Teaching Portfolio

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Table of Contents

Documentation of Teaching	3
Teaching Mission	3
Diversity and Inclusion	3
Illusions and the Brain (Winter 2021, 164 students)	4
Course Descriptions	
Student Evaluations and Comments	4
Visual Cognition (Fall 2020, 50 students)	5
Course Descriptions	5
Student Evaluations and Comments	5
Data and Model Programming for Comp. Social Science (Sum 2020, 11 students)	6
Course Descriptions	6
Student Evaluations and Comments	6
Data and Model Programming for Comp. Social Science (Spring 2020, 42 students)	7
Course Descriptions	7
Student Evaluations and Comments	7
Cognitive Psychology (Spring 2017, 139 students)	9
Course Descriptions	9
Student Evaluations and Comments	9
Cognitive Psychology (Fall 2016, 72 students)	10
Course Descriptions	10
Student Evaluations and Comments	10

Documentation of Teaching

Below are course descriptions and student ratings and comments regarding my instruction for the courses where I have served at the instructor: Intro to Cognition (Pennsylvania State University Fall 2016, Spring 2017), Data and Model Programming for Computational Social Sciences (University of California San Diego Spring 2020, Summer 2020), and Visual Cognition (University of California San Diego, Fall 2020). I am currently instructing Illusions and the Brain (University of California San Diego Winter 2021) and will be teaching Data and Model Programming for Computational Social Sciences (University of California San Diego Spring 2021).

Teaching Mission

I always valued educators who were dually passionate about both the subject matter and teaching. As an instructor, I strive to create similar interest and engagement in a positive, constructive environment, with the goal of helping students to learn and thrive. In my experience, active student engagement in class is crucial in achieving this end. I continually turn to the literature and apply findings from research on human learning to improve my courses, such as placing content within a broader context and by providing a variety of demonstrations to engage and encourage participation.

Diversity and Inclusion

In the classroom, my goal is to create an equitable environment for all students of different races, ethnicities, genders, sexual orientation, and ability. This principle shapes how I mentor students and interact with colleagues.

With regard to course content, psychological research too often operates under the assumption that it is acultural or experienced equally by everyone. For example, the Müller-Lyer illusion, which is commonly portrayed as two arrow-like figures of the same length that can be perceived as different lengths, was considered and still sometimes presented as a given phenomenon for all people, irrespective of culture. However, this illusion is not experienced by all peoples and may simply have originated from modern environments (Segall et al., 1966). These findings importantly challenge the belief of psychological universals and underscore the integral intersection of culture and cognitive psychology.

In addition, I understand that the cost of textbooks can be exorbitant, which places a burden on students, especially those from low socioeconomic backgrounds. More recently, I have used free resources (e.g., open access articles) instead textbooks, which attenuates financial burdens.

Illusions and the Brain

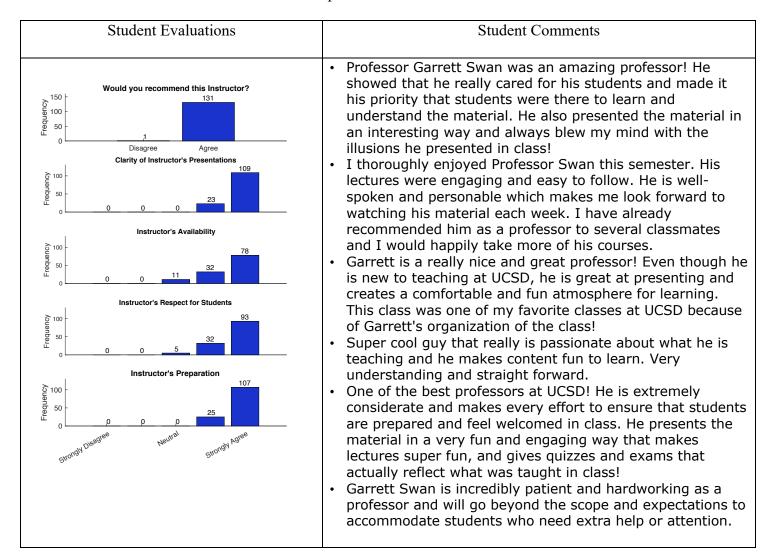
Instructor (164 students)

Winter Quarter 2021

University of California, San Diego

Course Description: This course provides an examination of visual, auditory and tactile illusions and examines how they arise from interactions between perceptual and cognitive systems.

Illusions and the Brain is an upper level Cognitive Psychology course. Given the Covid-19 pandemic, the course was instructed remotely, with lectures being offered over zoom and recording of those lectures uploaded after class to accommodate students who may have not be able to join the synchronous lectures. In addition to weekly quizzes, students are tasked with creating a video presentation that demonstrates their favorite illusion and provides a possible explanation for why that illusion occurs. Following submission, videos will be posted on a discussion board for students to view and provide feedback.



