

### **Course Information**

**Course Name:** The Science of Psychology

**Course Number:** PSYCUN1001

**Course Section:** 002

**Lecture days:** Mondays & Wednesdays

**Lecture times:** 10:10 – 11:25 AM

**Location:** 501 Schermerhorn

### **Instructor Information**

**Instructor:** Tina Kao, PhD

**Email address:** [tk2436@columbia.edu](mailto:tk2436@columbia.edu)

**Office location:** 500 Schermerhorn

**Office hours:** tbd

### **TA Information**

tbd

For **general course inquiries** (course content, assignment clarifications, due dates, etc.) that are not answered by this syllabus, please post your question to the Canvas Discussions page (you're probably not the only one wondering!).

For **personal inquiries** (missed deadlines, issues uploading assignments, personal concerns, etc.) please email using our TA email address: tbd

### **Required Textbook**

Gazzaniga, Michael S. (2018). "Psychological Science". W.W. Norton & Company. ISBN: 978-0-393-64034-2

### **Course Description**

This course provides a survey to the study of Psychological Science. The topics covered will include an overview of the many different areas of study within the field of Psychology, ranging from topics associated with the biological, cognitive and social perspectives. This course will generally be divided into three modules. For the first module, we will discuss the anatomy and functions of the nervous system. The second module will cover topics associated with cognitions, or the mental processing of information. The third module will cover topics associated with behaviors. This course will emphasize science as a process of uncovering new ideas and empirical results. Recent advances of research within Psychology will also be presented.

### **Course Objectives**

The objectives for each student taking this course will be a bit different. If you are interested in the study of Psychology, this course will provide you with a basic understanding of the concepts and research within this dynamic academic field. This course aims to lay the foundation for those interested in, and/or those with concentrations or majors in Psychology or Neuroscience and Behavior.

Others may be taking this course in order to fulfill a "science requirement" for graduation. If you are one of these students, this course is designed to be accessible to all students, and you may find that quite a bit of Psychological Science applies to other academic fields.

Finally, many of you may be involved in a pre-health track towards a future in medicine, since questions pertaining to Psychology are now part of the MCAT. I will do my best to address MCAT related topics, although it is my hope that you will find the course in its entirety to be an engaging and enriching experience.

## **Course Grading**

Exam 1: 20%

Non-cumulative Exam 2: 20%

Non-cumulative Exam 3: 20%

Experimental Participation (at least 6 credits): 10%

Paper 1: 15%

Paper 2: 15%

The letter grade equivalent for your final grade for the course will be assigned according to the following scale:

97 – 100: A+	89.9 – 87.0: B+	79.9 – 77.0: C+	69.9 – 60.0: D
96.9 – 93.0: A	86.9 – 83.0: B	76.9 – 73.0: C	59.9 & below: F
92.9 – 90.0: A-	82.9 – 80.0: B-	72.9 – 70.0: C-	

## ***Exams***

The exams will be opportunities to demonstrate how well you have learned the material covered in the course. There will be three equally-weighted exams administered in this course. The exams will consist of multiple choice and short answer questions. For all of the exams, you will be responsible for 1) the material covered in lectures and 2) the assigned readings of the textbook.

## ***Participation in Experiments Offered Within the Department of Psychology***

Your experimental participation will consist of you participating in experiments currently offered by the Department of Psychology. All experiments are approved by Columbia's IRB. A representative from the department will be providing more information about your experimental participation. This will occur early during the semester. NOTE: If you are under the age of 18, please contact Professor Kao as soon as possible, as you are not legally permitted to participate in experiments offered by the department.

Each student is required to complete 6 credits worth of experimental participation. Since 1 credit is given to each student for 30 minutes of experimental completion, and since experiments range from 30 – 90 minutes, plan on participating in more than one experiment.

Paper 1 you is based upon your experimental participation (refer to Papers 1 and 2 below). Therefore, you will need to complete at least one experiment prior to October 24 (this is the due date for Paper 1, so allocate yourself enough time between completion of your experimental participation, and the due date of this paper).

The remainder of credits needed fulfill your experimental participation can be completed anytime on, or before, date tbd. No paper is required for this remainder of credits associated with fulfillment of experimental participation, so just enjoy the experience!

## ***Papers 1 and 2***

You are required to write two papers for this course. Both papers should be two-pages, and double-spaced. More specific guidelines will be provided for both Papers 1 and 2. The goals of these papers are for you to demonstrate a fundamental understanding of hypothesis driven research in the academic field of Psychology. A brief description is as follows:

Paper 1 will be based on the experiment you participated in. Note that you need to complete your experimental participation so that you will have enough time to write, and to submit Paper 1 by date tbd. For this paper, you will be expected to write about the basic elements you have learned from the experiment in which you were a participant of (e.g. hypothesis, methods, discussion).

Paper 2 will be an opportunity for you to design and write your own research experiment! You will be expected to incorporate, via an experimental design, any of the materials we have discussed during the course. All of the basic elements of hypothesis driven research (e.g. hypothesis, methods), along with a description of what the predicted results, will be expected for the completion of Paper 2. Again, specific guidelines will be provided for both Papers 1 and 2 as we progress into the semester.

