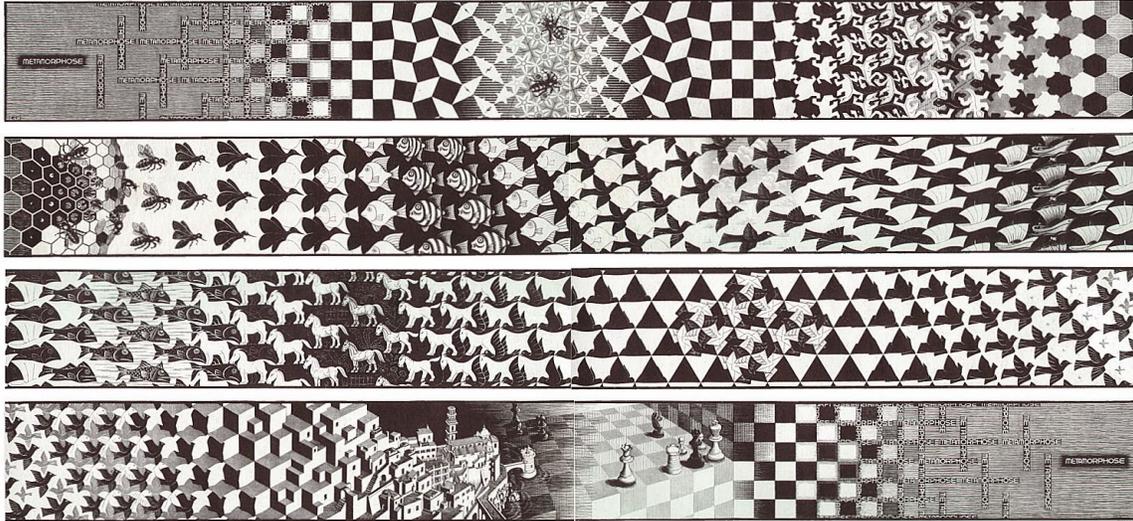


Psychology 347 (13335): PERCEPTION



Bill Griesar, Ph.D., **Instructor**; griesar@pdx.edu
Jeff Leake, M.F.A., **Instructor**; aspragus@yahoo.com

Please use these email addresses, *NOT d2l*

OFFICE HOURS: Mondays, 11:30am – 12:30pm; Cramer 317Z
Firas Saad, **Teaching Assistant**; fsaad@pdx.edu
Miles B. Lewis, **Teaching Assistant**; mblewis@pdx.edu
Lee Cyr, **Graduate Teaching Assistant**; cyrlee@pdx.edu

WINTER TERM: April 3 – June 11, MWF, 10:15 – 11:20am

Class meets in Cramer Hall 401

TEXTBOOK (recommended): Sensation & Perception, 2nd Edition, Wolfe et al.
I list an old edition, because the material is the same, and it costs a lot less. Newer editions are also acceptable; just read chapters that correspond to the topics.

ADDITIONAL BOOK (recommended): Hallucinations, by Oliver Sacks

ART SUPPLIES (required): Sketchbook (standard 11" x 14" drawing, 80 pound weight paper, with at least 24 sheets), colored pencils (basic set, 12 assorted colors), Assorted graphite sticks, Pink pearl eraser, one pound block of air dry clay (e.g., from Das), Assorted pipe cleaners.

NOTE: *You will need \$2.50 to participate in the Portland Art Museum tour, and \$2.50 for a tablet that will temporarily mess with your taste buds! (DUE WEDNESDAY, APRIL 12!)*

GOAL OF THE COURSE: Perception involves the routing, identification, and interpretation of energy and information in our environment, both external and internal. Typically, it begins with detection by sensory neurons, and the relay of this information to specific neural networks in the brain.

In this class we will investigate the mechanisms that underlie sensory detection of specific categories of stimuli (including vision, audition, gustation, somatosensation, olfaction, nociception, etc...), and the CNS networks involved in perceptual discrimination, interpretation, and complex cognitive responses.

We'll also look at how these critical, adaptive networks develop, and how they are influenced by drugs and, ultimately, decay...

We'll also explore how artists have approached, understood and integrated aspects of sensory detection and perception into often extraordinary works that compel, move, inspire, and affect our understanding of ourselves, and our world. During this course you'll have the opportunity to create objects designed to help you reflect on and understand the concepts we'll discuss...

GRADES: Grades are based on the following point scale: 90 points and above = A; 80 – 89 points = B; 70 – 79 points = C; 60 – 69 points = D; 59 points or below = F. ***An A or B is an ABOVE AVERAGE grade, a C is AVERAGE, and a D is BELOW AVERAGE.***

You can earn points in this class in the following ways...

****** DEADLINES ARE IMPORTANT: LATE WORK RECEIVES NO CREDIT. ******

QUIZZES (60 points)

Quiz One: Psychophysics, neurons, and synapses (15 points)

Quiz Two: Gustation, olfaction, and somatosensation (15 points)

Quiz Three: Visual system (15 points)

Quiz Four: Auditory and vestibular systems (15 points)

ART PROJECTS (30 points)

Art Project 1: Neuron model building (5 points)

Art Project 2: Neuron metaphor drawing (5 points)

Art Project 3: Blind touch sculpture (5 points)

Art Project 4: Mirror drawing (5 points)

Art Project 5: Blurred drawing (5 points)

Art Project 6: Sensory neuron model (5 points)

FINAL ART PROJECT (10 points)

Final Art Project: Final poster with gestalt collage (10 points)

ACADEMIC HONESTY: Any evidence of cheating or plagiarism will lead to serious academic consequences, including possible failure of the course and/or dismissal from school. Plagiarism is also a violation of the PSU Code of Student Conduct. For more information see: <http://www.pdx.edu/dos/psu-student-code-conduct>

STUDENTS WITH DISABILITIES: If you are a student with a documented disability and registered with the Disability Resource Center (DRC), please contact the instructor immediately to facilitate arranging academic accommodations. If you have a disability and have not yet registered with the DRC, please contact the DRC immediately.

