

# Introductory Psychology (PSY 101), Winter 2018

## Syllabus and Lab Manual

**Section 3**, 1-1:50 pm, MWF, 232 Au Sable Hall

**Section 1**, 2-2:50 pm, MWF, 232 Au Sable Hall

**Instructor:** Jennifer Gross, Ph.D.

**Office:** Rm. 2319 Au Sable Hall (ASH)

**Office Hours:** 12:20-12:50 pm on Monday, Wednesday, & Friday; 3:00-3:30 pm on Wednesday; and by appointment. Students with appointments have priority over walk-ins.

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### **Course Description:**

Three themes capture our quest into all things psychological. Although Psychology is a broad and diverse field (ranging from the anatomy of the eye, to forms of psychopathology, to psychology's insights on user-friendly design), all of *Psychology embraces the scientific study of human behavior (Theme 1)*. The scientific approach offers the highest standard of evidence, which affords a powerful approach to determine the validity of commonly made assertions (e.g., "Is watching violence on TV really harmless?"). With scientific scrutiny, you can critically evaluate advertising claims, propaganda, and other persuasive appeals. For example, are there really different "learning styles" (the idea that individuals differ in what mode [words vs. pictures vs. speech] of instruction is more effective, so instruction should be tailored accordingly)? Despite common beliefs about "visual learners" and "auditory learners", hot-of-the-press research found that "there is no adequate evidence base to justify incorporating learning styles assessments into general educational practice."<sup>1</sup> What changes could enhance learning? The "read-recite-review strategy" is a scientifically-proven technique for learning from a textbook that is more effective and efficient than hand-written notes<sup>2</sup>. With scientific literacy, you have the tools to distinguish between pseudoscience and real psychological research.

*The study of psychology reveals how even the simplest human behavior is influenced by a myriad of forces (Theme 2)*. This insight about the complexity of human behavior fosters avoidance of simplistic, naïve explanations for actions (like, there are two kinds of people in the world—the weak and the strong; the good and the evil). Nothing about human behavior is this simple. Consider that depression is one of the most common, and debilitating psychiatric conditions. With the popularity of antidepressant medications (e.g., Prozac, Zoloft) and the accompanying TV advertisements sponsored by pharmaceutical companies promising a cure, one might conclude that depression is due to a chemical imbalance in the brain. The implied premise—fix the imbalance, alleviate the condition. Such a premise is simplistic and wanting. For one, this naïve premise fails to recognize the role of negative life events as risk factors for depression.<sup>3</sup> Second, if a cure was so simple, given the widespread use of antidepressant medications, depression should be a thing of the past. By selectively publishing only the efficacious results of antidepressant trials, the medical community and the public have been misled.<sup>4</sup>

*Psychology has a practical impact on everyday life (Theme 3)* by scientifically answering questions like: should I take Ginkgo Biloba to prepare for my next exam, are there elevated risks when driving while talking on the phone, how does the mosquito ringtone evade detection by my professor, do we only use 10% of our brains, and can stress increase my susceptibility to colds? Join me as we scientifically probe the underpinnings of human behavior.

<sup>1</sup> Pashler, H., McDaniel, M., Rohrer, D., & Bjork, R. (2009). Learning styles: Concepts and evidence. *Psychological Science in the Public Interest*, 9(3), 105-119.

<sup>2</sup> McDaniel, M. A. et al. (2009). The read-recite-review study strategy: Effective and portable. *Psychological Science*, 20(4), 516-522.

<sup>3</sup> Shrout, P. E. et al. (1989). Characterizing life events as risk factors for depression: The role of fateful loss events. *Journal of Abnormal Psychology*, 98(4), 460-467.

<sup>4</sup> Turner, E. H., Matthews, A. M., Linardatos, E., Tell, R. A., & Rosenthal, R. (2008). Selective publication of antidepressant trials and its influence on apparent efficacy. *The New England Journal of Medicine*, 358, 252-260.

**Objectives:** Upon successful completion of this course, students will be able to:

1. Demonstrate an understanding of the scientific process in Psychology.
2. Identify major psychological theories and use psychological terminology correctly.
3. Critically evaluate the findings of psychological research.
4. Recognize examples of how psychological concepts are applied to daily life.

**Course homepage on Blackboard (mybb.gvsu.edu):**

Class information (e.g., syllabus, announcements, laboratory assignments, required readings, lecture slides, and grades) will be available on Blackboard.

**Weekly laboratory participation via APA Online Psychology Lab (OPL):** <http://opl.apa.org/>

**Class ID: 136815, Grand Valley State University, PSY 101 & 357**

**Required textbook:** Launchpad for Gray's Psychology (SIX MONTHS ACCESS).

ISBN-9781319060343; \$96 at GVSU bookstore. Optional, loose-leaf copy of the textbook available.

**Required reading:** Available electronically via "Course Documents" in Blackboard.

**Course Grade Formula:** Course grades will be based on scores from the following, weighted activities

Examination #1	17.5%
Examination #2	17.5%
Examination #3	17.5%
Final Examination	17.5%
Weekly Laboratory Assignment	25%
Read & Practice points (e.g., earned by taking online quizzes)	5%
Learning about Psychological Research	-12 to +12 percentage points added to an exam

**Letter Grades** will be calculated according to the following scale:

A	93-100%	C	73-76%
A-	90-92%	C-	70-72%
B+	87-89%	D+	67-69%
B	83-86%	D	60-66%
B-	80-82%	F	Below
C+	77-79%		

**Forms of Evaluation I-IV:**

**I. Attendance:**

You are expected to attend class. Students who attend regularly do well in the class. By attending class, you benefit by hearing content presented exclusively in lecture.

**II. Exams:**

To formally assess your understanding of course material, there will be four exams. Questions on the exams will be based on the material covered: 1) in lecture, 2) assigned readings, and 3) the laboratory assignments. See *Weekly Schedule* for exam dates. **Make-up exams** will be given for the following circumstances: Official university activities (e.g., participating in sporting events), illnesses, and extenuating circumstances. Please email the professor as soon as possible to explain the situation, and request permission for an alternate exam date.

