

# Introductory Psychology (PSY 101), Winter 2018

## Syllabus and Lab Manual

**Section 1**, 9-9:50 AM, Monday, Wednesday, Friday, 2302 Au Sable Hall

**Section 2**, 10-10:50 PM, Monday, Wednesday, Friday, 2302 Au Sable Hall

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

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

**Office Hours:** 11-11:50 AM on Mondays and Wednesdays; 1-1:30 PM on Fridays, 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. Despite the breadth and diversity of the 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 type of valuable changes should be made in our education? 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>!

*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 the affliction, depression, which 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 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>

Finally, *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.

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

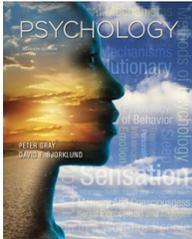
Class information (e.g., syllabus, announcements, laboratory assignments, required readings, lecture slides, and grades) will be posted on Blackboard.

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

**Lab ID: 11584**

**Required book:** Gray, Peter O. & Bjorklund, David F. (2014). *Psychology (Seventh Edition)*.

□ ISBN-10: 1-4641-4195-9 □ ISBN-13: 978-1-4641-4195-9



**Required readings:** 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%   |
| Examination #4                        | 17.5%   |
| Weekly Laboratory Assignment          | 30%   |
| 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 regularly attend 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 in the: 1) lectures, 2) assigned readings, and 3) 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. (Weekly) Laboratory Assignment:**

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. 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 using your own computer, 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.

For each lab, you are expected to understand: the theoretical motivation; methods and procedures including the independent and dependent variables; predicted results (i.e., the experimental hypothesis); and potential limitations. The answers to most 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**”). Finally, you are expected to understand the relationship between the weekly labs and class material.

**Submit your “Laboratory Assignments” following the instructions below to Blackboard by midnight on the due date to earn full credit.** Late labs 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 assignment for your personal records (backup proof of completion; helpful when preparing for exams).

### **Instructions for the Laboratory Assignments:**

1. State the **name of the lab** and the **date of your participation**
2. Provide your **UserID** (e.g., 47981) that was furnished upon completion of the experiment. Careful, this proof of completion pops-up only once from the host site so copy the # immediately.
3. Find, copy, and paste your **summary 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 personal summary results are not provided automatically, use your UserID to look up your results via the *Data* tab at the host site. See the instructions ‘*To Retrieve Data*’ elsewhere in the syllabus. Never report ‘Trial-by-trial data’.
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**.

**Please note:** Participation in all assigned labs is expected. Thus, failure to complete any lab results in a corresponding grade deduction (as shown in the following *Laboratory Assignment Grade*).

**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 or fewer                  | 50%  |

**Instructions for getting started with Online Psychology Lab (<http://opl.apa.org/>):**

1. Working from a GVSU computer lab, look for and open the ‘Application Folder’ on the desktop.
2. Next, open the ‘Psychology Folder’.
3. Launch the Online Psychology Lab (<http://opl.apa.org/>). If working from your own computer, be sure to download Adobe Flash plugin (available at host site) and permit pop-ups from host site before launching a lab.
4. Select ‘Students Begin Here’ and then select assigned experiment.
5. Enter class ID: **11584**
6. Enter requested demographic information (e.g., age, handedness) to proceed with experiment.
7. Upon completion of the experiment, write down the **UserId** (e.g., 47981) furnished upon completion of each experiment.

**To retrieve data, select the ‘Data’ tab on the homepage of the Online Psychology Lab (<http://opl.apa.org/>):**

8. Select ‘data format’ by scrolling down to ‘Microsoft Excel’.
9. Select the name of the experiment by scrolling through options.
10. Select our class **‘Grand Valley State University - 101 & 357, W18’** from the list.
11. Select ‘Download Data’ option. An Excel data file will open in a separate tab.
12. By using the **UserId**, look up your summary data in the Excel data file. Copy and paste your summary data to be submitted with your proof of completion. Never report trial-by-trial data.

#### 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 your lowest exam score. However, failure to do so results in a deduction of 3 percentage points from your highest exam score for every one enrichment activity credit not earned.

| Earned enrichment activity credits | Percentage points applied to an exam score |
|------------------------------------|--|
| 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 one Enrichment Activity. 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, one-hour 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 21<sup>st</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, Jeff Nolan, at [psychlab@gvsu.edu](mailto:psychlab@gvsu.edu).

### **Need Help?**

If you need assistance registering for studies, please contact Jeff Nolan, 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 17<sup>th</sup>**.

## **Option 2: Papers on Research 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 2016 or 2017 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 (**Friday, April 20<sup>th</sup>**).

### **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:**

pp. 1-27, Chapter 1, Foundations for the Study of Psychology

pp. 29-55, Chapter 2, Methods of Psychology

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

**Lab (Friday, 1/12):** In preparation for the weekly laboratory assignments, please familiarize yourself with the **APA Online Psychology website** at: <http://opl.apa.org/> From a GVSU computer lab, open first the “Psychology Folder” on the desktop, and then open the “Online Psychology Lab.”

