



OTRP *online*

office of teaching resources in PSYCHOLOGY

PSY 3280- Developmental Research Methods Course Syllabus Metropolitan State College of Denver Department of Psychology

Instructors of Record.

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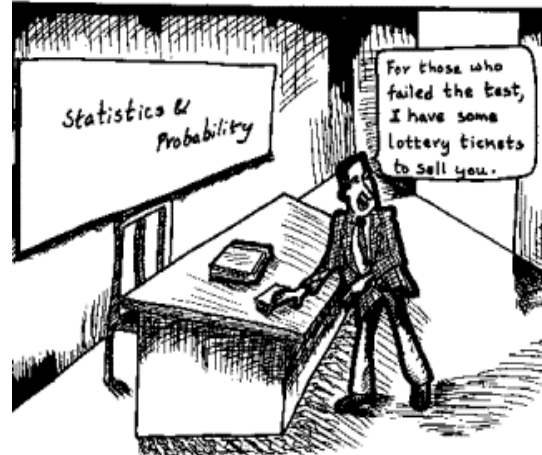
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Catalog Course Description.

As the comic suggests, many students fear statistics and research methods, however, we hope that your experience in this course will change your belief. This course focuses on the design and research methods used in the study of human development. This includes a survey of methodology that has been used to study development from a multi-disciplinary approach. The course will provide an overview of the statistics used in the field as well as research design. The appropriateness of different methods for different developmental levels will also be discussed.
Prerequisites: Introductory Psychology (PSY 1001) and Developmental Educational Psychology (PSY 1800). This is a core course for the Human Development Major.

Course Goals & Student Learning Objectives.

1. Become a critical consumer of developmental research by understanding variety of methodological issues.
2. Be able to read, understand, and integrate research in human development.
3. To understand the importance of scientifically studying issues pertaining to human development.
4. Be able to apply varying research methods to study people of all developmental periods.
5. To understand the ethical considerations involved when conducting research, especially with those under 18.
6. To learn about the research process by conducting a literature review, formulating a developmental research question and hypothesis, designing and carrying out methodology to test hypothesis, analyzing data, and writing APA formatted research paper.



Required Texts.

- Brown, K. W., Cozby, P. C., Kee, D. W., & Worden, P. E. (1999). *Research methods in human development* (2nd ed.). Mountain View, CA: McGraw Hill.
- Milinki, A. K. (Ed.). (2006). *A cross section of psychological research: Journal articles for discussion and evaluation* (2nd ed.). Glendale, CA: Pyczak Publishing.

Recommended Texts.

- Publication manual of the American psychological association* (6th ed.). (2010). Washington, DC: American Psychological Association.

Class Attendance.

Attendance is not required However, attendance will benefit you in several ways. First, material is presented in class that is not covered in your text, but it will appear on your exams. Second, your understanding of the course material is heightened from double exposure to the material (i.e., in class and in the text). Third, you are responsible for all information presented in class and assignments even on days that you are absent. If absences are necessary, please contact the instructor BEFORE the class.

Plagiarism & Ethical Conduct.

A student once said "I don't know what plagiarizing is, so I'm gonna take the easy way out and just copy something off the internet." Considering this, it is our policy as well as the college's policy that cheating, plagiarism, and ethical violations are strictly prohibited. The term "plagiarism" includes, but is not limited to, the use by paraphrase or direct quotations, of the published or unpublished work of another person without full and clear acknowledgement. All ethical guidelines for conducting research apply to the research project. Academic Dishonesty is a serious offense at the College because it diminishes the quality of the scholarship and learning experience for everyone on campus. An act of academic dishonesty may lead to penalties such as a reduction in grade, probation, suspension, or expulsion. For more information, consult the student handbook at www.mscd.edu/~studlife/StudentRights.html

Student Expectations.

1. **PLEASE ATTEND, BE ACTIVE AND PARTICIPATE IN CLASS.**
2. Complete all assignments.
3. Turn off your cell phones and/or pagers.
4. Be punctual for all classes.
5. Absolutely DO NOT enter classroom late during exams.
6. Discuss issues before or after class, during designated office hours, or during a scheduled appointment as they arise so that we can best address your needs.

Course Structure.

We don't need no, stinking structure you say? Actually we do, and the course will be structured around the following methodologies: (a) lecture, (b) active class discussion, and (c) small group activities. Class lectures and tutorials will be provided in multiple modalities: (a) PowerPoint presentations, (b) overheads, (c) videos, (d) assigned reading, and (e) reflective practices.



Description of Class Requirements.

