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# UC San Diego

# NEUROSCIENCES GRADUATE PROGRAM

**PROGRAM GUIDE** 

2021-2022

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### **PROGRAM ADMINISTRATION**

#### **OVERVIEW**

The Neurosciences Graduate Program is an interdisciplinary program that provides coursework and research training leading to a degree of Doctor of Philosophy in all areas related to the development and function of the nervous system. The program draws faculty from many UCSD departments as well as the Salk Institute, the Scripps Research Institute (TSRI), and the Sanford Burnham Prebys Medical Discovery Institute. The entire faculty associated with the program makes up the Neuroscience Graduate Program Faculty Group (neurograd.ucsd.edu/people/faculty.html).

#### **EXECUTIVE COMMITTEE**

The policies and guidelines that govern the program are set by the Executive Committee. This committee oversees a broad range of issues affecting the program including general administration, the distribution of financial and human resources, as well as activities and events involving the Group's faculty and students. This committee is composed of chairs of the various faculty-student committees, as well as several members at large and two student representatives.

#### **PROGRAM DIRECTOR**

The Director of the program is appointed for a renewable 3-year term by the Executive Committee based on input from the program faculty, and may have his or her primary appointment in any of the departments that make up the Faculty Group. The Director is a fulltime member of the program faculty and is responsible for the overall administration of the Ph.D. program. The Director serves as chair of the Executive Committee.

#### **PROGRAM ASSOCIATE DIRECTOR**

The Associate Director assists the Director to oversee various program activities and student affairs, and helps to improve the program leadership.

#### SELECTION OF PROGRAM DIRECTOR

Approximately three to six months before the end of the term for the director, the current director will appoint an Ad Hoc committee representing major participating institutions (UCSD, School of Medicine, Salk, and TSRI), with input from the Executive Committee. This committee will be in charge of soliciting nominations for the next director from the entire community (faculty and students), and recommending a final candidate to be discussed and voted at the Executive Committee meeting. The new Director will select an Associate Director with input from the Ad Hoc committee. The Associate Director is not a director-elect.

#### **PROGRAM COORDINATORS**

The Graduate Program Coordinators serve students and faculty members in academic, financial and administrative matters relating to the Graduate Program (<u>neurograd.ucsd.edu/people/administration.html</u>). The Coordinators are the primary contact for students on most program-related matters. The Neuroscience Graduate Program Offices are located in the Center for Neural Circuits & Behavior (CNCB), 2<sup>nd</sup> floor, rooms 276 & 277.

#### **GRADUATE DIVISION**

The Graduate Division (GD) administers all graduate programs at UCSD (grad.ucsd.edu). This office is responsible for all aspects of graduate programs, from admissions and administration of fellowships, to qualifying exams and final examinations. Although the individual graduate programs generally take care of the qualitative assessment of applications and examinations, the GD must be notified of the students' status with respect to all program requirements. For instance, notification of the completion of the Advancement to Candidacy exam must be processed through the GD. The Doctoral Committee must be approved by this office and the final thesis document must be submitted to the GD. The Graduate Council sets, and the GD enforces, standards for leaves of absence and time limits regarding the completion of the Ph.D. (see <u>Graduate Division Requirements & Deadlines</u>). The office can also serve as a resource for information on academic progress, academic rules and regulations, as well as sources of research funding and benefits available to graduate students.

#### COMMITTEES

#### OVERVIEW

Students and faculty work together on all aspects of the program and serve on various committees. In general, committee membership terms will run from October 1 to September 30 the following year, although some committees will require participation late in the Fall Quarter following student elections.

#### STUDENT ELECTIONS

Student Elections occur at the beginning of the Fall Quarter and are hosted by the student members of the Executive Committee. First year students are required to attend and sign up for at least one committee. All other students are encouraged to attend. If more than one student volunteers for an office, the appointment is made by a vote of the attending students. The updated Committee Membership list is available on the NGP website (neurograd.ucsd.edu/program/committees.html).

#### **NEW COMMITTEE FORMATION**

A proposal for a new committee should be communicated to the student members of the Executive Committee prior to Student Elections. The proposal should include:

- A mission statement for the proposed committee.
- A list of duties for committee members.
- A list of goals for the upcoming academic year.
- A suggestion for the number of people necessary to enact the committee goals along with potential positions (e.g. chair) and restrictions if applicable (e.g. third-year and above).
- A description of how the mission and goals do not fall within the purview of any current student committees.

The formation of new committees will be voted upon during Student Elections. If more than 75% of students agree to the formation of the new committee, it will be formed and new members will be invited to join.

Note: Formation of a new committee may require approval from the Executive Committee in cases where the goals of the committee relate to program-wide changes and events. In these cases, students should work with student members of the Executive Committee to bring the idea to an Executive Committee meeting.

#### **ADMISSIONS COMMITTEE**

The purpose of the Admissions Committee is to holistically review applications and identify promising prospective students who will make positive contributions to the UCSD Neurosciences Graduate Program, both as scientists and community members.

The Admissions Committee consists of faculty and students who meet approximately three times during the winter quarter. Membership on this committee requires a substantial time commitment since members of the committee must review 150-200 applicant files during a 1 to 2 week period. After the files have been reviewed, the committee convenes to discuss the individual applicant files and select a group of prospective students. These students are invited to visit the program and interview with Admissions Committee members and other faculty members. Finally, following interviews, the committee meets to decide which prospective students will be offered admission into the program.

#### **CAREER DEVELOPMENT COMMITTEE**

The purpose of the Career Development Committee is to support graduate students in finding gainful and meaningful employment by familiarizing them with traditional and non-traditional career options, and providing opportunities for skill development and networking. The committee maintains the NGP Alumni Network and LinkedIn Group, organizes alumni career panels, hosts skill-building workshops, and maintains a quarterly newsletter of career development opportunities on and off campus. The committee also runs "Job Talk," a blog of informational interviews with professionals in STEM-related fields.

#### COMPUTATIONAL NEUROSCIENCE COMMITTEE

The purpose of the Computational Neuroscience Committee is to empower students to pursue the <u>Computational Neurosciences Specialization</u> and more generally, to increase computational proficiency for all members of the NGP community. Student members organize a lunch during boot camp and host bi-weekly journal clubs.

#### **CURRICULUM COMMITTEE**

The purpose of the Curriculum Committee is to maintain and improve the curriculum for the UCSD Neurosciences Graduate Program (see <u>Description of Courses & Elective Requirements</u>). The committee is composed of faculty and students who evaluate core courses on an ongoing basis and may recommend changes based on feedback from the program students and faculty. They also solicit and select topics and faculty for readings-based electives (NEU 221) to be offered each year.

#### **DIVERSITY COMMITTEE**

The purpose of the Diversity Committee is to recruit, retain, and support students with identities and experiences previously underrepresented in the Neurosciences. We encourage diversity in the dimensions of race, ethnicity, nationality, socio-economic status, religion, sexual orientation, gender, disability, age, family educational history (first generation), and veteran status. This committee coordinates efforts to improve recruitment of under-represented groups. The students on this committee travel with the Graduate Program Coordinators and the committee chair to diversity recruitment conferences both locally and nationally.

#### **EXECUTIVE COMMITTEE**

The purpose of the Executive Committee is to set the policies and guidelines that govern the UCSD Neurosciences Graduate Program. This committee oversees a broad range of issues affecting the program including general administration, the distribution of financial and human resources, as well as activities and events involving NGP faculty and students. The Executive Committee is comprised of a group of faculty and 2 student members who participate in quarterly meetings. Student members of the Executive Committee are tasked with recording meeting minutes, speaking on behalf of NGP students on matters such as stipends, as well as introducing new committees and amending current ones.

#### **GRADUATE STUDENT ASSOCIATION (GSA)**

The purpose of the Graduate Student Association is to represent the interests of graduate and professional students on campus, locally, statewide, and on national levels (gradsa.ucsd.edu). Through activities and programming, GSA aims to enrich the lives of students and advance their interests politically, academically, and socially to help create a better academic and non-academic life at UC San Diego. The Neurosciences Graduate Program has two council members that represent the program at GSA meetings.

#### **INTERVIEW WEEK COMMITTEE**

The purpose of the Interview Week Committee is to support the Neurosciences Graduate Program Coordinators in planning the logistics and events that take place when prospective students visit UCSD during interview week. Housing, meals and transportation for the applicants are arranged, as well as tours, entertainment, and opportunities for applicants to meet current students and faculty in the program.

#### **INTRAMURAL SPORTS COMMITTEE**

The purpose of the Intramural Sports Committee is to promote student well-being and strengthen our community through team-building sports and recreational activities. We aim to facilitate recreational engagement for students with interests in a wide variety of physical activities and levels of competition by organizing program-only practices and games, as well as organizing intramural sports teams and cross-departmental events.

#### MINOR PROPOSITION COMMITTEE

The purpose of the Minor Proposition Committee is to facilitate the Minor Proposition Exam (see <u>Description of Courses & Elective Requirements</u>), a program requirement for second year students. Committee members participate in a mock NIH study section to score the F30/F31 proposals submitted by second year students. Committee members also then listen to an oral defense of the proposals for which they were primary, secondary, or tertiary reviewer.

#### PEER ADVISING COMMITTEE

The purpose of the Peer Advising Committee is to support the Neurosciences Graduate Program student experience. The committee organizes events that provide perspective and guidance on milestones or common experiences that students encounter along their Ph.D. path.

#### **RETREAT COMMITTEE**

The purpose of the Retreat Committee is to plan and coordinate an annual department wide event that celebrates the achievements and ongoing endeavors of students and faculty in the UCSD Neurosciences Graduate Program community. Retreat includes a robust scientific symposium, forums for discussion, and an opportunity for the entire department to bond over a weekend of socializing.

