

**PSYCHOLOGY 222:**  
**RESEARCH METHODS FOR SOCIAL AND NATURAL SCIENCES**  
**AND LAB**  
**FALL 2017**  
**SYLLABUS**

**Instructor: Dr. Alexander Swan**

Office: Burgess Hall 106B

Email: [aswan@eureka.edu](mailto:aswan@eureka.edu)

Office Phone: 309-467-6418

Office Hours: MW 10 AM – 5 PM; TR 3 PM – 5 PM; F 10 AM – 12:30 PM AND 2 PM – 5 PM

My Website: [www.swanpsych.com](http://www.swanpsych.com)

---

**BASIC COURSE INFORMATION**

---

**CLASS MEETING:**

When: Tuesdays & Thursdays @ 1:15 to 2:30 PM

Where: Vennum-Binkley Hall 42

**LAB MEETING:**

When: Fridays @ 1:00 to 1:50 PM

Where: Burgess Hall 204

**REQUIRED TEXTBOOK:**

Morling, B. (2014). *Research Methods in Psychology: Evaluating a World of Information*. 2<sup>nd</sup> Edition. New York: W. W. Norton & Company, Inc. (Cool blog run by author: [www.everydayresearchmethods.com](http://www.everydayresearchmethods.com))

**Recommended/Optional text:**

VandenBos, G. R. (Ed). (2010). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: American Psychological Association.

**COURSE WEBSITE:**

All the course announcements, quizzes, grades, this syllabus, and other resources will be available through the course portal on Brightspace. I will try my best to make the Powerpoint slides used for the lectures available online BEFORE each lecture. However, sometimes life will happen and they might not make it until afterward.

**COURSE DESCRIPTION:**

College catalog description: This course is an introduction to research methods that scientists use to identify and describe relationships which exist in the natural world and the social world. The strengths and limitations of commonly employed experimental and non-experimental methods will be conveyed through lectures, demonstrations, and written sources. This course will also give you a first-hand experience in conducting simple studies or data collection exercises and designing and proposing a research study.

Here's my take: the purpose of this course is to introduce you to the diverse field of Experimental Psychology. One aim of the course is to familiarize you with methods and concepts of experimental psychology, including theories, the formulation of hypotheses, operational definitions, variables, and measurement scales. In addition, we will discuss different experimental and non-experimental research methods, when to apply them, and what inferences can be drawn from different designs. And finally, we will explore ways of analyzing and interpreting

data from different experimental designs. Throughout the course you will be exposed to a variety of past and current psychological research. During this course, you will gain insight into the scientific process as a whole – its advantages, difficulties, and limitations. As such, you will be able to better evaluate the knowledge science can provide, and integrate that knowledge into a broader worldview. Ultimately, our goal is to provide you with some of the basic necessary tools to examine the existing evidence about a variety of topics in the field and to be able to generate new ideas and ways of testing those ideas.

**CLASS FORMAT:**

The course will consist of lectures, labs, demonstrations/activities, videos, and class discussion. Reading assignments should be completed before the chapter is discussed in class. Lab periods will focus on activities and writing assignments that are designed to give you practice and tools to fulfill course objectives.

**INTENDED LEARNING OBJECTIVES:**

By the end of the course, you should be able to:

- Demonstrate understanding of how scientific inquiry is based on evidence and that scientific knowledge and understanding evolves based on new evidence and differs from personal and cultural beliefs.
- Participate in scientific inquiry and communicate the elements of the process, including (a) making careful and systematic observations, (b) developing and testing a hypothesis, (c) analyzing evidence, and (d) interpreting results.
- Demonstrate an understanding of the variety of research and quantitative methodologies in the sciences.
- Quantitative Reasoning: Identify, access, and use quantitative information effectively, including information from formulas, graphs, tables, schematics, simulations, and/or visualizations.