Research Project (Student Learning Objectives 4, 5, and 6): To become good scientists & proper consumers of research, this project will give you firsthand experience in designing and carrying out a research project in developmental psychology. You and your research group will collaboratively develop a research topic, do a literature review on that topic, develop methodology to investigate that topic, collect the data, analyze the data, and present your findings to the class and in a final paper. This is a large project that is broken into eight separate assignments:

1. **Research Proposal Part I** (See Appendix A)
2. **Research Proposal Part II** (See Appendix A)
3. **Institutional Review Board application** (See Appendix A)
4. **Introduction and Methods Paper** (See Appendix B)
5. **Results and Discussion Paper** (See Appendix B)
6. **Final Research Paper** (See Appendix C)
7. **Group presentation** (See Appendix D)
8. **Peer-group grade** (See Appendix D)

Although the project is a group effort, project writing assignments will be completed individually (except when noted).

Late Policy. If a make-up exam or due date extension is needed (only under special circumstances), you must discuss your situation with us and make arrangements with us at least 1 week prior to the exam or due date. Failure to make prior arrangements with us at least 1 week in advance will result in a 10% deduction per 24 hour period. Exceptions to this late policy will be made only under extenuating circumstances that we determine made it impossible for you to adhere to the prior arrangement policy.

Group Work. Group work on the research project is an essential component of this class for several reasons. Working in groups provides a more realistic experience of how research is conducted as most research projects involve a highly collaborative effort. There also are valuable lessons to be learned working in groups as you mostly likely will have to work with others in your chosen profession so it is important to practice these types of skills. You need your group and they need you. To ensure the group's success and your own, it is important that you work constructively with your group and conduct yourself in a professional manner.

Journal Article Evaluation (Student Learning Objectives 1 and 2): This assignment is designed to assess your skills as a critical reader and to apply the concepts taught in class to published research. Becoming a critical reader will help you in your future careers by enabling you to be accurate in your assumptions and predictions. You will be required to read three separate articles that demonstrate different research designs discussed in class. You will then be asked to answer several questions that pertain to one of the three articles. See Appendix E for further details.

MythBusters Analysis (Student Learning Objectives 1 and 3): This fun and exciting assignment will allow you to observe science in action. By connecting what you have learned in class to real-world problems, you will solidify and reinforce what you have learned. You will watch a short **MythBusters** video clip online and answer several questions in regards to the video. The assignment is designed so that you apply what you have learned in this class to real-world situations. See Appendix F for further details.

Assignments/Activities (Student Learning Objectives 1-3): Relatively short take-home assignments and in-class activities that pertain to the topic from lecture and the textbook will be given periodically. Assignments/activities are designed to help you keep up and work with the material prior to exams, practice what you have learned, and eventually apply your knowledge. Assignments/activities can range from 2 to 15 points. Some assignments/activities will be done individually and some will be done in groups. There is not a set schedule for when these assignments/activities are given out and due, but plan on at least one assignment/activity per week or topic.

Exams (Student Learning Objectives 3, 4 and 5): The purpose of the exams is to assess your ability to properly consume research and understand basic concepts in developmental research. Two exams will be comprised of multiple choice, true/false, fill-in-the-blank, matching, and essay or short answer. The majority of questions on the exams will be from topics that were discussed both in class and found in your text. You will receive a study guide one week before each exam and only be tested on information that is found in the study guides. You must purchase and bring to class your own Scantron forms (No. 882-E) and a #2 pencil. You will have the option of having the multiple choice portion graded and discussing missed items with us immediately when you hand it in.

Grades.

Grades will be based on 13 different assessments: two separate exams, one journal article evaluation, Myth Busters analysis, a variety of assignments/activities, and eight separate evaluations of the research project.

Grade Breakdown	
Points	Grade
1000-900	A
899-800	B
799-700	C
699-600	D
599-500	F

Assignments	Points(%)
EXAMS (35% of total grade)	
Midterm Exam	150(15%)
Cumulative Final Exam	200(20%)
ASSIGNMENTS (15% of total grade)	
Journal Article Evaluation	50(5%)
MythBusters Analysis	50(5%)
Assignments/Activities	50(5%)
RESEARCH PROJECT (50% of total grade)	
Research Proposal Part I	25(2.5%)
Research Proposal Part II	25(2.5%)
Institutional Review Board Application	50(5%)
Introduction and Methods Paper	100(10%)
Results and Discussion Paper	100(10%)
Final Research Paper*	100(10%)
Research Presentation	50(5%)
Peer Grading of Group Work	50(5%)
Grand Total	1000(100%)

*The Final Research Paper must be turned in to pass the course.



