PSYC 3985 SENSATION AND PERCEPTION (3 credit hours)

Elmira College

SPRING 2025

Required Text:
1. Goldstein, E. B., & Brockmole, J. R. (2017). *Sensation and Perception (10th ed.)*. Cengage Learning.
2. Wolfe, J. M., Kluender, K. R., Levi, D. M., Bartoshuk, L. M., Herz, R. S., Klatzky, R. L., & Merfeld, D. M. (2021). *Sensation & perception (6th ed.)*. Oxford.
Supplemental readings might be included to illustrate or expand on textbook readings.

Pre-requisites: PSYC 1040 Foundations of Psychology; PSYC 3900 Introductory Cognitive Psychology

Course Description
This course is designed to provide you with a comprehensive understanding of how we perceive and interpret the world around us. Perception is a fundamental aspect of human experience, shaping our thoughts, emotions, and behaviors. By exploring the intricate mechanisms and processes involved in perception, you will gain insights into the complex interplay between our senses, brain, and environment. Topics include neural processing, perceptual organization, attention, illusions, multisensory integration, and individual/cultural differences in perception.

Course Objectives and Goals
➢ Understand the key concepts, theories, and models that explain how perception works, including sensory systems, attention, and cognitive processing.
➢ Develop and apply critical thinking skills in the context of perception and cognition.
➢ Explore the specific functions of vision, hearing, touch, taste, and smell, examining how each modality contributes to our overall perception of the world.
➢ Utilize the psychological insights derived from the study of perception and cognition to inform a wider range of contexts, encompassing daily life, societal dynamics, and technological applications.

Evaluation of Performance
Your grade will be based upon your performance on exams, assignments, and participation.

4 Assignments	20%
2 Quizzes	20%
2 Term Papers	15%
Midterm Exam	25%
Final Exam	20%

Total   100%

Grades will be assigned as follows:

A	93% and above	B-	80 - 82%	D+	67 - 69%
A-	90 - 92%	C+	77 - 79%	D	63 - 66%
B+	87 - 89%	C	73 - 76%	D-	60 - 62%
B	83 - 86%	C-	70 - 72%	F	59% or below

Withdrawal Policy: Please see Elmira College Bulletin for information on this policy.

Academic Honesty: Please read the section on Academic Honesty in the **Code of Conduct**. Briefly, academic dishonesty includes: cheating, fabrication, facilitating academic dishonesty, and plagiarism. Ask if you have any questions on whether something constitutes as academic dishonesty. All work must be original and new. Past assignments from current or other courses will not be accepted. Academic dishonesty will not be tolerated. It will result in zero on the assignment, and a report will be filed with the school. Continued practice will result in failure of the class. Institutional penalties may also apply with repeated acts of academic honesty.

Student Responsibility:
- It is your responsibility to keep track of assignments and due dates.
- You should ask questions concerning assignments and lectures, if you need any clarifications.
- If you are struggling in class, have concerns, and/or unsure about expectations, please stop by during office hours or make an appointment for another time.

Tentative Schedule of Topics

Topic	Modules	Tasks & Evaluations
Introduction to Perception ● Definition and importance of perception ● Historical perspectives and key figures in the field of perception ● Overview of the course structure and learning objectives	Module 1	
Sensory Systems and Perception ● Basic anatomy and physiology of sensory systems ● The role of receptors and neural pathways in perception	Module 2	Assignment 1
Bottom-Up and Top-Down Processing ● Understanding bottom-up processing: From sensory input to perception ● Exploring top-down processing: The influence of context, expectations, and prior knowledge ● The interplay between bottom-up and top-down processing in perceptual experiences	Module 3	
Perceptual Phenomena and Illusions	Module 4	Quiz 1

• Types of perceptual illusions and their causes • Case studies and hands-on activities to explore optical, auditory, and tactile illusions • The role of perceptual illusions in understanding the limitations and biases of perception		
Neural Processing • Key concepts including biological neural processing, artificial neural processing • Challenges and applications	Module 5	Assignment 2
Perception and Cognition • The relationship between perception and higher cognitive processes • Memory systems, oral and written language perception and production, reasoning and creativity • The role of perception in cognitive development and learning	Module 6	
Cultural Differences in Perception • How cultural background shapes visual, auditory, and spatial perception • Cultural norms, prejudice and stereotypes • Cross-cultural studies in perception	Module 7	Term Paper 1
Light, Color and Eye • Basic principles of light, color and visual perception and their relations • The physiological and psychological effects of light and the interaction of light with human behavior	Module 8	Midterm Exam
Spatial Vision • The integration of various visual cues, such as depth perception, visual illusions, and motion perception • Applications of spatial vision in fields	Module 9	
Measuring Perception • Common methods for measuring visual Acuity • Applications in Psychology and Neuroscience	Module 10	Assignment 3
Object Recognition • Basic Knowledge about variability in object appearance, contextual information and ethical and social implications • Applications of object recognition, technique challenges and solution	Module 11	Quiz 2
The Auditory System • Neural processing mechanisms • Impact of hearing loss on neural processing	Module 12	

● Solutions and advances		
Time, Cycle, Motion, and Event Perception ● Mechanisms understanding ● Implications for understanding human cognition and behavior	Module 13	Assignment 4
Attention and Perception ● Theories of attention and their impact on perception ● Selective attention, attentional filtering, and perceptual accuracy	Module 14	
The Ethics of Manipulating Perception ● The moral implications of using perceptual psychology in advertising, politics, and technology ● Ethical considerations, informed consent, and manipulation ● The ethical issues and solutions	Module 15	Term Paper 2
Applications of Perception in Real-World Contexts ● Perception in human-computer interaction: Designing user-friendly interfaces ● Perception in psychology: Clinical applications and therapeutic interventions	Module 16	Final Exam