### **III. Laboratory Assignments:**

The goal of this laboratory assignment is to foster your understanding of the scientific process in Psychology. Outside of class time, you will participate in classic and contemporary experiments in Psychology via the web. Take the time to read the background material for each lab at the host site. For all assigned experiments, you are expected to understand the theoretical underpinnings motivating the investigation; the procedures and methods of investigation, including the independent and dependent variables; the predicted experimental outcome (i.e., hypothesis); the results of the experiment expressed in statistics and graphs; potential limitations of the investigation; and how each experiment is related to material covered in class and the assigned readings.

**Submit your laboratory assignment to Blackboard by midnight on the due date to earn full credit.** Late labs automatically receive ½ credit. No email submissions will be accepted. You are encouraged to submit proof of completion up to two weeks early. You are encouraged to keep a copy of the laboratory assignment for your personal records (backup proof of completion; helpful when preparing for exams).

**Laboratory Assignment Format:** Answer the following questions, numbering your responses. Choose your words carefully. Write clearly, concisely, and with complete sentences. Check your grammar and spelling. I recommend preparing your responses in Word or other word processing program. Submit **Lab Reports** to Blackboard via Assignments.

1. State the **name of the lab** and the **date of your participation**
2. Identify your **UserId**, furnished as the completion of the experiment
3. **Find, copy, and paste your data.** Some labs automatically provide a summary of your individualized performance upon completion of the experiment. For example, the Monty Hall Lab gives feedback about your “wins” and “losses” after every trial (at the bottom of computer screen). When your individualized, summary results are not provided automatically, use your **UserID** to look up your results in the *Data* file at the host site. See the instructions ‘*To Retrieve Data*’ elsewhere in the syllabus.
4. Identify and operationally define the **independent and/or predictor variable(s)**.
5. Identify and operationally define the **dependent variable(s)**.
6. State the experimental **hypothesis**.
7. **Critique** the experiment. For example, how might the experiment be modified to improve the investigation?

**Hint:** The answers to many of these questions can be found at the host site by choosing one of two options (“*No, but tell me more about this experiment*” or “*Read about studies*”).

#### **PLEASE NOTE:**

1. Participation in all assigned labs is expected. Thus, failure to complete any lab report results in a corresponding grade deduction (as shown in the **Laboratory Assignment Grade**).
2. This course is subject to the GVSU policies listed at <http://www.gvsu.edu/coursepolicies/>

**Laboratory Assignment Grade:** will be awarded, according to the following schedule:

15 (of 15) labs by due date	100%
14	93%
13	87%
12	80%
11	73%
10	67%
9	60%
8	50%....

**Instructions for getting started with, and obtaining proof of completion from, the Online Psychology Lab (<https://opl.apa.org/>)**

You may complete the weekly experiments by using the GVSU computer labs or your own computer. Working on a GVSU computer, open the “Psychology Folder” on the desktop, then the “Online Psychology Lab.” If you are using your own computer, *Google* is the recommended browser. Before beginning, you will need to 1) download the required, complimentary software available at host site, and 2) allow pop-ups from the host site. A few labs require headphones, so please plan accordingly.

1. Navigate to the Online Psychology Lab (<https://opl.apa.org/>).
2. Select “Student Login”.
3. Register with Google (recommended) or your pre-existing APA account.
4. Find our class: **136815, Grand Valley State University, PSY 101 & 357**
5. Participate in experiments! Please see “Weekly Schedule” for laboratory assignments and due dates.
6. Record (e.g., take a screen shot) of your **User Id** and any **Summary Data** at the completion of experiment, which will be submitted as part of your lab report.
7. When your summary data are not provided automatically at the completion of the experiment, look up your data in the Excel file by using the **UserId**.
8. Copy and paste your data into your lab report.

#### **IV. Learning about Psychological Research**

Students are required to participate in activities designed to acquaint them with the nature and variety of research in psychology. Students must participate in *four* enrichment activities.

Two kinds of enrichment activities are available. *Option 1* involves participating in research studies, while *Option 2* involves reading and writing about papers that report research in scholarly journals.

Completion of all 4 enrichment activity credits results in 12 percentage points added to one exam score. However, failure to do so results in a deduction of 3 percentage points from one exam score for each enrichment activity credit not earned.

<b>Earned enrichment activity credits</b>	<b>Percentage points applied to an exam score</b>
0	-12
1	-9
2	0
3	6
4	12

## **Option 1: Participation in Psychological Research**

### **Objective**

The objective of this assignment is for you to gain direct experience with psychology research studies and what it is like to participate in them. In class, we shall discuss the social psychology of psychology research and how experimental designs take into account the expectations and beliefs of the participants. By participating in studies yourself, you can gain an understanding of the strengths and limits of psychological research. Psychology Department faculty and their research assistants perform the studies, all of which have been reviewed and approved by the university's Institutional Review Board.

### **Online Registration**

To participate in studies, you must register on the *Study Scheduling System*, accessible from the Psychology Department website (<http://www.gvsu.edu/psychology/>). The vendor maintains a strict policy protecting privacy and confidentiality. (This policy is available for review in the Psychology Office.) Navigating the Study Scheduling System is straightforward, and if you need guidance, detailed instructions are available on the Psychology Department website.

### **Prescreening Survey**

An on-line prescreening questionnaire is available during the first two weeks of the semester. Completing this survey counts as ½ (.5) of an Enrichment Activity point. It will appear the first time that you log into the *Study Scheduling System*, and you can access it from your [My Profile](#) page. If you opt to complete the survey, plan to complete it in a single, 30-minute sitting. Several of the studies taking place later in the semester determine eligibility according to the responses on the Pre-Screening Survey, so completing it may increase the number of studies you will be eligible to choose. (You may receive invitations based on the Pre-Screening responses.) The last date to participate in the prescreening survey is **Sunday, January 27<sup>th</sup>**.