Course Calendar

DATE	LECTURE TOPIC	READINGS	ASSIGNMENTS DUE
8/18	Introductions	NA	
8/20	Scientific View	Ch. 1	
8/25	Developing Research Idea	Ch. 3	
8/27	Designing & Evaluating Variables	Ch. 4	
9/1		Labor Day!	
9/3	Designing & Evaluating Variables	Ch. 4	Journal Article Evaluation
9/8	Designing & Evaluating Variables	Ch. 4	
9/10	Ethics	Ch. 2	Research Proposal Part I
9/15	APA Writing	NA	
9/17	Correlational Research	Ch. 5	Research Proposal Part II
9/22	Experimental Method	Ch. 5	
9/24	Designing Research	Chs. 8 & 10 (pp. 166-170)	
9/29	Designing Research	Chs. 8 & 10 (pp. 166-170)	Institutional Review Board Application
10/1	Review	NA	
10/6		Midterm Exam!	
10/8	No Class: Group Work	NA	
10/13	Sampling	Ch. 7	Introduction & Methods Paper
	Survey Research		
10/15	Descriptive Methods	Ch. 6	
10/20	Understanding Research Results	Ch. 14	
10/22	Understanding Research Results	Ch. 14	
10/27	SPSS Lab	NA	MythBusters Analysis
10/29	SPSS Lab	NA	
11/3		NA	
11/5	Understanding Research Results	Ch. 14	
11/10	Understanding Research Results	Ch. 14	
11/12	Developmental Research Designs	Ch. 9	Results & Discussion
11/17	Research Across the Life-Span	Ch. 11	
11/19	Review	NA	
11/24		FALL BREAK	
11/26		FALL BREAK	
12/1	Group Project Presentations	NA	
12/3	Group Project Presentations	NA	Final Paper
TBA		COMPREHENSIVE EXAM!	

Note. This calendar is subject to change at any time. We reserve the right to revise the course schedule if necessary. You will be informed if any changes are made.

Appendix A: Research Proposal Part 1 & 2 and IRB Proposal

<i>Grading Rubric for Research Proposal 1</i>				
<i>Group Members:</i>				
	Section	Total Points Possible*	Score	
	Research Topic & Hypothesis	5		
	Age(s) of Interest & Rationale	5		
	Brief Summary of Research Area	5		
	Rationale for Study	5		
	Peer-Reviewed Articles in APA Format	5		
	Total Score:	25		
Comments:				
*	1	2	3	4
	<i>Very Poor</i>	<i>Poor</i>	<i>Okay</i>	<i>Very Good</i>
				5
				<i>Excellent</i>

<i>Grading Rubric for Research Proposal 2</i>				
<i>Group Members:</i>				
	Section	Total Points Possible	Score	
	Hypothesis	5		
	Design of Study	5		
	Description of Variables	5		
	Assessment/Manipulation of Variables	10		
	Total Score:	25		
Comments:				

<i>Grading Rubric for IRB Proposal</i>				
<i>Group Members:</i>				
	Section	Total Points Possible*	Score	
	Completion of IRB training	10		
	Description of study (including materials)	10		
	Description of risk and protection of participants	5		
	Description of method of recruiting participants	5		
	Description of how you will disseminate results	5		
	Description of how you will ensure informed consent	5		
	Consent form	10		
	Total Score:	50		
Comments:				

Appendix B: Introduction/Methods and Results/Discussion Grading Rubrics

Grading Rubric: Introduction & Methods			
Student:			
	Points		Your Points
Literature Review	25		
Rationale for Study	10		
Research Question and/or Hypothesis	10		
Method: Participants & Design	10		
Method: Measures & Materials	15		
Method: Procedures	10		
<i>APA Format: Title Page</i>	2		
<i>APA Format: Body of Paper</i>	4		
<i>APA Format: References</i>	4		
General Writing	10		
Total	100		
Comments:			

Grading Rubric: Results & Discussion			
Student:			
	Points		Your Points
Results: Descriptive Statistics	15		
Results: Inferential Statistics	20		
Discussion: Explanation of Findings	20		
Discussion: Limitations	15		
Discussion: Implications & Future Research	10		
<i>APA Format: Results</i>	3		
<i>APA Format: Discussion</i>	4		
<i>APA Format: References</i>	3		
General Writing	10		
Total	100		

RESULTS: Checklist

- 1. If applicable, are the names of each statistic properly defined including relevant details?
- 2. If applicable, are there statistical values for significant levels, means, standard deviations, and sample size?
- 3. Does the structure of this section follow the logical structure of hypotheses?
- 4. Are there tables or figures that adequately describe the results?
- 5. Is the structure of tables, figures, and appendices in APA order and format?

