



Neuroscience Graduate Group  
Student Handbook  
2021-2022

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## NEUROSCIENCE GRADUATE GROUP ADMINISTRATION

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# INTRODUCTION

This handbook will help guide you through the Doctoral Program in Neuroscience at UC Davis. It covers issues ranging from lab rotations, advisory committees, and course work (which will take up most of the first two years), to the preliminary and qualifying exams, and dissertation (which will take up the remainder of your time here). Also included are contact information of your classmates and professors, and other useful information. Along with the procedures and facts, we have tried to include some advice and problem solving tips based on our collective experience. We hope our suggestions are helpful!

This handbook contains information specific to the Doctoral Program and Neuroscience Graduate Group. There is some overlap with the Office of Graduate Studies. Resources can be found at the following URL: <https://grad.ucdavis.edu/resources/graduate-student-resources>.

This page also includes information on registration and enrollment procedures, fees and campus information that we do not provide here, so we refer to it frequently. In addition, the program website prepared by our graduate group and by the Center for Neuroscience provides research summaries for each of the neuroscience faculty. This information will be useful when deciding on your rotations and Major Professor (sometimes referred to as your Principal Investigator or PI). You may view the faculty profiles at the following URL: <https://grad.neuroscience.ucdavis.edu/faculty>

If you wish to view the *official* program documents (the Neuroscience graduate program by-laws and degree requirements), you may view them at the following URL (these documents are also on file in the Graduate Group Office see Najwa Marrush – and at the Office of Graduate Studies in Mrak Hall): <https://grad.ucdavis.edu/programs/gnes>. You can also log into the Student Portal on the graduate group website. And they are available in your student binder.

A final note: This is a living document, meaning that it is constantly being updated, and will eventually be posted on the graduate group website.

## When you first arrive at UCD

Here is a summary of the things you will be doing in your first weeks at the University:

1. Meet with the Master Advisor, Dr. Jennifer Whistler. Jennifer will be happy to assist you with any questions you have about first-year coursework, lab rotations, or life beyond your first year. When you arrive in Davis, please take a few minutes to email Jennifer and let her know you are in town. She will also be available to you throughout the year to answer your questions.
2. Attend our Neuroscience Orientation (before classes begin). The Fall 2021 Orientation is scheduled for Wednesday, September 8<sup>th</sup> from 1:30-4pm. The orientation will give you an overview of the structure of the Neuroscience Graduate Group and its requirements, courses, and activities. The Welcome Social event (TBD) is a great opportunity to meet other graduate students and faculty members and find out about research in a variety of labs within the graduate group.
3. Attend our annual Neuroscience Retreat. This year the retreat will be a one-day event on campus on Friday, September 17<sup>th</sup>. If you have any questions, you may contact the Graduate Group Coordinator, Najwa Marrush ([nmmarrush@ucdavis.edu](mailto:nmmarrush@ucdavis.edu)), or the student planners, Becca Wilson ([rjwilso@ucdavis.edu](mailto:rjwilso@ucdavis.edu)) and Yihan Jin ([yihjin@ucdavis.edu](mailto:yihjin@ucdavis.edu)).

4. If you have not done so already, activate your UC Davis account. This is where you will obtain your UCD Kerberos login ID and password and email address.

Click on this link: <https://computingaccounts.ucdavis.edu/cgi-bin/services/index.cgi>

Click on “Get your UC Davis Computing Account,” click begin and follow the directions. Once you have activated your account, please send Najwa Marrush ([nmmarrush@ucdavis.edu](mailto:nmmarrush@ucdavis.edu)) your UCD email address so she may add you to the Neuroscience Graduate Student listserv. Once you have been added to the “[neuro-grads@ucdavis.edu](mailto:neuro-grads@ucdavis.edu)” email list you should begin checking your UCD account regularly, as you will receive updates on upcoming events (e.g., Annual Retreat, registration, etc.) and other graduate group related information.

5. Complete the FAFSA (if you have not already submitted one). All domestic students are required to file the Free Application for Federal Student Aid (FAFSA) in order to be eligible for fellowships, work-study, and Federal Financial Aid. This is just a formality and a requirement from the Office of Graduate Studies (OGS). Per OGS, any student receiving funding from the University needs to complete the form.

The FAFSA is available online at <http://fafsa.ed.gov>

6. Register for classes via SISWeb at <http://sisweb.ucdavis.edu>. First year students enroll in core courses during the year and one journal club per quarter (see Appendix B for a full listing of 2020-21 courses). After your first year of classes, you will then register for 11 units of NSC 299 and 1 unit of NSC 290C. Najwa will email the CRNs to you during the registration period. Each CRN corresponds to a faculty member, so it is important that you register for the correct 299 and 290C classes. In addition, you will also register for any classes of interest and one journal club per quarter.

7. Establish Residency and obtain your student ID card (Aggie Card). Please complete the Statement of Legal Residence before the start of Fall Quarter:  
<https://registrar.ucdavis.edu/tuition/residence/processes/slr-basics.cfm>

If you are not a California resident, you should begin the process of establishing residency as soon as you arrive in Davis. It takes one full year to become a California resident, and at the end of your first year, you should file the appropriate paperwork with the Office of the University Registrar to make the transition from non-resident to resident. Here is a link with more information about how to establish residency:

<https://registrar.ucdavis.edu/tuition/residence/processes/classification-instructions.cfm>

You should expect to complete the online petition by summer 2022.

Here is information on how to obtain your AggieCard:

<https://registrar.ucdavis.edu/records/aggiecard.cfm>

8. Send in your official and final transcripts with your undergraduate degree posted to:  
Office of Graduate Studies  
University of California, Davis  
One Shields Avenue  
Davis, CA 95616

9. Find a place to live (of course!) and a bike (and lock for it!)

10. Start attending classes and your first research rotation.

## Welcome from the Graduate Group Chair

On behalf of the students, faculty, and staff of the Neuroscience Graduate Group, I would like to welcome you to UC Davis! We are glad that you are here! As a graduate student, you are starting an amazing journey and are expected to take on many roles: student, researcher, learner, colleague, teacher, public speaker, and more. UC Davis provides an ideal environment for you to receive your neuroscience education. The faculty of the Neuroscience Graduate Group are world-class, carrying out research at all levels from molecules to cognition. They will do everything in their power to make the pursuit of a Ph.D. rewarding as well as challenging. The heart of a graduate program is, of course, its students. We are extremely proud of our students. You will soon discover that the students in the Graduate Group are like a big family; they are full of energy, make good friends and colleagues, and are rich sources for all kinds of information. Useful as this Handbook is, there is no substitute for talking to students and faculty about your research interests and career goals. Graduate school is a marvelous time that is filled with new knowledge, new questions and new insights. Our Graduate Group is dedicated to your success and is anxious to help whenever possible. We very much look forward to talking and working with you!

*“UC Davis is a diverse community comprised of individuals having many perspectives and identities. We come from a multitude of backgrounds and experiences, with distinct needs and goals. We recognize that to create an inclusive and intellectually vibrant community, we must understand and value both our individual differences and our common ground. The UC Davis Principles of Community is an aspirational statement that embodies this commitment, and reflects the ideals we seek to uphold.”*

*The principles of community, prologue (UC Davis)*

Elva Diaz, PhD, Chair, Neuroscience Graduate Group, Professor, Department of Pharmacology

## Organizational Overview

### *The Doctoral Program and Neuroscience Graduate Group*

You are enrolled as a graduate student in the Doctoral Program in Neuroscience at UC Davis. The faculty members of the Neuroscience Graduate Group, chiefly through the Chair and the Executive Committee, administer the Doctoral Program (which has a curriculum and degree requirements). Our Grad Group currently consists of about 82 faculty members representing over 13 different home departments from the various colleges and schools across campus. Some of our faculty belong to several graduate groups. Thus, the Grad Group is a meta-entity that floats somewhere above campus departments, but you receive your degree from the University of California through the Doctoral Program. You'll find that the faculty and students are not housed in a single building but are located throughout the campus and in Sacramento (see the directory in Appendix B).

There are currently 63 graduate students in the Program. There are also many postdoctoral fellows in the labs of the faculty members of the Neuroscience Graduate Group. A list of the graduate students and faculty members of the Neuroscience Graduate Group is provided at the end of this handbook.

## Center for Neuroscience

The Center for Neuroscience (CNS), located on Research Park (across Freeway I-80 from the University). It serves as a focal point for neuroscience at UC Davis. It houses some of the faculty of our Grad Group, as well as others from Psychology and other departments who are working in our field. A regular series of seminars by local and visiting researchers is held in the CNS Conference Room (Room 113).

## The Neuroscience Graduate Student Association and Student Representative

The Neuroscience Graduate Group has a departmental GSA, the Neuroscience Graduate Student Association (NGSA). The NGSA was originally formed in 1994 to officially convene in order to be able to petition for event money from the GSA, the Dean, and the undergraduate campus organization (ASUCD). The student selected as the NGSA representative acts as the lead representative for the departmental group. This student acts as the primary liaison between the students and faculty/staff of the graduate program. It is this student's duty to organize the annual spring meeting, ensure that all committee and officer positions are filled within the NGSA, authorize the treasurers to issue reimbursements, develop and implement the yearly student agenda, and coordinate the dissemination of information between the various committee members/officers and the students. This student also serves as a liaison between the students, faculty, and administration on various administrative issues that arise for students. These issues include, but are not limited to UCD Internal Fellowship applications, course curriculum analyses, new student orientation, and social activities for students and development of student resources for graduate success. You are automatically a member of this auspicious and distinguished association just by being here!

## **DOCTORAL PROGRAM IN NEUROSCIENCE GRADUATE STUDENT POSITIONS IN THE NGSA**

Neuroscience graduate students are active in all aspects of policy and academic life in the Neuroscience graduate group. Students are selected annually during the Spring Meeting (every May/June) to fill a variety of positions for the graduate group. These positions are filled by nomination and (if necessary) a vote at the annual Spring Meeting. This is a great way to get involved in the program and to interact with fellow students. Below is the list of positions and position leaders for 2021-2022:

### **Neuroscience Graduate Student Representative**

*Alexa D'Ambra*

This individual serves as the liaison between the graduate students and faculty. They also arrange and run the meetings of the NGSA, help to define and ensure the filling of other graduate student positions, and work on specific student goals for the year. Send out quarterly newsletters. This student must have advanced to candidacy.