#### SEMINAR DINING COMMITTEE

The purpose of the Seminar Dining Committee is to assign students to attend lunches and dinners with speakers of the Neurosciences Graduate Program Seminar Series (<u>neurograd.ucsd.edu/news-events/seminar-series.html</u>). Prior to the start of the Seminar Series, student members survey NGP students for their preferences and are invited to attend approximately one lunch and one dinner per year. Student members of this committee attend a significant proportion (1/3 to 1/2) of lunches and are responsible for paying for these meals using tickets provided by the NGP Coordinators.

#### SEMINAR SERIES COMMITTEE

The purpose of the Seminar Series Committee is to plan and execute the weekly Neurosciences Graduate Program Seminar Series (<u>neurograd.ucsd.edu/news-events/seminar-series.html</u>). Duties include surveying the UCSD Neurosciences community for speaker nominations, choosing speakers with diverse research and demographics, inviting and scheduling speakers, and assigning student hosts to invited speakers. An important role of the committee members is to ensure student interests are well represented in the final seminar series.

#### STUDENT PROGRESS COMMITTEE

The responsibility of this committee is to help with cases where a student may not be progressing according to the expectations of the program. A member of the committee is generally assigned to work with the student and advisor to identify and resolve any impediments, and make recommendations for corrective steps.

#### SOCIAL COMMITTEE

The purpose of the Social Committee is to provide a schedule of inclusive and enjoyable social events to foster community pride and camaraderie. Throughout the year, we organize informal social functions for members of the NGP community as well as partner with other UCSD graduate programs in joint events. Events include a post-Bootcamp party, a Halloween party (typically co-hosted with BMS or Biology graduate students), and quarterly happy hours with faculty and program administrators.

#### SOCIAL MEDIA COMMITTEE

The purpose of the Social Media Committee is to connect members of the UCSD Neurosciences Graduate Program with each other and with other academics across social media platforms (e.g. <u>Facebook</u> and <u>Twitter</u>).

# ACADEMICS

#### **OVERVIEW**

Each student in the Neurosciences Graduate Program is expected to make normal progress toward the Ph.D., as evidenced by meeting the Program's degree requirements at a reasonable pace and with a high level of performance. Under most circumstances, students should be able to earn the Ph.D. in less than 6 years.

Students must complete the following requirements to remain in good standing in the program and to obtain the Degree of Doctor of Philosophy:

- Participate in Boot Camp
- Complete 3 Research Rotations
- Complete Coursework
  - 6 Core Courses covering molecular, cellular, systems, and clinical neuroscience, behavior, anatomy, statistics, and ethics
  - Minor Proposition Course & Exam
  - o 12 units of Electives to expand knowledge in specific areas of neuroscience
  - Research Rounds for 2 years (6 quarters) to learn about NGP students' research and improve presenting skills
- Complete TA requirement (1 quarter)
- Advance to Candidacy
- Defend your Dissertation

The following pages include a timeline summary for each year of the program, followed by a full description of each requirement. Note that some requirements are applicable for multiple years.

#### ACADEMIC REQUIREMENTS

#### TIMELINE SUMMARY

#### <u>YEAR 1</u>

- Complete Boot Camp
- Begin Core Coursework
  - Basic Neuroscience (NEU 200A,B,C)
  - Neuroanatomy (NEUG 257)
  - Statistics (BGGN 216/BIOM 285/COGS 243/PSYC 201)
- Complete 3 quarters of Research Rounds (NEU 276)
- Complete 3 quarters of Research Rotations (NEUG 296)
- Attend Journal Club
- Attend the Society for Neuroscience (SfN) Conference
- Select Thesis Advisor

#### <u>YEAR 2</u>

- Begin Thesis Research
- Complete Core Coursework
  - Scientific Ethics (NEU 241)
  - Minor Proposition Exam (NEUG 280)
- Complete 3 quarters of Research Rounds (NEU 276)
- Begin Elective Coursework (e.g. NEUG 221)
- Complete the TA Requirement (NEU 500)
- Select Pre-thesis Committee
- Hold a Pre-thesis Committee Meeting/Spring Evaluation

#### <u>YEAR 3</u>

- Continue Thesis Research
- Complete Elective Coursework (e.g. NEUG 221)
- Hold a Thesis Committee Meeting/Spring Evaluation
- Advance to Candidacy

#### <u>YEAR 4</u>

- Advance to Candidacy
- Continue Dissertation Research
- Hold a Thesis Committee Meeting/Spring Evaluation

#### <u>YEAR 5-6</u>

- Complete Dissertation Research
- Hold a Dissertation Defense

#### FIRST YEAR REQUIREMENTS

#### BOOT CAMP (NEU 210)

All incoming students participate in Boot Camp. Students are required to enroll in NEU 210 (Neurobiology Boot Camp Course) during the fall quarter enrollment period to receive credit for this two-week course. See <u>Description of Courses & Elective Requirements</u> for more information.

#### FIRST YEAR COURSE WORK

Students are required to take five core courses and three quarters of Research Rounds during the first year (see <u>Description of Courses & Elective Requirements</u>). Journal Club attendance is optional but strongly encouraged. Students electing to obtain the Specialization in Computational Neuroscience are required to take additional coursework (see <u>Computational Neurosciences Specialization</u>).

- NEU 200A Cellular, Molecular & Developmental Neuroscience
- NEU 200B Systems Neuroscience
- NEU 200C Cognitive & Behavioral Neuroscience
- NEUG 257 Neuroanatomy
- NEU 276 Research Rounds (Fall, Winter & Spring)

One of the following statistics courses:

- BIOM 285 Statistical Inference and Experimental Design (BIOM 285)
- BGGN 216 Biostatistics
- COGS 243 Statistical Inference and Data Analysis
- PSYC 201 Quantitative Methods (PSYC 201A/B)

#### **RESEARCH ROUNDS (NEU 276)**

Research Rounds is a weekly seminar course that meets in Fall, Winter and Spring quarters, in which graduate students beyond their second year in the program present their current research. All students in their first and second years are required to take Neurosciences Research Rounds (NEU 276) for six quarters. Students engage in scientific discussion as well as constructive criticism on the presentations meant to enhance the skills of both the audience and presenters.

#### RESEARCH ROTATIONS (NEUG 296)

Research rotations provide the opportunity for first-year students to obtain hands-on research experience in several different laboratories. Through the rotations, students identify a faculty member under whose sponsorship and in whose laboratory their dissertation research will be completed.

Students must complete three rotations for a minimum period of nine weeks each following the quarterly academic calendar. Rotation advisors should be selected from within the NGP Faculty (<u>neurograd.ucsd.edu/people/faculty.html</u>); although, non-affiliated faculty may be selected upon pre-approval from the Program Director. Students must arrange their own rotations, but during Boot Camp students are exposed to many faculty looking for students. Only Fall quarter rotations may be scheduled before arriving in San Diego. Winter and Spring quarter rotations should be scheduled after Boot Camp is over.

Prior to the beginning of the rotation, the student and faculty member should discuss their expectations and goals. Regular meetings between the student and the faculty advisor are required. At the conclusion of each rotation, the faculty member will submit a written evaluation of the student's performance to the Graduate Program office.

All three rotations must be completed by the end of the spring quarter of the student's first year. By this time, each student should have identified the Program Faculty member under whose sponsorship and in whose laboratory their dissertation research will be completed. A fourth rotation requires approval from the Program Director and should be undertaken only in special circumstances.

#### **Research Rotations for MSTP Students**

MSTP students are expected to have completed at least two research rotations before joining the graduate program, and must complete a total of three rotations before joining a thesis lab. At least two of the rotations must be in labs associated with the Neurosciences Graduate Program. MSTP students must complete all rotations by fall Quarter after entering the graduate program, and must select a thesis lab by the end of the fall Quarter.

#### JOURNAL CLUB

Journal Club is organized entirely by students. Each week the student host of the Neuroscience Seminar Series presents a paper from the laboratory of the seminar speaker. The goal of the journal club is to create an open venue for friendly but lively scientific discussion. First year students are required to attend. Refreshments are provided.

First year students who maintain attendance of 70% or better for Journal Club will receive 2 units of NEU 221 credit to count towards elective requirements. Upon approval, and during the fall quarter of their second year, students will enroll in a NEUG 221 section, 2 units, letter grade option.

#### ATTEND THE SOCIETY FOR NEUROSCIENCE (SFN) CONFERENCE

The program provides up to \$1,200 to each incoming student to attend the annual Society for Neuroscience conference (<u>sfn.org</u>). Travel and reimbursement information will be provided at Orientation.

#### THESIS ADVISOR SELECTION

Selecting your Thesis Advisor is a crucial step in your graduate student career. They will supervise your Ph.D. thesis research and chair your doctoral committee. You should select your Thesis Advisor by the end of the first year in June and no later than the beginning of the second year in September. Your thesis advisor assumes fiscal responsibility for you, which includes payment of all fees, tuition, and stipend.

To help ensure that basic components of a productive student-advisor relationship are met, the program will provide a "Joining a Lab" checklist to be signed by the student and advisor. This checklist will establish general guidelines that address both parties' expectations throughout the student's tenure in the lab.

You and your thesis advisor should meet on a regular basis. To guide your progression through the program, you will receive an annual evaluation (a.k.a. Spring Evaluation) from your thesis advisor and committee beginning in your second year. The Spring Evaluation will be reviewed by the Program Director and the Graduate Division, and will become part of your academic file (see <u>Evaluations & Examinations</u>).

#### FIRST-YEAR ADVISOR

Incoming students will be assigned a First Year Advisor to discuss research rotations, coursework, thesis lab selection, and any other questions or concerns they may have. Students should meet with their advisor each quarter.

#### <u>SUMMER</u>

During the summer months you will not be enrolled in courses. You are expected to focus exclusively on your thesis research.