**COURSE REQUIREMENTS AND GRADING**

---

Unit Quizzes (4)	40% (10% each)	Various dates
Research Proposal	35%	Various dates
Lab Assignments	20%	Various dates
Class Participation Mini-Assignments	5%	Various dates

**GRADING SCALE:**

≥ 97%	A+	≥ 80% and < 83%	B-	≥ 63% and < 67%	D
≥ 93% and < 97%	A	≥ 77% and < 80%	C+	≥ 60% and < 63%	D-
≥ 90% and < 93%	A-	≥ 73% and < 77%	C	< 60%	F
≥ 87% and < 90%	B+	≥ 70% and < 73%	C-		
≥ 83% and < 87%	B	≥ 67% and < 70%	D+		

**NOTE: Grades will not be changed for any reason, except for clerical errors!**

**UNIT QUIZZES:**

- The in-class Quizzes (3 “Units” & Final) consist of multiple-choice and short-answer questions and are based on both the lectures and text readings. Each Quiz (including the Final) will only cover material from the unit. Although none of the Quizzes are cumulative, new material tends to build upon previous material. ANY material covered in the lectures or reading may appear on the Quiz, but I will provide a study guide to focus studying. Some of the material in the readings will not be covered in the lecture and some of the material in the lecture will not be covered in the readings. **You are responsible for both!**
- Quizzes must be taken on the date scheduled. Vacation is not a valid excuse, nor is an exam scheduled at the same time. If you must miss a Quiz due to some emergency, then you can make it up by taking an

essay exam. A doctor's note or some other formal verification of absence is required to make up a Quiz. This is the ONLY condition under which I will give a make-up. All make-up Quizzes are ESSAY in format and must be taken during a make-up period agreed upon by you and me.

- No use of notes is allowed for any Quiz. Please be aware that cheating on a Quiz will result in a grade of 0 for the exam and reporting of the incident to the Division Chair and Provost. Cheating includes use of notes, books, cell phones, or copying from someone else's Quiz.

### **RESEARCH PROPOSAL:**

- This research proposal should include the background literature review and the methodology sections of a final paper. In addition, the proposal should include a schedule for data collection, analysis, writing schedule, and finally the statistical analysis that will be used.
- Written reports must include the following sections:
  - **Title Page.** A brief descriptive title, your name, and course section and number appear on this page.
  - **Introduction.** This section should include a review of the relevant literature and a clear statement of the hypothesis which you plan to test. A good introduction can be written in approximately 3 pages.
  - **Method.** This should include a discussion of the participants/subjects recruited/observed for the study and a detailed description of the method you used. The method can be any of several noncausal/nonexperimental methods (e.g., natural observation, correlational study, or case study, etc.) or an experimental method. A good Method section can be written in approximately 2-3 pages, but depending on the complexity of the study the section *can be shorter or longer*.
  - **Expected Results.** This section should summarize how you would plan to analyze data collected.
  - **References.** This should include a list of all articles, books and documents that were cited in the body of the paper. Approximately 8-10 references are appropriate for a paper of this magnitude.
- We will use some lab time to discuss and help plan each other's research. In this way, we can all learn how different methods can be used to generate information.
  - To help with lab, **a research question is due on September 22.** You must conduct library research in order to generate a good research question. As such, the question needs to be completed before the paper can be appropriately drafted.

### **LAB ASSIGNMENTS:**

Lab sections are the most important aspect of PSY 222 (in order to pass the class successfully). You are expected to attend all lab sections and to build relationships with your classmates. In lab, you will develop research questions, engage in research design practice, practice analyzing data sources, and practice writing and editing yours and your peers' work.

Most weeks, you will work on a small assignment in lab that is designed to prepare you for your own research work and to engage you in the material beyond a simple lecture course. Some weeks there will not be assignments so students can work on their proposals in class and ask me questions about the writing and the process.