### **TA Union Representative**

*Rebecca de Frates*

A student is selected to represent the graduate students on the TA Union. This student can communicate issues from the graduate students to the Union, or report any information provided from the Union to the students to keep them informed of their rights and responsibilities. The student will also help coordinate meetings between the Union and the Graduate group in the Fall to have incoming student learn about the TA Union and throughout the year as necessary (Ex. Covid-19 virtual town hall). Additionally, the student has the option of taking as active a role in the Union as they would like.

### **Admissions Committee Representative**

*Preetham Ganupuru*

The selected student reviews all applications for admission to the graduate group and meets with the rest of the committee to discuss each applicant's suitability for the program. The student committee member

will interview prospective students during the recruitment weekend and will meet with the committee to make final admission decisions. Per the bylaws, the Chair of the Neuroscience Graduate Group selects this student. The student member must have advanced to candidacy

**Education Policy Committee Representative**

*Tanner Stevenson*

The selected student participates in curriculum reviews along with the faculty members of the committee. This student can raise concerns and contribute ideas from the student body regarding changes to the Neuroscience graduate program curriculum.

**Recruitment Committee**

*Kiran Long-Iyer  
Stephanie Lozano*

Students serving on this committee help the graduate program coordinator plan and execute the recruitment weekend for prospective neuroscience students. This is an active commitment for approximately one month of the year. This position is a two-year commitment. Therefore, there will be 1 person staying on and 1 new person each year. The new people will stay on for the following year and help train the next coordinator.

**Neuroscience Initiative to Enhance Diversity Committee**

*Jasmine Carter  
Ashley Williams  
Stephanie Lozano*

Students serving on this committee help the academic coordinator plan and execute the NIED weekend for undergraduate students to pursue a PhD in Neuroscience.

**Executive Committee Representatives**

*Rebecca Wilson  
Tracy Warren*

This committee is comprised of the Chair of the Neuroscience Graduate Group, the faculty chairs of each committee in the graduate program, and two student members. The two student members serve as representatives of the neuroscience graduate student body. The committee meets at least quarterly.

**Retreat Coordinators**

*Rebecca Wilson  
Yihan Jin  
Brett Bormann  
Vanessa Hull*

The selected students are responsible for working with the graduate program coordinator and chief administrative officer to organize the annual retreat. Usually, two first year students and two second year students volunteer to serve as coordinators. The first year students are responsible for planning the meeting schedule, organizing faculty and student speakers, and organizing room reservations for attending graduate group members. The second-year students are responsible for organizing retreat social events and inviting/hosting the keynote speaker. Each position is a two-year commitment. Therefore, there will be 2 staying on and 2 new people each year. The new people will stay on for the next year and help train the next set of coordinators.

**Student-Organized Seminar Series Student Organizers**

*Sarah Gooding  
Kennedy Allen*

The selected student coordinators organize a meeting during which students nominate and vote on 3-4 speakers for the series. At that time, a student host is selected for each invited speaker. Student coordinators and hosts work together to plan the seminar series. Responsibilities include inviting the chosen speakers, organizing their itineraries with faculty and student meetings during the day and meals with students, scheduling their seminar and introducing them before the talk, and making arrangements for all transportation during the visit.

## Student Outreach for Minority Advocacy Student Organizers

*Eden Barragan  
Lindsay Cameron  
Nicole Claiborne  
Rose De Kock  
Jose Marquez  
Sasha Mikhailova  
Raisa Rahim*

Similar to the Student Seminar Series, the selected student coordinators organize a meeting during which students nominate and vote on 3-4 speakers for the series. At that time, a student host is selected for each invited speaker. Student coordinators and hosts work together to plan the seminar series. Responsibilities include inviting the chosen speakers, organizing their itineraries with faculty and student meetings during the day and meals with students, scheduling their seminar and introducing them before the talk, and making arrangements for all transportation during the visit

## SfN Student Lead

*Brett Bormann*

Students serving on this committee help the graduate coordinator plan and schedule the student volunteers at SfN for the graduate group recruitment booth.

## Social Media Leads

*Jose Marquez  
Garreck Lenz  
Kiran Long-Iyer*

Students serving on this committee help the program coordinator post to the graduate group social media outlets: Facebook, Instagram and Twitter.

## NeuroFest Organizer

*Porter Harrast  
Rebecca Wilson*

Students serving on this committee help the event planner and NeuroFest Faculty organizer with gathering student volunteers and setting up booths.

## GSA Representatives

*Caroline Keeshen  
Rose De Kock  
Kathryn Prendergast (alt)  
Porter Harrast (alt)*

The selected students are responsible for going to monthly GSA Meetings (+ eating delicious Woodstock pizza), forwarding GSA emails to the grad group, and generally representing our interests at the level of the Graduate Student Association.

## Peer-to-Peer Mentoring Program

*Sasha Mikhailova  
Rebecca de Frates  
Jasmine Carter*

In this initial year, committee members will need to develop and implement the Peer-to-Peer mentoring program, including getting all interested mentees and pairing them with upper-year mentors.

## Senior Tutors

*Joseph Martinez  
Nicole Claiborne  
Ashley Williams  
Ksenia Vlasov*

The function of the Senior Tutors program is to provide support for the first-year Neuroscience graduate student preparation for the preliminary exam. Senior tutors are not teaching assistants and are not expected to be involved in teaching of the core courses. Senior tutors are selected based on their satisfactory progress in the Neuroscience graduate group (NGG). Ideally, students in their second through fourth year of graduate training would be eligible for this program. The NGG provides modest compensation for an expected 30 hours of tutoring services over the course of the academic year.

# DOCTORAL PROGRAM IN NEUROSCIENCE

## Program Requirements

### Overview

When you successfully finish the Program, you will receive a Ph.D. in Neuroscience from the University of California. Our Program and the University have specific requirements that you must complete in order to receive the Ph.D. You are required to do the following:

1. Complete required undergraduate preparatory courses (you may already have done this).
2. Complete required graduate core courses and three research lab rotations, and (if agreed upon by your Major Professor) an extramural course.
3. Participate in instruction as a Teaching Assistant for one quarter.
4. Pass the Preliminary Exam before the start of your second year.
5. Prepare a thesis proposal and pass the Qualifying Exam within one year of passing the preliminary exam.
6. At the start of your second year, prepare an Individual Development Plan (IDP) with your Major Professor
7. Perform thesis research under your Major Professor and write a dissertation based on that research.
8. Deliver an Exit Seminar to the Neuroscience community.

## The First Two Years

During the first two years, you will complete your required course work and lab rotations, choose a Major Professor, begin preliminary research on a possible thesis topic, and begin to prepare for both the Preliminary Exam and Qualifying Exam.

### Year 1

Enroll in core courses, complete three laboratory rotations, and select a Principal Investigator to work with and Laboratory to join, prepare for the Preliminary Exam (written and oral exam), which will be administered before the start of your second year.

### Year 2

Enroll in statistics core course and potential elective courses, develop an IDP and thesis plan with your PI, select Qualifying Exam committee, write your thesis proposal and pass the Qualifying Exam within one year of passing the Preliminary Exam.

## Courses and Journal Clubs

### Official course requirements

#### Neuroscience Graduate Group Core Courses (Organized by Quarter)

### Fall Quarter

**NSC 200LB - Laboratory Methods in Neurobiology:** (3 units) Laboratory – 9 hours. Individual research in the laboratory of a faculty member. Research problems emphasize the use of contemporary methods and good experimental design. May be repeated three times for credit. Instructors: Current Master Advisor.

**NSC 221 - Cellular Neurophysiology:** (4 units) Lecture – 3 hours; discussion – 1 hour. Physiological aspects of cellular and subcellular organization of the nervous system. Neuronal cell biology, the structure and function of ion channels, electrical excitability, signaling cascades, sensory transduction and, mechanisms of synaptic transmission, and the cellular basis of learning and memory. Instructors: D. Fioravante, T. Griffith, J. Gray, N. Marsh-Armstrong, K. Zito

**NSC 226– Molecular and Developmental Neuroscience:** (4 units) Lecture/discussion – 4 hours. Key issues in developmental and molecular neurobiology. Discussion emphasis on critical evaluation of the experiments and methods described in research papers. Readings of seminal, primary research papers, reviews, and book chapters. Reading materials will be distributed one week in advance. Instructors: E. Diaz, K. Murray, C. Rogers

**NSC 298 – Responsible Conduct of Research Ethical Lecture Series:** Seminar—2 hours/week; Participation in the Office of Research's Responsible Conduct of Research lecture-discussion series throughout the year (8 lectures mandatory).

One NSC Journal Club of student's choice

### Winter Quarter

**NSC 200LB - Laboratory Methods in Neurobiology:** (3 units) Laboratory – 9 hours. Individual research in the laboratory of a faculty member. Research problems emphasize the use of contemporary methods and good experimental design. May be repeated three times for credit. Instructors: Current Master Advisor.

**NSC 201 (lecture)– Neuroanatomy for Graduate Students:** (3 units) Lecture – 2 hours; laboratory/discussion – 1 hour. Mix of lectures, demonstrations, and dissections, emphasizing functional significance of neuroanatomy from a biological perspective, with comparisons between human and non-human brains. Emphasis placed on functional anatomy of the nervous system, integrated with cellular, molecular, cognitive, and developmental concepts. Instructors: S.C. Noctor (Lecture).

**NSC 219- Design to Data: Statistics for Modern Neuroscience:** (Taken in your 2<sup>nd</sup> year) (4 units) Lecture – 4 hours. Instruction will be through lecture and problem-based learning using real data, including examples drawn from cellular and molecular, systems, to cognitive neuroscience. Students will use the open source R environment and will learn basic statistical programming and best practices for statistical computing. This class will prepare students to meet rigor and reproducibility expectations necessary for practitioners of modern neuroscience. Instructors: A. Nord, R. Chaudhuri.