DISCUSSION: Checklist

- 1. Is there a restatement of the purpose of the study?
- 2. Is there a discussion of results as they relate to each hypothesis?
- 3. Are the implications of this study clearly stated?
- 4. Are the limitations of this study mentioned?
- 5. Are directions of future research explained?

Comments:

Appendix C: Final Research Paper

Grading Rubric: Final Paper			
Student:			
	Points	Your Points	
Abstract	5		
Introduction	15		
Research Question and/or Hypothesis	5		
Method: Participants	10		
Methods: Measures & Materials	10		
Methods: Procedures	10		
Results	10		
Discussion of Results	10		
Discussion: Limitations	5		
Discussion: Implications & Future Research	5		
<i>APA Format: Title Page</i>	2		
<i>APA Format: Body of Paper</i>	7		
<i>APA Format: References</i>	6		
General Writing	5		
Total	100		
Comments:			

TITLE PAGE

- 1. Is the running head brief, but informative?
- 2. Is the title brief, but informative?
- 3. Does the author's name appear below the title in upper and lower case letters?
- 4. Does additional information appear below the author's name?

ABSTRACT

- 5. Is the general purpose of the research study clearly stated?
- 6. Are the specific goals of the study clearly stated?
- 7. Is the research design explained?
- 8. Are the methods explained?
- 9. Are the results and contribution briefly mentioned?

INTRODUCTION & LITERATURE REVIEW

- 10. Does the introduction provide a strong rationale for why the study is needed?
- 11. Is there a smooth transition from the introduction to the literature review?
- 12. Are important terms operationally defined?
- 13. Is it evident that this study builds on past studies?
- 14. Is the research question or purpose of study clearly stated?
- 15. Is there a clear and smooth transition from the research question to the hypotheses?
- 16. Are the major hypotheses of the study clearly stated?
- 17. Are the hypotheses supported by the research covered in the literature review?

PARTICIPANTS

- 18. Are participants recruitment procedure described adequately?
- 19. Are characteristics of the sample described adequately?
- 20. Was informed consent obtained?

___ 21. Is the selection methods described?

DESIGN

___ 22. Is the design explicitly stated as a correlational, prediction or experimental study?

___ 23. Are the independent and dependent variables properly described?

___ 24. If experimental study, how were participants assigned to groups?

___ 25. If experimental study, are the groups or conditions described adequately?

MEASURES

___ 26. Are all of the measures explained in detail?

___ 27. Is the source of measures explicitly stated?

___ 28. If the measures have been used before, are they reliable and/or valid?

___ 29. If there is more than one measure, was the order of delivery counterbalanced?

MATERIALS

___ 30. Are all the materials needed to conduct the study described adequately?

___ 31. If appropriate, is the apparatus described or does it need a figure to illustrate?

PROCEDURE

___ 32. Is it clear who conducted the experiments?

___ 33. Is the timeline of delivery of measures clearly stated?

___ 34. Is the description of what was done adequately described?

___ 35. Could the reader properly replicate this study based on the procedure description?

___ 36. Was the instructions to the participants explained properly?

RESULTS

___ 37. Are the names of each statistic properly defined including relevant details?

___ 38. Are there statistical values for significant levels, means, standard deviations, effect sizes, and sample size?

___ 39. Does the structure of this section follow the logical structure of hypotheses?

___ 40. Are there tables or figures that adequately describe the results?

DISCUSSION

___ 41. Is there a restatement of the purpose of the study?

___ 42. Is there a discussion of results as they relate to each hypothesis?

___ 43. Did you state clearly how generalizable or ecological valid this study was?

___ 44. Are the implications of this study clearly stated?

___ 45. Are the limitations of this study mentioned?

___ 46. Are directions of future research explained?

REFERENCES

___ 47. Are all references cited in the body of the paper are listed in the reference page?

___ 48. Are there references in the reference page that are not in the body of paper?

___ 49. Is the references in alphabetical order and then chronological order if you have more than one citation for an author(s)?

