

# American Public University System

*The Ultimate Advantage is an Educated Mind*

School of Arts and Humanities  
PSYC501  
Course Title: Research and Statistical Methods  
3 Graduate Credit Hours  
8 Weeks  
Prerequisites: None

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**Instructor:** Dr. Stella Michael-Makri  
**Email:** stella.michaelmakri@mycampus.apus.edu  
**Office Hours:** Arranged via email. *Most concerns can be dealt with effectively via e-mail. Students wishing a phone consult should arrange a time with the instructor in advance in order to ensure mutually uninterrupted time and attention.*

## Course Description (Catalog)

[This course provides an overview of quantitative and qualitative methodology and design and examines ethical and legal considerations for research practices relevant to the field of psychology. Skills needed to evaluate published research reports are also emphasized.](#)

## Course Scope

This course emphasizes the skills and knowledge needed to critically evaluate behavioral science research from a methodological standpoint, and to conduct methodologically sound research. Topics covered include an overview of the scientific method and research ethics, APA writing style for proposal and reporting of research, measurement of variables, descriptive, correlational, experimental methods and quasi-experimental methods, and statistical techniques used to analyze data collected using each approach.

## Course Objectives

**Graduate learners successfully completing this course will have demonstrated an ability to apply in-depth knowledge of:**

1. Methodologies used to gather and analyze data in the study of psychology
2. Strengths and weaknesses of a variety of research methods
3. Ethical and legal constraints in human research
4. Statistical applications, circumstances in which each should be used, the types of information they provide, and their limitations
5. Alternative techniques used to gather and analyze data
6. Study and research proposal development
7. APA style and writing skills appropriate for graduate level work

## Course Delivery Method

This 8-week graduate course delivered via distance learning will enable students to complete academic work completely online. Course materials and access to an online learning management system will be made available to each student. Online assignments include Discussion Forum questions accomplished in groups through a threaded discussions and assignments completed and graded individually.

## Text and Course Materials

Jackson, S. L. (2009). *Research methods and statistics: A critical thinking approach* (4<sup>th</sup> ed.). Belmont, CA: Wadsworth.

## Evaluation Procedures

### GENERAL ASSIGNMENT INSTRUCTIONS

It is expected that graduate students will exhibit advanced level critical thinking, ability to synthesize multiple sources of information, high caliber writing skills and academic integrity in all course activities. With the exception of discussion forum posts and any other assignments so designated by the course instructor, assignment submissions completed in a narrative essay or composition format may not be written in first or second person (“I” or “you”). All writing must follow the citation and reference style established by *the American Psychological Association* (APA) in size 12 Times New Roman or Arial font, double-spaced with 1” margins on all sides of the page and include a cover page with the following centered vertically and horizontally: Student Name, Date of Submission, Assignment Title, Course Name and Professor Name. With the occasional exception of necessary brief quotes of specific statistical research findings or terminology used to describe research models or psychological constructs, in which case the author and publication must be properly source credited, all paper content MUST be paraphrased (summarized in the student’s own words) with proper source citations (See APA guidelines document in the classroom Resources folder).

**IMPORTANT:** Students engaging in graduate studies are held to rigorous standards. Absolutely NO copying of any kind is allowed in this course. When reporting on what one reads in any published source, including the course text, paraphrasing (summarizing what was read and learned in one's own words) and providing the source(s) is required. Failure to do so is considered plagiarism. The website <http://owlenglish.purdue.edu/owl/resource/560/01/> is an excellent, easy to understand resource for APA style formatting and source citation. APA formatting guides are included in the classroom Resources folder. Any instance of plagiarism, regardless of intent, will result in an assignment score of zero with no option for revision and resubmission for the first incident and course failure for any additional incidents.

Scholarly, peer-reviewed journals must be used for assignment completion. Unless instructed to do so for specific assignments, students may not use commercial websites as the basis for completion of course work. Encyclopedia websites, such as Wikipedia or Encarta, dictionaries, About.com and other article summary sites, blogs or opinion slanted news media outlets may not be used for any writing assignment.