---

## **COURSE POLICIES**

### **1. GETTING INFORMATION:**

- **EMAIL PROTIP:** I use email for almost all communications/announcements. If you do not check your Eureka email often, forward it to an address you do check. YAHOO ADDRESSES

GET SENT TO MY SPAM FOLDER. The best way to contact me is always via email. If you cannot come to office hours and/or decide to send an email, be sure to use the following format so that I can help you:

To:  
Subject Line: "PSY 222: (insert your topic here)"  
From: your full address

*Dear (insert name of person you are contacting here),*

*Hello, my name is (your full name here) and I am a student taking PSY 222/Research Methods. I have a question regarding (insert your question here).*

*(Considerate closing of your choosing),  
Your full name*

A word of caution: I will do my best to reply within 48 hours. Depending on the nature (and popularity) of your question, my answer may be direct OR posted as a general class announcement on Brightspace. Please hold off on resending a message until 48 hours have passed. Finally, I may not respond to emails between the hours of 8 PM and 8 AM, so please keep this in mind when deciding whether to resend the message.

- **OFFICE HOURS:** As you may note from the first page of this syllabus, I will be in my office a lot. I will trial an open-door policy: stop by whenever within the time frames and I will be happy to chat. You can check my website for these times rather than emailing me to ask me if I'll be there. You might want to email me to let me know you're coming, but walk-ins are welcome. I will specify whether there are circumstances that will cut into my office time as needed.

## 2. LATE WORK AND MAKE-UP POLICY:

- If participation in university-sponsored events (e.g., athletics) or observance of a religious holiday or other sanctioned event prevents your attendance, you must contact me prior to the relevant date, and you must have any appropriate documentation. If an assignment is due on that date, arrangements must be made to complete the assignment ahead of time.
- Unless otherwise stated, all assignments are due at the beginning of class (unless otherwise noted for electronic assignments). Late assignments will only be accepted in the case of extraordinary circumstances and appropriate documentation, and may involve point/percentage deductions. Please alert me to these extraordinary circumstances by email within 24 hours of the missed class, and we will set up a time to discuss these on a case-by-case basis.
- Without appropriate circumstances and documentation, early Quizzes or Quiz make-ups will not be granted.
- However, I recognize that sometimes life happens; therefore, I have built some flexibility into the course to allow for illness, other obligations, and bad days. First, on Quizzes, extra credit will be offered from one Quiz to the next if there is a 10% improvement. For example, if Quiz 1 receives a 60%, a 70% or higher on Quiz 2 will result in an additional percentage increase of extra credit. If you miss a Quiz AND notified me appropriately, and cannot make-up the Quiz prior to the next Quiz, I will count your next Quiz score twice (so no zeroes are given out). In addition, your lowest Reading Check and one Participation assignment will be dropped from your final category computation. You will not be able to make these up—they are dropped for whatever reason you missed, no questions asked!

### 3. GRADE DISPUTE POLICY:

- If you disagree about how your term paper was graded, you must dispute the issue *in writing* (not email). Write a paragraph about why you think your attempt was correct/sufficient and turn it (with the original assignment) in to the instructor at the lecture following the return of the relevant assignment. Only reasonable and well-justified complaints will be considered, and all decisions are final. Please note that if you submit a complaint, the instructor will re-grade the entire assignment, and your grade could increase, decrease, or remain the same. **This policy does not apply to final course grades.**

### 4. CLASS ETIQUETTE:

- **Please do not use your cell phones during class.** I would prefer them to be put on silent or off. If your cell phone goes off during class or an exam, please silence it immediately; do not let it ring through. I will remind everyone prior to exams to make sure their phones are turned off. Please refrain from text messaging during class. I know you think you're being subtle; I assure you that I can see you texting.
- Please do not leave the class partway through unless it is an emergency; it is very disruptive. If you must leave, please sit in the back and at the edge of an aisle so as to not disrupt your fellow classmates.
- Please have respect for the class, your peers, and yourselves by being fully present in the class. Please avoid anything not relevant to the class, such as sleeping, surfing the Internet, or doing homework for other classes.
- **LATENESS:** Please try to arrive a few minutes before the start of lecture. We will begin promptly at 1:15 PM on TR and 1:00 PM on Friday, and it can be distracting to me and to your peers if you arrive late. I will not keep you late.