NOTE: Incompletes are rarely given, and are based on criteria described in the university catalog. Incompletes are not appropriate when less than ¾'s of the course work has been scored. No incomplete will be assigned without a written formal agreement and timeline related to course completion.

EXCUSES: Life has ups and downs, and everyone struggles sometimes with family, work, and other personal concerns and commitments. However, unless there is a serious, unexpected, sudden, and significant emergency, *please do not petition for special treatment regarding deadlines for projects, quizzes, or exams*. I am required to treat all students fairly, and that means each of you must think ahead and plan for when assignments are due. Everyone is subject to the same course expectations ...

THE CLASSES

WEEK ONE: April 3 – April 7

INTRODUCTIONS: syllabus, basic concepts, history of perception, philosophical considerations, psychophysics, measuring the threshold, signal detection theory, neuroesthetics, *What is real? How do we know what's actually out there (or in here :)?*

READ: Text, Chapter 1 (Introduction)

WEEK TWO: April 10 – April 14

**** MONEY: For Art Museum Tour (\$2.50) and taste tablet (\$2.50) due Wed, 4/12!**

SENSORY DETECTION: Neurons carry information-rich electrical messages, and communicate with each other by releasing chemical messengers (neurotransmitters)

What sort of sensory detection machinery do you have? How is detected information transferred to neural networks for further processing and response?

READ: Text, Chapter 1 (Introduction)

WEEK THREE: April 17 – April 21

* **QUIZ ONE ON Friday, April 21st:** Psychophysics, neurons and synapses

* **ART PROJECT 1:** Neuron model (Monday, 4/17; bring pipe cleaners)

More on sensory detection; **CHEMICAL SENSES** (Gustation and Olfaction)

READ: Text, Chapters 13 (Olfaction), 14 (Taste)

WEEK FOUR: April 24 – April 28

* **Miracle berry demonstration on Monday, April 24th**

* **ART PROJECT 1 DUE Monday, April 24th**

INTRODUCTION TO SOMATOSENSATION

READ: Text, Chapter 12 (Touch)

* **ART PROJECT 2:** Neuron metaphor drawing (Wednesday 4/26; bring drawing supplies)

WEEK FIVE: May 1 – May 5

* **QUIZ TWO ON Friday, May 5th:** Gustation, olfaction, somatosensation

* **ART PROJECT 2 DUE Wednesday, May 3rd**

* **ART PROJECT 3:** Blind touch sculpture (Wednesday, 5/3; bring clay)

More on somatosensation: Dorsal column (mechanoreceptors), and anterolateral (protective sense receptors) systems; pathways and brain regions involved...

WEEK SIX: May 8 – May 12

* **ART PROJECT 3 DUE Monday, May 8th**

* ART PROJECT 4: Mirror drawing (Friday, 5/12; bring mirror drawing sheet/d2l)

INTRODUCTION TO THE VISUAL SYSTEM

READ: Text, Chapter 2 (The First Steps in Vision: Seeing Stars);

Chapters 3 (Spatial Vision); 4 (Perceiving and Recognizing Objects)

WEEK SEVEN: May 15 – May 19

* **ART PROJECT 4 DUE Monday, May 15th**

More on the visual system

* ART PROJECT 5: Blurred drawing (Wednesday, 5/17; drawing pad, graphite stick, eraser)

WEEK EIGHT: May 22 – May 26

* **QUIZ THREE ON FRIDAY, May 26th**: Visual system

* **ART PROJECT 5 DUE Wednesday, May 15th**

THE AUDITORY SYSTEM

READ: Text, Chapter 9 (Hearing: Physiology and Psychoacoustics)

WEEK NINE: May 29 – June 2

* **NO CLASS MONDAY, MAY 29th (Memorial Day)**

More on the auditory system; VESTIBULAR SYSTEM

READ: Text, Chapter 10 (Hearing in the environment)

WEEK TEN: June 5 – June 9

* **QUIZ FOUR ON Monday, June 5th**: Auditory and vestibular systems

* **VISIT TO PORTLAND ART MUSEUM on Wednesday, June 7th**

* **VISIT TO PORTLAND ART MUSEUM on Friday, June 9th**

HALLUCINATIONS: Drug effects, and other sources of perceptual distortion
Charles Bonnet Syndrome; Musical Ear Syndrome, sensory deprivation experiments...

READ (highly recommended): Oliver Sack's "Hallucinations"

FINAL PROJECT ON WEDNESDAY, JUNE 14th, 10:15 – 12:05pm
(Please note: The final project will *not* be moved for any reason)

A REMINDER: Life has ups and downs, and everyone struggles sometimes with family, work, and other personal concerns and commitments. **However, unless there is a serious, unexpected, sudden, documented, significant emergency, *please do not petition for special treatment regarding deadlines for projects, quizzes, or exams.***

Once again, I am required to treat all students fairly, and consistently, and that means each one of you must think ahead and plan for when assignments are due. Everyone is subject to the same course expectations.

Note that sometimes, for a myriad of reasons, life intervenes to create ongoing difficulties with class attendance, and meeting academic requirements. *In these cases, it's often best to withdraw from the course, and perhaps re-enroll at a less stressful time...*