### **Participating in Studies**

Register for studies on the Study Scheduling System. Before you sign up to participate in a study, review any listed restrictions (for example, "left-handed people only"). If you sign up for a study and you do not meet the posted eligibility requirements, you will not receive credit for the study.

Arrive before the scheduled time, as studies start punctually. You will be given a description of what participating in the study will involve, and you will be asked for your consent before the study begins. If you then choose not to participate, you may leave without penalty. You can check to see that you have

received credit by selecting My Schedule/Credits, where credits are typically posted within a week after you participate in a study.

If you sign up for a study but cannot attend, please cancel your session on-line.

### **Under 18?**

Special rules apply to students who are under 18. If you are 17 and regularly enrolled at GVSU, you can sign up for studies that allow regularly enrolled students that are under 18 to participate. This information can be found in the study's eligibility requirements. A parental consent form can also be filled out for studies that do not have this requirement. Please contact [psychlab@gvsu.edu](mailto:psychlab@gvsu.edu) to get this form. You will need a different parental consent form for each study that requires one. If you are under 18 and not regularly enrolled, please use *Option 2*.

If you have any questions, please contact the Lab Assistant, Casimir Tokarski, at [psychlab@gvsu.edu](mailto:psychlab@gvsu.edu).

### **Need Help?**

If you need assistance registering for studies, please contact Casimir Tokarski, who can be reached in the Psychology Department Office (2224 Au Sable Hall, 616.331.3262) or by sending an email to [psychlab@gvsu.edu](mailto:psychlab@gvsu.edu).

### **Option 1 Deadline**

The last day to participate in studies is **Tuesday, April 16<sup>th</sup>**.

## **Option 2: Papers on Experiments in Scholarly Journals**

A second Enrichment Activity option is to read a selected journal article and then write a brief report on the article.

### **Summary of the Assignment**

Pick a current, empirical article from a psychological journal listed below. Read the abstract, introduction, and conclusions of the article and skim the remainder of it to understand the gist. You are not expected to understand the details of the article; your task is to understand the article's general thrust, content, and conclusions. Write a brief summary (as detailed below) to document your reading. *Be sure to use your own words. Do not copy or paraphrase the abstract or the paper.*

### **Objective**

This option, like the first, is intended to familiarize you with the nature and variety of psychological research. The objective is to broaden your understanding of psychological research and how it is conducted.

### **Selecting an Article**

Choose a current article published in 2017 or 2018 that reports an empirical study (i.e. one that is based on the collection of data). The large majority of the papers published in the journals listed below are suitable for this assignment, but a few are not. In particular, reviews, meta-analyses, and other comparisons of studies from separate researchers are not appropriate for this assignment. The article you read should have sections labeled "Methods" and "Results." Note that there are other journals, not

acceptable for this assignment, which have misleadingly similar names. Make sure the title of the journal matches *exactly* one on this list:

Behavioral Neuroscience  
 Developmental Psychology  
 Experimental and Clinical Psychopharmacology  
 Health Psychology  
 Journal of Abnormal Psychology  
 Journal of Applied Psychology  
 Journal of Comparative Psychology  
 Journal of Consulting and Clinical Psychology  
 Journal of Counseling Psychology  
 Journal of Educational Psychology  
 Journal of Experimental Psychology: General  
 Journal of Experimental Psychology: Animal Behavior Processes  
 Journal of Experimental Psychology: Applied  
 Journal of Experimental Psychology: Human Perception and Performance  
 Journal of Experimental Psychology: Learning, Memory, and Cognition  
 Journal of Personality and Social Psychology  
 Neuropsychology  
 Psychological Science  
 Psychology and Aging

### **Finding the Journals**

The journals are available electronically through databases you can access through the GVSU Library website. Base your paper on the “full text” of the paper. You can watch a video showing how to access the journals by going to <http://libguides.gvsu.edu/psych> and then clicking on the *Recommended Journals* tab. Access the journals *only* through the GVSU Library, not other sources or websites, as such materials may be incomplete or from the wrong journal.

Once you have located the journal article, select the “full text” version.

### **Documenting Your Reading**

Write a brief, double-spaced paper summarizing the article. The body of your essay should contain three sections, each between 100-300 words. Start each of the three sections with a heading, copying the exact words for each heading described below. No separate introduction or conclusion is required, simply answer the three questions. Under each heading write a well-organized paragraph that specifically addresses the question posed in the heading:

1. *What question or questions does the article address?*
2. *Why are the question(s) that the article addresses important ones to consider?*
3. *What answers does the article provide?*

### **The Paper Must Be Your Own Work and Written in Your Own Words**

At the core of Grand Valley State University’s policy on plagiarism (described in the catalog and in the Student Code) is the principle that “[a]ny ideas or material taken from another source... must be fully acknowledged.” This means that your paper must be written strictly in your own words, and it must acknowledge any ideas that you take from another source. Try to avoid quoting from the article, but if

you must quote to make a point, take care that the phrases quoted are in quotation marks. All quoted phrases must be in quotation marks, even if the phrases are only two or three words long. Words or ideas borrowed from a source other than the target article should be acknowledged and completely referenced. If you submit a paper that violates this policy, you may receive a failing grade for the course.

### **Required Identifying Information**

At the top left-hand corner of the first page of your summary, on separate lines, put your name, your student number (G-number), your professor's name, and the date. Immediately below this, provide a full reference to the article, with the information in the following order: Names of all authors (last name, comma, initials), the year of publication (in parentheses), the exact title of the article, the full name of the journal, the volume number, and the page numbers. Here is a sample of a reference with the information in the proper order:

Lastname, F. and Othername, S.B. (2013). A study of titles of research reports. *Journal of Obscure Psychological Research*, 13, 93-108.

If the article you select has not yet appeared in print, instead of page and volume numbers, include the words "Advanced online publication. doi:" and then give the *doi* number. The *doi* number is typically found in the upper right hand corner of the first page of the full-text paper. This reference information must be complete and accurate for you to receive credit for the paper.