**NSC/NPB 222 - Systems Neuroscience:** (5 units) Lecture – 4 hours; discussion – 1 hour. Integrative and information-processing aspects of nervous system organization. Topics include sensory systems, motor function, sensorimotor integration, the limbic system, and the neurobiology of learning and memory. Instructors: W.M. Usrey, W.M. DeBello, J. Ditterich.

**NSC 298 – Responsible Conduct of Research Ethical Lecture Series:** Seminar—2 hours/week; Participation in the Office of Research’s Responsible Conduct of Research lecture-discussion series throughout the year (8 lectures mandatory).

One NSC Journal Club of student’s choice

Spring Quarter

**NSC 200LB - Laboratory Methods in Neurobiology:** (3 units) Laboratory – 9 hours. Individual research in the laboratory of a faculty member. Research problems emphasize the use of contemporary methods and good experimental design. May be repeated three times for credit. Instructors: Current Master Advisor.

**NSC 223 - Cognitive Neuroscience:** (4 units) Lecture – 3 hours; discussion – 1 hour. Neurobiological bases of higher mental function including attention, memory, language. Instructors: P. Janata

**NSC 298 – Preliminary Exam Preparations:** (3 units) Seminar—3 hours/week; Participation in study and practice sessions for the preliminary exam. Schedule to be determined.

**NSC 298 – Responsible Conduct of Research Ethical Lecture Series:** Seminar—2 hours/week; Participation in the Office of Research’s Responsible Conduct of Research lecture-discussion series throughout the year (8 lectures mandatory).

One NSC Journal Club of student’s choice

Additional Courses:

You are not expected to enroll in these courses until the completion of your core courses or after your first year of graduate study.

Neuroscience Graduate Group Courses:

**NSC/NPB/PSC 211 – Advanced Topics in Neuroimaging:** (2 units) Lecture - 2 hours. Critical presentation and discussion of the most influential advanced issues in neuroimaging, emphasizing fMRI design/analysis and the integration of fMRI with EEG/MEG. Offered Winter quarter. Instructors: L. Miller.

**NSC 220 – How to Give a Scientific Seminar:** (3 units) Lecture/ Presentations - 3 hours. Student presentations of selected neuroscience topics in seminar format. Must be taken in two consecutive quarters. Offered Winter and Spring quarters (alternate years). Instructors: A. K. McAllister, W.M. DeBello.

**NSC 225 – Translational Research in the Neurobiology of Disease:** (2 units) Lecture – 1 hour; discussion – 1 hour. This course will provide an overview of major neuropsychiatric and neurological disorders from both the clinical and fundamental science perspectives. Offered Spring quarter. Instructors: C. Carter, A.K. McAllister.

**NSC 243 – Topics in Cellular and Behavioral Neurobiology:** (2 units) Discussion – 1 hour; seminar-1 hour. An advanced examination of several current problems in neurobiology. Topics will vary in different years. Offered TBA. Instructors: TBD

**NSC/NPB 247 - Topics in Functional Neurogenomics:** (2 units) Lecture – 1 hour; discussion - 1 hour. The theory, methods, and principles of functional neurogenomics with emphasis on the relationship to molecular mechanisms involved in development and disease of the nervous system. Offered Winter quarter (alternate years). Instructor: Neuroscience Graduate Group Faculty.

**NSC 250 – Biology of Neuroglia:** (2 units) Lecture/discussion – 1.5 hours. The properties and functions of non-neuronal or neuroglial cells in the mammalian central nervous system with relevance to neuronal development, physiology and injury response. Offered in alternate years. Instructor: Neuroscience Graduate Group Faculty.

**NSC 261A – Topics in Vision: Eyes and Retinal Mechanisms:** (2 units) Lecture/discussion – 2 hours. Structure and function of the visual system, with emphasis on the eye and retina, including optics, anatomy, transduction, retinal synapses, adaptation, and parallel processing. Offered in Fall quarter (alternate years). Instructors: M. Burns

**NSC 261B – Topics in Vision: Systems, Psychophysics, Computational Models:** (2 units) Lecture/discussion – 2 hours. Functions of the central visual pathways and their underlying mechanisms. Recent research on aspects of anatomy, biochemistry, electrophysiology, and psychophysics, development, and genetics of the visual system. Offered in Winter quarter (alternate years). Instructors: M. Burns

**NSC 267 – Computational Neuroscience:** (5 units) Lecture/discussion – 4 hours. Mathematical models and data analysis techniques used to describe computations performed by nervous systems. Lecture topics include single neuron biophysics, neural coding, network dynamics, memory, plasticity, and learning. Lab topics include programming mathematical models and data analysis techniques in MATLAB. Offered in Fall quarter. Instructors: M. Goldman.

**NPB 270 – How to Write a Fundable Grant:** (3 units) Lecture/discussion – 3 hours. Familiarization with the skills required to craft a successful grant proposal submitted to extramural agencies such as NIH and NSF. Offered in Spring quarter. Instructor: M. Burns.

**NSC 271A – Core Concepts & Methods in Learning, Memory, and Plasticity, Part I :** (2 units) Lecture/discussion – 2 hours. Core concepts and methods used in studies of learning, memory and plasticity. This is the first quarter of a three-course sequence. It includes an overview of the behavioral paradigms and measurement approaches in human and animal studies of learning and plasticity, as well as a consideration of the functional, anatomical and neuronal mechanisms underlying brain plasticity. (F) Instructors: C. Ranganath.

**NSC 271B – Core Concepts & Methods in Learning, Memory, and Plasticity, Part II:** (2 units) Lecture/discussion – 2 hours. Core concepts and methods used in studies of learning, memory and plasticity. This is the 2nd quarter of a three-course sequence. The 1st half of the course provides a detailed survey of methods to study learning, memory and plasticity, from the cellular and molecular level to the level of neural circuits. The 2nd half describes areas of learning, memory, and plasticity research where recent progress has been made in linking across these levels of analysis.. (W) Instructors: T. Hanks.

**NSC 271C – Translational Approaches to Learning, Memory, and Plasticity Disorders:** (2 units) Lecture/discussion – 2 hours. An introduction to a range of neurological disorders, the effect of these disorders on learning, memory and plasticity, approved therapeutic options and current research designed to improve understanding and treatment of these diseases: (i) the clinical presentation, diagnostic criteria, and existing therapies, (ii) mechanistic studies in humans and

animal models, and (iii) molecular pathways involved in the disease and approaches for drug discovery. (S) Instructors: G. Gurkoff.

**NSC 290C – Research Conference in Neurobiology:** (1 unit) Discussion – 1 hour. Presentation and discussion of faculty and graduate student research in neurobiology. Offered Fall, Winter, Spring quarters. Instructors: Principal Investigator.

**NSC 292 – Cortical Plasticity and Perception:** (2 units) Lecture/discussion – 2 hours. Examination of articles on cortical plasticity and changes in perception. Examples drawn from studies of the somatosensory, visual, auditory, and motor cortex. Offered Winter quarter (alternate years). Instructors: Neuroscience Graduate Group Faculty.

**NSC 298 – Group Study:** (1-5 units) Variable. Offered Fall, Winter, Spring quarters. Instructors: Graduate Group Faculty.

**NSC 299 – Research:** (1-12 units) Variable. Offered Fall, Winter, Spring quarters. Instructors: Major Professor.

#### Neuroscience Graduate Group Journal Clubs:

All Neuroscience graduate students, regardless of their year, are expected to participate in one journal club, of the student's choice, per quarter. Journal clubs are a good way for you to familiarize yourself with the literature relative to a specific field of expertise. They can vary, however, in style and breadth. Some clubs are more narrowly focused than others.

In some clubs, students may be required to make a formal presentation of a research paper, whereas in other clubs, everyone reads a weekly selection and comes prepared to discuss its merits and weaknesses. We recommend approaching faculty that you would be interested in taking a journal club from. Many journal clubs are initiated by student interests. The following is a list of journal clubs open to Neuroscience students. Note: not all journal clubs are offered each quarter.

**NSC 283 – Neurobiological Literature:** (1 unit) Seminar – 1 hour. Critical presentation and analysis of recent journal articles in neurobiology. Offered Fall, Winter, Spring quarters. Instructors: TBA

**NSC 284 – Development of Sensory Systems:** (1 unit) Seminar – 1 hour. Presentation and discussion of recent literature on the development of sensory systems. Offered Winter, Spring quarters. Instructors: TBA.

**NSC 285 – Literature in Visual Neuroscience:** (2 units) Seminar – 2 hours. Critical presentation and discussion of current literature in visual neuroscience. Offered Fall, Winter, Spring quarters. Instructors: W.M. Usrey, J. Ditterich.

**NSC 287A – Topics in Theoretical Neuroscience:** (2 units) Seminar – 2 hours. In-depth exploration of topics in theoretical neuroscience. Foundational material from books and review articles. Topic varies each year. Offered Fall quarter. Instructors: M. Goldman, J. Ditterich.

**NSC 287B – Topics in Theoretical Neuroscience:** (2 units) Seminar – 2 hours. In-depth exploration of topics in theoretical neuroscience. Topic varies each year. Continuation of year's topic through readings of seminal articles from the primary literature. Offered Spring quarter. Instructors: M. Goldman, J. Ditterich.

**NSC 289 – Topics in Molecular and Developmental Neurobiology:** (2 unit) Seminar – 2 hours. Analysis and discussion of seminal and current research papers in molecular and developmental neurobiology. Different topics will be covered each quarter. In the past, topics have include, “Synaptic vesicle dynamics,” “Neuronal polarity,” and “Glutamate receptors.” Offered Winter, Spring quarters. Instructors: E. Diaz, K. Zito.

**NPB 291 – Auditory Neuroscience:** (1 unit) Seminar – 1 hour. Exploration of various important aspects of auditory physiology, behavior and psychophysics through the review of original literature. Offered Fall, Winter, Spring quarters. Instructors: G.H. Recanzone, M.L. Sutter.