#### SECOND YEAR REQUIREMENTS

#### SECOND YEAR COURSEWORK

All second year students are required to take the following courses:

- NEU 241 Research Ethics (Or Ethics Course via UCSD Research Ethics)
- NEUG 280 Minor Proposition
- NEU 276 Research Rounds (Fall, Winter & Spring)
- Electives 1 2 Electives (to fulfill the 12 unit requirement)

#### MINOR PROPOSITION (NEU 280)

The Minor Proposition course preparation begins winter quarter of the second year. The minor proposition proposal must be completed and the oral exam passed by the end of spring quarter. Students will enroll in Minor Proposition (NEUG 280), 4 units. See <u>Description of</u> <u>Courses & Elective Requirements</u> for more information.

#### **RESEARCH ROUNDS (NEU 276)**

See First Year Coursework.

#### **RESEARCH ETHICS (NEU 241)**

Students are required to take an Ethics Course by the end of their first year. Ethics courses are offered fall, winter and spring quarter each year. See <u>Description of Courses & Elective</u> <u>Requirements</u> for more information.

#### **ELECTIVES**

Students are required to take 12 units of electives at the graduate level (200+) to expand their knowledge in specific areas. The courses may be taken in almost any department including neurosciences, biology, cognitive science, psychology, medicine, mathematics, or engineering. At least 4 credits need to be advanced topics courses based on reading of primary literature. The elective requirement must be fulfilled prior to advancement to candidacy. See <u>Description of Courses & Elective Requirements</u> for more information.

#### <u>TEACHING</u>

All students are required to be a teaching assistant (TA) for at least one quarter during their graduate career to develop their talents and gain experience as teachers. Opportunities to lecture and to assist in laboratory exercises and demonstrations are available through many departments, including Neurosciences, Biology, Cognitive Science and Psychology. The teaching requirement must be fulfilled before advancement to candidacy. (see <u>Description of Courses & Elective Requirements</u>).

#### PRE- THESIS COMMITTEE

Before the end of their second-year, students are required to assemble a Pre-Thesis Committee (see Thesis Committee). This committee provides scientific input on the dissertation project and evaluates students at the end of each year after the first (i.e. once they have joined a laboratory) and until they advance to candidacy. See <u>Academic Advising & Committees</u> for more information.

#### CONTINUING MASTER'S DEGREE (OPTIONAL)

By the end of the second year and upon completing all required coursework, passing the Minor Proposition course, and fulfilling the teaching requirement, students are eligible to receive a Master's Degree. The Graduate Division requires a minimum of 36 units of graduate coursework, not including 296 or 299 research courses. Only students who have not previously received a M.S. in Neurosciences or a similar subject are eligible to receive their M.S. in Neurosciences from UCSD. Students should contact the Graduate Program Coordinator if they choose to file for a continuing Master's Degree. See <u>Appendix I</u> for more information.

#### <u>SUMMER</u>

During the summer months you will not be enrolled in courses. You are expected to focus exclusively on your thesis research.

#### THIRD YEAR REQUIREMENTS

By the end of the third year students should have completed their elective courses (12 units), TA requirement, formed their full Doctoral Committee, and met with their full committee for their Spring Evaluation or Advancement to Candidacy.

#### DOCTORAL COMMITTEE

Prior to advancing to candidacy, students must assemble their full Doctoral Committee, during their third or fourth year. Students meet yearly with this committee to evaluate their progress to date, recommend the modifications to the dissertation's scope or methodology, timetable for completion, and recommendation for support in the following year. The Doctoral Committee should comprise a minimum of five members, of which at least three must be members of the Group in Neurosciences. See <u>Academic Advising & Committees</u> for more information.

#### ADVANCEMENT TO CANDIDACY

To advance to candidacy students must assemble their full doctoral thesis committee and meet with them for the qualifying exam. The qualifying exam is required by the Graduate Council of the Academic Senate to evaluate the quality of the dissertation work completed to date as well as the proposed additional experiments. The emphasis of the exam is on the conceptual rationale of the dissertation proposal. In addition, it is the charge of the Doctoral Committee to estimate the time required to complete the project. Passing the qualifying exam advances the student to candidacy, effectively changing his/her status from doctoral student to doctoral candidate.

The Neurosciences Graduate Program encourages all students to advance to candidacy by the end of their third year. MSTP students are required to advance by the end of spring quarter their third year. Non-MSTP Neuroscience students are required to advance by the end of spring quarter of their fourth year. The GD will place a hold on all students' registration during summer quarter following the pre-candidacy time limits. The University will not allow students to register for the fall quarter following the advancement deadline or receive any financial support unless they have successfully advanced to candidacy. All required course work must be completed before a student is permitted to advance. See <u>Evaluations & Examinations</u> for more information.

#### FOURTH YEAR REQUIREMENTS

#### ADVANCEMENT TO CANDIDACY

See Third Year Requirements and Evaluations & Examinations.

#### THESIS COMMITTEE MEETING

In the spring quarter of each year, all graduate students are subject to review. This review takes the form of a Spring Evaluation. See <u>Evaluations & Examinations</u> for more information.

#### FIFTH AND SIXTH YEAR REQUIREMENTS

#### THESIS COMMITTEE MEETING

In the spring quarter of each year, all graduate students are subject to review. This review takes the form of a Spring Evaluation. See <u>Evaluations & Examinations</u> for more information.

#### **DISSERTATION DEFENSE**

The dissertation defense should be completed by the end of the sixth year. See <u>Evaluations &</u> <u>Examinations</u> for more information.

#### **DESCRIPTION OF COURSES & ELECTIVE REQUIREMENTS**

Students must complete the following course requirements to remain in good standing in the program and to obtain the Degree of Doctor of Philosophy:

- Boot Camp (NEU 210) 2 Units
- Core Courses
  - Basic Neuroscience (NEU 200A,B,C)– 12 Units
    - Cellular Molecular & Developmental Neuroscience (NEU 200A)
    - Systems Neuroscience (NEU 200B)
    - Cognitive & Behavioral Neuroscience (NEU 200C)
  - Neuroanatomy (NEU 257) 4 Units
  - Statistics (BGGN 216, BIOM 285, COGS 243, PSYC 201A/B) 4 Units
  - o Research Ethics
- Research Rounds (NEU 276) 6 Units
- Minor Proposition Course (NEU 280) 4 Units
- Electives 12 Units
- Apprenticeship Teaching (NEU 500) 2 Units

#### BOOT CAMP (NEU 210)

All incoming first-year neuroscience graduate students participate in Boot Camp, which is designed to:

- Familiarize them with the basic ideas and techniques of neuroscience
- Acquaint them with senior graduate students (who serve as TAs)
- Introduce them to faculty members and their research
- Help them get to know their classmates

This course, based on summer courses at the Marine Biological Laboratory in Woods Hole, MA, is a series of intensive lab exercises that runs for two weeks from morning until midnight. At lunchtime students give short talks about research they have done. The course is held in September just before fall quarter begins. Topics covered include single-cell electrophysiology, computational modeling, molecular techniques, slice electrophysiology, both fly and rodent behavior and electrophysiology and imaging. In addition, faculty members highlight the major research interests being pursued in their laboratories and entering students give informal talks about the research they have done before entering the graduate program.

All incoming students participate in Boot Camp. Students are required to enroll in NEU 210 (Neurobiology Boot Camp Course) during the fall quarter enrollment period to receive credit for this two-week course.

#### **BASIC NEUROSCIENCE (NEU 200A, B, C)**

By the end of the second year, students are expected to demonstrate competence in the basics of neuroscience by taking the following mandatory course work:

#### CELLULAR MOLECULAR & DEVELOPMENTAL NEUROSCIENCE (NEU 200A)

Instructors: Brenda Bloodgood, Jeff Isaacson, Byungkook Lim

This course is offered every fall and covers cellular & molecular neuroscience and is taught every fall. Each week, there is one lecture and one discussion section in which research papers are discussed. Topics include cellular physiology, synaptic transmission, neurotransmitters and receptors, plasticity, and neural development.

#### SYSTEMS NEUROSCIENCE (NEU 200B)

Instructors: John Reynolds, Sreekanth Chalasani & Eiman Azim

This course is offered every winter and covers systems neuroscience and is taught every winter. Lectures are given by researchers in various fields, coupled with discussion sections on research papers. Topics include visual, auditory, olfactory, somatosensory, and motor systems.

#### COGNITIVE & BEHAVIORAL NEUROSCIENCE (NEU 200C)

#### Instructor: Cory Miller

This course is offered every spring and deals with the methods of cognitive neuroscience, and then various topics including object recognition, attention, long-term and working memory, reinforcement learning and executive function.

#### **NEUROANATOMY (NEU 257)**

#### Instructor: Eric Halgren

This course is offered every winter and provides a hands-on look at the anatomy of the central nervous system including the key structures and their connectivity and the types of information they carry. MSTP students are waived from NEU 257 if they took SOMC 227 and 237 in Medical School. In addition, the MSTP student will receive an additional 4 units of elective credit for this course.

#### STATISTICS

Students must take at least one statistics course during their first or second year unless they qualify for a statistics waiver (see below). Students may choose from the several courses offered through Biomedical Sciences, Cognitive Science, and Psychology based on their level of experience. In addition to the proposed courses, students may petition to take a statistics course in another department to meet the program requirement by sending a copying the course syllabus to the Program Director for his review and approval.

#### **BIOSTATISTICS (BGGN 216)**

This statistics course is offered in the spring quarter and covers fundamentals of biostatistics and their practical application, including central tendency and variability, hypothesis testing, parametric and nonparametric inferential techniques, correlation and regression. Practice sets are drawn from the lab and primary literature. Students develop a conceptual understanding of basic principles of probability and statistics, to build a working understanding of how these principles are applied in biology and an appreciation for why good statistics are essential to sound conclusions. Students acquire practical skills using biostatistics software in realistic research scenarios. Recommended for students with little prior experience who desire the minimum required set of competencies.

#### Statistical Inference and Experimental Design (BIOM 285)

This statistics course is offered every winter and spring and is recommended if you're looking to augment a basic level of competence with more advanced techniques. Please contact one of the NGP Graduate Coordinators for a copy of the syllabus.

