

# Psychology 410: Neurons, Art, and Memory: Exploring Perception and Trauma in Chile



## DRAFT SYLLABUS

### SUMMER TERM 2027

June 25 – July 23, 2027

**Classes meet  
Mondays/Tuesdays/Wednesdays  
10:15 – 12:35am; Field trips on  
Thursdays**

**OFFICE HOURS:  
By appointment, ZOOM (Bill & Jeff)**

Jeff Leake, M.F.A., **Instructor;** [jleake@pdx.edu](mailto:jleake@pdx.edu)  
Bill Griesar, Ph.D., **Instructor;** [griesar@pdx.edu](mailto:griesar@pdx.edu)

**ART SUPPLIES:** Fabric swatches (ideally from materials with special meaning for you), including at least one larger (16” x 16” or more) single color piece (for the backdrop for your arpillera), sewing needles, 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, and a package of pipe cleaners.

### GOAL OF THE COURSE:

The faculty-led program offers an interdisciplinary exploration of neuroscience and art in Chile, focusing on memory, trauma, stress, and resilience. Students examine sensation and perception through engagement with Chile’s artistic and scientific communities, particularly in Valparaíso and Viña del Mar. The program integrates neuroscience concepts with artistic practices to explore how individuals and societies process experience and memory. Chile provides a distinctive setting due to its strong traditions in neuroscience research and its complex social and political history. Students engage with local organizations, including a STEAM-focused nonprofit, and explore how artistic expression—such as the arpillera—has been used to represent collective memory and social change. The immersive environment challenges students’ perceptual frameworks and deepens their understanding of cognition, culture, and bias. The program emphasizes experiential learning through site visits, laboratory engagement, artistic creation, and community outreach.

**GRADES:** Course grades are based on a point scale: 90 and above = A; 80 – 89 = B; 70 – 79 = C; 60 – 69 = D; 59 points or below = F. Points are earned by completing art projects.

**ART PROJECTS (80 points)**

Art Project 1: Neuron models (20 points)

Art Project 2: Sensory map of Valpo y/o Viña (20 points)

Art Project 3: Memory Arpilleras (20 points)

Art Project 4: Block print portraits of change (20 points)

**ART AND NEUROSCIENCE JOURNAL (20 points)**

## THE CLASSES

### **WEEK ONE**

#### **Introduction, Sensory Detection & Synapses**

\* ART PROJECT 1: Neuron model (pipe cleaners - or any found objects)

**\*\* ART PROJECT 1 DUE BY SUNDAY**

#### *MONDAY*

Introductions, syllabus; welcome to Valparaíso! History of perception; philosophical considerations; synesthesia, psychophysics, measuring threshold, signal detection theory; introduction to Art Project 1

#### *TUESDAY*

Neurons carry information-rich electrical messages and communicate with each other by releasing chemical messengers (neurotransmitters). Brain cells, membranes, protein machines, forces, resting potential, action potential, synapses

#### *WEDNESDAY*

*How do neurons carry information in the form of electric current, and communicate chemically across synapses to form neural networks for sensation and perception?*

#### *THURSDAY*

Visit to Montemar Institute of Marine Biology and Centro Interdisciplinario Neurociencia Valparaíso (CINV): Discussion with neuroscientists

### **WEEK TWO**

#### **Neuroesthetics, Gestalt & Chemical Senses**

\* ART PROJECT 2: Sensory map (drawing supplies)

**\*\* ART PROJECT 2 DUE BY SUNDAY**

#### *MONDAY*

NEUROESTHETICS (the biology of beauty and art)

#### *TUESDAY*

More on NEUROESTHETICS and GESTALT

*WEDNESDAY*

CHEMICAL SENSES: Gustation and olfaction

*THURSDAY*

Visit to art galleries in Valparaíso

### **WEEK THREE**

#### **Stress, arpilleras and the processing of trauma and resilience**

\* ART PROJECT 3: Memory Arpilleras

\*\* ART PROJECT 3 DUE BY SUNDAY

*MONDAY*

Class

*TUESDAY*

Class

*WEDNESDAY*

Arpilleras

*THURSDAY*

Visit to Ciencia Al Tiro!

### **WEEK FOUR:**

#### **Outreach and Engagement**

\* ART PROJECT 4: Afferent (sensory) neuron

\*\* ART PROJECT 4 DUE BY SUNDAY

*MONDAY*

Class

*TUESDAY*

Class

*WEDNESDAY*

Visit to art galleries in Valparaíso

*THURSDAY*

Visit/outreach with Ciencia Al Tiro!

**Access and inclusion for students with disabilities**

PSU values diversity, equity, and inclusion. Our goal is to create a learning environment that is accessible, equitable, inclusive, and welcoming. I am committed to fostering mutual respect and full participation for all students. If any aspects of instruction or course design result in barriers to your inclusion or learning, the Disability Resource Center (DRC) provides accommodations in the learning environment.