### **TIMELY SUBMISSION OF ASSIGNMENTS**

All students are expected to submit classroom assignments by posted due dates and to complete the course according to the published class schedule. Should a student need additional time to complete an assignment he or she must contact the course professor before the due date so the situation can be reviewed and a resolution determined. Not all delayed assignment requests will be approved; leisure trips to areas without Internet access, wanting more personal time with family, forgetting assignments and leaving needed course materials at home or at the office cannot be considered valid reasons for missing course work. Unavoidable and non-negotiable military or civilian work assignments and health emergencies are generally considered valid reasons. Requests must be submitted for each potential delay need. Delayed work submission permission can only be granted one week at a time. Blanket permission for late work cannot be given and work may not be completed early to accommodate anticipated absences later in the term. The University has an extension system and a set of policies articulated in the APUS Student Handbook for managing unavoidable coursework extension needs. Routine submission of late assignments will result in significant points deducted from the final course grade.

### **COURSE ASSIGNMENTS**

#### **DISCUSSION FORUMS:** Due Weeks 1 through 8

Weekly dialogs with classmates will be based on engagement with assigned course readings and/or related multi-media and will take place in the online classroom on designated discussion Forums. A set of instructions for each dialog will be posted on its respective forum by the professor. While designed to promote lively discourse within a community of fellow learners, the dialogs are academic in nature and require a scholarly orientation, with students supporting their perspectives with source citations both in the post body and references at the end formatted in APA style (Note: Some APA requirements, such as indentation and italics, may not be supported by the Educator courseware; penalties will not be assigned in these specific cases). Reply posts are required in order to ensure discussion interaction.

#### **Grading Rubric for Discussions**

**Your initial discussions are due on Thursdays at 11:59pm (EST) and your replies on Sundays at**

<b>Requirements</b>	<b>Points</b>
<b>Format</b> (correctly uses APA format – i.e. no abbreviations; in-text citations)	6
<b>Posted correctly</b> (work is posted according to instructions on the Forum (please see the three required questions that need to be answered; minimum of 500 words)	20
<b>Replies</b> (minimum of two replies to initial posts – minimum of 300 words)	10
<b>Views are supported with required amount of research articles</b> (minimum of two scholarly articles per initial post)	4
<b>Total</b>	<b>40</b>

**11:59pm (EST).**

**MIDTERM AND FINAL EXAMS:** Due Weeks 4 and 8

Students will complete non-cumulative midterm and final exams. These exams, as graduate level learning outcomes assessments, are subject to rigorous grading standards. The two exams will be accessible in the classroom “Tests & Quizzes” folder during their respective weeks. The exams will be short essays and will include calculations.

**WEEKLY PROBLEM SOLVING ASSIGNMENTS:** Due Weeks 1, 3, 5, and 6

Students will complete **four** problem-solving activities focused on text chapters and other course resources.

**ANNOTATED BIBLIOGRAPHY:** Due Week 5

Each student will complete a literature search of their Research Paper topic related to psychology. An annotated bibliography is an APA formatted list of all the published sources used for an assignment with the word “References” centered at the top of the page. The term “Annotated” in the assignment title indicates that each article used must include directly below it a brief paragraph 4 to 5 sentences in length describing what the particular article covers. These paragraphs must be written in the student’s own words. Copying is forbidden and quoting is not needed or accepted for this assignment. The assignment must be completed per the course general writing standards.

**RESEARCH PAPER:** Due Week 8

This major course paper must be 10 to 12 pages (3000-3600 words), **not** including the title page, abstract, or reference pages. It will focus on a topic directly related to the course, of the student’s choice and pre-approved by the course instructor. For this paper, students are required to review 6 to 8 scholarly, peer-reviewed articles from the APUS Online Library, summarizing, critiquing and discussing how the articles are related; and describing what additional research is needed in the future to expand the body of knowledge related to the topic. The relating of articles must be done via transition statements between related summaries such that the paper interweaves all the articles into a coherent and well-articulated review of scholarly publications related to the paper topic focus. For example, after one article summary, the statement, “Related research conducted by Keisling (2009) showed that...” would be an effective means of connecting it to another summary. The paper will end with a minimum of two paragraphs summarizing points made and articulating suggestions for future research directions arising from the article reviews.

Selected articles must have been submitted for approval with brief descriptions of content and URL links from the APUS Online Library by the end of Week 5 of the course as the Annotated Bibliography assignment. Articles selected for written assignments other than the Annotated Bibliography (e.g. for Discussion Forums) cannot be used in the completion of the course Research Paper.

As a culminating course assignment, this submission will be evaluated based on:

The degree to which the article summaries are related and truly integrated within the paper; lack of supporting evidence of actual connections between the articles will result in a significant point deduction.

Evidence of academically mature insight and use critical thinking skills in analyzing and relating the articles.