#### Statistical Inference and Data Analysis (COGS 243)

This statistics course is offered winter quarter and provides a rigorous treatment of hypothesis testing, statistical inference, model fitting, and data analysis techniques used in neural sciences. Students acquire an understanding of mathematical foundations and hands-on coding experience in MATLAB. Facility with calculus, linear algebra and elementary probability theory is assumed.

#### Quantitative Methods (PSYC 201A/B)

This statistics course is offered as part of a series every fall and winter, and is recommended if you're starting from scratch and want to obtain an advanced level of competence. Syllabi are available at <u>vulstats.ucsd.edu/.</u>

#### **Statistics Waiver**

Students should email the Program Director to request a statistics waiver if they meet the following requirements: Computational Neurosciences sub-specialty track students should have completed a statistics course within the past 3 years with a grade of an 'A' or equivalent to receive a waiver. All other students should have completed a statistics or biostatistics course that focuses on applications in the biomedical sciences with some exposure to experimental design within the past 3 years with a grade of an 'A' or equivalent. All waiver requests should include a copy of the course schedule (i.e. a link to the current class website) and a copy of the transcript.

Prior to the start of winter quarter of the first year, each non-MSTP student must notify one of the Graduate Coordinators about which stats course they plan to take or submit the appropriate stats waiver to the Program Director, and copy the Graduate Coordinator.

#### **RESEARCH ETHICS (NEU 241)**

Students are required to take an Ethics Course by the end of their first year. Ethics courses are offered fall, winter and spring quarter each year. *This course will cover "ethical" issues in academia, including dishonesty, plagiarism, attribution, sexual misconduct, etc. Also discussed are "survival" issues, including job hunting, grant preparation, journal reviews, writing letters of recommendation, mentoring, etc. Students are required to take an Ethics Course by the end of their second year.* Course information and enrollment details are available online (ethics.ucsd.edu/courses/index.html).

#### **RESEARCH ROUNDS (NEU 276)**

Research Rounds is a weekly seminar course that meets in Fall, Winter and Spring quarters, in which graduate students beyond their second year in the program present their current research. All students in their first and second years are required to take Neurosciences Research Rounds (NEU 276) for six quarters. Students engage in scientific discussion as well as constructive criticism on the presentations meant to enhance the skills of both the audience and presenters.

#### **MINOR PROPOSITION (NEUG 280)**

The Minor Proposition course preparation begins winter quarter of the second year. The minor proposition proposal must be completed and the oral exam passed by the end of spring quarter. Students will enroll in Minor Proposition (NEUG 280), 4 units.

Minor Proposition is an intensive writing course required for second-year neuroscience graduate students. This course provides an overview on the preparation, submission, and response to feedback of a NRSA F30/31 grant application. Students prepare an entire application on the topic of their choice – likely on their research interest and in support from their primary mentor. Target deadlines for application components are provided with overview lectures on navigating the NIH system, descriptions on the importance of the Training Plan, and opportunities to write, discuss, and obtain feedback throughout the process. At the end of the course, students 'submit' their application for review, which is subsequently discussed at a mock study section and feedback provided. Upon receipt of feedback, the students prepare a response in addition to an oral defense to the reviewers of their application.

Students completing their application and defending their application and response to reviewers will receive a passing grade, those incomplete will not pass. Student with the best ranked score will receive a \$500 award to go toward conference travel or educational needs. Students must receive a passing grade in the course, based on a successful written proposal and oral exam, to continue in the graduate program. Students are eligible to receive a continuing Master's degree upon passing the Minor Proposition Course.

#### ELECTIVES

Students are required to take 12 units of electives at the graduate level (200+) to expand their knowledge in specific areas. The courses may be taken in almost any department including neurosciences, biology, cognitive science, psychology, medicine, mathematics, or engineering. At least 4 credits need to be advanced topics courses based on reading of primary literature. This can be satisfied either by completing NEU 221 courses or by completing graduate level readings based courses offered by any related discipline. To qualify for a readings-based course, at least one session per week should be devoted to discussion of published research papers. For a list of current and recent offerings, take a look at the NGP Course Catalog (<u>neurograd.ucsd.edu/program/course-catalog.html</u>). Course offerings are always changing. See the UC San Diego Course Catalog for descriptions of these and other courses (<u>ucsd.edu/catalog/courses/NEU.html</u>).

#### Electives for Students in the Computational Neuroscience Specialization

Core course requirements for the Computational Neuroscience Specialization can be used to fulfill the elective requirement. However, CN students must also fulfill the 4 credits of advanced topics courses based on reading primary literature.

#### **Electives for MSTP Students**

MSTP students may petition to receive credit for neuroscience related coursework taken as a medical student, including clerkship, for a maximum of 8 units. A petition to waive an elective requirement should be submitted in writing to the Program Director with a copy of the syllabus of the previous course, and a copy of the transcript showing the grade earned. All MSTP students must take at least 2 units of a reading based elective, and are encouraged to take other neuroscience related electives to broaden their education and subject knowledge.

#### **Example Elective Courses**

- NEU 268 Molecular and Cellular Neurobiology (Dr. Pamela Mellon)
- NEU 268 Molecular and Cellular Neurobiology (Dr. Pamela Mellon)
- NEU 221 Advanced Topics in Neuroscience (recent offerings):
  - Landmark Papers in Neurosciences (Kristan, Issacson)
  - Neurobiology of Circadian Clocks (Welsh)
  - Principles of Communicating Science (Voytek)
  - Glia (Allen, Lemke, Nimmerjahn)
  - RNA/Epigenetics in Neural Development and Disease (Wilkinson)
  - Genetic Tools in Neuroscience (Hnasko)
  - Neural Circuits (Leutgeb), Quantitative Behavior Genetics (Palmer)
  - Neurotransmitter-based synaptic plasticity (Dulcis)
  - Philosophy in Neuroscience (Bechtel)
  - Neurobiology of Learning and Memory (Mayford)
  - Using animal models to study neuropsychiatric disorders (Dulawa)
  - Chromatin and transcription in the brain: from omics to single cell (Telese)

 Any of the computational neuroscience courses (see <u>Computational Neurosciences</u> <u>Specialization</u>)

#### **APPRENTICESHIP TEACHING (NEU 500)**

All students are required to perform as a teaching assistant (TA) for at least one quarter to develop their talents and gain experience as teachers. To this end, opportunities to lecture and to assist in laboratory exercises and demonstrations are available through a number of departments, including Neurosciences, Biology, Cognitive Science ,and Psychology (see list below). The TA requirement must be fulfilled before advancing to candidacy.

Furthermore, as TAships are a curriculum requirement for the program, they are not a source of supplementary income. In cases where the students' TAships provide financial support, the total annual support will remain at the standard level, currently \$34,500/year. Students are encouraged to complete their TA requirement during their second or third year, and should contact the instructor of the course they wish to TA. In addition, students must inform the Graduate Program Coordinator at least three weeks prior to the beginning of the quarter when the TAship starts. Students TAing for NEU courses or others that do not have a specific TA section listed should enroll in NEU 500 Apprenticeship Teaching for 2 Units.

The following teaching opportunities are available each year:

- The Graduate Division's Job Opportunities Bulletin available at https://grad.ucsd.edu/financial/employment/job-opportunities-bulletin.html is written to assist graduate students who are seeking employment outside of their own academic home departments. Students can be appointed to student academic positions (Teaching Assistant, Reader, Tutor, Associate or Graduate Student Researcher) by a department, group or program or employed in student staff positions which are listed by the Career Center (Student Employment Office) in the <u>Handshake system</u>.
- The Division of Biological Sciences has salaried TA positions available. Our department has 3 (50% or 20 hour a week) slots available each year. A link to the application will be sent to the student listserv in May of each year.
- Neurosciences students may serve as a TA for one of our core classes (NEU 200ABC, NEUG 257 Neuroanatomy, and NEU 243 Mathematical Foundation in Comp Neuro). These are non-salaried positions and if interested please contact the primary instructor who will select a TA(s).
- MSTP students may serve as a TA for a med school course. Prior to accepting the position, please send an email to the Program Coordinator with details about the course to make sure it will meet the program's TA requirement.
- The graduate program's Journal Club coordinators receive TA credit. A call for volunteers will be sent to second year students at the beginning of their second year (in August).

 Students may serve as an "Associate In" or instructor of record for an undergraduate level course. An Associate In may conduct the entire instruction of a lower division course or upper division course with approval granted by the Dean of the Graduate Division. The Associate is assigned a faculty mentor to provide guidance and training as needed. To serve as an Associate, the graduate student must have demonstrated a talent for classroom teaching and had advanced training in the subject matter. For Ph.D. students, the candidacy exam must have been passed and the student must be in the final stages of dissertation writing or must have equivalent other accomplishments (publications, extensive experience as performer-teacher, or the like). The appointment is also dependent upon positive academic and administrative review and approval by the student's department/group Chair, Dean of the Graduate Division.

#### TA Credit for Outreach

Students may fulfill the Neurosciences Program TA requirement by completing an outreach teaching activity that fulfills the criteria below.

- An outreach teaching experience suitable for TA credit should involve both curriculum development and hands-on teaching time, with the graduate student being the person primarily responsible for at least one of these two areas. Outreach subject matter should be science related.
- The teaching experience should be focused in time (occurring over the course of a quarter/semester) and should contain at a minimum 20 hours of student contact time in addition to time spent on curriculum development, paper grading and other prep work.
- The hands-on teaching time should include some time spent teaching to a group in a class type setting and not entirely consist of one-on-one interactions.
- Graduate students requesting outreach TA credit should develop and teach multiple lessons. For example, visiting 20 high school (HS) classrooms with the identical outreach lesson would not be considered sufficient.
- Students can be of any age group, however if the graduate student has not had previous experience teaching college aged students, i.e. undergraduate TA experience, they should strongly consider an outreach or traditional TA position with that age group.
- If the outreach TA experience involves a larger disruption of lab work than traditional TA appointments graduate students should receive approval from their PI.