**Q:** Offer science-based advice on how to efficiently and effectively learn from a textbook based on McDaniel and colleagues’ (2009) research. Explain the 3R method by identifying each of the three steps. What were the control conditions? 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? How can you use, in a 3R-way, the study guides provided for the textbook?

### **Dr. Martin Luther King, Jr. Day Recess on Monday, January 15**

Commemoration week event schedule: <http://www.gvsu.edu/mlk/>

**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:**

pp. A1-A8, Statistical Appendix

pp. 101-126 and pp. 136-143, Chapter 4, Basic Processes of Learning

**Lab #1: Monty Hall (due Friday, 1/19)**

(Select “quit” to complete lab after at least 60 total trials, comprised of 30 “Stay” and 30 “Switch”)

**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?



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 his/her first door-choice, or to **CHANGE** by picking the other (non-revealed) door. If you were a naïve contestant on the show, would you **STAY** with your first door choice or **CHANGE** to another door, if given the opportunity? Amusement guaranteed! (A fun simulation of the lab is available here:

[http://www.nytimes.com/2008/04/08/science/08monty.html?\\_r=1](http://www.nytimes.com/2008/04/08/science/08monty.html?_r=1))

**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?

**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***

**Readings:**

pp. 195-205, Chapter 6, Mechanisms of Motivation and Emotion

pp. 57-85, Chapter 3, Genetic and Evolutionary Foundations of Behavior

**Lab #2 Stroop (due Friday, 1/26) 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)? 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?

**Q:** We like to think that our attitudes and preferences are volitional. That is, we choose to like Charmin, because it is the softest bathroom tissue, and Crest, because it is recommended by 3 out of 4 dentists. But, could our preferences be unknowingly, yet intentionally shaped by implicit forces, such as veiled messages embedded in advertising? What do advertisers covary to implicitly shape attitudes? Give a real-life an example. Include identification of the “unconditioned stimuli” and “conditioned stimuli” in your answer.

**Q:** Biological Preparedness Theory (see textbook) contends that humans may learn some covariations (e.g., taste and nausea) more easily than other covariations (e.g., light and taste). How might this insight be exploited to promote more studious behaviors on a college campus, or reduce prejudice in a community, or design effective, health-campaigns (e.g., dangers of smoking)? Pick one of these issues, and generate a potential example of an attitude-changing commercial that draws both from Biological Preparedness Theory.

**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, 2/2**

**(EXAM 2 MATERIAL BEGINS HERE)**

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

#### **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 Making Lab, how is information organized

in our mental dictionary? What is the role of “context” (i.e., priming) in the lab? What appears to automatically spread in our minds? By the way, why did the experiment include “non-words” (fake words)?

**Q:** How is the Lexical Decision Making Lab related to drug addiction? Be sure to provide a conceptual link between the contingencies in the Lexical Decision Making Lab and the contingencies in addiction. Include the role of external and internal cues, and the concept of “spreading activation” in your answer. How does tolerance develop? Explain the power of context (situational-specificity) in the maintenance of addiction? What are the goals of cue-exposure therapies, and what makes addiction so difficult to treat?

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

**Readings:**

pp. 281-319, Chapter 8, The Psychology of Vision

pp. 245-279, Chapter 7, Smell, Taste, Pain, Hearing and Psychophysics

**Lab #4: Ponzo Illusion (due Friday, 2/9)**

**Your Data:**

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.

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.

**Q:** Is perception veridical (truthful)? 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.

**Q:** You’ve probably heard the old adage, “*Seeing is believing.*” As you look over the lab and the entirety of the assigned reading, tell me, is our mind a truthful representation of reality?

For fun: How well can you judge gender based on motion cues? Go here to find out:

<http://www.biomotionlab.ca/Experiments/BMLmdsex/>. Poke around the website to see other cool demos.

**Week 6 Sensation and Perception: *The Mechanics.***  
**Memory: *Memory feats, foibles, and fallacies.***

**Readings:**

pp. 321-365, Chapter 9, Memory and Consciousness

**Lab #5 Numerical Memory (NOTE: requires headphones) (due Friday, 2/16)**

**Your Data:**

Time: \_\_\_ sec

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

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

**Lab #6 Mental Rotation (due Friday, 2/16)****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 repeatedly “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:** Some memories are described as picture-like. For example, our nation’s tragedy on 9/11 appears to be preserved in our minds as horrifying, almost surreal images. We can introspect about the details of this tragic event, recanting these seemingly “burned-in” pictures in our minds. Consistent with the *Picture in the Head Theory* (Kosslyn, 1994), most people report having a range of experiences stored in their mind as “mental images.” Let’s try to elicit this type of memory in you. How many windows are on the front of your residence? In which hand does the Statue of Liberty hold her torch? To answer these questions, most report “seeing” a visual image. What was your phenomenological experience when answering these questions?