### 3. LAPTOP POLICY:

- Research indicates that taking notes by hand results in significantly better retention of conceptual information than taking notes on a laptop (see Mueller & Oppenheimer, 2014), even when students are engaged in the material (i.e., are not also checking their email or Facebook feed).
- Further, laptop use can be distracting in various ways to the entire class. Because my goal is to maximize the likelihood of a favorable learning environment, **I strongly recommend that you not use laptops in class.**
- However, laptops will be permitted on a probationary basis; should the use of laptops be taken advantage of or prove distracting to other students, I will revisit this policy then.

### 4. PARTICIPATION & ATTENDANCE:

- Small assignments will be given at the beginning of class on random days throughout the semester. Points will be given out for completing the assignments that will count toward your participation grade. It is highly recommended that you arrive to class on time in order to complete these assignments.
- Students who take notes, ask questions, respond to questions, and come to office hours are typically the ones who succeed in this class.
- Though attendance is not required by College policy, I strongly recommend you attend class prepared and present. As such, you will not be penalized in your grade for missing a class. However, I WILL REWARD folks who arrive to class on time and attend each class, most likely with some helpful exam advice, if you catch my drift. If you do happen to miss a class, that's OK, but you will be responsible for *all* material covered in lecture, some of which will not be covered by the textbooks. If you know about an absence beforehand, please shoot me and email to let me know.

## ADDITIONAL COURSE AND COLLEGE INFORMATION

---

### **ACCESSIBILITY (ADA) STATEMENT:**

The Learning Center, located on the first floor of Alumni Hall, provides academic services to all Eureka College students. Consultations are available in the areas of math and writing. Study groups, individual academic counseling, and course specific tutoring are also available by contacting Jason Zimmerman at x6520 or [jzimmerman@eureka.edu](mailto:jzimmerman@eureka.edu).

Any Eureka College student with a disability or other special circumstances requiring accommodations or other consideration in order to successfully complete the requirements of this course is requested to identify himself/herself to the instructor and discuss the matter privately. This disclosure should be made within the first week of the course so proper accommodations can be made.

### **ACADEMIC HONESTY AND INTEGRITY STATEMENT:**

Eureka College strives to instill individual responsibility and integrity in its students, and expects its students to behave with integrity throughout their time at the College. Any giving or receiving of unpermitted aid on tests or assignments is considered cheating. If a student is uncertain about how to document sources or incorporate materials into a paper, it is his or her responsibility to seek help by speaking to the faculty member, another professor, or a Writing Center tutor. The College's Academic Dishonesty policy is outlined in the Student Handbook.

Academic dishonesty constitutes a major breach of the trust that exists between the instructor and the student. It includes passing off another's ideas as one's own, any attempt to gain information about a test or exam prior to the test or exam date without the instructor's consent, and providing unauthorized assistance on a test, exam, paper, or other assignment to another student. Cheating on a test, exam, quiz, paper, or other assignment will result in a failing grade for the assignment. Further dishonesty will result in failing the course. Students who fail for academic dishonesty will not have the option of withdrawing from the course. If you are in doubt about what plagiarism means, or about how to appropriately document sources in your work, please contact me; I will be happy to help.

### **COUNSELING SERVICES:**

Provided by Tazwood Center for Wellness, seeing a professional counselor as a Eureka College student is easy and free. Whatever is on your mind, don't be afraid to talk to someone.

Tazwood Center for Wellness visits campus twice a week for on campus counseling appointments. Each student receives 6 free sessions per semester.

Tazwood Center for Wellness  
3248 Vandever Ave. Pekin, IL 61554  
309-437-5522 (Phone)  
309-347-1148 (Emergency Response Services)

### **CHANGES TO SYLLABUS:**

The Instructor reserves the right to make policy and course changes to the syllabus at any time with advance notice to students.