**NSC 298 – Brain Imaging Neuroscience Journal Club:** (1 unit) Seminar – 1 hour. Current issues related to cognitive neuroimaging, with an emphasis on functional magnetic resonance imaging (fMRI). Emphasis will be placed on the pragmatic aspects of neuroimaging methods (i.e., relating theory to practical issues faced by experimenters), rather than in-depth explanation of biophysical and statistical methods. Instructor: C. DeCarli, C. Ranganath.

**NSC 298 – Neuronal Signal Transduction Mechanisms:** (1 unit) Seminar – 1 hour. Critical evaluation and discussion of current issues and literature related to signal transduction neurobiology. Instructors: M.E. Burns.

**NSC 298 – Behavioral Phenotyping:** (2 units) Seminar – 1 hour. Behavioral Phenotyping of Transgenic and Knockout Mice. Instructors: J. Crawley.

**NSC 298 – Animal Models of Neurodevelopmental Disorders:** (1 unit) Seminar – 1 hour. Spring quarter. Instructors: J. Silverman.

See Appendix B for a full listing of courses and journal clubs for 2018-2019.

### Extramural courses

In addition to the course requirements, there are also extramural training options. Extramural training includes summer courses such as those offered on neuroscience-related topics at the Marine Biology Laboratory in Woods Hole, Massachusetts, Cold Spring Harbor Laboratory in New York, the Summer Institute in Cognitive Neuroscience, or other institutions. You can choose from a very large range of possibilities depending on your interests. Usually, you apply for an extramural course after your first or second year in the Program.

## Seminars

### Perspectives in Neuroscience Seminar Series

The Perspectives in Neuroscience Series is the official formal seminar series at the Center for Neuroscience. The schedule and list of speakers for 2020-21 is in the seminar section of your Orientation binder. Please plan on attending the seminars from 12-1 p.m. and the student/postdocs-only lunch hour from 1-2 p.m. with each speaker.

### Neurolunch

Each month, members from a laboratory present their recent results to the Neuroscience Graduate Group. Neurolunch seminars are held on Thursdays throughout the year, and the lunch (pizza!) begins at 11:30 a.m. in the Center for Neuroscience Conference Room 113. The list of dates and lab presentations for 2021-22 to be determined.

### Student Organized Seminar Series

The Neuroscience Student Organized Seminar Series is a symposium in which graduate students nominate, invite, and host neuroscientists whose work they admire. Traditionally, three to four speakers are hosted each academic year representing multiple areas of neuroscience research. The goal of this seminar series is to promote interactions between graduate students and invited speakers. As such, the invited speakers spend much of their social time with graduate students who are also responsible for arranging all aspects of the speakers' visits. The schedule and list of speakers for 2018-19 will be announced soon.

### Seminar Outreach for Minority Advocacy (SOMA)

The purpose of SOMA is to enhance the visibility of successful underrepresented minorities in neuroscience and educate our campus community about issues that contribute to continued oppression of minority groups. Current neuroscience graduate students organize a speaker series consisting of scientists from underrepresented backgrounds. Half of these speakers will be from cellular/systems/cognitive neuroscience backgrounds, while the other half will be from social neuroscience, speaking on their research related to the neuroscience of implicit bias, race relations, gender, etc. All invited speakers will begin their seminar with a description of their journey in academia as a minority. This is their opportunity to share personal stories that will enhance the awareness of underrepresented stories in academia. Each seminar is accompanied by lunch and dinner, allowing students an opportunity to interact with the speaker on a personal level. All talks are open to the entire campus community; lunches are reserved for neuroscience graduate students.

## Registering for Courses

Register for classes via SISWeb at <http://sisweb.ucdavis.edu>. First year students enroll in core courses during the year and one journal club per quarter (see Appendix B for a full listing of 2021-22 courses). After your first year of classes, you will then register for 11 units of NSC 299 and 1 units of NSC 290C. Najwa Marrush will email the CRNs to you during the registration period and will be available on the student portal. Each CRN corresponds to a faculty member, so it is important that you register for the correct 299 and 290C classes. In addition, you will also register for any classes of interest and one journal club per quarter.

In addition to Neuroscience courses and journal clubs, you may register for other classes offered by the University. For a full listing of the courses offered each quarter, please see <https://registrar.ucdavis.edu/registration/schedule/class-search.cfm>.

## Lab Rotations

Our graduate program is unique in that you are not automatically assigned to a Major Professor when you are admitted; you have approximately one year to decide with whom among the Neuroscience Graduate Group faculty you want to work. The purpose of laboratory rotations is to give you early exposure to neuroscience research to help you make that decision. All students in the program are required to complete three laboratory rotations during their first year.

During each laboratory rotation, you visit the lab of a professor in the Neuroscience Graduate Group and perform a small research project for one quarter. In the beginning you and the professor will decide what project you will work on (s/he will probably give you some choices) and you and the faculty will develop a one-page proposal to be submitted at the start of the rotation. Everyone's experience with lab rotations is different, but the basic expectation is that you put in a reasonable amount of time on the rotation project and try to get something out of it. The rotations are for your benefit to see whether you like one kind of research over another, but they are also evaluated on a Pass/Fail basis. The evaluation is based on

1. A 12 minute presentation (with an additional 3 minutes for questions) that you give on your rotation project to the Master Advisor and the Neuroscience Graduate Group community at the end of each quarter.
2. A short discussion between the Master Advisor and the professor you worked under during the rotation.

This does not mean that you must have spectacular results (or even any results, if the project did not work), but rather that you made an effort to accomplish something. To choose your rotations, talk to the Master Advisor, the professors with whom you might want to do rotations, and with classmates who may have done rotations with the same professors. You will need to make sure a given professor can take you on as a rotation student. If you decide that you want to change your list of intended rotations, talk with the Master Advisor.

Every rotation is slightly different. In some laboratories, you may be limited to mostly observing post-docs or other graduate students. This may be the case in labs where you need special training or permission to handle the equipment or animals. In other labs, the professor may expect you to design a small project and collect some data. Thus, it is worthwhile to spend some time talking with professors and investigating labs in which you would most like to do rotations. Discussing the

specifics of what you would like to do and what your chosen professor thinks is reasonable is the best way to avoid mismatches between your expectations and those of the professor.

You are ultimately responsible for making the necessary arrangements for your lab rotations. Visiting professors in their own labs and talking to them about their current research projects is the best way to start. In addition, it is important to plan in advance. Find out what quarters professors will be in Davis (sometimes they go on sabbatical or are on clinical rounds) and which quarters they may be willing to take rotation students. Finally, do not rely on the printed research summary as a guide to the current research that a professor is pursuing; the publication process is very lengthy, and the professor may now be working on something different from when the summary was printed.

While you are actually doing a rotation, you may want to ask yourself whether you would want to eventually settle into that lab. Questions to consider include: Do you enjoy the research? Is the professor a good mentor? Are the other students or post-docs in the lab happy? Can you think of a way to extend the research in a direction that could be your own independent project? The end of the rotation is an excellent time to discuss whether or not the professor would be willing to take you into their lab and what kinds of funding they could provide.

Your choice of rotations can have a major effect on your later direction for thesis research. Some students have switched areas of interest entirely after a rotation (either toward a new direction or to get away from something that does not look so interesting anymore!). So, do not be afraid to sign up for a rotation in unfamiliar territory.

## Teaching Assistantships

A requirement of the Program is that you teach at least one quarter as a Teaching Assistant (TA). Many courses need TAs every quarter, so keep in touch with the Master Advisor or any faculty that teach undergraduate courses in need of a TA.

## Preliminary Exam

### PRELIMINARY EXAMINATION DESCRIPTION

#### The General Knowledge Exam

- I. Written Exam Portion
  - a) Administered after the first year coursework has been completed in a campus computer lab.
  - b) Designed to be finished in 4 hours, though 6 hours will be allowed (3 hour morning session, 3 hour afternoon session).
  - c) Consists of approximately 1/3 basic facts, 1/3 problem solving/short answer and 1/3 integrative essay.
  - d) Covers the knowledge base that is taught in the core courses (Mol/Dev; Cell; Systems; Neuroanatomy; Cognitive).
- II. Oral Exam Portion
  - a) Administered within the week following the written exam.
  - b) Designed to be a 1.5-hr exam, though additional time may be needed on a case-by-case basis.
  - c) Allows examination of areas of perceived weakness from the written exam and allows testing of the student's ability to "think on their feet."
- III. Exam Committee
  - a) Composed of 6 faculty approved by the Ed Policy committee. For 2021: Will DeBello – chair, Sutter, Fox, Fioravante, Wiltgen, Diaz.
  - b) Same committee will write and grade both portions of the exam.
  - c) If there is an unforeseen conflict, the faculty member will appoint a replacement approved by the Ed Policy Committee.
- IV. Outcomes
  - a) Pass/No Pass/Fail applies to both the written and oral components of the exam.
  - b) If No Pass on the first attempt, the student will re-take the exam within 3 months (with exemptions for special circumstances approved by the testing and Ed Policy committees). If No Pass on the second attempt, the student will be dismissed from the program.
  - c) If Fail on first attempt, the student will be dismissed from the program.
  - d) If No Pass on one section and Pass on the others, then the student may retake just that portion of the exam.

## Qualifying Exam

### QUALIFYING EXAMINATION GUIDELINES

To be completed within 1 year of passing the Preliminary Exam

## The Research Proposal

The proposal is modeled after an NIH proposal for a predoctoral fellowship (NRSA), with the addition of an overall in-depth introduction. Students are encouraged to work with their PI after passing the qualifying exam to submit a version of their proposal to NIH for possible funding.

The formatting of the proposal will follow NIH guidelines including: Font: Arial 11, Margins: 0.5 inches, single spaced.

The following sections must be included:

- a. An overall introduction to the proposal that reviews relevant literature and puts the student's proposal into context (up to five pages). Note: this is not part of the NIH proposal format.
- b. Project Summary/Abstract (30 lines of text).
- c. Specific Aim(s) (one page). Compactly outlines the main scientific questions addressed by the proposal. Should include hypotheses and a very brief description of what will be done to test the hypotheses.
- d. Research Strategy (six pages). This should be modeled after the guidelines of an NRSA application and should include significance, innovation, and approach. The student should clearly describe the methods under use, potential pitfalls, and what would be concluded from different possible outcomes. Preliminary data can be included in this section, but is not required.

