
PSYCHOLOGY OF SENSATION in Spring 2021 (PY3025)

Course Code	PY3025	Professor(s)	Seta Kazandjian
Prerequisites	None	Office Number	PL-103/104
Class Schedule	W: 13:45-16:40 in PL-4	Office Hours	Wednesdays 12h00-13h30 and by appointment
Credits	4	Email	skazandjian@aup.edu
Semester	Spring 2021	Office Tel. Ext.	839

Course Description

COURSE DESCRIPTION:

The Psychology of Sensation provides a comprehensive overview of the fundamental operations by which every human being acquires knowledge about the external world. This course provides a scientific understanding of how and why the human senses affect the way people perceive the world around them - including how perceptions can be distorted by both physical and experiential factors. This course will also offer a practical understanding of the psychology of sensation and perception in daily life and from narratives of people for whom sensation is disrupted.

This course will explore these methodologies, from traditional measures like psychophysics and signal-detection analysis to newer cognitive neuroscience approaches. We will also discuss disorders and diseases of sensation and perception. Here we will examine peripheral problems (such as damage to the eyes) from central problems (such as damage to the brain) and how these problems differ. We will also consider the myriad ways in which research on sensation and perception has applications in many fields, from medicine to civil engineering to sports.

The textbook and lectures will provide the basic principles and theoretical foundations of sensation and perception. In-class and online experiments and activities will provide opportunities to test some of these theoretical principles, while field trips (when possible) will offer a multisensory and interactive exposure to the topics learned. My hope is that this format will introduce the subject to you through several avenues and thus provide a more solid understanding.

Course Learning Outcomes

Have a comprehensive understanding of the basic theories, concepts, key researchers, and psychological mechanisms related to S&P

Learn the historical issues and empirical findings, which have contributed to the state of the art in sensory physiology and perception

Develop an increased awareness of the interaction of anatomical, physiological, perceptual, motivational and cognitive factors in perception.

Gain a better understanding of the relevance of sensation and perception to everyday living.

Develop more understanding of, and compassion towards, people whose perceptual experiences, attitudes and behaviors differ from your own.

Understand the different methodologies utilized in S&P and be able to apply them in class and in your own research.

Develop more effective skills in searching and critically evaluating scientific literature.

General Education

[PLEASE REMOVE THIS SECTION IF THE COURSE DOES NOT FULFILL ANY GLACC REQUIREMENT]

GLACC

The Global Liberal Arts Core Curriculum (GLACC) degree requirements include the following categories of courses:

- Integrative Inquiry (coded CCI)
- Experiential learning (coded CCX)
- Research, Interpretation, and Writing (coded CCE)
- Digital Literacy and Communication (coded CCD)
- Disciplinary Research Methods and Writing (coded CCR)
- Quantitative Reasoning (coded CCM)
- Experimental Reasoning Course with Lab (coded CCS)
- Expression Française (coded FR)
- AUP Capstone (coded CCC)

This course can be used to fulfill the [INDICATE THE REQUIREMENT(S) FULFILLED BY THE COURSE] requirement and as such has the following learning outcomes:

[INDICATE THE GENERAL EDUCATION LEARNING OUTCOMES]

Course Outline

Practice Using Your Other Senses and Dining in the Dark

Part 1: Your Other Senses

Goal: To become more conscious of how much information is provided when one of your “dominant” senses is not used or greatly diminished.

Task: Choose to focus on being blind or deaf. Visit at least two different websites and read about your choice. I have provided some suggestions. You may find other sites if you wish. Please list the web addresses for any sites you visit.

A. Blindness

- <http://listverse.com/2014/06/12/10-incredible-stories-about-blind-people/>
- https://www.youtube.com/watch?v=H4bz4LbDc8A&feature=em-subsub_digest and other Tommy Edison YouTube videos (Google Tommy Edison and select several)
- <https://www.youtube.com/watch?v=qLziFMF4DHA> (series of 5 videos about Ben Underwood) Watch at least one.
- <https://www.fightingblindness.org/beacon-stories>
 1. Spend an hour “observing” without using your eyes -- rely on hearing, smell, touch (if appropriate). During the hour, try to do several different things (e.g., in the past a student had a friend take her to a store where she selected and purchased something--all while not using her vision; another student put on a blindfold immediately upon awakening then went through his morning routine).
 2. After the observation time has elapsed, write down what you were able to notice. Don't forget to talk about each of the other senses you were using. Were there any surprises? How was it trying to figure out what was going on without vision? What information did you pick up on that you may have ignored if you were using your eyes?
 3. Continue writing about your experience. Here are some questions to get your started: How do your experiences correspond to those of the websites? Have your views about blindness changed now that you have read about blindness book and gone for one hour without sight?