### **Copy of First Page of Journal Article**

To the back of your summary, staple a photocopy or printout of the first page of the full-text version of the article that you read. Make sure that the photocopy includes the exact name of the journal, the title of the paper, the volume number, the page numbers, and the abstract and first paragraph of the article. If you copy from the printed journal, all of the required information will usually be on the first page of the article, but if you download the "full text" version of the article from a library database, you may have to print several pages to make sure all the required information is present. If you select an article that has not yet been published in print version, volume and page numbers will typically not be available. In such cases, make sure the photocopy or printout you submit includes the *doi* number of the article, which is usually in the upper right hand corner of the first page of the full-text article.

### **Credit/No Credit Grading of Papers**

The papers will be graded on a Credit/No Credit basis. No partial credit will be given. Most papers that receive a failing grade are ones where the writer fails to follow the instructions. Double-check your paper before you submit it, to make sure it conforms *exactly* to all the rules described above.

### **Submitting Papers for Grading & Deadline**

*Option 2* papers can be turned in anytime during the semester until the last day of class.

**Weekly Schedule:**

**Week 1 Introduction: *What constitutes science?***

**Research Methods: *Experimental tools—Correlations and Experiments***

***Testing washing machines relies on same scientific methods as does testing the mind***

**Readings** (approx. 36 pages):

Chapter 1, Background to the Study of Psychology (pp. 1-27)

Putnam, A. L., Sungkhasettee, V. W., & Roediger, H. L. (2016). Optimizing Learning in College: Tips From Cognitive Psychology. *Perspectives on Psychological Science*, 11(5), 652–660.

**Lab (Friday, 1/11):** In preparation for the weekly laboratory assignments, please familiarize yourself with the **APA Online Psychology website** at: <http://opl.apa.org/> Reminder: Working from a GVSU computer lab, open first the “Psychology Folder” on the desktop, and then open the “Online Psychology Lab.” If using your own computer, *Google* is the recommended browser. Before beginning, you will need to 1) download the required, complimentary software available at host site, and 2) allow pop-ups from the host site. A few labs require headphones, so please plan accordingly.

**Week 2 Research Methods: *Does TV violence cause violence among viewers?***

**Classical Conditioning: *The role of timing and contingencies.***

**Worksheet: *Classical conditioning in daily life***

**Readings** (approx. 35 pages):

Chapter 2, Methods of Psychology (pp. 29-57)

Chapter 5, Mechanisms of Motivation and Emotion (pp. 151-159 only)

- General principles of motivation
- Reward mechanisms of the brain

**Lab #1 Monty Hall (due Friday, 1/18)**

Select “quit” to complete lab after at least 60 total trials.

**Your Data:**

When you stayed with your first door choice, what percentage of times did you win the grand prize?

When you switched to a new door, what percentage of times did you win the grand prize?

**Q:** Now that you have completed the lab, tell me, are your odds of winning the grand prize better if you **STAY** or **CHANGE**? When doing the lab, what governed your door selection? Probabilities? Gut instinct?



The Monty Hall Lab was inspired by a television game show called, *Let's Make a Deal*, hosted by Monty Hall, first airing in 1963. In the television game show, contestants won big prizes if they correctly picked one (of three) doors, behind which the grand prize (e.g., a car) was hidden. Two of the doors, when opened, revealed booby prizes (e.g., a month's worth of Comet cleanser; a scrawny goat). In the show, after each contestant made her/his initial door choice, Monty opened one of two non-chosen doors to reveal a booby-prize. Then, Monty typically offered each contestant the option to **STAY** with the first door-choice, or **CHANGE** by picking the remaining, non-opened door. If you were a naïve contestant on the show, what would you do? Amusement guaranteed!

**Q:** Offer science-based advice on how to efficiently and effectively learn from a textbook according to McDaniel and colleagues' (2009) research. Most students prefer to take notes and reread texts when studying. Yet, retrieval practice produces robust learning that exceeds the benefits of additional study. Quizzes, for example, are valuable retrieval practice! Explain the 3R method. What were the experimental and control conditions, and were they randomly assigned? What was the dependent variable? Which study condition took the most time? Which study condition produced the best learning on immediate testing, delayed testing, and when answering inference-based test questions? What makes the 3R technique mnemonically so effective? Give your friend some advice—how can they study more effectively in any class using the 3R method?

**Week 3 Classical Conditioning: *How do we learn to like, or dislike, something?***  
**Operant Conditioning: *The power of consequences!***  
**Worksheet: *Operant conditioning in daily life***

### **Martin Luther King, Jr. Day Recess, Monday, January 21**

**Readings** (approx. 43 pages):

Chapter 8, Basic Processes of Learning (pp. 266-309)

**Lab #2 Stroop (due Friday, 1/25)** via alternate site: <https://faculty.washington.edu/chudler/java/ready.html>

**Your Data:**

Your reaction time for Word Set 1 \_\_\_\_\_

Your reaction time for Word Set 2 \_\_\_\_\_

What is the difference between your Word Set 2 time and Word Set 1 time?

(To calculate the difference: Word 2 time - Word 1 time = Difference) \_\_\_\_\_

Speculate on which condition you were more accurate in \_\_\_\_\_ and why this occurred \_\_\_\_\_

**Q:** Can you stop from reading billboards plastered along the highways? To fully answer this question, tell me what behavior was automatic (i.e., uncontrollable) in the Stroop experiment?

What behavior was controlled (i.e., stoppable) in the experiment? Under what condition was your performance facilitated (made faster with improved accuracy)? When did your performance suffer from interference effects (made slower and more error-prone)? Can you clarify the role of practice in the acquisition of automatic behaviors?