In general, the document should explain why the experiments are being done, how they will be performed, and what will be concluded from different possible experimental outcomes. Remember that the thesis proposal is not a binding contract for the work to be done; normally this evolves under the guidance of the major professor and thesis committee. The proposal is to be given to the committee at least 3 weeks in advance of the exam date. The thesis proposal defense is expected to be completed within one year of passing the general knowledge exam.

## Oral Defense of Research Proposal

### The committee

The student, in consultation with the PI and the Master Advisor, chooses the committee for this exam. The committee must include at least five members, one of whom must come from outside the Graduate Group. One member also must be on the advising committee and serves as the Chair. The expertise of the members should relate to the subject of the student's proposal. In sum, the Chair must be a member of the advising committee, you must have one external member, and the remaining three members must be from the Neuroscience Graduate Group. You will need to complete the Qualifying Exam Application available on the Graduate Studies website. The form requires the committee composition, the date of the exam, and the Master Advisor's signature. The application must be filed at least one month prior to the exam.

### Structure of the exam

The oral defense is a 3-hour exam. It starts with a presentation of the proposal. It is expected that the committee members will have read the proposal in detail, so this section should be brief (approximately 20-30 minutes seems to work well), perhaps offering more graphical support than in the proposal itself. Following this, there is a general discussion of the proposal, with examiners free to explore background (i.e., the student's scholarship), methodology, and reasoning. As in the general-knowledge exam, each faculty member will be given a nominal time slot in which to work; it will probably be less meaningful in this exam because it will most likely be more discussion-oriented. The student will be asked to leave, and the faculty will discuss whether the student has demonstrated sufficient expertise to advance to candidacy. A second round of questioning might also be called for at this point, to inquire into areas not sufficiently explored in the first round.

### Expectations

The proposal should be well researched, scholarly, and the presentation professional. The student should fully grasp the rationale behind the proposed experiment, the methodology used to perform it, and what interpretations will be drawn from it. In short, the student is expected to show full professional competence as a scientist.

### Outcomes

The Graduate School allows three possible results: Pass, Not Pass, and Fail. Under a not-pass outcome, the committee may specify a variety of remedial actions, from redoing the exam, re-writing parts of the proposal, to demonstrating in other ways proficiency where it was found lacking during the exam.

The Exam committee's unanimous vote is required to pass a student on the exam. If a student does not pass the exam, the committee may recommend that the student be reexamined one more time, but only if the Graduate Adviser concurs with the committee. The second exam must take place within one quarter of the first exam. The format of the second exam is the same as that of the first exam and may include the submission of an amended version of the proposal. The examination may not be repeated more than once. A student who does not pass on the second attempt is subject to disqualification from further graduate work in the program.

## **The Dissertation**

Once you pass the Qualifying Exam, you are eligible to advance to candidacy, or become a Ph.D. candidate. You can obtain the Advancement to Candidacy form Plan B on the Office of Graduate Studies website here: <http://gradstudies.ucdavis.edu/forms/index.html>. You will need to select your dissertation or thesis committee, obtain signatures from the Master Advisor and chair of your Qualifying Exam, pay the candidacy fee and finally submit the form to the Office of Graduate Studies.

### *The Dissertation Committee*

On the Advancement to Candidacy form, the candidate lists proposed members of the Dissertation Committee. The Committee consists of your Major Professor and four other faculty members (one must be from outside the Graduate Group) that agree to give advice concerning the shaping of your thesis research. Your Major Professor will serve as chair of the committee. Once the committee has been selected, you must meet with them annually. The chair of your Committee will then submit a

summary of your progress to the Master Advisor. These meetings are mandatory and essential to the successful completion of your dissertation.

#### Completing the thesis research and dissertation

At this point in the Program, you will devote a significant amount of time to completing your research project. After gathering a sufficient amount of data, you will begin writing research papers for publication. These can be incorporated into your dissertation, which will likely also include unpublished results. The Master Advisor and your Major Professor have a lot of experience with dissertations, so refer to them for help, as well as your other Dissertation Committee members. There are numerous copies of dissertations from our Alumni in the Graduate Student Lounge. Feel free to peruse them at your leisure.

#### Exit Seminar

Before leaving the graduate group and the University, you will present a public exit seminar describing the results of your research. Congratulations! You have become an independent, self-sufficient scientist.

# USEFUL INFORMATION

## Annual Meeting with the Advisor

Every year before the Spring Meeting, the students are required to meet individually with their assigned advisor from the Graduate Advisory Committee to discuss their progress in the program. Unsatisfactory progress reports are forwarded to the Office of Graduate Studies. You will receive an email from the SPA (Student Progress Assessment system) in early spring to start your annual report and, with the assistance of Najwa; you will schedule your meeting.

## Spring Meeting

The Neuroscience Graduate Group meets annually every spring to discuss student progress and program issues. In the first part of the meeting, the faculty and students meet separately; the faculty meet to discuss student progress, and the students meet to discuss issues that need to be raised during the general meeting. In the second part of the meeting, the students and faculty meet as a whole to review the past year's events and honors and to discuss any issues related to the program.

## Financial Support

### Stipend (new students only):

The Neuroscience Graduate Group offers financial support for its first-year students with a yearly stipend of \$35,967.00, full fee remission, and as necessary, full non-resident tuition. Please note that satisfactory academic progress must be maintained and that you must file a FAFSA form (<http://fafsa.ed.gov>) to be eligible for this support. The FAFSA form can be filled out online and should be submitted at your earliest convenience.

Your stipend will be paid monthly, over 9 months, upon presentation of a validated student ID card at the Student Accounting Office, 2022 Dutton Hall, beginning November 1, 2021. You can request direct deposit by filling out the appropriate forms available through the Student Accounting website: <http://studentaccounting.ucdavis.edu>. Please note: your first check will be presented to you on November 1st, and, as you will be here in Davis well before November, you should be prepared to weather a month-and-a-half to two-month period without a monthly stipend. Once you join a lab and are hired as a Graduate Student Researcher (GSR), depending on your funding your first paycheck will be August 1, 2022 or November 1, 2022.

### Graduate Student Researcher (GSR) appointments:

Once you pick a lab to work in (decision after your third lab rotation in Spring), you will be picked-up by your Major Professor or Principal Investigator (PI) and hired as a Graduate Student Researcher (GSR) in that lab. As a student in the Neuroscience Graduate Program you will continue to receive the \$35,967.00 amount per year.

## Fellowships

UC Davis offers information on a number of great internal fellowships:  
<http://gradstudies.ucdavis.edu/ssupport/internal.html>

And external fellowships: <http://gradstudies.ucdavis.edu/ssupport/external.html>

## Tax Information

Refer to Internal Revenue Service Publication 970 (<http://www.irs.gov/publications/p970/index.html>). Fellowships and scholarships are taxable, except for the amount paid for tuition, required fees, books and course-related expenses. The university neither withholds taxes, nor reports such payments to the IRS or State Franchise Tax Board for U.S. citizens and permanent residents. Individuals are required to report this income themselves and to make arrangements with the federal and state tax services to make estimated quarterly tax payments on fellowship income. Information on tax reporting is available in the Government Documents section of the University library (<http://www.lib.ucdavis.edu>), or you may contact the campus tax accountant at (530) 757-8936.

International Students – Refer to the Internal Revenue Service Publication 519. Fellowships are paid through the payroll office and taxes are withheld and reported to the Internal Revenue Service (IRS) and the State of California, Franchise Tax Board. Certain individuals from countries with which the United States has a tax treaty may be exempted from federal withholding (<http://www.ucop.edu/ucophome/cao/paycoord/taxstate.html>). More information is available from Services for International Students and Scholars (SISS) at <http://siss.ucdavis.edu/taxation.cfm>.

The graduate group is not allowed to give out tax advice. Please refer to the following links for Student Accounting and tax information: <https://studentaccounting.ucdavis.edu/tax>

Contact information for Student Accounting: <https://studentaccounting.ucdavis.edu/contact>

## Health Insurance and Benefits

You are eligible for UC Davis graduate student health insurance (GSHIP), which is included in your student fees. If you are a new student, the health coverage will not begin until the beginning of the quarter. If you arrive in Davis early, please make sure you have health coverage prior to the beginning of the quarter in case of an emergency.

Here is a link to the Student Health Services: <http://healthcenter.ucdavis.edu/>

Here is a link to your insurance information: <http://healthcenter.ucdavis.edu/insurance/index.html>

Life Balance and Wellness information: <https://grad.ucdavis.edu/current-students/support-resources/graduate-student-resources>

Mental Health and Counseling information: <https://grad.ucdavis.edu/current-students/mental-health-counseling-services>

Leave Accommodation information: <https://grad.ucdavis.edu/resources/graduate-student-resources/student-employment/leave-accommodation>

Student Parents and Family information: <https://grad.ucdavis.edu/resources/graduate-student-resources/life-balance-and-wellness/student-parents-families>

Crisis Counseling: <https://www.ucdavis.edu/news/uc-davis-promotes-texting-option-crisis-counseling>  
<https://eachaggiematters.ucdavis.edu/here-are-some-options-immediate-crisis-support>

## Planned Educational Leave Program (PELP)

The University offers students the option of taking a break in their education for a valid reason. You can PELP for a minimum of one and a maximum of three consecutive quarters. During your PELP period, you are not a registered student, but you retain some student privileges such as using the library and the recreational facilities (only if you purchase the necessary cards for each of those). For more information regarding the PELP, please contact the Office of Graduate Studies (752-0650).

## Sexual Violence Prevention and Response and Title IX

One of UC Davis' highest priorities is the safety of its students and all members of its community. UC Davis prohibits all forms of sexual harassment and sexual violence, including sexual assault, dating and domestic violence, and stalking. Such conduct violates University policy and may violate California law.