If you have, or think you may have, a disability that may affect your work in this class and feel you need accommodations, contact the DRC to schedule an appointment and initiate a conversation about reasonable accommodations. The DRC works with students who have physical, learning, cognitive, mental health, sensory, chronic illness, and all other disabilities.

If you already have accommodations: Please contact us to make sure that we have received your Faculty Notification Email, and to discuss your accommodations.

The DRC is located in Smith Memorial Student Union, Suite 116. You can also contact the DRC at 503-725-4150, [drc@pdx.edu](mailto:drc@pdx.edu), or visit the [DRC website](#).

It can be challenging to do your best in class if you have trouble meeting basic needs like safe shelter, sleep, and nutrition. Resource centers across campus are here to provide assistance, referrals, and support. Please contact anyone on this list for assistance:

- [Basic Needs Hub](#): email to connect with the basic needs hub [basicneedshub@pdx.edu](mailto:basicneedshub@pdx.edu).
- [Portland State Food Pantry](#): email to connect with the PSU food pantry [pantry@pdx.edu](mailto:pantry@pdx.edu).
- [C.A.R.E. Program](#): email to connect with the CARE Program [askdos@pdx.edu](mailto:askdos@pdx.edu), or call (503) 725-4422.
- [Student Health & Counseling](#): email to connect with student health and counseling [askshac@pdx.edu](mailto:askshac@pdx.edu), or call (503) 725-2800.

**Mental health emergencies**

If you are having a mental health emergency and need to speak with someone immediately, come into SHAC at any time during SHAC [hours of operation](#). After hours and weekends call the Multnomah County Crisis Line 503-988-4888.

**PSU CARES**

Connects students with resources when they are experiencing distress or other concerns that might impact their personal or academic success.

- [Make a referral to PSU CARES](#)
- Call PSU CARES: 503-725-4422
- Email PSU CARES: [askdos@pdx.edu](mailto:askdos@pdx.edu)

PSU desires to create a safe campus. As part of that mission, PSU requires all students to take the [Understanding Sexual Misconduct and Resources learning module](#). If you or someone you know has been harassed or assaulted, you can find the appropriate resources on PSU's [Sexual Misconduct Response website](#).

### **Title IX reporting statement**

Students frequently come to us for assistance in matters not related to the course material. Please be aware that PSU's policies require instructors to report any instance of sexual harassment, sexual and relationship violence and/or other forms of prohibited discrimination to university officials, who will keep the information private. If you would rather share information about these matters with a PSU staff member who does not have these reporting responsibilities and can keep the information confidential, please use these campus resources:

- Connect with Confidential Advocates: 503-894-7982 or [schedule online](#) to talk with a Confidential Advocate (for matters regarding sexual harassment and sexual and relationship violence).
- [Center for Student Health and Counseling](#): 1880 SW 6th Avenue #200; 503-725-2800

### **Discrimination and Bias Incidents**

[The Office of Equity and Compliance](#) (OEC) addresses complaints of discrimination, discriminatory Harassment, and sexual harassment against employees (faculty and staff). If you or someone you know believes they have been discriminated against, you may file a complaint. Someone from the OEC will contact you to discuss how to best address your complaint.

[The Bias Review Team](#) (BRT) gathers information on bias incidents that happen on and around campus, and gives resources and support to individuals who experience them. You can report a bias incident you experienced or learned about. A member of the BRT will contact you if you indicate you would like to be contacted.

### **Religious accommodations statement**

If you would like to obtain religious accommodations, such as flexibility in attending evening courses or an extension on assignments, please contact your instructors. If you need additional assistance, please contact the Office of the Dean of Student Life (DOSL) by emailing [askdos@pdx.edu](mailto:askdos@pdx.edu).

### **Cultural Resource Centers statement**

Cultural Resource Centers (CRCs) create a student-centered, inclusive environment that enriches the university experience. They honor diversity, explore social justice issues, celebrate cultural traditions, and foster student identities, success, and leadership. They provide opportunities for student leadership, employment, and volunteering; student resources such as computer labs, event, lounge, and study spaces; and extensive programming. All are welcome!

- [Multicultural Student Center](#)

- [La Casa Latina Student Center](#)
- [Native American Student and Community Center](#)
- [Pan African Commons](#)
- [Pacific Islander, Asian, and Asian American Student Center](#)
- [Middle East, North Africa, South Asia Student Center](#)

**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. **USE YOUR OWN BRAIN:** No AI is permitted in art of other assignments. For more information see: <http://www.pdx.edu/dos/psu-student-code-conduct>

**INCOMPLETES:** Incompletes are rarely given, and are based on criteria described in the university catalog. Incompletes are not appropriate when less than  $\frac{3}{4}$ 's of the course work has been scored. No incomplete will be assigned without a written formal agreement and timeline related to course completion.

**PLEASE NOTE:** Life *clearly* has ups and downs, and everyone struggles sometimes with family, work, and other personal concerns and commitments. And not everyone experiences the world in the same way. If there is a serious, unexpected, sudden and significant emergency, please reach out. But also be aware that we strive 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.*