**Sunday, January 27<sup>th</sup>** is the last date to participate in the prescreening survey!

**Week 4 Operant Conditioning: *Can we reduce human suffering through conditioning?***  
**In-class movie (time-permitting): *The Dog Nose Knows* or *The Behavioral Treatment of Autistic Children***

**Exam 1, Friday, Feb. 1** (approximately 113 pages of reading)

**(EXAM 2 MATERIAL BEGINS HERE)**

**Lab #3 Lexical Decision (due Friday, 2/1)**

**Your Data:**

Related Accuracy: Words= \_\_\_%; Nonwords= \_\_\_%

Related Reaction Time: Words= \_\_\_ sec; Nonwords= \_\_\_ sec

Unrelated Accuracy: Words= \_\_\_%; Nonwords= \_\_\_%

Unrelated Reaction Time: Words= \_\_\_ sec; Nonwords= \_\_\_ sec

**Q:** How is our mental dictionary similar to, and different from, a physical dictionary? You have a vocabulary in excess of 60,000 words stored in a mental dictionary. However, within fractions of a second, you can easily decide if “rimmelnode” is word you know. How might you do that? You may be fooled when asked, “*how many animals of each kind did Moses take on the ark?*” However, you are not fooled if “*Moses*” is replaced with “*Nixon.*” Why not? Dictionaries alphabetically organize entries. Based on the experimental findings in the Lexical Decision lab, how is information organized in our mental dictionary? Lexical decisions to the second stimulus are faster (called priming) when the pair of stimuli are related. For example, “nurse” primes “doctor”, but not “horse”, signifying that “nurse” and “doctor” are associates in semantic memory (Collins & Loftus, 1975). What is revealed about our semantic networks if “male” and “female” do not equally prime “doctor”, or if negative words (e.g., “vomit”) are stronger primes for faces of one race compared to another? By the way, why did the experiment include non-words (fake words)?

**Week 5 Sensation and Perception: *Psychology applied to engineering, for better living.***

**Readings** (approx. 38 pages):

Chapter 7, The Psychology of Vision (pp. 225-263)

**Lab #4 Ponzo Illusion (due Friday, 2/8)**

**Your Data:**

Background not present: Adjusted lower line to an average of \_\_\_% longer than the top line; judging the top line to be \_\_\_ [longer/shorter] than it actually was.

Background present: Adjusted lower line to an average of \_\_\_% longer than the top line; judging the top line to be \_\_\_ [longer/shorter] than it actually was.

**Q:** Is perception veridical (coincide with reality)? What do visual illusions reveal about perception? Incorporate this week’s lab in your answer, and identify the visual features that led to perceptual misjudgments. How is understanding the world an interaction of “sensation (bottom-up processing)” and “perception (top down processing)”? In what sense, and under what sort of circumstances, might “errors” such as perceptual misjudgments be problematic? When might these illusions be useful? Support your answers by generating novel examples of 1) a beneficial perceptual misjudgment, and 2) a deleterious one.

## **Week 6 Sensation and Perception: *The Mechanics.***

**Readings** (approx. 31 pages):

Chapter 6, Smell, Taste, Pain, Hearing, and Psychophysics (pp. 192-223)

### **Lab #5 Numerical Memory (NOTE: requires headphones) (due Friday, 2/15)**

**Your Data:**

Time: \_\_\_ sec

Audio # Correct (AUD): \_\_\_

Visual # Correct (VIS): \_\_\_

### **Lab #6 Mental Rotation (due Friday, 2/15)**

**Your Data:**

(Copy and paste your data line from the site)

ANG0COR          ANG0TIME    DANG0COR    DANG0TIME ....etc.

\_\_\_\_\_

**Lab #5:**

**Q:** Short-term (a.k.a., working) memory is conceptualized as a limited storage space that operates for a brief duration. In contrast, long-term memory is conceptualized as a permanent repository with vast capacity, yet prone to retrieval difficulties. How do the experimental findings of the Numerical Memory Lab elucidate the characteristics of short-term memory? That is, what is the capacity (digit span length) of short-term memory for spoken material? For visually-presented material? What modality (visual vs. auditory) produced longer “spans,” and speculate on what factors might account for this finding? Importantly, are the “spans” for both modalities consistent with *Miller’s Magical Number*? Besides number of items presented, what other factors influence the capacity of short-term memory? Rehearsal time? Phonological similarity? Finally, did you engage in any strategic (a.k.a., elaborative) rehearsal process to remember the digits? Explain.

**Q:** Explain this statement: “short-term memory is the primary bottleneck in human information processing.” More generally, do you think you have limited memory to focus on what’s here-and-now? How might this attentional “bottleneck” affect your ability to do two things simultaneously? Imagine that you had to complete the lab again, but this time, you were asked to both hold the digits in temporary memory while simultaneously saying “blah, blah, blah...” (i.e., an articulatory suppression task) until prompted to recall the digits. What would this articulatory suppression task actually suppress? My daughter insists that she can do her homework while simultaneously watching television. I disagree. Explain how this modified version of the Numerical Memory Lab with an articulatory suppression task might offer support for mom’s intuition.

**Lab #6:**

**Q:** Most people report having a range of experiences stored in their minds as “mental images” (a.k.a., *Picture in the Head Theory*; Kosslyn, 1994). For example, national and international tragedies (JFK assassination; 9/11; Hurricane Katrina; Malaysian airlines flight 370) evoke strong, emotional images. Tragic events seemingly leave “burned-in” pictures in our minds.

Let’s try to elicit less emotional, pictorial memories in you. How many windows are on the front of your residence? In which hand does the Statue of Liberty hold her torch? Which is darker green—a pine tree or a frozen pea? To answer these questions, most report bringing visual images to the forefront of their mind. What was your phenomenological experience when answering these questions?

**Q:** Could your memory be wrong regarding the number of windows at your residence, Liberty’s hand preference, and the green-ness of a pine tree? Our subjective experience is not necessarily truthful. For example, if we look at a scene, we see height, width, and depth (3-dimensions). Yet, our retinas (in the back of our eyes) only record 2-dimensions, similar to how only two dimensions are captured in a photograph. The third dimension of depth has to be reconstructed by our minds. Thus, there is good reason to be skeptical about introspective evidence. Instead of relying on introspections, how did the mental rotation experiment explore “mental images” in a scientific way? According to Shepard and colleagues’ mental rotation experiments, if it takes you one second to mentally rotate an object thirty degrees, how long will it take you to mentally rotate the object sixty degrees? What are the implications (i.e., take home message) of Shepard and colleague’s mental rotations experiments?