More information: <https://sexualviolence.ucdavis.edu/>

Title IX information: [http://compliance.ucdavis.edu/compliance\\_program/title\\_ix.html](http://compliance.ucdavis.edu/compliance_program/title_ix.html)

## Aggie Travel (students with Major Professors housed at the CNS)

It is inevitable that you will attend a few conferences while a graduate student in the Program. If your Major Professor or the Graduate Program is covering some or all of your costs you will need to go through a reimbursement process where you submit your travel summary info and receipts to the administrative staff. All receipts must be in the traveler's name as we cannot reimburse individuals for costs in the name of others. When sharing a hotel room please do not have one person charge the entire cost; please split payment of the hotel bill. Request a separate bill in each person's name; all hotels should provide this service. Remember that original receipts are required for everything, including your boarding pass.

Contact Najwa Marrush [nmmarrush@ucdavis.edu](mailto:nmmarrush@ucdavis.edu)

## Room reservations

You may reserve the Center for Neuroscience conference room 113 or School of Medicine Neuroscience conference rooms 320 or 602 by submitting a request through our online reservation system which is in the process of transitioning to a new system. Please email Najwa for information on how to reserve rooms.

## Projectors and printing

There is one projector available for checkout. Please see Najwa if you wish to check out the equipment. If you need to print documents from your laptop while at CNS they will come out of the mailroom printer. If you need to connect to the printers, please talk to the IT person at CNS (Ryan Foster [rfoster@ucdavis.edu](mailto:rfoster@ucdavis.edu)) to get you set up. Please feel free to make copies in the mailroom; a scanner is also available on the copy machine.

## Mailboxes

You will have a mailbox in the mailroom at the Center for Neuroscience. You will be sharing a mailbox with graduate students who share the first letter of your last name.

APPENDIX A: Neuroscience Graduate  
Group Directory  
2021-2022

Neuroscience Graduate Group Faculty Members (Alphabetically by Faculty Member)					
	Name/Degree(s)	Rank	Primary (& Secondary) Appointment(s)	College	Research Interest
1	Amaral, David G., PhD	Professor	Psychiatry and Behavioral Sciences	SOM	Structural Imaging of the Autistic Brain, Social Behavior in Animal Models of Autism
2	Bales, Karen, PhD	Professor	Neurobiology, Physiology, and Behavior	L&S	Neurobiology of social behavior in pair bonding species including prairie voles, titi monkeys, and seahorses.
3	Bauman, Melissa D., PhD	Associate Professor	Psychiatry and Behavioral Sciences	SOM	Neural Systems, Social Behavior, Animal Models of Autism, Autism, Neuroimmunology, Neurodevelopment
4	Bliss-Moreau, Eliza, PhD	Assistant Professor	Psychology	L&S	Neural Mechanisms of Affect and Attention, Evolutionary Mechanisms
5	Boorman, Erie, D Phil	Assistant Professor	Psychology	L&S	Neural Mechanisms of Reinforcement- Guided Learning and Decision Making
6	Borodinsky, Laura N., PhD	Professor	Physiology and Membrane Biology, Institute for Pediatric Regeneration, Shriners Hospitals	SOM	Developmental Neuroscience
7	Burns, Marie E., PhD	Professor	Center for Neuroscience, Ophthalmology and Vision Science, Cell Biology and Human Anatomy	SOM	Photoreceptor Signaling; Retinal Physiology
8	Carstens, Earl, PhD	Professor	Neurobiology, Physiology and Behavior	CBS	Pain and Itch Mechanisms
9	Carter, Cameron S., MD	Professor	Psychiatry and Behavioral Sciences, Director of the Behavioral Health Center of Excellence	SOM	Neural Mechanisms of Attention and Memory, Pathophysiology of Cognitive Disorders, Neural Imaging
10	Chadhuri, Rishidev, PhD	Assistant Professor	Center for Neuroscience, Mathematics	L&S	General Theoretical Principles of Neural Computation
11	Chen, Shizhe, PhD	Assistant Professor	Statistics	L&S	Merging Statistical Problems in Learning Large Complex Biological Systems from Massive Data, Applications in Neuroscience
12	Chen, Tsung-Yu, MD, PhD	Professor	Center for Neuroscience, Neurology	SOM	Structures, Functions and Physiology of Ion Channels
13	Chen, Xiaomo, PhD	Assistant Professor	Center for Neuroscience, Neurobiology, Physiology and Behavior	CBS	Neural mechanisms underlying cognitive control functions.
14	Chiu, Joanna, PhD	Associate Professor	Entomology	CBS	Molecular Chronobiology and Molecular Genetics of Animal Behavior
15	Corina, David, PhD	Professor	Center for Mind and Brain, Linguistics	L&S	Cognitive Neurolinguistics
16	Cortopassi, Gino A., PhD	Professor	Molecular Biosciences	SOM	Mitochondrial Function and Dysfunction in Human Aging and Disease
17	Crawley, Jacqueline N., PhD	Professor	Psychiatry and Behavioral Sciences (Robert E. Chason Endowed Chair in Translational Research at MIND)	SOM	Neurodevelopmental and Neuropsychiatric Disorders
18	Cudmore, Robert, PhD	Assistant Professor	Physiology and Membrane Biology	SOM	Vascular function and neurovascular coupling in health and disease, neuronal spine dynamics

	Name/Degree(s)	Rank	Primary (& Secondary) Appointment(s)	College	Research Interest
19	Cruz-Orengo, Lillian	Assistant Professor	Anatomy, Physiology & Cell Biology	SOM	Sexual Dimorphism, Blood-Brain Barrier, Autoimmunity & Neuroimmunology
20	DeBello, William M., PhD	Associate Professor	Center for Neuroscience; Neurobiology, Physiology and Behavior	CBS	Molecular Plasticity of Owl Optic Tectum
21	Diaz, Elva D., PhD	Professor	Pharmacology	SOM	Functional Genomics of Nervous System Development
22	Ditterich, Jochen, PhD	Associate Professor	Neurobiology, Physiology and Behavior	CBS	Neural Mechanisms Linking Perception and Action
23	Dugger, Brittany	Assistant Professor	Pathology and Lab Medicine	SOM	Neuropathology of Neurodegenerative Diseases, Dementias, Alzheimer's Disease, Dementia with Lewy Bodies, Frontotemporal Dementias, Tau, Alpha Synuclein, Amyloid Beta, Digital Pathology, Immunohistochemistry
24	Fan, Audrey, PhD	Assistant Professor	Biomedical Engineering and Neurology	COE	The Functional Advanced Neuroimaging (FAN) Lab develops advanced, multi-modal imaging tools to understand the vascular and physiological bases of neurological disorders.
25	Fink, Kyle	Assistant Professor	Neurology	SOM	Neurology and Institute for Regenerative Cures
26	Fioravante, Diasynou, PhD	Assistant Professor	Center for Neuroscience; Neurobiology, Physiology and Behavior	CBS	Synaptic Neurophysiology, Plasticity, Learning and Memory
27	Fox, Andrew S., PhD	Assistant Professor	Psychology	L&S	The Neuroscience of Emotion and Temperament in Primates
28	Geng, Joy J., PhD	Associate Professor	Psychology	L&S	Visual Attention
29	Goldman, Mark Steven, PhD	Professor	Center for Neuroscience; Neurobiology, Physiology and Behavior; Ophthalmology and Vision Science	CBS /SOM	Computational Neuroscience
30	Gong, Qizhi, PhD	Professor	Cell Biology and Human Anatomy	SOM	Developmental Neuroscience, Olfactory System, Plasticity
31	Gray, John, MD, PhD	Assistant Professor	Center for Neuroscience; Neurology	SOM	NMDA Receptors and Synapse Regulation
32	Griffith, Theanne, PhD	Assistant Professor	Physiology and Membrane Biology	SOM	Cellular and molecular mechanisms that underly transmission of thermal sensations in both health and disease.
33	Guo, Fuzheng, PhD	Associate Professor	Neurology	SOM	Neural Development, Glial Differentiation
34	Gurkoff, Gene, PhD	Assistant Professor	Neurological Surgery	SOM	Neurotrauma
35	Hagerman, Randi J., MD	Professor	Pediatrics	SOM	Genotype-Phenotype Relationships in Fragile X Syndrome
36	Hamada, Fumika, PhD	Associate Professor	Neurobiology, Physiology and Behavior	CBS	Temperature homeostasis: Circadian rhythms, thermoregulation, temperature sensation

	Name/Degree(s)	Rank	Primary (& Secondary) Appointment(s)	College	Research Interest
37	Hanks, Timothy, PhD	Assistant Professor	Neurology	SOM	Neural Mechanisms of Decision Making
38	Hell, Johannes W., PhD	Professor	Pharmacology	SOM	Postsynaptic Signaling Mechanisms Including Signaling Complexes Formed by Glutamate Receptor and Ca Channels
39	Jin, Lee-Way, MD, PhD	Associate Professor	Pathology and Laboratory Medicine	SOM	Alzheimer's Disease, Autism Spectrum Disorders, Glia Biology
40	Joiner, Wilsaan	Assistant Professor	Neurobiology, Physiology and Behavior	CBS	Sensorimotor integration, motor control, adaptation, generalization, rehabilitation, eye movements, visual perception, computational modeling, robotics, neuroengineering, prosthetics
41	Kim, Christina, PhD	Assistant Professor	Center for Neuroscience, Neurology	SOM	Functional and biochemical mapping of neural circuits
42	Knoepfler, Paul, PhD	Professor	Cell Biology and Human Anatomy; Institute for Pediatric Regeneration, Shriners Hospitals	SOM	Stem and Cancer Cell Epigenetics
43	Krubitzer, Leah, PhD	Professor	Center for Neuroscience, Psychology	L&S	Cortical Organization and Plasticity
44	La Torre Vila, Anna PhD	Assistant Professor	Cell Biology and Human Anatomy	SOM	Molecular Mechanisms of Stem Cell Specification and Differentiation in the Retina
45	Lein, Pamela J., PhD	Professor	Molecular Biosciences	SVM	Molecular and Cellular Mechanisms of Neurotoxicity
46	Luck, Steven J., PhD	Professor	Psychology	L&S	Basic and Translational Cognitive Neuroscience
47	Mangun, George R., PhD	Professor	Psychology, Neurology	SOM	Visual Attention and fMRI
48	Marsh-Armstrong, Nicholas, PhD	Professor	Ophthalmology	SOM	Molecular Mechanisms Involved in Gene Regulation and Development and Disease of the CNS, Retina
49	Martinez-Cerdeno, Veronica, PhD	Associate Professor	Pathology and Laboratory Medicine, Institute for Pediatric Regenerative Medicine, Shriners Hospital	SOM	Stem Cells, Neurodevelopment, and Autism
50	McAllister, A. Kimberley, PhD	Professor	Center for Neuroscience, Neurology; Neurobiology, Physiology and Behavior	CBS/ SOM	Brain Development; Synapse Formation & Elimination; Neuroimmunology
51	Miller, Lee M., PhD	Professor	Neurobiology, Physiology and Behavior	CBS	Auditory Neuroscience and Speech Perception
52	Morrison, John, PhD	Professor	CNPRC, Neurology	SOM	Neurobiology of Aging and Neurodegenerative Disorders
53	Moxon, Karen, PhD	Professor	Biomedical Engineering	ENG	Neural encoding and plasticity, neuroprosthetics, neuroengineering, brain-machine interfaces
54	Noctor, Stephen C., PhD	Assistant Professor	Psychiatry and Behavioral Services, M.I.N.D. Institute	SOM	Factors that Regulate Neurogenesis in the Prenatal Cerebral Cortex