### **Course Policies**

#### ***Absences/Lateness***

Given the size of the class, I will not be taking attendance, nor will class participation account for any portion of your grade. However, be aware that you will be responsible for the materials covered as part of the lectures, much of which may not be contained in the readings of the textbook. In addition, the materials presented during lecture will constitute greater portions of the exams.

If you are unable to attend the days that the exams are scheduled for, please contact Professor Kao as soon as possible. Please plan ahead: having multiple exams on a single day, or vacation plans, are NOT acceptable reasons for needing to reschedule a make-up exam. For the most part, the only acceptable reason for missing an exam is due to serious illness. If such a situation was to arise, you may proceed to receive permission from myself and from your advising dean to reschedule a make-up exam.

Submissions of Papers 1 and 2 past the deadline dates will result in a reduction of 10% of the total score, for each day of late submission.

#### ***Class Etiquette***

Laptops may be used for course specific purposes. However, please be considerate to those around you if you do use a laptop. I understand that there are many gifted people out there who think that they are capable of multi-tasking between in-depth learning of the foundations of cognition and behavior, while checking their 140-character status updates on Facebook or Twitter. If you believe that you are one of these gifted individuals, please be considerate of the fact that checking non-course-related materials on your laptop will be distracting to those sitting around you.

#### ***Academic Integrity***

Academic integrity means presenting only your own work in your assignments. Taking credit for the work of others is a serious violation of the academic community, and anyone found to be guilty of cheating or plagiarizing will receive a zero for that assignment and will be reported to the University. Information on what constitutes a violation of academic integrity can be found in Columbia's Undergraduate Guide to Academic Integrity (<http://www.college.columbia.edu/academics/integrity>).

That said, if you have any questions about how to appropriately cite another's work or build upon someone else's ideas, please feel free to contact Professor Kao, or your TAs, as we'll be happy to help!

#### ***Disability Services***

In order to receive disability-related academic accommodations for this course, students must first be registered with their school Disability Services (DS) office. Detailed information is available online for both the [Columbia](#) and [Barnard](#) registration processes. Refer to the appropriate website for information regarding deadlines, disability documentation requirements, and [drop-in hours](#) (Columbia)/[intake session](#) (Barnard).

For this course, students are not required to have testing forms, or accommodation letters, signed by faculty. However, students must be aware of, and do the following:

1. The Instructor section of the testing form has already been completed, and this testing form does not need to be signed by the professor.

2. The student must complete the Student section of the testing form, and submit this form to Disability Services.

Master forms are available in the office of Disability Services, or online:

<https://health.columbia.edu/services/testing-accommodations>

**Tentative Schedule for Topics and Readings** (allocations of dates for each topic may vary)

You are required to complete the readings associated with the lecture topics before each class date.

<i><b>Date(s)</b></i>	<i><b>Lecture Topic(s)</b></i>	<i><b>Reading(s)</b></i>
Sept 9	Introduction/Overview of Course	
Sept 14, 16	Introduction to Psychology and Research Methods Introduction to Nervous System	Chapters 1, 2
Sept 21, 23	Nervous System and its components: neuroanatomy and mechanisms of action	Chapter 3
Sept 28, 30	Consciousness: circadian rhythm, modulations associated with neuropharmacology Sensation: psychophysics	Chapters 4, 5
Oct 5, 7	Sensation: sensory transduction <b><u>Exam 1 on October tbd</u></b>	
Oct 12, 14	Perception: visual attention	Chapter 5
Oct 19, 21	Learning: conditioning, observational learning and biological basis of learning	Chapter 6
Oct 26, 28	Memory: models of human memory Memory: biological basis of human memory <b><u>Paper 1 due at the beginning of class on October tbd</u></b>	Chapter 7

Nov 2, 4	Language and Intelligence: elements of directive thinking <b><u>No class on November 4</u></b>	Chapters 8, 9
Nov 4, 6	Human Development: physical, cognitive social patterns of the lifespan <b><u>Non-cumulative Exam 2 on November tbd</u></b>	
Nov 9, 11	Motivation: biological motivators, intrinsic vs extrinsic Emotion: physiological aspects of emotions	Chapter 10
Nov 16, 18	Health and Well Being: stress, behaviors associated with coping Personality: the big five, traits	Chapters 11, 13
Nov 23, 25	Social Psychology: group behaviors, group influences <b><u>No class on November 25</u></b>	Chapter 12
Nov 30, Dec 2	Psychological Disorders: classifications, Diagnostic and Statistical Manual of Mental Disorders (DSM)	Chapter 14
Dec 7, 9	Psychological Disorders: treatments of symptoms <b><u>Paper 2 due at the beginning of class on December 9</u></b>	Chapter 15
Dec 14	tbd	
TBD	<b><u>Non-cumulative Exam 3</u></b>	

Note that this syllabus is subject to revisions throughout the semester. Refer to Canvas for updates.