**Q:** How could a researcher redesign the Mental Rotation experiment to examine if blind participants could perform mental rotation? Could such a version of the Mental Rotation experiment with blind participants potentially settle the debate about whether there are really pictures in our heads?

**Week 7 Memory: *Memory feats, foibles, and fallacies.***

**Memory: *Strategies for improvement.***

**Attention: *Can you simultaneously talk on that cell phone and safely drive, really?***

**Readings** (approx. 47 pages):

Chapter 9, Memory, Attention, and Consciousness (pp. 310-357)

**Lab #7 Self-Reference (due Friday, 2/22)**

**Your Data:**

Self Hit Rate (SELF HR): \_\_\_\_

Self False Alarm Rate (SELF FAR): \_\_\_\_

Self Discrimination Index (SELF DI): \_\_\_\_

E-word Hit Rate (EWORD HR): \_\_\_\_

E-word False Alarm Rate (EWORD FAR): \_\_\_\_

E-word Discrimination Index (EWORD DI): \_\_\_\_

My data is \_\_\_\_ [consistent/inconsistent] with the hypothesis because the ratio of hits to misses for self-reference words is \_\_\_\_ [greater/less] for E-words.

**Q:** In the movie *Memento* (2000), the lead character is a man suffering from anterograde amnesia, an unable to form new memories since his wife died. Thus, he cannot remember new names, dates, faces, and events. Rehearsal has no long-term effects on retention in his memory. When momentarily distracted, this amnesiac will completely forget what he has been holding in temporary, conscious memory. To hunt down his wife's killer, this amnesiac makes up for his inability to retain new information by annotating instant snapshots, compiling sticky notes, and rereading his tattoos.



Commonly, people complain about the inability to remember the name of someone just introduced—a la *Memento* style. Based on: 1) the Self-Reference Lab, and 2) Craik and Tulving's (1975) research on Depth (Levels) of Processing (see textbook), offer science-based advice on how to minimize the "just-forgot-the-name" phenomenon. Be specific about the processes that influence the movement of information from short-term to long-term storage. Include the mnemonic benefits of "elaboration," "organization," and the power of a well-developed construct of self (hint: self-reference lab) in your answer.

**Week 8 Thinking: *Rational and irrational thought investigated.***

**Exam 2, Wednesday, 2/27** (approximately 116 pages of readings):

**(EXAM 3 MATERIAL BEGINS HERE)**

**Readings** (approx. 14 pages):

Chapter 10, Reasoning and Intelligence (pp. 360-374 only)

- How people reason 1: Analogies and induction
- How people reason 2: Deduction and insight

**Lab #8 Social Balance (due Friday, 3/1)****Your Data:**

(Copy and paste your data from the site.)

Likes—Dislikes: \_\_\_\_

Likes—Loves: \_\_\_\_

Likes—Hates: \_\_\_\_

Likes—Likes: \_\_\_\_

Likes—Neutral: \_\_\_\_; ..... etc.

**Q:** Would you be more prone to litter on campus (e.g., throw items over the Little Mac Bridge into the ravine), if you just witnessed students cheating on an exam? To help answer this question, begin with these: What was the role of environmental influences on disorderly behavior, as demonstrated by Keizer & colleague's (2008) experiment? Does the mere presence of graffiti, littering, or other acts of vandalism trigger disorderly behavior and petty crimes? Be specific. What evidence in the study supports the "cross-norm inhibition effect"? Could fixing the "broken window" (so to speak) fix the problem? Finally, name one change/movement on campus that could potentially reduce an unwanted disorderly student behavior on campus.

**Q:** Would you be more willing to inflict pain on another if requested to do so by a legitimate authority figure (e.g., a professor on campus)? To answer this question, consider that Stanley Milgram in 1961 began a series of experiments to measure the willingness of ordinary people recruited from the local paper to obey an authority figure. Milgram's studies were motivated by the horrific acts of World War II, in which thousands of people complied to do harm to others. Milgram wondered what environmental conditions would compel so many people to participate in the atrocities of Nazi Germany? In his experiments, everyday citizens under the ruse of performing the role of a teacher were asked to punish a learner's memory mistakes. What environmental influences in Milgram's obedience experiments compelled ordinary people to comply with the request to punish the learner? In your answer, explain the "foot-in-the-door" technique and the role of "cognitive dissonance." In proposed follow-up experiments, what changes could be made to the experimental environment to increase, and decrease, compliance with the request to punish the learner? Finally, name one contemporary example of obedience to an authority that resulted in everyday people doing harm to others.

**Week 9 Spring Break (March 3-10)!****Drop Deadline - grade W, March 8**

**Week 10 Social:** *Subtle, unconscious ways in which the social world shapes how we act and think. Zajonc's (1960) concepts of balance, congruity, and dissonance.*

**Readings** (approx. 40 pages):

Chapter 13, Social Psychology (pp. 493-532)

**Lab #9 Facial Recognition (due 3/15)**

**Your Data:**

Condition: \_\_\_\_ [Control / Experimental]

Day 1:

Hits: \_\_\_\_; Misses: \_\_\_\_; False alarms: \_\_\_\_; Correct rejections: \_\_\_\_

Discrimination index (DI): \_\_\_\_

Day 2:

Hits: \_\_\_\_; Misses: \_\_\_\_; False alarms: \_\_\_\_; Correct rejections: \_\_\_\_

Discrimination index (DI): \_\_\_\_

**Q:** Imagine that you are a member of a jury deliberating a criminal case. The only evidence against the defendant is the testimony of an eyewitness who, under cross-examination, reported that the defendant was at the scene of the crime. The night before the jury's final deliberations, you completed this lab assignment (so the relevant research is fresh in your mind). To your fellow jury members, explain the purpose of the Facial Recognition lab. In your oration, explain how "hit", "miss", "false alarms", and "correct negatives" are calculated. Explain the "source monitoring error." Do the experimental findings reveal that "witnesses" in the experimental condition were vulnerable to the "source monitoring error"? How are all these issues related to the criminal case?