	Name/Degree(s)	Rank	Primary (& Secondary) Appointment(s)	College	Research Interest
55	Nord, Alex S., PhD	Assistant Professor	Center for Neuroscience; Neurobiology, Physiology, and Behavior; Psychiatry and Behavioral Sciences	CBS/ SOM	Genomic Control of Transcription in the Brain
56	Olichney, John M. MD	Associate Professor	Neurology	SOM	Cognitive Disorders and Aging, ERPs, fMRI
57	Olson, David E., PhD	Assistant Professor	Chemistry	L&S	Learning and Memory, Organic Synthesis, Molecular Neurobiology, and Behavioral Neuropharmacology
58	O'Reilly, Randall, PhD	Professor	Psychology	L&S	Psychology and Computer Science/ Cognitive Science
59	Patten,Carolynn, PhD, OT, FAPTA	Professor	Physical Medicine and Rehabilitation	SOM	Assessment and treatment of motor dysfunction associated with aging and adult neuropathologies.
60	Pessah, Isaac N. PhD	Professor	Molecular Biosciences	SVM	Molecular and Cellular Mechanisms Regulating Calcium Signaling
61	Pleasure, David E., MD	Professor	Neurology, Pediatrics	SOM	CNS Glial Development and Glial Diseases
62	Ragland, John Daniel, PhD	Professor	Psychiatry and Behavioral Medicine	SOM	Learning and Memory in Schizophrenia
63	Ranganath, Charan, PhD	Professor	Center for Neuroscience, Psychology	L&S	Cognitive Neuroscience of Memory
64	Recanzone, Gregg H., PhD	Professor	Center for Neuroscience; Neurobiology, Physiology and Behavior	CBS	Auditory Perception
65	Richman, David P., MD	Professor	Neurology	SOM	Myasthenia Gravis, Lambert Eaton Syndrome, and Multiple Sclerosis
66	Rivera, Susan M., PhD	Professor	Psychology	L&S	Developmental Cognitive Neuroscience/Developmental Disorders
67	Ryan, Karen, PhD	Associate Professor	Neurobiology, Physiology and Behavior	CBS	Neuroendocrine Mechanisms, Systemic Metabolism, Therapeutic Intervention in Stress-Related and Metabolic Disease
68	Schumann, Cynthia, PhD	Associate Professor	Psychiatry and Behavioral Sciences	SOM	Cellular and molecular developmental trajectory of brain regions related to anxiety across the lifespan in neurotypical individuals and those with neurodevelopmental and psychiatric disorders
69	Schweitzer, Julie, PhD	Professor	Psychiatry and Behavioral Sciences	SOM	ADHD and Related Disorders in Children and Adults Using Behavioral/Neuropsychological and Functional Neuroimaging Methods
70	Shahlaie, Kiarash, MD, PhD	Professor	Neurological Surgery	SOM	Neuromodulation to Promote Cognitive Recovery in Trauma, Epilepsy, and Neurodegenerative Disorders
71	Sharp, Frank R., MD	Professor	Neurology	SOM	Neurobiology of Stroke and Other Diseases
72	Silverman, Jill, PhD	Assistant Professor	Psychiatry and Behavioral Science	SOM	Pharmacological Treatments for Autism Spectrum Disorders
73	Simkins, Tyrell, D.O., PhD	Assistant Professor	Neurology	SOM	Mechanisms and pathology of CNS remyelination

	Name/Degree(s)	Rank	Primary (& Secondary) Appointment(s)	College	Research Interest
74	Simo, Sergi, PhD	Assistant Professor	Cell Biology and Human Anatomy	SOM	Developmental Patterns in the CNS, Neuron Migration, Signaling Pathways, Development
75	Simon, Tony J. PhD	Professor	Psychiatry and Behavioral Sciences	SOM	Brain and Cognition, Neurodevelopmental Disorders, Psychosis
76	Soulika, Athena, PhD	Associate Professor	Dermatology; Ophthalmology & Vision Science	SOM	Local immune responses in the healing process following tissue injury.
77	Sutter, Mitchell L., PhD	Professor	Center for Neuroscience; Neurobiology, Physiology and Behavior	CBS	Auditory and Sensory Systems
78	Swick, Diane, PhD	Associate Adjunct Professor	VA Northern California, Neurology	SOM	Cognitive Neuroscience of Executive Control, Memory, Language
79	Tian, Lin, PhD	Associate Professor	Biochemistry and Molecular Medicine, Psychiatry and Behavioral Sciences	SOM	Optical Dissection of the Structure and Function of Neural Circuitry
80	Trainor, Brian C., PhD	Professor	Psychology	L&S	Behavioral Neuroscience
81	Usrey, W. Martin, PhD	Professor	Center for Neuroscience; Neurobiology, Physiology and Behavior; Neurology	CBS/ SOM	Structure, Function and Development of Neural Circuits for Vision
82	Wan, Jiandi	Assistant Professor	Chemical Engineering	COE	Cerebrovascular Coupling and Intestinal Stem Cell
83	Whistler, Jennifer	Professor	Center for Neuroscience; Physiology and Membrane Biology	CBS/ SOM	Neurobiology of addictive disorders and their comorbidities
84	Wiltgen, Brian, PhD	Associate Professor	Center for Neuroscience; Psychology	L&S	Neurobiology of Learning and Memory
85	Xiang, Yang K., Ph.D.	Professor	Pharmacology	SOM	Signaling Transduction, Neurodegenerative Diseases, Heart Failure, Receptor Pharmacology
86	Yonelinas, Andrew P., PhD	Professor	Psychology	L&S	Memory and Amnesia
87	Zarbalis, Konstantinos, PhD	Associate Professor	Department of Pathology and Laboratory Medicine	SOM	Molecular mechanisms underlying craniofacial and forebrain development
88	Zhang, Lin, PhD	Professor	Neurology	SOM	Experimental Therapeutics of neurodegenerative disorders
89	Zhao, Min, MD, PhD	Professor	Dermatology; Ophthalmology & Vision Science	SOM	Corneal Wound Healing
90	Zhou, Chengji, PhD	Professor	Cell Biology and Human Anatomy; Institute for Pediatric Regeneration, Shriners Hospitals	SOM	Developmental Disorders and Regeneration
91	Zito, Karen, PhD	Professor	Center for Neuroscience; Neurobiology, Physiology and Behavior	CBS	Development and Plasticity of Neural Circuits

## Neuroscience Student Roster 2021-2022

Current Student	Email	Major Professor	PI Email	Objective	Year
Aarrestad, Isak	aarrestad	TBD	TBD	PhD	1
Alexander, Prescott	pcalexander	Marty Usrey	wmusrey	PhD	8
Allen, Kennedy	kemallen	Brian Trainor	bctrainor	PhD	3
Anguiano, Maribel	mangui	TBD	TBD	PhD	1
Barragan, Eden	evbarragan	John Gray	john.gray	PhD	7
Bormann, Brett	bmbormann	David Corina	dpcorina	PhD	2
Cameron, Lindsay	lcameron	David Olson	deolson	PhD	6
Carrasco, Carlos	cdcarrasco	Steven Luck	sjluck	PhD	4
Carter, Jasmine	jascarter	Kyle Fink	kdfink	PhD	4
Chandra, Joshua	jchandra	TBD	TBD	PhD	1
Charbonneau, Joseph	jcharbonneau	Eliza Bliss-Moreau	eblissmoreau	PhD	3
Claiborne, Nicole	nclaiborne	Karen Zito	kzito	PhD	5
D'Ambra, Alexa	adambra	Diasynou Fioravante	dfioravante	PhD	5
De Frates, Rebecca	radefrates	TBD		PhD	3
De Kock, Rose	rvdekock	Wilsaan Joiner	wmjoiner	PhD	4
Disse, Gregory	gdisse	Karen Moxon	kmoxon	MD/PhD	3
Fenton, Ethan	emfenton	TBD	TBD	PhD	1
Foray, Katherine	kforary	TBD	TBD	PhD	1
Ganupuru, Preetham	pganupuru	Tim Hanks	thanks	PhD	6
Gooding, Sarah Warren	swgooding	Jennifer Whistler	jlwhistler	PhD	5
Grant, Simone	segrant	Melissa Bauman	mdbauman	PhD	4
Haley, Evan	echaley	TBD	TBD	PhD	1
Harrast, Porter	pdharrast	Will DeBello	wmdebello	PhD	4
Hull, Vanessa	vlhull	David Pleasure	depleasure	PhD	3
Jacobi, Ariel	aajacobi	Johannes Hell	jwhell	MD/PhD	3
Jefferson, Jaleel	jajefferson	John Morrison	jhmorrison	PhD	4
Jin, Yihan	yihjin	Lin Tian	lintian	PhD	3
Jordan, Katherine	kajordan	TBD	TBD	PhD	1
Keeshen, Caroline	cmkeeshen	Jennifer Whistler	jlwhistler	PhD	3
Lee, Quimby	qbylee	Audrey Fan	apfan	PhD	2