If a student is interested in fulfilling his/her TA requirement using an outreach activity, he/she must submit an outreach TA plan (1-2 paragraphs) to the Program Director before beginning the outreach activity and have it approved. The outreach plan must describe how the teaching requirement will be met. Upon completion of the teaching outreach activity, the student must submit a two-page teaching portfolio report to the Program Director describing the outreach activities completed, and the number of hours spent on outreach teaching. If possible, the student should include documentation to indicate effectiveness of the activities (e.g. letters/evaluation from students or Program Director). The signed report must then be submitted to the Graduate Program Coordinator so that the fulfillment of the TA requirement is

noted in the student's file. Students who have completed an outreach TA activity without preapproval may petition the graduate program director to receive TA credit for the activity by submitting an outreach teaching portfolio.

Examples of outreach experiences likely to receive TA credit:

- Academic Connection classes- Graduate students develop and teach an intensive 3week class for talented HS students during the summer at UCSD. <u>http://academicconnections.ucsd.edu</u>
- Teaching a class at a local community college.
- Elementary Institute of Science- Graduate students develop and teach a 16 week handson science class for 7-13 year olds. <u>http://www.eisca.org</u>
- Developing a series of neuroscience lessons for HS students. Teaching these lessons to HS teachers and then helping the teachers to successfully teach these lessons in their HS classes.

Examples of outreach experiences **<u>not</u>** likely to receive TA credit:

- Volunteering with the Salk Mobile Science lab repeatedly.
- Volunteering repeatedly with the UCSD neuroscience outreach group.
- Tutoring
- Volunteering as an exhibit explainer at the Reuben H. Fleet science center.
- Visiting schools and talking about how to become a scientist.

#### GRADING

Core Courses, Research Rounds, and required electives must be taken for a letter grade with the exception of Journal Club which should be taken for an S/U grade.

If a course is only offered as a Satisfactory/Unsatisfactory grade option, the instructor must provide a letter indicating the letter grade the student would have received. A grade of "B" or better must be obtained. This will be placed in the student's file.

All other non-required courses may be taken for a grade of "satisfactory", where "satisfactory" grade is considered to be a "B-" or better. If a student receives a grade of "C+" or lower or "unsatisfactory", (s)he has the option of either repeating the course or taking a different course from the list of allowable electives.

It is the responsibility of each student to clear up any grading problems. Students should check their academic record on TritonLink each quarter for grading clerical errors, missing grades and/or incorrect course enrollment. If errors are not cleared up by the end of the quarter, the grade "F" or "U" will be assigned. All academic errors must be corrected within one year. There will be no exceptions except for medical reasons or military duty.

#### WAIVING A COURSE REQUIREMENT

If a student feels that he/she has previously demonstrated proficiency (received a letter grade of "A" at a graduate level equivalent course) in a class comparable to one of the Core Courses (see special provisions for the Statistical Methods Course), (s)he may appeal to the Chair of the Curriculum Committee or the Program Director to substitute the previous coursework for selected Neurosciences Core Courses. Such a request needs to be made in writing via email, with a letter from the Neuroscience Program instructor approving the substitution, a copy of the syllabus of the previous course, and a copy of the transcript showing the grade earned.

#### PETITIONING

Many of the academic and administrative requirements are handled by the "General Petition," form (see <u>Appendix II</u>). Note an important use of the General Petition, listed under section H. Other: "...may also be used when requesting exceptions to academic policy not covered in other petition sections." This means that students can petition for exceptions to essentially any policy, and these requests will be considered.

#### **ADDING & DROPPING CLASSES**

Graduate students may add or drop classes without GD approval through the second week of the quarter on TritonLink, WebReg. All adds after the second week will require departmental and GD approval. GD approval is also required to drop a class after the end of the second week; approval by the department is also required.

- To Drop a class without a "W' on your record or Add a class you must do so before the end of the 4<sup>th</sup> week of classes.
- To Add or Drop a class after the 2<sup>nd</sup> week students will submit a request through the Enrollment Authorization System (EASy) at: https://academicaffairs.ucsd.edu/Modules/Students/PreAuth
- The request will be routed to the Graduate Coordinator and Instructor, if required, for approval.
- If you will fall below 12 units after you drop the class, you'll need to fill out a 2nd <u>EASy</u> request to add the extra units to your NEU 296 or 299 Research Section.
- Deadline to drop a class without penalty of an "F" grade, is the end of 9th week of the quarter. Student will receive a "W" on his/her transcript indicating a withdrawal from the class.

Students are only permitted one "W" per course at UCSD. Please contact the Graduate Program Coordinator for additional information.

#### COMPUTATIONAL NEUROSCIENCES SPECIALIZATION

#### OVERVIEW

The Computational Neuroscience specialization is a facet of the broader Neuroscience graduate program at UC San Diego. The goal of the specialization is to train the next generation of neuroscientists with the analytical and computational skills that are essential to understand the organization and function of neural systems. The specialization is open to all students and may be of particular interest to students with backgrounds in physics, computer science, engineering, and mathematics. The specialization allows Neuroscience students to concentrate on a program of rigorous course work on fundamental aspects of computational neuroscience. Students are encouraged to pursue thesis projects that include both an experimental and a computational component, possibly arranged as a collaboration between two research groups. Upon achievement of degree requirements, students will receive a diploma indicating both their successful completion of the broader Neuroscience Program as well as their specialization in Computational Neuroscience.

The program is focused on these major themes relevant for computational neuroscience research:

- **Cellular and Synaptic Dynamics** Anatomy, physiology, and electrical and chemical dynamics of individual neurons. Neuromorphic models.
- **Biophysical Basis of Neuronal Computation** Collective properties and dynamics of neuronal systems, with emphasis on feedforward networks, associative networks, and networks of coupled oscillators.
- Algorithms for the Analysis of Neural Data Characterization of spiking and continuous processes (ECoG, LFP, MEG, fMRI). Statistical aspects of genomics and neuroanatomy.

The program is currently led by David Kleinfeld (Physics and Neurobiology) and the primary teaching faculty also include Henry Abarbanel (Physics and Scripps Institution of Oceanography), Gert Cauwenberghs (Bioengineering), Eran Mukamel (Cognitive Science), Terrence Sejnowski (Salk Institute for Biological Studies and Neurobiology), Tatyana Sharpee (Salk Institute for Biological Studies and Physics), and Gabriel Silva (Opthalmology and Bioengineering).

#### APPLICATION

All students admitted to the Neurosciences Graduate Program are eligible to pursue the CNS. Additionally, Ph.D. candidates in Physics and Bioengineering are also eligible to apply to the CNS. Upon completion of the CNS required coursework, a Neuroscience, Physics or Bioengineering student can apply for the specialization by submitting a copy of their C.V., undergraduate transcripts, graduate transcripts, and a short description of their research interests to the Committee Chair, David Kleinfeld at <u>dkleinfeld@ucsd.edu</u>.

#### THESIS RESEARCH

All CNS students are expected to complete a Ph.D. dissertation connected with an issue in contemporary computational neuroscience. Either the student's primary advisor or close co-advisor (approved by the Computational Neuroscience Committee) must be a member of the Neuroscience Graduate Program faculty.

#### **REQUIREMENTS AND ELECTIVES**

Students in the Computational Neuroscience Specialization will complete these three courses:

#### NEURODYNAMICS (BGGN 260 / BENG 260/ PHYS 279)

Instructor: Henry Abarbanel, Gert Cauwenberghs, or Gabe Silva This course if offered in the fall quarter. Topics include anatomy, physiology, and electrical and chemical dynamics of individual neurons. Neuromorphic models. (<u>isn.ucsd.edu/classes/beng260/</u>)

#### **BIOPHYSICAL BASIS OF NEURONAL COMPUTATION (PHYS 278)**

Instructor: David Kleinfeld or Tatyana Sharpee

This course is offered in the winter quarter and covers the collective properties and dynamics of neuronal systems, with emphasis on feedforward networks, associative networks, and networks of coupled oscillators. (<u>neurophysics.ucsd.edu/physics\_178\_278.php</u>)

#### ALGORITHMS FOR THE ANALYSIS OF NEURAL DATA (COG 260 / NEU 282)

#### Instructor: Eran Mukamel

This course is offered in the spring quarter and covers the characterization of spiking and continuous processes (ECoG, LFP, MEG, fMRI).

#### **ELECTIVE COURSES**

Students are encouraged to take reading classes as well as additional classes in Engineering, Mathematics, and Physics to supplement their backgrounds in quantitative skills and measurement techniques.

Suggested reading classes:

- BGGN 246 Computational neurobiology reading course (Sejnowski)
- NEUG 221 Advanced topics in neurosciences (various faculty)

Suggested classes in analysis and applied mathematics include:

- ECE 250 Parameter estimation
- ECE 255 Information theory
- MATH 250 Differential geometry
- MATH 280 Probability theory

- MATH 282 Applied statistics
- MATH 287B Multivariate analysis
- PHYS 210 Nonequilibrium statistical mechanics
- PSYC/NEUG 231 Tools for Experimental Data analysis

Suggested classes in engineering and physics include:

- BENG 278 Magnetic resonance imaging
- BENG/ECE 247A Advanced biophotonics
- BENG/ECE 247B Bioelectronics
- PHYS 270A Experimental techniques for quantitative biology
- PHYS 270B Quantitative biology laboratory
- ECE 240 Lasers and optics

#### **QUANTITATIVE FOUNDATIONS SERIES**

In addition to the CN specialization, the program also offers the "Quantitative Foundation Series" for students who do not have quantitative backgrounds sufficient to begin the CN specialization. The goal of the QF series is to ensure that all students acquire practical experience and knowledge of tools for quantitative exploration, interpretation and evaluation of neuroscience data through hands-on problems solving exercises that develop skills in quantitative data exploration.