**Q:** Could your memory be wrong regarding the number of windows at your residence and the Statue of Liberty's hand preference? Our subjective experience about the form of a mental image is not necessarily veridical (truthful). For example, if we look at a scene, we see height, width, and depth (3-dimensions). Yet, our retinas (in the back of the eyes) only record 2-dimensions, similar to how only two dimensions are captured by a "flat" photo. The third dimension of depth is restored 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: *Strategies for improvement.***

**Thinking: *Rational and seemingly irrational thought investigated.***

**Readings:**

pp. 369-387, Chapter 10, Reasoning and Intelligence

Strayer, D. L. et al. (2006). A comparison of the cell phone driver and the drunk driver. *Human Factors*, 48(2), 381-391.

**Lab #7: Self-Reference (due Friday, 2/23)**

**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, 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.

**Q:** As a distinguished graduate, your former high school has invited you to give an address to the senior class. You have been asked to share the wisdom that a college education has afforded you (so far). You decide to share the compelling scientific evidence about the dangers of talking on a cell phone while driving. In your oration, deliver your message about safe driving practices, by summarizing (in, perhaps, Myth Buster's style) Strayer and colleagues' research (see book). Anticipate the common misconception that multitasking while driving is commonplace, and therefore, driving and talking on a cell phone poses minimal risk. Were the impairments associated with using a cell phone while driving as profound as those associated with driving under the influence of alcohol? Be sure to note if a hands-free cell phone reduced the risk. How does science offer a higher standard of evidence than do common opinions?

**Week 8 Attention:** *Can you simultaneously talk on that cell phone and safely drive, really?*

### **Exam 2, Wednesday, 2/28**

**(EXAM 3 MATERIAL BEGINS HERE)**

### **Lab #8: Social Balance (due Friday, 3/2)**

#### **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 (see book)? 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 4-11**

### **Drop Deadline with a grade of ‘W’, March 9**

**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:**

pp. 539-570, Chapter 14, Social Influences on Behavior

### **Lab #9: Facial Recognition (due 3/16)**

#### **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 the witnesses were vulnerable to the “source monitoring error? Clarify why the

“witnesses” in the experimental condition more likely to experience the “source monitoring error” than those in the control condition. How are all these issues related to the criminal case?

**Week 11 Social: *Cognitive processes in prejudice.***  
**In-class Film: *Obedience***

**Readings:**

pp. 503-537, Chapter 13, Social Perception and Attitudes  
 pp. 231-241, Chapter 3, Foundations for Understanding Emotions

**Lab #10 First Impressions (due Friday, 3/23)**

**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:** Looking back over the entirety of the readings, identify ways to control (if not necessarily eliminate) potentially unwanted pairings in the mind, like those tapped in the First Impressions Lab and those elicited by broken windows?

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

**Readings:**

pp. 573-594, Chapter 15, Personality  
 pp. 461-468, Chapter 12, Social Development

**Lab #11 Implicit Association Test** of your choice at Project Implicit (**due Friday, 3/30**). Go here:  
<https://implicit.harvard.edu/implicit/>.

**Your Data:** At minimum, a one-sentence summary of your attitudes (e.g., “Your data suggest...”)

**Lab #12 First-Person Shooter Task (due Friday, 3/30)**. Go here:  
<http://psych.colorado.edu/~jclab/FPST.html>.

**Your Data:** A summary 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 racial 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. In the Implicit Association Test, what conditions yielded longer reaction times and were more error prone? Under what conditions were reactions times faster and more accurate? What, then, are reaction times measuring? The researchers who designed the Implicit Association Test never explicitly labeled an object, person, or group with derogatory terms during the experiment. 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?

**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, Wednesday, 4/4**

(EXAM 4 MATERIAL BEGINS HERE)

**Readings:**

pp. 159-164 and pp. 172-177 and pp. 180-192, Chapter 5, Neural Control of Behavior  
pp. 205-230, Chapter 6, Sex: An Example of a Non-Regulatory Drive; The Sleep Drive

**Lab #13: Word Recognition (due Friday, 4/6)**

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, 4/6)**

**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.***  
**Worksheet: *Diagnosing Psychological Disorders***  
***Social and genetic influences in schizophrenia and depression***  
***Biology of Mind and Behavior: Can depression result from a chemical imbalance?***

**Readings:**

pp. 617-659, Chapter 16, Mental Disorders

**Lab #15: Dichotic Listening (NOTE: requires headphones) (due Friday, 4/13)**

**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?

**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:**

pp. 663-692, Chapter 17, Treatment

**Q:** Upon making a diagnosis of PTSD, you advocate for cognitive-behavioral therapy administered via the internet as the preferred method of treatment. Tell the soldiers at least two advantages of cognitive-behavior therapy. 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 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 cognitive-behavior therapy?

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

**Final Exam Schedule:**

**Section 1: Tuesday, April 24, 8-9:50 AM**

**Section 3: Tuesday, April 24, Noon-2:50 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.