discussion Board (8 @ 2%)</td>
<td>= 16%</td>
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<tr>
<td>Assessments (4 @ 10%)</td>
<td>= 40%</td>
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<tr>
<td>PowerPoint Presentations (2 @ 9%)</td>
<td>= 18%</td>
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<tr>
<td>Article Review</td>
<td>= 9%</td>
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<tr>
<td>Case Study</td>
<td>= 9%</td>
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<tr>
<td>Assignment</td>
<td>= 8%</td>
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<tr>
<td><strong>Total</strong></td>
<td>= 100%</td>
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Course Schedule/Checklist (PLEASE PRINT)

The following pages contain a printable Course Schedule to assist you through this course. By following this schedule, you will be assured that you will complete the course within the time allotted.
By following this schedule, you will be assured that you will complete the course within the time allotted. Please keep this schedule for reference as you progress through your course.

<table>
<thead>
<tr>
<th>Unit I</th>
<th>Introduction to Research Methods</th>
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| Review: | □ Unit Study Guide  
  □ Learning Activities (Non-Graded): See Study Guide |
| Read: | □ Chapter 1: Behavioral Research and the Scientific Method  
  □ Chapter 2: From Hunches to Testable Hypotheses  
  □ Additional Required Reading: See Study Guide  
  □ Suggested Further Reading: See Study Guide |
| Discuss: | □ Discussion Board Response: Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time)  
  □ Discussion Board Comment: Comment on another student’s Discussion Board response by Tuesday, 11:59 p.m. (Central Time) |
| Submit: | □ Assessment by Tuesday, 11:59 p.m. (Central Time) |
| Notes/Goals: | |

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<tr>
<th>Unit II</th>
<th>Ethics in Research</th>
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| Review: | □ Unit Study Guide  
  □ Learning Activities (Non-Graded): See Study Guide |
| Read: | □ Chapter 3: Ethical Considerations and Guidelines  
  □ Additional Required Reading: See Study Guide  
  □ Suggested Further Reading: See Study Guide |
| Discuss: | □ Discussion Board Response: Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time)  
  □ Discussion Board Comment: Comment on another student’s Discussion Board response by Tuesday, 11:59 p.m. (Central Time) |
| Submit: | □ PowerPoint Presentation by Tuesday, 11:59 p.m. (Central Time) |
| Notes/Goals: | |

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<th>Unit III</th>
<th>Methods of Systematic Observation</th>
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| Review: | □ Unit Study Guide  
  □ Learning Activities (Non-Graded): See Study Guide |
| Read: | □ Chapter 4: Methods of Systematic Observation  
  □ Suggested Further Reading: See Study Guide |
| Discuss: | □ Discussion Board Response: Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time)  
  □ Discussion Board Comment: Comment on another student’s Discussion Board response by Tuesday, 11:59 p.m. (Central Time) |
<p>| Submit: | □ Article Review by Tuesday, 11:59 p.m. (Central Time) |
| Notes/Goals: | |</p>
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<tr>
<th>Unit IV</th>
<th>Methods of Looking within Ourselves and Reliability and Validity in Measurement and Research</th>
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</table>
| Review: | - Unit Study Guide  
|         | - Learning Activities (Non-Graded): See Study Guide |
| Read:   | - Chapter 5: Methods for Looking Within Ourselves  
|         | - Chapter 6: Reliability and Validity in Measurement and Research  
|         | - Supplemental Reading: See Study Guide |
| Discuss:| - Discussion Board Response: Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time)  
|         | - Discussion Board Comment: Comment on another student’s Discussion Board response by Tuesday, 11:59 p.m. (Central Time) |
| Submit: | - Assessment by Tuesday, 11:59 p.m. (Central Time) |

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<tr>
<th>Unit V</th>
<th>Randomized Experiments and Causal Inferences and Non-Randomized Experiments and Causal Reasoning</th>
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| Review: | - Unit Study Guide  
|         | - Learning Activities (Non-Graded): See Study Guide |
| Read:   | - Chapter 7: Randomized Experiments and Causal Inference  
|         | - Chapter 8: Nonrandomized Experiments and Causal Reasoning |
| Discuss:| - Discussion Board Response: Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time)  
|         | - Discussion Board Comment: Comment on another student’s Discussion Board response by Tuesday, 11:59 p.m. (Central Time) |
| Submit: | - Case Study by Tuesday, 11:59 p.m. (Central Time) |

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<th>Unit VI</th>
<th>Survey Research and Subject Recruitment</th>
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| Review: | - Unit Study Guide  
|         | - Learning Activities (Non-Graded): See Study Guide |
| Read:   | - Chapter 9: Survey Research and Subject Recruitment  
|         | - Supplemental Reading: See Study Guide |
| Discuss:| - Discussion Board Response: Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time)  
|         | - Discussion Board Comment: Comment on another student’s Discussion Board response by Tuesday, 11:59 p.m. (Central Time) |
| Submit: | - Assessment by Tuesday, 11:59 p.m. (Central Time) |

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<th>Notes/Goals:</th>
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### Unit VII: Summarizing the Data and Correlating Variables

**Review:**
- Unit Study Guide
- Learning Activities (Non-Graded): See Study Guide

**Read:**
- Chapter 10: Summarizing the Data
- Chapter 11: Correlating Variables
- Suggested Further Reading: See Study Guide

**Discuss:**
- Discussion Board Response: Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time)
- Discussion Board Comment: Comment on another student’s Discussion Board response by Tuesday, 11:59 p.m. (Central Time)

**Submit:**
- Assessment by Tuesday, 11:59 p.m. (Central Time)
- Assignment by Tuesday, 11:59 p.m. (Central Time)

**Notes/Goals:**

### Unit VIII: Understanding $p$ Values and Effect Size Indicators

**Review:**
- Unit Study Guide
- Learning Activities (Non-Graded): See Study Guide

**Read:**
- Chapter 12: Understanding $p$ Values and Effect Size Indicators
- Suggested Further Reading: See Study Guide

**Discuss:**
- Discussion Board Response: Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time)
- Discussion Board Comment: Comment on another student’s Discussion Board response by Tuesday, 11:59 p.m. (Central Time)

**Submit:**
- PowerPoint Presentation by Tuesday, 11:59 p.m. (Central Time)

**Notes/Goals:**