Visual Cognition

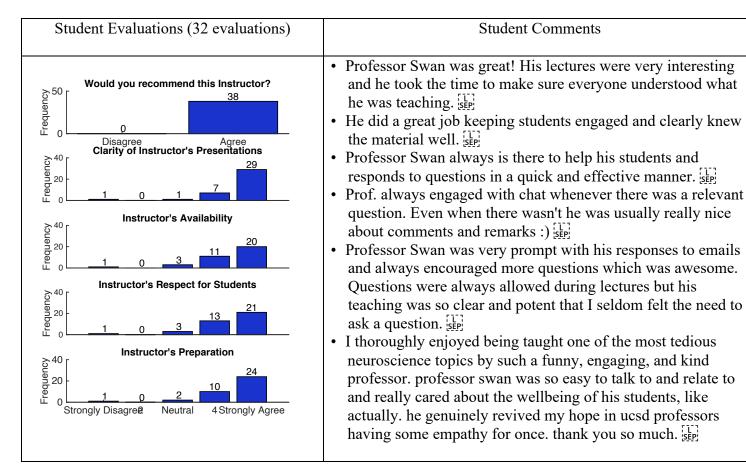
Instructor (50 students)

Fall Quarter 2020

University of California, San Diego

Course Description: This course provides an overview of high-level visual perception, and of how visual perception intersects with attention, memory, and concepts. Topics may include an introduction to the visual system with an emphasis on high-level visual regions; object recognition, face recognition, scene recognition and reading; visual attention, including eye movements during scene perception; and visual working memory.

Visual Cognition is an upper level Cognitive Psychology course. Given the Covid-19 pandemic, the course was instructed remotely, with lectures being offered over zoom and recording of those lectures uploaded after class to accommodate students who may have not be able to join the synchronous lectures. In addition to weekly quizzes, students were also tasked with writing a paper requiring them to do a literature review.

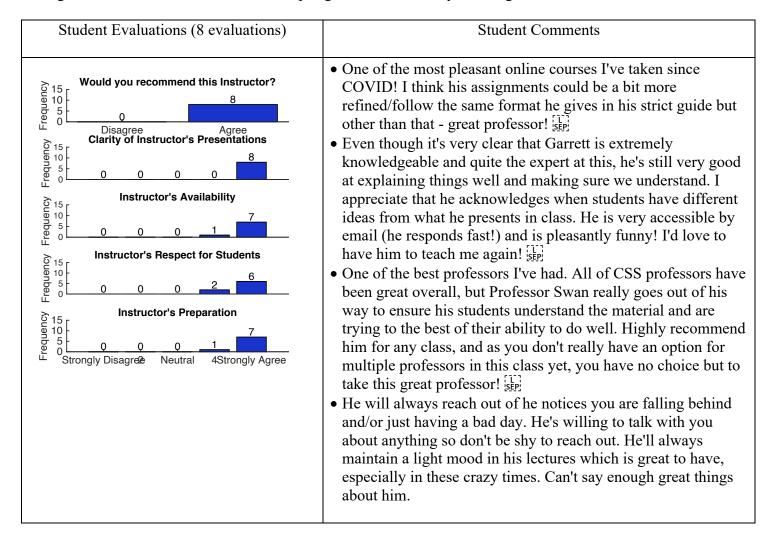


Data and Model Programming for Computational Social Science

Instructor (11 students) Summer Session II 2020 University of California, San Diego

Course Description: This course explores the use of computational methods across the social sciences. Topics include thinking like a computational social scientist; research design for big data; legal and ethical dimensions of Computational Social Science (CSS). Students will implement demonstrations of these methods in Python through data visualization, selection, and modeling. At the end of the course you should have a good understanding of how to visualize, clean, and organize data for data analysis and modeling. Throughout the course, we will utilize NumPy and Pandas and will cover Matplotlib, Seaborn, and Scikit packages as well, which all commonly used in data science. By the end of the course, you will be able to do basic data science from a variety of data sources.

I adapted material from the first time I taught this course (Spring 2020). I improved the lectures and problem sets given feedback from the students in Spring 2020 and from my teaching assistant.



Data and Model Programming for Computational Social Science

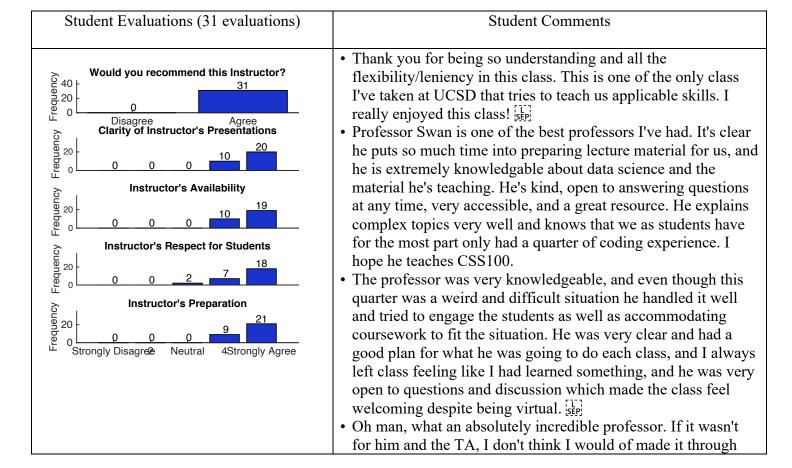
Instructor (42 students)

