NEW YORK CITY COLLEGE OF TECHNOLOGY
The City University of New York School of Arts & Sciences
Department of Social Science Course Outline

Course code: PSY 3407
Course title: Psychology of Visual Perception
Class hours/credits: 3 class hours, 3 credits
Prerequisite: PSY 1101, ENG 1101
Pathways: Scientific World

Catalog Description: The physiological, psychophysical and cognitive perspectives that guide the contemporary understanding of human visual sensation and perception are explored. Students are provided with the opportunity to test various theoretical perspectives covered by using the experimental method. Topics covered include object perception, depth perception, motion perception, size perception and color perception.

RECOMMENDED TEXTBOOK (S) and/or MATERIALS*
• Sensation and Perception by E. Bruce Goldstein, Wadsworth Publishers
    • Materials: Base-out prism glasses (lorgnette) for stereoscopic viewing (supplied by the College). Films of Colin Blakemore, PhD demonstrating the neurophysiology of the visual system
The textbook/materials used in a particular section will be chosen by the instructor.

COURSE INTENDED LEARNING OUTCOMES/ASSESSMENT METHODS

Learning outcomes	Assessment Methods*
Students should be able to identify and define basic neuronal functioning including concepts such as excitation, inhibition, and the action potential.	On exam, answer questions regarding electrochemical communication within and between neurons, neurotransmitters, receptors and basic electrophysiology.
	On exam, label diagram of neuron including dendrites, cell body, axon, terminal buttons.
	On exam, label intraneuronal oscilloscope recording including resting potential, threshold, action potential, and excitatory vs. inhibitory postsynaptic
Students should have an understanding of the neuroanatomy of the visual system.	On exam, label diagram showing major visual pathways and centers including the optic chiasm, superior colliculus, lateral geniculate nucleus of the thalamus, the occipital primary visual cortex, the inferior temporal lobe, and the posterior parietal lobe.
Students should have a working knowledge of psychophysics and signal detection theory.	On exam, answer questions regarding methods of testing absolute threshold, difference threshold, and signal estimation.

	On exam, label diagrams including decision outcome matrix (hits, misses, false alarms, correct rejections, signal and noise distributions, liberal and conservative response bias(β), and sensitivity (d').
Students should be able to recognize gestalt grouping principles.	On exam, identify visual examples of gestalt principles including pragnanz, proximity, similarity, connectedness, closure, and symmetry.
Students should be able to recognize monocular depth perception(spatial) cues.	On exam, identify visual examples of depth cues of interposition, texture gradient, linear perspective, shadowing, absolute and relative size, and atmospheric perspective(clarity).
	On exam, answer questions regarding motion parallax.
Students should be able to understand the basic mechanisms of perceptual(especially lightness) constancy in three dimensional objects.	On exam, label luminance vs. illuminance vs. reflectance images, and identify various line junctions such as Xjunctions as well as dihedral('JI), trihedral(Y) junctions, "T" and "L" junctions.
Students will understand the mechanisms of various visual illusions, including the Muller-Lyer, Ponzo, twisted cord, anomalous contour, size constancy, and moon illusions. The Ames Room, impossible figures, and checker-shadow illusions will also be explored and explained.	On exam students will identify visual examples of visual illusions and answer questions about their mechanisms.
Students will understand the normal and pathological causes and manifestations of both simple and complex visual hallucinations.	On exam, students will identify visual examples of both simple and complex hallucinations, answer questions about their etiologies, and answer questions about the areas of the visual systems associated with their occurrence.

Pathways Scientific World Leaning Outcomes

1.	Demonstrate how tools of science, mathematics, technology, or formal analysis can be used to analyze problems and develop solutions.
2.	Articulate and evaluate the empirical evidence supporting a scientific or formal theory.
3.	Understand the scientific principles underlying matters of policy or public concern in which science plays a role.

GENERAL EDUCATION LEARNING OUTCOMES/ASSESSMENT METHODS

Learning outcomes	Assessment Methods*
KNOWLEDGE: Develop an introductory knowledge of psychology methodology and concepts.	Exam items, assignments, in-class discussion, in-class activities, Discussion Board.
SKILLS: Develop and use the tools needed for communication, analysis and productive work.	Exam items, assignments, in-class discussion, in-class activities, Discussion Board.
INTEGRATION: Work productively within and across disciplines.	Exam items, assignments, in-class discussion, in-class activities, Discussion Board.