The QF series comprises three <u>optional</u> courses (intended to be taken as electives in the first and second year):

#### TOOLS FOR EXPERIMENTAL DATA ANALYSIS (NEUG 231)

#### Instructor: John Serences

This course is offered in the fall quarter and covers the basics of programming in Python using Jupyter notebooks and Git, along with a set of general data analysis methods that are broadly applicable in many different sub-disciplines of psychology/neuroscience. Topics include model fitting, information theory, Fourier analysis, and machine learning. At the end of the course students will have a code repository and a set of general functions that can be applied in a variety of settings.

#### MATHEMATICAL FOUNDATIONS FOR COMPUTATIONAL NEUROSCIENCE (NEUG 240)

#### Instructor Maxim Bazhenov

This course is offered in the winter quarter and is designed to introduce students coming from a life-sciences background to the various mathematical domains used in modern neuroscience research. The purpose of this is two-fold: 1) to provide the students with a knowledge base that will be indispensable when engaged in data analysis/computational modeling or reading computationally-oriented papers, 2) to understand how to "think mathematically" or how these concepts provide an organizing, theoretical framework which can be used to quickly and rigorously generate and evaluate novel hypotheses. To accomplish

this, the focus will be less on computation, and more on understanding the conceptual framework behind each subject and the abstract principles of mathematics. We will also connect all these principles to their applications in neuroscience through concrete examples and a final project.

#### METHODS IN COMP NEURO (BGGN 201)

#### Instructor Pamela Reinagel

This class is offered in the spring quarter and is designed for Neuroscience and Biology PhD students who have advanced knowledge of neurobiology, but limited math background. Cellular and systems neuroscience (NEU 200A and 200B, or equivalent) is assumed. Each week there is one lecture explaining a computational method, and one class discussing papers from the primary literature that use this method. In general the students meet for an hour or two outside of class to go over the papers before they are discussed in class. There are no programming assignments or problem sets; this class will not teach you how to perform all these analyses. The goal of the class is to provide exposure to a broad range of computational methods that are used in neuroscience, so that you will be better equipped to understand the research literature and seminars, and so you will be aware of the tools that are available should you need them in your future research. Topics include: Poisson processes, spiking reliability (Fano Factor); Fourier transforms, spectra and phase analysis; Dimensionality reduction (e.g. PCA); Intro to Linear Algebra; Cluster analysis; Auto- and cross-correlation analysis; Information theory; Ideal Observer (ROC) analysis; Bayesian Statistics.

#### **ACADEMIC ADVISING & COMMITTEES**

#### **FIRST YEAR ADVISORS**

Each first year student is assigned a first year advisor. First year students should meet with their first year advisor to discuss academic issues such as course and rotation selections and selection of a thesis lab. It is recommended that first year students meet with their assigned advisor once per quarter.

#### NON-THESIS FACULTY ADVISOR

Beginning in the second year, each student will meet with an assigned faculty advisor on an annual basis. The meeting will have a similar format to the first year evaluation including topics such as progress to degree, coursework, thesis research, career development, and any other questions or concerns the student may have about the program or their advisor.

#### **PRE-THESIS COMMITTEE**

Before the end of their second-year, students are required to assemble a Pre-Thesis Committee. This committee provides scientific input on the dissertation project and evaluates students at the end of each year after the first (i.e. once they have joined a laboratory) and until they advance to candidacy. This evaluation is primarily related to the students' research rather than to their course work. The committee consists of the Thesis Advisor and two other members of the Graduate Program faculty group (one of the members may be from outside the program by approval of the Program Director). Typically, the Pre-Thesis Committee would become the nucleus of the Doctoral Committee. The full five member Doctoral Committee must be formed by winter quarter of the third year.

All students are required to meet with their Pre-Thesis or full Doctoral Committee, once formed, every spring. This meeting serves as the annual Spring Evaluation. This evaluation is primarily related to the students' research rather than their course work. The meeting should contain an oral presentation by the student, outlining progress made and plans for the future. Students must submit a 1-2 page written thesis proposal to their committee prior to the first pre-thesis spring evaluation meeting.

#### **DOCTORAL (THESIS) COMMITTEE**

Prior to advancing to candidacy, students must assemble their full Doctoral Committee, during their third or fourth year. Students meet yearly with this committee to evaluate their progress to date, recommend the modifications to the dissertation's scope or methodology, timetable for completion, and recommendation for support in the following year. The Doctoral Committee conducts the qualifying examination, conducts the students annual Spring Evaluation, supervises the preparation and passes upon the dissertation, and administers the final examination.

The Doctoral Committee should comprise a minimum of five members. Effective Fall 2021, the Doctoral Committee should comprise of a minimum of four members. Names of the proposed committee members must be submitted to the Graduate Program Coordinator at least one month prior to the anticipated advancement exam date. After review, the coordinator will send the nomination form to the GD for review and approval. Students should not schedule their advancement until they have received final approval for the appointment of their doctoral committee by the GD.

Note: Neurosciences Graduate Program faculty are listed on our website at <u>neurograd.ucsd.edu/people/faculty.html</u>. Because new faculty are constantly joining the program, you can obtain the most current list from the Program Coordinators.

#### Criteria to Appoint the Doctoral Committee

- The Graduate Program in Neurosciences policy on Doctoral Committee membership is as follows: "The Doctoral Committee for students in the Neurosciences Graduate Program should comprise a minimum of five members and of these; at least three must be members of the Group in Neurosciences. If all members are from the Group, then two must have a different home department in which the Committee Chair and Co-Chair have no primary affiliation, and one of these two must be tenured."
- Graduate Council Action 12/1/95: "The Neurosciences Graduate Program also allows for two adjunct committee members without adding a sixth member."
- If the graduate student's advisor has an adjunct title, he/she must appoint a ladder ranked co-chair and they must be a UCSD faculty member.
- GD policy states that: "The committee consists of five or more officers of instruction, no fewer than four of whom shall hold professional titles of any rank. The committee members shall be chosen from two or more departments. At least two members shall represent academic specialties that are different from the student's major department, and one of the two must be a tenured UCSD faculty member."
- Graduate Council Action 6/9/88: "A faculty member with a regular appointment in one department and an adjunct appointment in another department may be an inside or an outside member of the committee for either department. Only one such member is accepted per committee. There must also be one person with no connection to the student's department. The tenured outside member may be either the adjunct or outside person."
- Graduate Council Action 4/8/93: "A professor who leaves UCSD may continue to be on the committee and may serve as co-chair, but may not continue as chair."
- "A committee chair and/or co-chair from outside the department may not also serve as the tenured, outside member."
- "A professor from another UC campus may be an inside or an outside member."
- An additional member (non-adjunct, outside the university) can be included if the expertise of that member is especially relevant and unique to the dissertation project. However, such members serve as an extra (i.e., sixth or seventh member)
- The committee must be approved by the student's department chair.

#### DOCTORAL COMMITTEE MEMBERSHIP

Title	Professorial Title	Senate Member	Officer of Instruct	Tenured Outside Member	Chair	Co- Chair	One of Five Members	Sixth Member
PROFESSOR SERIES:								
Full & Associate	Y	Y	Y	Y	Y	Y	Y	Y
Assistant	Y	Y	Y	N	Y	Y	Y	Y
IN-RESIDENCE PROFESSOR SERIES:								
Full & Associate	Y	Y	Y	Y	Y	Y	Y	Y
Assistant	Y	Y	Y	N	Y	Y	Y	Y
ACTING PROFESSOR SERIES:								
Full & Associate	Y	Y	Y	N	Y	Y	Y	Y
Assistant	Y	Ν	Y	Ν	Ν	Y	Y	Y
ADJUNCT SERIES*:								
All Ranks	Y	N	Y	N	Y#	Y#	Y	Y
PROFESSOR OF CLINICAL "X" SERIES:								
Full & Associate	Y	Y	Y	N	N	Y	Y	Y
Assistant	Y	N	Y	N	Ν	Y	Y	Y
CLINICAL PROFESSOR SERIES:								
All Ranks	Y	N	Y	N	N	N	N	Y
VISITING PROFESSOR SERIES:								
All Ranks	Υ	N	Y	N	N	N	N	Y
PROFESSOR EMERITUS SERIES:								
All Ranks	Y	Y	Y	Y	Y	Y	Y	Y
PROFESSOR FROM ANOTHER UC CAMPUS**:								
All Ranks	Y	Y	Y	N	N	Y	Y	Y
LECTURER SERIES:								
Lecturer & Sr. Lecturer	N	N	Y	N	N	N	N	Y##
LSOE & Sr. LSOE	Ν	Y	Y	Ν	Ν	Ν	Y	Y
RESEARCH SCIENTIST/ SCHOLAR W/LECTURER APPOINTMENT:								
All Ranks	N	N	Y	N	Y	Y	Y	Y
RESEARCH ASSOCIATE, RESEARCH FELLOW & PROJECT SCIENTIST/ SCHOLAR:								
All Titles	N	N	N	N	N	N	N	Y##

\* Only one person in this category per committee unless there are more than five members.