TABLES, FIGURES & APPENDICES

___ 50. Is there at least one table and one figure?

___ 51. Is there a table page preceding the reference page?

___ 52. Is there a figure caption page preceding the last table?

APA FORMAT & STYLE

___ 53. Is title page in correct APA format?

___ 54. Is the abstract in correct format?

___ 55. Is the introduction and literature review in APA format?

___ 56. Is the introduction and literature review void of grammatical mistakes?

___ 57. Does the methods section meet all the APA formatting and style issues?

___ 58. Are all the citations in the manuscript APA style?

___ 59. Does the reference page strictly adhere to APA format?

___ 60. Is the structure of tables, figures, and appendices in APA order and format?

Appendix D: Research Presentation & Peer Grading of Group Work

<i>Presentation Evaluation</i>				
<i>Group Members:</i>				
Presentation	Total Points Possible	Score		
Discussion of Previous Research	5			
Discussion of present Study	5			
Research Question and/or Hypothesis(s)	5			
Methods	5			
Results	5			
Implication of Findings	5			
Limitations and Future Research	5			
Clarity and Tempo	5			
Quality of PowerPoint Presentation	5			
Q & A Period	5			
Total Score:	50			
Comments:				
1	2	3	4	5
<i>Very Poor</i>	<i>Poor</i>	<i>Okay</i>	<i>Very Good</i>	<i>Excellent</i>

Instructions: Please first rate your own performance on the group project. Then please write each of your group members. Please be just, fair, and accurate.

Rate Yourself:

<i>Rating Criteria</i>	<i>Rating Score (please circle)</i>				
	<i>Very Poor</i>	<i>Poor</i>	<i>Okay</i>	<i>Good</i>	<i>Excellent</i>
1. They were well prepared.	2	4	6	8	10
2. Worked well with others.	2	4	6	8	10
3. Contributed creative, innovative, and useful ideas.	2	4	6	8	10
4. Contributed considerable productive time on project.	2	4	6	8	10
5. Communicated well.	2	4	6	8	10
Total Score					/50

Group Member Name:

<i>Rating Criteria</i>	<i>Rating Score (please circle)</i>				
	<i>Very Poor</i>	<i>Poor</i>	<i>Okay</i>	<i>Good</i>	<i>Excellent</i>
1. They were well prepared.	2	4	6	8	10
2. Worked well with others.	2	4	6	8	10
3. Contributed creative, innovative, and useful ideas.	2	4	6	8	10
4. Contributed considerable productive time on project.	2	4	6	8	10
5. Communicated well.	2	4	6	8	10
Total Score					/50

Appendix E: Journal Article Evaluation

JOURNAL ARTICLE EVALUATION

This assignment will give you practice in critical reading of peer-reviewed journal articles. In addition, by completing this assignment you will be more knowledgeable about how developmental research methods are used in real-life situations and empirical studies. If you do not have a hard copy already, it is suggested that you print this page, so that you may have instructions to walk you through the activity.

DIRECTIONS

- **Step 1:** Choose one article from Milinki (2006) book.
- **Step 2:** Read the article.
- **Step 3:** Answer the questions below.

QUESTIONS

1. Please provide an APA format of the article you choose.
2. Answer ALL **Factual Questions** and **Questions for Discussion** at the end of the article. You do not have to answer the *Quality Rating Questions*.
3. Please number each of your answers accordingly.

STEPS-TO-SUCCESS

1. **Always cite your work and be descriptive in your answers.**
2. **Turn in on time.**

BIBLIOGRAPHY

Milinki, A. K. (Ed.). (2006). *A cross section of psychological research: Journal articles for discussion and evaluation* (2nd ed.). Glendale, CA: Pycszak Publishing.

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Appendix F: MythBusters Analysis

MYTHBUSTERS-DEVELOPMENTAL RESEARCH METHODS

This online learning activity will help you understand the key concepts in developmental research methods. This assignment is based on an article published by Burkley and Burkley (2009). If you do not have a hard copy already, it is suggested that you print this page, so that you may have instructions to walk you through the activity.

DIRECTIONS

- **Step 1:** Go to www.youtube.com and search for **MythBusters** episodes.
- **Step 2:** Locate and choose one episode.
- **Step 3:** Watch the episode with the questions below in mind.

QUESTIONS

4. What was the title of the episode?
5. Provide the link to the episode you watched.
6. What type of research design did they use?
7. What was the independent variable?
8. Was there a control group?
9. What was the dependent variable(s)?
10. What was the scale of measurement used?
11. Identify and explain how three research methods concepts discussed in class were used in the episode.

STEPS-TO-SUCCESS

3. **Always cite your work and be descriptive in your answers.**
4. **Turn in on time.**

BIBLIOGRAPHY

Burkley, E., & Burkley, M. (2009). *Mythbusters: A tool for teaching research methods in psychology*. *Teaching of Psychology*, 36(3), 179-184. DOI: 10.1080/00986280902739586

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