## TENTATIVE COURSE SCHEDULE

*Note:* The schedule is subject to change depending on the progress of the course.

Week	Day	Date	Lecture	Lecture Topic	Readings	Research Proposal (Due Dates)
1	T	8/22	----	<b>OPENING CONVOCATION – NO CLASS</b>		
	R	8/24	1	Course Introduction		
	F	8/25	L1	LAB: Lab Introduction		
2	T	8/29	2	Science as a Way of Knowing (Scientific Method)	Ch. 1	
	R	8/31	3	Science as a Way of Knowing (Scientific Method)		
	F	9/1	L2	LAB: Research Questions		
3	T	9/5	4	Ethical Guidelines	Ch. 4	
	R	9/7	5	Research Sources of Information	Ch. 2	
	F	9/8	L3	LAB: HSC Training		
4	T	9/12	6	Research Sources of Information	Ch. 2	
	R	9/14	----	<b>QUIZ #1</b>		
	F	9/15	L4	LAB: Literature Review Sourcing	Presenting Results (pp. 487-526)	
5	T	9/19	7	Three Claims	Ch. 3	
	R	9/21	8	Four Validities	Ch. 3	
	F	9/22	L5	LAB: Sharing Research Questions		Research Questions Due (by 1 PM)
6	T	9/26	9	Identifying Good Measurement	Ch. 5	
	R	9/28	10	Describing What People Do (Survey)	Ch. 6	
	F	9/29	L6	LAB: Survey Design/Collect Data		
7	T	10/3	11	Describing What People Do (Obs Design)	Ch. 6	
	R	10/5	12	Qualitative Research		
	F	10/6	----	<b>HOMECOMING – NO LAB</b>		
8	T	10/10	13	Descriptive Statistics	Stats Review (pp. 441-462)	
	R	10/12	----	<b>QUIZ #2</b>		
	F	10/13	L8	LAB: Data Analysis Practice		
9	T	10/17	----	<b>FALL BREAK – NO CLASS</b>		
	R	10/19	14	Sampling	Ch. 7	
	F	10/20	L9	LAB: Sampling Practice		
10	T	10/24	15	Correlational Research	Ch. 8	
	R	10/26	16	Correlational Research	Ch. 9	
	F	10/27	L10	LAB: Data Analysis Practice		Draft of Proposal Intro Due (by 1 PM)
11	T	10/31	17	Simple Experiments	Ch. 10	
	R	11/2	18	Inferential Statistics	Stats Review (pp. 463-486)	
	F	11/3	L11	LAB: Design Proposal Methodology		

12	T	11/7	19	Confounding & Obscuring Variables	Ch. 11	
	R	11/9	20	Experiments: 2+ Variables	Ch. 12	
	F	11/10	L12	LAB: Experiments Practice		
<b>13</b>	T	11/14	21	Experiments: 2+ Variables		
	R	11/16	----	<b>QUIZ #3</b>		
	F	11/17	L13	LAB: Data Analysis Practice		Draft of Proposal Method/Expected Results Due (by 1 PM)
14	T	11/21	----	<b>THANKSGIVING HOLIDAY – NO CLASS</b>		
	R	11/23	----	<b>THANKSGIVING HOLIDAY – NO CLASS</b>		
	F	11/24	----	<b>THANKSGIVING HOLIDAY – NO CLASS</b>		
15	T	11/28	22	Quasi-Experiments	Ch. 13	
	R	11/30	23	Small-N Designs		
	F	12/1	L15	LAB: FREE LAB/PROPOSAL WORK		
16	T	12/5	24	Replicability & Generalizability	Ch. 14	
	R	12/7	25	Replicability & Generalizability		
	F	12/8	L16	LAB: FREE LAB/PROPOSAL WORK		
F	T	<b>12/12</b>	----	<b>FINAL QUIZ (#4) – 1:00 PM to 3:00 PM</b>		FULL PROPOSAL DUE (by 1 PM)