VALUES, ETHICS, AND RELATIONSHIPS: Understand and apply values, ethics, and diverse perspectives in personal, civic, and cultural/global domains.	Exam items, assignments, in-class discussion, in-class activities, Discussion Board.

* may vary slightly per instructor to suit their own needs

Capstone Course Statement:

This course fulfills the LAA/LAS Associate Capstone requirement, though it can also be taken for other requirements and electives. The City Tech LAA/LAS Associate Capstone is designed for students entering their second year in the program. LAA/LAS Associate Capstone courses are meant to prepare students to continue their studies in a bachelor's degree, third-year, or junior, level. In addition, Associate Capstone courses are meant to help students develop an awareness of the importance of knowledge, values and skills developed in general education courses; and to integrate this knowledge, these values and these skills into their advanced academic study and professional careers. Please ask the instructor if you have any questions about what the LAA/LAS Associate Capstone requirement entails.

ASSIGNMENTS and other course requirements*

Item	Points per	Total Points	Weight
2 Exams	100	200	33.3%
Final Exam	200	200	33.3%
Assignments	25	100	16.7%
Research Project	100	100	16.7%
Total		600	100%

*This is a guideline or sample that instructors may choose to select or adapt.

METHOD OF GRADING
New York City College of Technology's official grading scale will be used: 93-100%(A), 90-92.9%(A-), 87- 89.9%(B+), 83-86.9%(B), 80-82.9%(B-), 77-79.9%(C+), 70-76.9%(C), 60-69.9%(D), 59.9% and below(F).

ATTENDANCE POLICY

It is the conviction of the Department of Social Science that a student who is not in a class for any reason is not receiving the benefit of the education being provided. Missed class time includes not just absences but also latenesses, early departures, and time outside the classroom taken by students during class meeting periods. Missed time impacts any portion of the final grade overtly allocated to participation and/or any grades awarded for activities that relate to presence in class.

Instructors may including a reasonable "Participation" grade into their final grade calculations for this course.

ACADEMIC INTEGRITY POLICY

Students and all others who work with information, ideas, texts, images, music, inventions, and other intellectual property owe their audience and sources accuracy and honesty in using, crediting, and citing sources. As a community of intellectual and professional workers, the College recognizes its responsibility for providing instruction in information literacy and academic integrity, offering models of good practice, and responding vigilantly and appropriately to infractions of academic integrity. Accordingly, academic dishonesty is prohibited in The City University of New York and at New York City College of Technology and is punishable by penalties, including failing grades, suspension, and expulsion. The complete text of the College policy on Academic Integrity may be found in the catalog.

STUDENT ACCESSIBILITY

City Tech is committed to supporting the educational goals of enrolled students with disabilities in the areas of enrollment, academic advisement, tutoring, assistive technologies, and testing accommodations. If you have or think you may have a disability, you may be eligible for reasonable accommodations or academic adjustments as provided under applicable federal, state, and/or city laws. You may also request services for temporary conditions or medical issues under certain circumstances. If you have questions about your eligibility and/or would like to seek accommodation services and/or academic adjustments, please email the [Student Accessibility Center](#).

COMMITMENT TO STUDENT DIVERSITY

The Department of Social Science complies with the college wide nondiscrimination policy and seek to foster a safe and inclusive learning environment that celebrates diversity in its many forms and enhances our students' ability to be informed, global citizens. Through our example, we demonstrate an appreciation of the rich diversity of world cultures and the unique forms of expression that make us human.

SAMPLE SEQUENCE OF TOPICS AND TIME ALLOCATIONS*

Week	*Topic*
1	*Basic neuronal functioning*
2	*Neuroanatomy of the Visual System*
3	*Psychophysics*
4	*Anatomy of the Eye*
5	*Neurophysiology*

guidelines from which instructors may select or adapt

Written by: Maria Pagano, Ph.D., 2001
Reviewed/Revised by: Maria Pagano, Ph.D., spring 2006; Jean Hillstrom, Ph.D., June 2012, July 2016; Daniel Capruso, Ph.D., 12/14/15
Revised by Peter Parides, Spring 2021