\*\* May serve as inside or outside member

# Adjunct professors of all ranks may serve as chairs of doctoral committees as long as a ladder rank faculty member serve as a co-chair

## May serve as an inside or outside member

# **Doctoral and Master's Committee Membership Table**

Legend - Eligibility to serve

		Legena -	Eligibility to ser	vc					
	Yes	No	Restrictions (						
Title	Chair	Co-Chair	Tenured Member	One of Four UCSD Members	Additional Member				
PROFESSOR (LADDER-RANK) SERIES, including Emeritus									
Full & Associate <sup>^</sup>	Y	Y	Y	Y	Y				
Assistant^	Y	Y	N	Y	Y				
PROFESSOR IN RESIDENCE SERIES									
Full & Associate <sup>^</sup>	Y	Y	Y	Y	Y				
Assistant^	Y	Y	N	Y	Y				
PROFESSOR OF CLINICAL "X" SERIES									
All Ranks^	N	Y	N	Y	Y				
TEACHING PROFESSOR (LECTURER WITH (POTENTIAL) SECURITY OF EMPLOYMENT) SERIES									
All Ranks^	Y+	Y+	N	Y	Y				
ACTING PROFESSOR	SERIES								
Full & Associate <sup>^</sup>	Y	Y	N	Y	Y				
Assistant	N	Y	N	Y	Y				
ADJUNCT PROFESSO	R SERIES (Full	-Time Salaried	d Adjuncts in the	Health Sciences)					
Full & Associate	Y	Y	Y	Y	Y				
Assistant	Y	Y	N	Y	Y				
ADJUNCT PROFESSOR	R SERIES (incl	uding Non-Sa	laried Appointm	ents in the Health So	ciences)*				
All Ranks	Y#	Y#	N	Y	Y				
PROFESSOR OF PRAC	TICE SERIES*								
Full	Y#	Y#	N	Y	Y				
Visiting	N	N	N	N	Y				
HEALTH SCIENCES CL	INICAL PROFE		S						
All Ranks	N	N	N	N	Y				
VISITING PROFESSOR	SERIES								
All Ranks	N	N	N	N	Y				
PROFESSOR FROM AN	NOTHER UC CA	MPUS OR NO	ON-UC INSTITUT	ION (All Series)					
All Ranks	N	N	N	N	Y				
LECTURER SERIES (N	on-Senate Inst	ructional Unit	)						
All Ranks	N	N	N	N	Y##				
RESEARCH SCIENTIST SERIES (must also have Lecturer/Educator appointment)									
All Ranks	Y	Y	N	Y	Y				
RESEARCH ASSOCIATE, RESEARCH FELLOW & PROJECT SCIENTIST/SCHOLAR									
All Titles	N	N	N	N	Y##				
L									

\*Confers Academic Senate membership, see https://senate.ucsd.edu/Operating-Procedures/Senate-Manual/Appendices/105.1

\*Only one person in this category may serve on the committee unless there are more than four members

#Adjunct professors and Professors of Practice of all ranks may serve as chairs of doctoral committees as long as a ladder rank faculty member serve as a co-chair

##Voluntary basis

+Teaching Professors of all ranks may serve as chair or co-chair by exception

#### **EVALUATIONS & EXAMINATIONS**

#### SPRING EVALUATION

In the spring quarter of each year, all graduate students are subject to review. This review takes the form of a Spring Evaluation. A satisfactory Spring Evaluation must be submitted to the GD by the end of spring quarter each year. Continued approval for financial support is dependent upon the annual filing of a satisfactory Spring Evaluation. A hold will be placed on the student's winter quarter registration by GD if the evaluation is not completed by the deadline.

The Spring Evaluation is completed and submitted through the Graduate Divisions "On-Line Spring Evaluation" system. Evaluations are routed to the committee chair, committee members, the Program Director, and the graduate student for comments and approval. The final evaluation is routed to the GD and becomes a part of the student's permanent record. Although the signatures and submission of the evaluations will be accomplished on-line, the Graduate Division Dean has emphasized the importance of having face-to-face meetings between students and their faculty advisors and committee. The on-line submission process should not prevent an in-person meeting.

First year students will meet with the Program Directors for their initial Spring Evaluation. The evaluations will be scheduled in early June by the Graduate Program Coordinator.

MSTP first year students should form a Pre-Thesis Committee (see <u>Academic Advising &</u> <u>Committees</u>) in consultation with their primary advisor (two faculty members in addition to your advisor), and plan on having a committee meeting during summer of their first year.

Before a student advances to candidacy, the Spring Evaluation is called a "pre-candidacy" evaluation. The student must meet with all three members of his/her pre-thesis committee for the evaluation. Once the student has advanced to candidacy, the Spring Evaluation is called an "in-candidacy" evaluation. The Neurosciences Graduate Program requires that all of the Doctoral Committee members attend the Spring Evaluation. Students should schedule their spring evaluation in April to meet the September 30 deadline each year.

Students who receive a "needs improvement" rating on their Spring Evaluation need to have a follow-up meeting with their committee to make sure that there is clear evidence of improvement and for the committee to provide necessary guidance. The follow-up meeting should ideally be in the quarter immediately following the evaluation and should take place no later than 6 months from the date of the spring evaluation meeting. A form for the follow-up meeting can be obtained from the Graduate Program Coordinator.

It is important to note that Spring Evaluations affect not only future support but are required before any exception can be requested of the Graduate Council, and, if there are academic difficulties, will be relied upon heavily in the Dean's action. In many instances, they are the only narrative documentation of a student's progress, other than the transcript. The following students are exempt from Spring Evaluations:

- A student advancing to Ph.D. candidacy during winter or spring of the current academic year.
- A student on approved leave of absence during the spring of the current academic year. Note that an evaluation must be submitted, in this instance, by the end of the first quarter of return after the leave for continued support.

#### QUALIFYING EXAMINATION: ADVANCEMENT TO CANDIDACY

To advance to candidacy the student must assemble their full Doctoral (Thesis) Committee and meet with them for the qualifying exam (see <u>Academic Advising & Committees</u>).

The qualifying exam is required by the Graduate Council of the Academic Senate to evaluate the quality of the dissertation work completed to date as well as the proposed additional experiments. The emphasis of the exam is on the conceptual rationale of the dissertation proposal. In addition, it is the charge of the Doctoral Committee to estimate the time required to complete the project. Passing the qualifying exam advances the student to candidacy, effectively changing his/her status from doctoral student to doctoral candidate.

The Neurosciences Graduate Program encourages all students to advance by the end of their third year. MSTP students are required to advance by the end of spring quarter their third year. Non-MSTP Neuroscience students are required to advance by the end of spring quarter of their fourth year. The GD will place a hold on all students' registration during summer quarter following the pre-candidacy time limits. The University will not allow students to register for the fall quarter following the pre-candidacy time limit or receive any financial support unless they have successfully advanced to candidacy.

The Graduate Council requires that students advance to candidacy a minimum of three quarters (not including summer) prior to their final dissertation defense. This requirement may be waived under special circumstances.

To take the qualifying examination, a student must maintain a minimum GPA of 3.0 in upperdivision and graduate course work with no more than eight units of "F" and/or "U" grades. Additionally, the student must have grades of "B" or better in all Core Courses, fulfilled their teaching requirement and must have completed a minimum of three academic quarters. All required course work must be completed before a student is permitted to advance.

After selecting a Doctoral Committee, the student must schedule the qualifying examination and present a written dissertation proposal to the Doctoral Committee. The proposal should be at least 5 pages and should describe the goals of the project, summarize previous work in the area, describe the experimental design, present the progress that the student has already made, and discuss future plans. The Thesis Advisor should read and approve the proposal before it is distributed to other Doctoral Committee members. The committee should have your proposal at least one week prior to the Qualifying Examination.

At the Qualifying Examination, the student is required to give an oral presentation that is followed by a period of open questioning from the committee members. When the dissertation proposal is approved, the Committee members sign the exam approval sheet (Appendix IV, exhibit two). A \$50.00 Advancement to Candidacy fee is required to complete the paperwork. The Neurosciences Graduate Program will not cover this fee, however the student may request reimbursement from their doctoral advisor or thesis lab.

Advancement to Candidacy becomes official when the advancement fee has been paid and the approved form is filed with the GD, provided that the student is enrolled that quarter.

Advancements occurring during the summer or between quarters will be posted in the next quarter of enrollment.

# Procedure for Advancement to Candidacy

- 1) Obtain the form entitled REPORT OF THE QUALIFYING EXAMINATION AND ADVANCEMENT TO CANDIDACY FOR THE DEGREE OF DOCTOR OF PHILOSOPHY from the Graduate Program Coordinators.
- 2) At the completion of your Qualifying Examination, the Doctoral Committee members will signify their approval by signing their names to the form directly following the exam.
- 3) The student also must sign the form where indicated and add the quarter/year planned to complete dissertation.
- 4) The Neurosciences Program Director must also sign the form. Either drop it off to the graduate program office or take it directly to the Director.
- 5) Once all the signatures have been obtained, the student must take the form to the Cashiers Office and pay the \$50.00 candidacy fee. They will stamp the form.
- 6) The fee is required, in advance, to complete the paperwork. The Neurosciences Graduate Program will not cover this fee; however, the student may request reimbursement from their doctoral advisor or thesis lab.
- Finally drop off the completed form to the Neurosciences Graduate Program Coordinator. They will make a copy for your file and mail it to GD for final approval and signature.
- 8) Advancement to Candidacy becomes official when the final approved form is filed with GD, provided that the student is enrolled that quarter. Advancements occurring during the summer or between quarters will be posted in the next quarter of enrollment.

## FINAL EXAMINATION: DEFENSE OF THE DISSERTATION

The student MUST contact the Graduate Program Coordinator at least one month prior to scheduling their defense/final exam. Students must refer to the Graduate Division's requirements and timelines for degree completion available at:

# http://grad.ucsd.edu/academics/preparing-to-graduate/degree-completion.html#Doctoral-Students

## **DISSERTATION**

Students are expected to submit a draft of the doctoral dissertation each member of the doctoral committee at least one month before the scheduled defense.

- Preliminary and final meetings with the GD Academic Affairs Advisors are mandatory. Appointments are scheduled online at: <u>https://gradforms.ucsd.edu/calendar/index.php</u>.
- The submission of the doctoral dissertation is the last step leading to the award of the degree. The finished manuscript is a scholarly work that is the product of extensive research and related preparation. The two final copies of the dissertation or the electronic copy are preserved by the UCSD Libraries. It becomes the official and permanent record, available to other researchers and faculty. For these reasons, the Graduate Council has established criteria for uniformity in physical format which have been compiled in a manual which can be found at the GD website link at: <a href="https://grad.ucsd.edu/\_files/academics/BlueBook%202019-20%20updated%205.05.20%20COVID.pdf">https://grad.ucsd.edu/\_files/academics/BlueBook%202019-20%20updated%205.05.20%20COVID.pdf</a>

These are the minimal requirements to which all doctoral dissertations must conform in order to be accepted. To ensure that all of these requirements are met, and to become thoroughly familiar with these instructions students should read the manual in full.