Spring Quarter 2020

University of California, San Diego

Course Description: This course explores the use of computational methods across the social sciences. Topics include thinking like a computational social scientist; research design for big data; legal and ethical dimensions of Computational Social Science (CSS). Students will implement demonstrations of these methods in Python through data visualization, selection, and modeling. At the end of the course you should have a good understanding of how to visualize, clean, and organize data for data analysis and modeling. Throughout the course, we will utilize NumPy and Pandas and will cover Matplotlib, Seaborn, and Scikit packages as well, which all commonly used in data science. By the end of the course, you will be able to do basic data science from a variety of data sources.

This is the second course in a new minor in Computational Social Sciences at UCSD. This was a brand new course. I designed all of the course materials and assessments and had to immediately adapt to remote instruction as a result of the Covid-19 pandemic closing campus only a couple weeks before the quarter began. I taught almost exclusively by coding on a shared screen using google colab so that students could program along with me to solve different computational problems. Lectures were given synchronously and then uploaded after class to accommodate students' schedules. Every week, students completed problem sets to solve real world data science problems using python.



	this course. He brings in guest speakers, takes the time to answer all of the student's questions whether it would be through text or voice, and is also very great at just making things a little more interesting! Definitely recommend him and wish I could have him for CSS 100!
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Introduction to Cognition

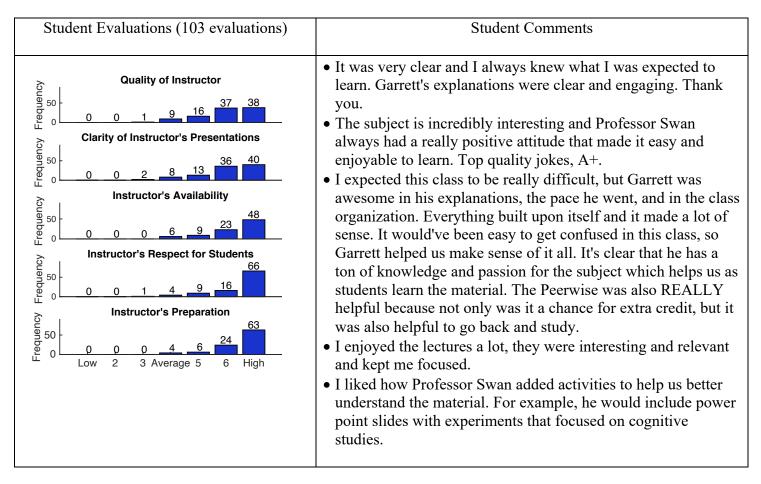
Instructor (139 students)

Spring Semester 2017

The Pennsylvania State University

Course Description: The purpose of this course is to provide a detailed understanding of the processes involved in human cognition. In other words, you'll be learning how the human mind works. You will probably find this to be a fascinating topic, as we will learn about how you see the world, remember events from your life, and make important decisions. We will also discuss higher level forms of cognition, such as reasoning, decision making, and even morality. Efforts to understand these concepts have been at the forefront of philosophy for millennia, and now that we have the scientific tools to study human thought, the answers we have been discovering are a fascinating revelation of our own selves. This course will change the way you view your own memories, actions, and decisions.

I adapted material from the first time I taught this course (Fall 2016). I improved the lectures by increasing the clarity of some of the sections. I also utilized Peerwise and IF-AT cards again to engage with students.



Introduction to Cognition

Instructor (71 students)

Fall Semester 2016

The Pennsylvania State University

Course Description: The purpose of this course is to provide a detailed understanding of the processes involved in human cognition. In other words, you'll be learning how the human mind works. You will probably find this to be a fascinating topic, as we will learn about how you see the world, remember events from your life, and make important decisions. We will also discuss higher level forms of cognition, such as reasoning, decision making, and even morality. Efforts to understand these concepts have been at the forefront of philosophy for millennia, and now that we have the scientific tools to study human thought, the answers we have been discovering are a fascinating revelation of our own selves. This course will change the way you view your own memories, actions, and decisions.

Material was instructed through lectures. In addition to the lectures, I utilized a couple of innovations to engage students and encourage learning. Peerwise is a website where students can upload their own multiple choice questions, answer questions generated by other students, and then provide feedback about those questions. By generating a question, a student must not only know the right answer, but also wrong answers. I also utilized Immediate Feedback Assessment Technique (IF-AT) cards. An individual card resembles a scratch-off card, with answer choices from A to E for 10 questions. The correct answer for each question corresponds to a star located underneath the scratch off material. Students really enjoy working as a team to answer the questions and some have even formed their own study group as a result of being paired together.