B. Deafness

- - <https://www.youtube.com/watch?v=sKIX1Ru4KQ8>
 -
1. Spend an hour “observing” without using your ears -- rely on sight, smell, touch (if appropriate). This can be accomplished by purchasing some earplugs (look for the highest dB reduction you can find -- I have some ear plugs rated at 29 dB reduction).

During the hour, try to do several different things (e.g., some students have attempted watching television, you can also try some of the activities used with

2. After the observation time has elapsed, write down what you were able to notice. Don't forget to talk about each of the other senses you were using. Were there any surprises? How was it trying to figure out what was going on with minimal hearing? What information did you pick up on that you may have ignored if you were using your ears?
3. Continue writing about your experience. Here are some questions to get your started: How do your experiences correspond to those of the websites? Have your views about deafness changed now that you have read about deafness and gone for one hour with minimal sound?

PART 2: Dining In the Dark

Goal: To have students focus on how their senses (excluding vision) are important to eating

Task: Eat a meal completely without vision. After the dinner is over, fill out the questionnaire below:

Dining in the Dark Questionnaire

Instructions: Please rank the senses in terms of how much you relied on each then tell how you used each sense.

Sense	Rank (1-5) <i>1=relied on most; 5=relied on least</i>	How you used the se
Hearing		
Kinesthetic/vestibular		
Smell		
Taste		
Touch		

How enjoyable was dining in the dark compared to dining in the light? (Rank 1 -5 1 = much less enjoyable; 5 much more enjoyable)

What if anything did you differently when dining in the dark than you would normally do when dining the light?

What sensory aspects of the experience did you like most?

What sensory aspects of the experience did you like least?

Would you dine in the dark again? Why?

The Forest Walk Activity

Goal: To reinforce learning about proprioceptive/kinesthetic senses by putting your own system to a test

Note: Be very careful when doing activities with one or both eyes closed.

Dynamic Equilibrium : Fill in the table with a description of any deviation you had while walking under the following conditions.

Action	Status of Eyes	Description of Deviation (if any)
Walk Straight Line	Eyes Open	
	Eyes Closed	
Walk straight line with head tilted to the right	Eyes Open	
	Eyes Closed	
Walk straight line with head tilted to the left	Eyes Open	
	Eyes Closed	

Static Equilibrium: Fill in the time (in seconds) you stayed on your foot without putting your other foot down or needing assistance to stay upright under the following conditions:

Action	Stand on LEFT foot		Stand on RIGHT foot	
Eyes	Eyes Open	Eyes Closed	Eyes Open	Eyes Closed
Body erect				
Head tilted to the right				
Head tilted to the left				

1. Did you walk less straight or stand on one leg longer when your eyes were closed? Why or why not?
2. Did tilting your head influence your ability to walk straight or stand on one leg? What does this tell you about the importance of proprioceptors?

Course Plan (subject to changes)

	Date	Topic / Activity	Chapter	ISLE Assignment (Choose <u>at least 3</u> ISLE activities)	
1	January 20	The Field, The Methods, and The Basics	Chapters 1 & 2	ISLE 1.2. Illustration of Action ISLE 1.7. Fechner's Colors and ISLE 2.2. Method of Limits 2.2a. Dot Threshold (we will go through many together)	
2	January 27	Vision: The Eye and the Brain	Chapters 3 & 4	ISLE 3.1. The Basics of Waves ISLE 3.5. Map Your Blind Spot ISLE 3.6. Photopic vs Scotopic V ISLE 4.1. From Eye to LGN ISLE 4.2. Simple Cells	
3	February 3	Objects and Color Perception	Chapters 1. & 6	ISLE 5.3. Figure-Ground: Symm ISLE 5.6. Illusory Contours ISLE 6.12. Dichromacy ISLE 6.12 (a). Cones Missing in ISLE 6.12 (b). Color Matching in ISLE 6.12 (c). Simulating Dichro ISLE 6.7. Color Aftereffect	
	February 10	No Class			

4	February 17	At-Home Activity Practice Using Your Other Senses and Dining in the Dark		Island of the Colorblind document https://www.youtube.com/user/a	
	February 24	No Class			
5	March 3	Depth, Size and Art	Chapter 7	https://vimeo.com/98471805 OK https://youtu.be/UiA0kZDKS90 ISLE 7.14. Ames Room (choos	
6	March 10	Action and Attention	Chapters 8 & 9	ISLE 8.3. Apparent Motion ISLE 8.10. Motion Aftereffects • ISLE 8.10 Quiz ISLE 8.16. Sprial Staircase • ISLE 8.16 Quiz ISLE 9.2. Feature vs. Conjunction • ISLE 9.2 Quiz ISLE 9.1. Spatial Cuing • ISLE 9.1 Quiz ISLE 9.4. Attentional Blink and P • ISLE 9.4 (a). Attentional • ISLE 9.4 (b). Attentional • ISLE 9.4a-b Quiz	
7	March 17	Museum of Illusions (or Modern Art) Visit (TBC)			