## Neuroscience Student Roster 2021-2022

Lenz, Garreck	ghlenz	Jennifer Whistler	jlwhistler	PhD	3
Long-Iyer, Kiran	krlongiyer	Lin Tian	lintian	PhD	3
Lozano, Celena	cnlozano	TBD	TBD	PhD	1
Lozano, Stephanie	salozano	Alex Nord	asnord	PhD	2
Marquez, Jose	josmarquez	TBD		PhD	2
Martinez, Joseph	joemartinez	Kevin Xiang	ykxiang	PhD	6
Maw, Savannah	smaw	Eliza Bliss-Moreau	eblissmoreau	PhD	2
Mikhailova, Alexandra	smikhailova	Kim McAllister	kmcallister	PhD	5
Moghbel, Ariana	anmoghbel	TBD	TBD	PhD	1
Paulus, John	jppaulus	Karen Bales	klbales	PhD	2
Prendergast, Kathryn	keprendergast	Kim McAllister	kmcallister	PhD	5
Rahim, Raisa	rarahim	Joy Geng	jpgeng	PhD	4
Rodriguez Cruz, Paula	parodriguezcruz	TBD	TBD	PhD	1
Ronning, Kaitryn	keronning	Marie Burns	meburns	PhD	7
Salter-Cid, Tomas	tsalterc	TBD	TBD	PhD	1
Sanchez, Alyssa	alysanchez	Marty Usrey	wmusrey	PhD	4
Scott, Erin	ecscott	TBD	TBD	PhD	1
Seban, Nicolas	nrseban	TBD	TBD	PhD	1
Seidl, Stacey	seseidl	Marty Usrey	wmusrey	PhD	8
Skuja, Lukas	llskuja	TBD	TBD	PhD	1
Spruston, Evan	ejspruston	TBD	TBD	PhD	1
Stevenson, Tanner	tstevenson	Rishi Chaudhuri	rchaudhuri	PhD	2
Vafaeva, Olga	ovafaeva	Elva Diaz	ediaz	PhD	4
Varga, Erica	evarga	TBD	TBD	PhD	1
Vargas, Maxemiliano	maxvargas	David Olson	deolson	PhD	5
Vlasov, Ksenia	kvlasov	Diasynou Fioravante	dfioravante	PhD	4
Wang, Yiheng	pyhwang	Mark Goldman	msgoldman	PhD	3
Warren, Tracy	tlwarren	Alex Nord	asnord	PhD	4
Williams, Ashley	ashwilliams	Charan Ranganath/Dan Ragland	cranganath/jdragland	PhD	4
Willson, Rebecca	rjwilso	Pam Lein	pjlein	PhD	3
Yazel, Britt	bwyazel	Lee Miller	leemiller	PhD	8

APPENDIX B: Neuroscience  
Course Listing (Subject to Change)  
2021-2022

# Neuroscience Fall Quarter 2021 Courses

## First Year Courses

Course	CRN	Title	Units	Instructor	Location	Time
NSC 200LB	43099	Neuro Lab Rotation	3	Whistler	TBD	TBD
NSC 226	53915	Molecular & Developmental Neuroscience	4	Diaz/Murray/Rogers	SOM 320	MF 9:00-11:00am
NSC 221	43101	Cellular Neuroscience	4	Gray	SOM 320	TWR 10:00-11:20am
NSC 298	43155	First-years Ethics RCR*	1	Whistler	See link below	See link below

## LaMP courses

Course	CRN	Title	Units	Instructor	Location	Time
NSC 271A	43102	Core Concepts & Methods in Learning, Memory, and Plasticity, Part I	2	Ranganath	CNS 203J	M 11:30am-1:30pm
NSC 298	43159	LaMP Career Dev Meeting	2	McAllister	CNS 203J	M 9:00-11:00am

## Other Courses

Course	CRN	Title	Units	Instructor	Location	Time
NSC 261A	52887	Topics in Vision	2	Burns	Tupper 2135	F 9:00 - 11:00am
NSC 287A	43104	Topics in Thoretical Neuroscience (This course counts as a Journal Club)	2	Goldman	Shields Library 360	R 9-10:50am

## Journal Clubs

Course	CRN	Title	Units	Instructor	Location	Time
NSC 298	43183	Clinical/Translational	1	Gurkoff	TBD	Biweekly Wednesday 11:45am-1:45pm
NSC 298	43160	Molecular and Cellular Neuro	1	Fioravante	TBD	BiWeekly Friday 9:30-11:30am
NSC 298	43172	Neuroimaging	1	Carter	TBD	TBD
NSC 285	43103	Lit Vis Neuroscience	2	Britten	TBD	TBD
NSC 295	43147	Lit Neuroengineering	1	Moxon	CHSL 109	Fridays 10:00 - 11:50am
NSC 298	43154	Neuroimmunology	1	Bauman	TBD	TBD
NSC 298	43152	MIND: Molecular Neurobiology of Disease	1	Ander/Stamova/Sharp	TBD	Thursdays 1:00 - 2:00pm

\*RCR: <http://research.ucdavis.edu/policiescompliance/research-ethics-rcr-program/>

# Neuroscience Winter Quarter 2022 Courses

## First Year Courses

Course	CRN	Title	Units	Instructor	Location	Time
NSC 200LB	34701	Neuro Lab Rotation	3	Whistler	TBD	TBD
NSC 222	34703	Systems Neuroscience	5	Usrey/Ditterich/DeBello	CNS 113	TR 9:00-10:20am W 9:00-11:30 am
NSC 226	45284	Neuroanatomy	3	Noctor	CNS 113	TWR 8:00 - 8:50am
NSC 298	34785	First-years Ethics RCR*	1*	Whistler	See link below	See link below

## Second Year Course

Course	CRN	Title	Units	Instructor	Location	Time
NSC 219	34702	Statistics	3	Nord	CNS 113	MW 3:10-4:30pm
NSC 298	34781	Optional Applied Statistics*	1	Nord	CNS 113	MW 4:40-5:30pm

## LaMP courses

Course	CRN	Title	Units	Instructor	Location	Time
NSC 271B	34706	Core Concepts & Methods in Learning, Memory, and Plasticity, Part II	2	Wiltgen	CNS 203J	M 11:30-1:30pm
NSC 298	34787	LaMP Career Dev Meeting	2	McAllister	CNS 203J	M 9:00-11:00am

## Other Courses

Course	CRN	Title	Units	Instructor	Location	Time
NSC 287B	34705	Topics in Theoretical Neuroscience	2	Goldman	TBD	R 9:00-10:50am

## Journal Clubs

Course	CRN	Title	Units	Instructor	Location	Time
NSC 298	34778	Clinical/Translational	1	Gurkoff	TBD	Biweekly Wednesday 11:45am-1:45pm
NSC 298	34753	Molecular and Cellular Neuro	1	Kim, C	TBD	BiWeekly Friday 9:30-11:30am
NSC 298	34760	Neuroimaging	1	Carter	TBD	TBD
NSC 285	34707	Lit Vis Neuroscience	2	Britten	TBD	TBD
NSC 298	34765	Neuroimmunology	1	Bauman	TBD	TBD
NSC 298	34759	MIND: Molecular Neurobiology of Disease	1	Ander/Stamova/Sharp	TBD	Thursdays 1:00 - 2:00pm

\*RCR: <http://research.ucdavis.edu/policiescompliance/research-ethics-rcr-program/>

\*Optional course that is not required.

# Neuroscience Spring Quarter 2022 Courses

## First Year Courses

Course	CRN	Title	Units	Instructor	Location	Time
NSC 200LB	52600	Neuro Lab Rotation	3	Whistler	TBD	TBD
NSC 223	52602	Cognitive Neuroscience	4	Janata		TR 3:10-5:00pm
NSC 298	52654	Preliminary Exam Preparations	3	DeBello	CNS 113	M 4:10-7:00pm
NSC 298	52655	First-years Ethics RCR*	1	Whistler	See link below	See link below

## Second Year Course

Course	CRN	Title	Units	Instructor	Location	Time
NSC 298	52679	Rocks and Shoals*	1	Gurkoff	SOM 320	F 4:00-5:00pm

## LaMP courses

Course	CRN	Title	Units	Instructor	Location	Time
NSC 271C	52604	Translational Approaches to Learning, Memory, and Plasticity Disorders	2	Gurkoff/Dugger	CNS 203J	T 2:00-3:30pm
NSC 298	52687	LaMP Career Dev Meeting	2	McAllister	CNS 203J	M 9:00-11:00am

## Other Courses

Course	CRN	Title	Units	Instructor	Location	Time
NSC 211	52601	Advanced Neuroimaging	3	Miller		TBD

## Journal Clubs

Course	CRN	Title	Units	Instructor	Location	Time
NSC 298	52680	Clinical/Translational	1	Gurkoff	TBD	Wednesday 11:45am-1:45pm
NSC 298	52649	Molecular and Cellular Neuro	1	Zito	TBD	BiWeekly Friday 9:30-11:30am
NSC 298	52686	Neuroimaging	1	Carter	TBD	TBD
NSC 285	52605	Lit Vis Neuroscience	2	Britten	TBD	TBD
NSC 298	52666	Neuroimmunology	1	Bauman	TBD	TBD
NSC 298	52689	MIND: Molecular Neurobiology of Disease	1	Ander/Stamova/Sharp	TBD	Thursdays 1:00 - 2:00pm

\*RCR: <http://research.ucdavis.edu/policiescompliance/research-ethics-rcr-program/>

\*Rocks and Shoals is a Basic Neuroscience T32 requirement for your career development course. It is also open to everyone else to take.