**Week 11 Social: *Cognitive processes in prejudice.***  
**In-class Film: *Obedience or Experimenter***  
**Social and Emotional Development**

**Readings** (approx. 31 pages):

Chapter 5, Mechanisms of Motivation and Emotion (pp. 177-188 only)

- Foundations for understanding emotions
- Thinking critically about motivation and emotion

Chapter 12, Social Development (pp. 451-471 only)

- Infancy: Using caregivers as a base for growth
- Helping, comforting, and learning from others
- Parenting styles
- Roles of play in gender development

**Lab #10 First Impressions (due Friday, 3/22)****Your Data:**

Alphas (A)

Popular: \_\_\_\_; Helpful: \_\_\_\_; Honest: \_\_\_\_; Lazy: \_\_\_\_; Unhappy: \_\_\_\_; Irresponsible: \_\_\_\_

Sum of Positive: \_\_\_\_

Sum of Negative: \_\_\_\_

Percent of Negative: \_\_\_\_%

Betas (B)

Popular: \_\_\_\_; Helpful: \_\_\_\_; Honest: \_\_\_\_; Lazy: \_\_\_\_; Unhappy: \_\_\_\_; Irresponsible: \_\_\_\_

Sum of Positive: \_\_\_\_  
 Sum of Negative: \_\_\_\_  
 Percent of Negative: \_\_\_\_%

**Q:** What is an illusory correlation? In the lab, did participants perceive a relation between two variables that were weakly related or not related at all? Participants read about people who belonged to either the majority group or the minority group. Some members of each group did desirable things (e.g., helped a sick friend), while fewer members did undesirable things (e.g., kicked a dog). After forming a first impression of each group, which group was viewed more negatively? More positively? Yet, wasn't the ratio of desirable to undesirable behaviors the same in both groups? What role does minority status (Beta Omicron was the smaller group) have on forming impressions for low frequency events (undesirable behaviors were less common)? Could a contingency table help you spot hidden assumptions and faulty reasoning? Let's find out in class.

**Week 12 Personality: *Cognitive processes in personality.***  
*Do parent-child attachments become part of personality?*  
*Do we have a need to belong?*

**Readings** (approx. 47 pages):

Chapter 14, Personality (pp. 536-554 and pp. 564-573 only)

- Personality as behavior dispositions, or traits
- Personality as adaptations to life condition
- Personality as mental processes II: Social-cognitive views

Chapter 3, Genetic and Evolutionary Foundations of Behavior (pp. 66-86 only)

- Inheritance of behavioral traits
- Evolution by natural selection
- Natural selection as a foundation for understanding

**Lab #11 Implicit Association Test** of your choice at Project Implicit (**due Friday, 3/29**). Go here: <https://implicit.harvard.edu/implicit/>.

**Your Data:** Typically, a one-sentence summary of your attitudes (e.g., "Your data suggest...")

**Lab #12 First-Person Shooter Task** (**due Friday, 3/29**). Go here: <http://psych.colorado.edu/~jclab/FPST.html>.

**Your Data:** A chart of your correct and incorrect responses and average response times as a function of target threat and race.

**Q:** Historically, people's attitudes and beliefs have been measured by self-report. Yet, self-report is vulnerable to social desirability (changing responses in accordance with presentation of one's desired image; Greenwald & Banaji, 1995). For example, individuals may fail to self-report prejudices out of a fear of social reprimand. Self-report also relies on conscious

introspection. Yet, research reveals that many mental processes occur outside awareness (Bargh & Chartrand, 1999). Thus, self-reporting individuals may fail to recognize that they harbor prejudices (Uhlmann, Greenwald, & Banaji, 2009). Instead of relying on self-report, the Implicit Association Test measures automatic, associative processes involved in attitudes and beliefs. Explain. In the Implicit Association Test, what conditions yielded longer reaction times and were more error prone? What conditions yielded faster reactions times and were more accurate? What, then, are reaction times measuring? The Implicit Association Test researchers never explicitly labeled an object, person, or group with derogatory terms. Then, how did the researchers evaluate stereotypic views? In the Implicit Association Test, were your responses difficult to fake or control? What similarities exist between the Implicit Association Test and the Stroop Lab?

**Q:** Based on your understanding of the Implicit Association Test’s findings, can words be “loaded”? For example, should we remove words such as “he” and “chairman” from our language? Defend your answer.

**Q:** Looking back over the entirety of these labs and readings, if you wanted to plan a university-wide intervention at GVSU to reduce, or potentially eliminate a form of bias, what plan of action might you propose to the Student Senate?

### **Week 13 The Biology of Mind and Behavior**

*The neuroscience of reading faces and recognizing words*

**In-class Movie:** *The Man with Two Brains*

**Stress, Health and Coping:** *Can stress increase susceptibility to the common cold?*

**In-class Movie:** *To heal or not to heal*

**Exam 3, Monday, 4/1** (approximately 132 pages of readings)

**(EXAM 4 MATERIAL BEGINS HERE)**

**Readings** (approx. 27 pages):

Chapter 4, The Neural Control of Behavior (pp. 113-118; pp. 130-148 only)

- Methods of mapping the brain’s behavioral functions
- How hormones interact with the nervous system
- Hemispheric differences in the cerebral cortex
- Changes in the brain over time
- Thinking critically about neural control of behavior

### **Lab #13 Word Recognition (due Friday, 4/5)**

NOTE: To fully appreciate the lab, you will view in class the Scientific American Frontiers segment titled, *Man With Two Brains*.

**Your Data:**

Hand Preference: \_\_\_\_ [Right/Left]

Right: \_\_\_\_ (proportion correct); Left: \_\_\_\_ (proportion correct)

### Lab# 14 Mirror Drawing (due Friday, 4/5)

NOTE: Ideally, when tracing the outline of the star, you should trace with your finger as a stylus on a trackpad or touchscreen.