Clear and thorough articulation of the paper's key points

Compliance with APA paper formatting standards

Minimal to no grammar, spelling or basic writing errors

**Grading Rubric for Research Paper**

<b>Requirements:</b>	<b>Points</b>
Academically mature insight and critical thinking skills (summarize, critique and discuss how the articles are related; describe what additional research is needed in the future)	180
Clear and thorough articulation of key points	70
Articles are related and integrated within the paper	20
Review of 6 to 8 scholarly, peer-reviewed articles	10
APA formatting standards	10
Mechanics of style	10
<b><u>Total</u></b>	<b><u>300</u></b>

<b><u>Course Requirements</u></b>	<b><u>Points</u></b>
Discussion Forum Assignments (8 x 40)	<b>320</b>
Problem Solving Assignments	<b>45</b>

Midterm Exam	<b>150</b>
Final Exam	<b>150</b>
Annotated Bibliography	<b>35</b>
Research Paper	<b>300</b>
<b>TOTAL</b>	<b>1000</b>

#### Grading Scale

See the link <http://www.apus.edu/student-handbook/grading/index.htm> for the APUS grading scale.

## COURSE OUTLINE

### Week 1

#### Readings:

Chapter 1: Thinking Like a Scientist

Chapter 2: Getting Started: Ideas, Resources, and Ethics

#### Learning Objectives:

Appraise the major areas of psychological research and related research methods

Apply knowledge of the scientific approach to understanding the natural world

Characterize ethical and practical considerations related to conducting scientific research

#### Assignments:

*Discussion Forum 1 – Instructions on the classroom forum*

*Problem Solving Assignment 1: **Chapter 1: Exercises – 6, 8; Chapter 2: Exercise 1***

### Week 2

#### Readings:

Chapter 3: Defining, Measuring, and Manipulating Variables

Chapter 4: Descriptive Methods

Chapter 5: Data Organization and Descriptive Methods

#### Learning Objectives:

Articulate issues associated with defining and measuring variables, including reliability and validity

Evaluate descriptive research methods and their related advantages and disadvantages.

Compare research sampling techniques

Describe data set through the use of descriptive statistics

#### Assignments:

*Discussion Forum 2 -- Instructions on the Forum*

### Week 3

#### Readings:

Chapter 6: Correlational Methods and Statistics

Chapter 7: Probability and Hypothesis Testing

#### Learning Objectives:

Learn how to conduct correlational research, the magnitude and direction of correlations, and graphical representations of correlations

Discuss basic probability concepts and learn how to compute probabilities

Discuss null and alternative hypotheses, Type I and Type II errors, and one- and two-tailed tests of hypothesis

#### Assignments:

### **ONLINE LIBRARY RESEARCH CENTER & LEARNING RESOURCES**

The Online Library Resource Center is available to enrolled students and faculty from inside the electronic campus. This is your starting point for access to online books, subscription periodicals, and Web resources that are designed to support your classes and generally not available through search engines on the open Web. In addition, the Center provides access to special learning resources, which the University has contracted to assist with your studies. Questions can be directed to [librarian@apus.edu](mailto:librarian@apus.edu).

- **Charles Town Library and Inter Library Loan:** The University maintains a special library with a limited number of supporting volumes, collection of our professors' publication, and services to search and borrow research books and articles from other libraries.
- **Electronic Books:** You can use the online library to uncover and download over 50,000 titles, which have been scanned and made available in electronic format.
- **Electronic Journals:** The University provides access to over 12,000 journals, which are available in electronic form and only through limited subscription services.
- **Turnitin:** [Turnitin.com](http://Turnitin.com) is a tool to improve student research skills that also detect plagiarism. Turnitin.com provides resources on developing topics and assignments that encourage and guide students in producing papers that are intellectually honest, original in thought, and clear in expression. This tool helps ensure a culture of adherence to the University's standards for intellectual honesty. Turnitin.com also reviews students' papers for matches with Internet materials and with thousands of student papers in its database, and returns an Originality Report to instructors and/or students.
- **Smarthinking:** Students have access to 10 free hours of tutoring service per year through [Smarthinking](http://Smarthinking). Tutoring is available in the following subjects: math (basic math through advanced calculus), science (biology, chemistry, and physics), accounting, statistics, economics, Spanish, writing, grammar, and more. Additional information is located in the Online Research Center. From the ORC home page, click on either the "Writing Center" or "Tutoring Center" and then click "Smarthinking." All login information is available.

The University offers tools in its [Online Library Research Center](#) to help you analyze your papers for possible plagiarism violations and for instructors to uncover such activities.

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