8	March 24	The Auditory Brain and Sound Localization	Chapter 1. 10 & 11	ISLE 10.4. Frequency Response • ISLE 10.4 Quiz ISLE 10.11. The Basilar Membrane • ISLE 10.11 Quiz ISLE 10.15. Transduction and Hearing • ISLE 10.15 Quiz	
9	March 31	Speech and Music Perception	Chapters 12 & 13	• ISLE 12.3. McGurk Effect ◦ ISLE 12.3 Quiz • ISLE 12.4. Familiar vs Unfamiliar ◦ ISLE 12.4 Quiz • ISLE 12.5. Phonemic Recognition ◦ ISLE 12.5 Quiz Choose 3 for Chapter 13	
10	April 7	The Body Senses	Chapter 14	• ISLE 14.1. Action of Mechanoreceptors ◦ ISLE 14.1 Quiz • ISLE 14.4. Somatosensory System ◦ ISLE 14.4 Quiz • ISLE 14.5. Melzack and Wall's Gate Control Theory ◦ ISLE 14.5 Quiz	
11	April 14	The Body Senses Guest Lecturer		The Man Who Lost His Body does not feel pain https://www.dailymotion.com/video/x7v3v3v	

12	April 21	The Chemical Senses	Chapter 15	• ISLE 15.1. Brain Area for Taste ◦ ISLE 15.1 Quiz • ISLE 15.2. Posterior Piriform Cortex ◦ ISLE 15.2 Quiz https://www.npr.org/sections/the-salt/s/2015/04/21/398888800/how-hot-sauces-perk-up-your-food https://youtu.be/Wa_WfcuE1a0 https://youtu.be/rwj83T7hC0 https://gastropod.com/crunch-crunch/	
13	April 28	Forest Walk		Pleasure and Pain	https://ihavenotv.com/pleasure-pain/
14	May 5 18h30 – 21h00	Final Exam		Cumulative (1- 15) Nothing new will be on the final.	

Textbooks

Title	Author	Publisher	ISBN	Required
Sensation and Perception	Schwartz and Krantz	Sage	9781506383910	No

Attendance Policy

PY3025 ATTENDANCE POLICY: Attendance is key. During all online classes, please keep your cameras on during the lecture or discussion portions of class. This is a requirement of the class. If you are participating asynchronously (due to illness or significant time zone issues), then I expect you to participate through the chat features, the Teams platform, and sending in video recordings of yourself asking about or commenting on course topics. I encourage you to try your best to join class synchronously as often as possible.

AUP ATTENDANCE POLICY:

Students studying at The American University of Paris are expected to attend ALL scheduled classes, and in case of absence, should contact their professors to explain the situation. It is the student's responsibility to be aware of any specific attendance policy that a faculty member might have set in the course syllabus. The French Department, for example, has its own attendance policy, and students are responsible for compliance. Academic Affairs will excuse an absence for students' participation in study trips related to their courses.

Covid-19 temporary amendments:

Students studying at The American University of Paris are still expected to attend ALL

scheduled classes. Due to the Covid-19 pandemic, students will have the option of attending classes remotely when special circumstances apply. For example, when students are placed under quarantine by the French authorities or by their doctor, or when students present symptoms of Covid-19 and are directed, by their doctor or the AUP Health Office, to remain home. It is still the student's responsibility to be aware of any specific attendance policy that their professor might have set in the course syllabus. In particular, Students attending remotely from distant Time Zones should check with their professors about the specific attendance policy for remote learners.

Attendance at all exams is mandatory. In all cases of missed course meetings, the responsibility for communication with the professor, and for arranging to make up missed work, rests solely with the student.

Whether an absence is excused or not is ALWAYS up to the discretion of the professor or the department. Unexcused absences can result in a low or failing participation grade. In the case of excessive absences, it is up to the professor or the department to decide if the student will receive an "F" for the course. An instructor may also recommend that a student withdraw, if absences have made it impossible to continue in the course at a satisfactory level.

Students must be mindful of this policy when making their travel arrangements, and *especially during the Drop/Add and Exam Periods*.

ENGLISH LANGUAGE PROFICIENCY STATEMENT:

As an Anglophone university, The American University of Paris is strongly committed to effective English language mastery at the undergraduate level. Most courses require scholarly research and formal written and oral presentations in English, and AUP students are expected to strive to achieve excellence in these domains as part of their course work. To that end, professors include English proficiency among the criteria in student evaluation, often referring students to the university Writing Lab where they may obtain help on specific academic assignments. Proficiency in English is monitored at various points throughout the student's academic career, most notably during the admissions and advising processes, while the student is completing general education requirements, and during the accomplishment of degree program courses and senior theses.