#### Your Data:

Hand Preference: \_\_\_\_ [Right/Left]

Time for Left: \_\_\_\_ sec; Time for Right: \_\_\_\_ sec

**Q for Labs 13 & 14:** Are the two hemispheres of the brain created equal? To answer this question, offer as evidence the results of this week's lab that investigates hemispheric specialization. Which hemisphere should have the advantage in word recognition? Which hemisphere should have the advantage in visual spatial tasks? Include the concepts of "brain lateralization" and "contralateral control" in your answer. To further elucidate the hemispheric specializations of the brain, where is face recognition in our brain? As depicted in the film "*Man With Two Brains*," if a split-brain patient was shown to the right visual field a painting of a face-made-out-of-books by the famous 16<sup>th</sup> Century Italian artist Giuseppe Arcimboldo (who constructed faces from ordinary objects [e.g., flowers; books]), what would this patient report seeing? What would happen if the face-made-out-of-books painting was presented to the patient's left visual field? Based on your answer, what advice would you give product package designers on the placement of verbal and visual elements on product packaging?



**Week 14 Psychological Disorders: *The suffering mind: Forms of mental disorders. Social and genetic influences in schizophrenia and depression***  
**Biology of Mind and Behavior: *Can depression result from a chemical imbalance?***  
**Worksheet: *Diagnosing Psychological Disorders***

**Readings** (approx. 59 pages):

Chapter 15, Psychological Disorders (pp. 577- 622)

### Lab #15 Dichotic Listening (NOTE: requires headphones) (due Friday, 4/12)

#### Your Data:

Hand Preference: \_\_\_\_

Number Correct Left Ear: \_\_\_\_; Number Correct Right Ear: \_\_\_\_

Total Trials Per Ear: \_\_\_\_

**Q:** Imagine you are a clinical psychologist who has been asked to recommend how to appropriately screen, diagnose, and treat soldiers returning from war. You anticipate that depression and post-traumatic psychiatric disorder (PTSD) will be prevalent. Recognizing that a diagnosis of a psychiatric disorder often bears a stigma that may hamper accurate screening (e.g., patient's reluctance to report symptoms), you decide to implement the Dichotic Listening experiment as a diagnostic tool. What advantage might this tool, which relies on automatic processing, have over traditional questionnaire-based screening methods?

**Q:** Using the Dichotic Listening experiment to screen for depression, you will ask soldiers to shadow (repeat aloud) neutral words and phrases presented to their right ear. A depressed soldier, compared to a nondepressed one, will more likely attend to what type of words/phrases presented to his/her left, unshadowed ear? That is, generate five examples of words and/or phrases which will be uniquely distracting to a depressed person when presented in the nonattended ear? To use the Dichotic Listening experiment to screen for PTSD, what five words or phrases would be uniquely distracting to these sufferers when presented to their nonattended ear?

**Tuesday, April 16<sup>th</sup>** is the last day to participate in Enrichment Activity studies (Option 1).

**Week 15 Treatment: *Scientific evidence on the effectiveness of psychological therapy***  
*Can talking about personal problems relieve suffering?*  
*Can relationships protect people from illness?*

**Readings** (approx. 41 pages):

Chapter 16, Treatment of Psychological Disorders (pp. 624-655)

**Q:** Upon making a diagnosis of PTSD, you advocate for internet-based therapy as the preferred method of treatment. Tell the soldiers at least two advantages of Interapy (as described in this week's reading) when compared to traditional methods. Also, explain to these soldiers what are the mechanisms considered crucial to overcoming a traumatic event. Include "habituation," "exposure (self-confrontation)," and "cognitive reappraisal" in your tutorial. Next, explain to the soldiers the treatment protocol (i.e., what Interapy treatment requires patients to do) for all three phases. In your tutorial, tell why it is important to write in first person? Why include sensory details (e.g., smells; sounds) in their writing assignments? How is cognitive reappraisal fostered? Why write a culminating, dignified letter in Phase 3? Finally, based on impressive empirical evidence (Lange & colleagues, 2003), what are the symptoms of PTSD that will likely diminish in frequency following Interapy?

Your esteemed colleagues, the soldiers, and your professor thank you for recommending scientifically-validated therapeutic practices!

**April 19, Classes End: Enrichment Activity Papers (Option 2) can be turned in anytime during the semester until the last day of class.**

**Final Exam Schedule** (approximately 135 pages of readings):

**Section 3 (Class meets 1-1:50 pm): Tuesday, April 23, 2-3:50 pm**

**Section 1 (Class meets 2-2:50 pm): Monday, April 22, 2-3:50 pm**

The mission of the Grand Valley State University General Education Program is to provide a broad-based liberal education experience that fosters lifelong learning and informed citizenship. The program prepares students for intelligent participation in public dialogues that consider the issues of humane living and responsible action in local, national, and global communities.

**PSY 101 Introductory Psychology  
Foundations - Social and Behavioral Sciences**

**Student Learning Outcomes:**

1. Explain how knowledge in the social and behavioral sciences is created and applied
2. Explain major approaches, methods, theories, and substantive findings of the field
3. Weigh and apply ideas and claims from the social and behavioral sciences outside the classroom
4. Critical Thinking – use systematic reasoning to examine and evaluate information and ideas and then synthesize conclusions to propose new perspectives and solutions. Students will:
  - Assess relevant information, perspectives and assumptions.
  - Construct logical conclusions based on reason and evidence.
  - Formulate novel approaches or create innovative interpretations.
  - Evaluate the proposed ideas or approaches.
5. Ethical Reasoning – use a decision-making process based on defining systems of value. Students will:
  - Recognize ethical issues when presented in a complex situation.
  - Demonstrate understanding of key concepts and principles underlying various systems of reasoning.
  - Participate in activities that engage them in ethical reasoning.
  - Demonstrate the ability to deal constructively with ambiguity and disagreement.