Grading Policy

ASSESSMENT and GRADING:

You will be assessed in several ways, including essay writing, experiments/activities, and discussion work. Put simply, there are two basic skills you need to be a good psychologist, and these are what I will look for when assessing you:

- Your knowledge and understanding of psychological theories, concepts, and studies
- Your evaluation of a psychological theory/argument/study

GRADING: Final grades for this course will be determined by the following formula:

20 % Biweekly Quizzes based on textbook and lecture

20 % ISLE Experiments

30 % Reaction Essays & Class Discussion

30 % Cumulative Final Exam - Finals Week

92-100% = A

90-91.9% = A-

88-89.9% = B+

82-87.9% = B

80-81.9% = B-

78-79.9% = C+

72-77.9% = C

70-71.9% = C-

68-69.9% = D+

60-67.9% = D

59.9% or less = F

Biweekly Quizzes: To help build learning over time and encourage students to not cram and then forget everything afterwards, we will have quizzes every two weeks on the basic principles of sensation and perception. These quizzes will be based on the material presented in the textbook and the lecture notes (including PowerPoints on Blackboard). The quiz will be multiple choice, diagrams to complete, or short answer. They will take 20-30 minutes to complete maximum and administered through Blackboard. Each quiz can be attempted up to 3 times. The highest score from each quiz will be counted toward your final grade.

Reaction Essays & Class Discussion: There are three “big” activities that aim to merge the inside and the outside of the classroom. These are: Practice Your Other Senses/Dining in the Dark, Museum Visit, and Forest Walk. A 2-page reaction essay is requested for each of these activities. The reaction essay should be an intellectual exercise that includes a discussion about how the activity relates to the course topics (a sensory system, perception, etc), what the activity allowed you to discover and learn, and what questions it may have left you with. Specific instructions will be provided when possible

(see addendum for “Practicing Other Senses” and “Forest Walk” Instructions).

Online Experiments and Activities:

Specific experiments and “small” activities will be assigned through ISLE. **Interactive Sensory Laboratory Exercises (ISLE)** is a set of activities, experiments, and illustrations that allow students to engage the concepts of *Sensation & Perception* by interacting with the phenomena discussed in the book, including anatomical diagrams, visual illusions, auditory illusions, and musical selections. Access the full range of ISLE activities within the Interactive eBook or the website <https://isle.hanover.edu> You are welcome to do as many activities as you like, but only a select number will be assigned toward your grade.

These “small” activities and its accompanying quiz should be completed during the designated class time. The completed quizzes should be submitted through BlackBoard. They are not graded for accuracy (only for completion).

Final Exam: A cumulative final exam made up of multiple choice and short answer questions will be taken through BlackBoard on Final Exam day (May 5). There will be nothing *new* on the final exam. If you have taken the biweekly quizzes and ISLE activity quizzes, you should be well prepared for the final exam with a typical review. You should not be reading and cramming the

semester in one last week.

Student Resources: There are excellent tools available at <https://edge.sagepub.com/schwartz/student-resources>, which includes an Action Plan for each chapter to keep your studying plans structured, eFlashcards and practice quizzes. They also include supplemental video and audio files and journal articles to help if you want to learn more.

Other

Course Expectations And Rules:

Read and/or view assigned material before coming to class. This course meets only once per week, which makes each class very important. Not only do I strongly recommend attending all classes, but it is also in your best interest to come to the classes prepared so that you may ask for clarification of material. In class, we will not simply present the material from the text but examine the material. This material is dense, and the goal of the lectures is to answer your questions not to present the information for the first time. Thus, familiarity with the material **prior to class** is vital.

Check your AUP mail, Teams, and Blackboard sites regularly for announcements.

No Phones During Class (for in-person classes) You may use laptops and tablets for note taking or assigned activities only, but please put your phones away and on silent.

Turn assignments in on time. If 2020 has taught us anything, it is that things can come up last minute that will inhibit us from completing tasks, turning in assignments on time, studying as planned, etc. Please think ahead, plan, and don't leave work for the last minute.

Participation in Class. For this course to be interesting and educational, class discussion is key. We need all of you to ask questions, suggest ideas and critique other people's ideas, including mine. Engagement is a key component to learning and will be a core measure toward your grade.

Cameras on. During the online portion(s) of this course, please keep your cameras on. Seeing everyone's face really changes the mood and experience of the class for everyone

involved. If you are really in a low Wi-Fi situation, we can discuss other options, but this is an important ask on my part.

Seek help as you need it. If you are having trouble seek help from me and/or fellow students. Seek the help as soon as the trouble begins.