## **DISSERTATION DEFENSE**

The Dissertation Defense consists of a public presentation of the dissertation work, followed by public discussion. As well as an oral defense, in closed session, with the student's Doctoral Committee.

All committee members are required to be present at the final examination/defense. Graduate Council has permitted any absent member to examine the candidate in advance of the exam date and to then sign off on the Final Report and the dissertation signature page. If the absent member has questions for the committee to consider at the exam, these should be forwarded to the committee chair and the committee chair should then withhold signature until those questions are resolved. This procedure should not be undertaken without the program and committee chair's advance approval. The committee chair and the tenured outside member must always be present at a final examination/defense.

Prior to scheduling your thesis defense and dissertation filing contact the Graduate Program Coordinators for specific instructions. At the conclusion of the Defense, all members will sign the "Final Report of the Final Examination and Filing of the Dissertation for the Degree of Doctor of Philosophy" via DocuSign at <u>www.etdadmin.com</u>. The Final Report Form needs to be completed at least one day prior to final appointment with the Graduate Division. In addition, the following documents are required at the final appointment:

- One copy of the first page of the abstract (not needed for Spring 2020)
- Dissertation and Thesis Release Form <u>http://grad.ucsd.edu/\_files/academics/DissertThesisReleaseTemplate.pdf</u>.
- Survey of Earned Doctorates certificate (https://sed-ncses.org /) (not required for D.M.A.).
- Complete the UC San Diego Graduate Survey (web link to survey is sent to the student prior to their appointment).

# **Degree Completion**

Registration will be waived for a student completing between quarters if registered in previous quarter. The Degree will be conferred at the end of the following quarter.

# Filing Deadlines

The deadlines for filing dissertations and theses is on the Friday before the last day of Fall and Winter quarters, and one week earlier for spring quarter. Students seeking to meet this deadline MUST have a preliminary appointment for a formatting check prior to their final appointment and submission of the dissertation with GD and Geisel Library.

# Filing Fee (General Petition)

A student on an approved leave of absence who has completed all requirements except the final defense of the dissertation or thesis or taking of the final examination, may petition to pay a filing fee (one half of the registration fee) in lieu of full registration fees. Cashier validated petition must be submitted with student's Final Report form. The Filing Fee is one half of the Education Fee, or approximately \$188.

# Participation in Commencement

UCSD Graduate Division conducts one commencement ceremony each year at the end of spring quarter. Only students who have completed ALL degree requirements, including filing of the thesis or dissertation, may participate in commencement.

## Summer Degrees

- Students completing terminal degrees during the summer and who were enrolled in the previous spring quarter do not pay any additional fees but must file a General Petition to waiver registration between quarters.
- Students completing terminal degrees during the summer who were on leave of absence in the previous spring quarter will pay the filing fee for completion and will also need to file a General Petition to complete between quarters.
- Continuing Ph.D. students who complete a master's degree during the summer will have the degree awarded in the fall quarter.
- GD publishes a schedule of specific deadline dates for summer degrees at the end of each spring quarter

# **GRADUATE DIVISION REQUIREMENTS & DEADLINES**

#### DEADLINES

There are a number of deadlines by which students must meet academic requirements. Some of these are set by the program and some by GD. The most relevant of these deadlines are:

#### **COMPLETION OF PH.D. REQUIREMENTS**

Each Ph.D. program at UCSD has three time limits: 1) Pre-Candidacy, 2) Support, and 3) Total Registered.

#### PRE-CANDIDACY TIME LIMIT

Neurosciences Graduate Students are encouraged to advance to candidacy by the end of their third year. MSTP students are <u>required</u> to advance by the end of spring quarter of their third year. Non-MSTP Neuroscience students are required to advance by the end of spring quarter of their fourth year. The University will not allow students to register for the fall quarter following the advancement deadline or receive any financial support unless they have successfully advanced to candidacy.

#### SUPPORT LIMIT

This is the maximum time during which a doctoral student is eligible for support. Students must complete all requirements by the end of their sixth year. MSTP students must complete all requirements and defend within 6 years. Their total registered time limit is also 6 years. At the end of the sixth year, the student is no longer allowed to register at the University. Non-MSTP students may continue as a student for an additional seventh year, but will not be eligible for financial support during that year. This includes all stipend, fees/tuition payments, fellowships, scholarships, and employment administered by the University and its affiliated institutions (i.e. the Salk Institute, the Sanford-Burnham Institute, and the Scripps Research Institute), but does not affect financial aid loans. Since students cannot receive any support, they will be required to pay their own tuition/fees to be eligible for student health insurance and student housing.

## TOTAL REGISTERED TIME LIMIT

This is the maximum registered time in which a student must complete all Ph.D. requirements. As noted above, MSTP students must complete all Ph.D. requirements by the end of the sixth academic year, thereafter the student is no longer allowed to register at the University. Non-MSTP Neuro students must complete all Ph.D. requirements by the end of the seventh academic year. At the end of the seventh year, the student is no longer allowed to register at the University.

# LEAVE OF ABSENCE

Graduate students are eligible for a maximum of three quarters of leave with departmental approval. If you would like to request a leave of absence, you must do the following:

- Write a letter stating the reason you are requesting a leave and explain the circumstances. The letter should be addressed to the Neurosciences Graduate Program Director.
- 2) Have your advisor also submit a signed letter supporting your leave of absence request.
- 3) Set up a meeting with the Program Director to discuss your request and bring the signed letters to your meeting.

Please note that the Director will not approve a leave of absence until the above requirements have been met.

A student who leaves the University for one quarter (and up to three quarters) with the intention of resuming study during a later quarter must file a formal Leave of Absence, Extension and/or Withdrawal form prior to leaving the campus. Graduate students must have completed at least one quarter of academic residence and be in good standing (GPA 3.0 minimum or equivalent and no more than eight units of U or F grades) to be granted a leave. A student on leave of absence status cannot make use of University facilities or faculty time, be employed at UCSD, UCSD Medical Center or UC Extension, or hold a fellowship, traineeship, assistantship, or similar appointment at UCSD.

A student seeking to maintain health coverage while on a leave of absence MUST contact the Student Insurance office on campus at 858-534-2124 for specific details.

## VOLUNTARY SHIP FOR LEAVE OF ABSENCE OR AFTER GRADUATION

Voluntary coverage is available for up to two quarters while on an approved LOA, or one quarter maximum if on Filing Fee status or post-graduation. The student must be covered under SHIP the prior quarter in order to "continue" coverage. The Student Health website has information regarding how to enroll in the voluntary continuation coverage through SHIP at <a href="https://wellness.ucsd.edu/studenthealth/insurance/other-options/Pages/grad-students-leave.aspx">https://wellness.ucsd.edu/studenthealth/insurance/other-options/Pages/grad-students-leave.aspx</a>

NOTE: There are enrollment deadlines for the voluntary coverage (generally 30 days from the end of the last coverage period) so it is important that if a student is planning on continuing coverage, they must file the appropriate paperwork for their eligible status (e.g. LOA or Filing Fee) prior to the voluntary SHIP enrollment deadline. The current cost to purchase voluntary SHIP coverage is \$1,127.33 (medical) or \$1,284.93 (medical, dental and vision per quarter.

# INTERNATIONAL STUDENTS ON A LEAVE OF ABSENCE

Under normal conditions, an international student is not permitted to go on a leave of absence. Immigration regulations require that the student must be enrolled in a full-time course of study for the duration of the student's stay in the United States. Exceptions may be granted under the following circumstances. All requests for a leave of absence for international students require International Center approval prior to GD consideration. The usual requirements of departmental approval and campus regulations apply. Students who have advanced to Master's or Ph.D. candidacy may apply for a leave for research or employment related to their research purposes. The International Center requires a copy of the GD approved advancement form and a letter from the department stating the purpose of the leave prior to consideration of the leave request. If the student is leaving the country, International Center approval is usually automatic and the student does not need a department letter.

## PARENTAL LEAVE OF ABSENCE

A graduate student who is bearing a child, who has primary responsibility for the care of an infant immediately following birth, a child under the age of five, or adoption of a child under age five and is in good academic standing will be granted, on request, a one-quarter extension of all unexpired Ph.D. time limits. During the quarter in which childbirth or adoption occurs, the graduate student may choose one of the following registration options:

- 1) Continue registering as a full-time graduate student and retain eligibility for support.
- 2) Reduce to part-time status (less than 12 units) and be eligible for up to 25% time employment on campus.
- 3) Take a leave of absence.

After the quarter in which childbirth or adoption occurs, a graduate student who has primary responsibility for caring for a child up to the age of five will be granted, on request, a leave of absence for the purpose of caring for the child for a maximum of two quarters (or three quarters, if a one quarter extension has not been granted for the quarter in which childbirth or adoption occurred).

The total amount of time for which graduate students may receive extensions of time limits for parenting or childbearing may not exceed three quarters in a graduate student's career at UCSD. Approved leaves for childbearing and parenting will not count in the three-quarter leave limit available to all graduate students.

# UCSD CHILDBIRTH ACCOMMODATION FOR DOCTORAL STUDENTS

As many as 6.4% of UCSD PhD students are parents of a young child or children. Recognizing the special challenges involved in balancing participation in Doctoral programs and childbearing, the University and the Graduate Division (GD) are committed to supporting policies, programs, and services to financially assist graduate students through childbirth while they pursue their academic goals.

Doctoral student women who give birth while in paid status with a Graduate Student Researcher (GSR), Associate In or Teaching Assistant (TA) appointment may be excused from regular employment duties for a period of up to six weeks without loss of financial support (a longer period may be granted in the case of exceptional medical circumstances experienced by the mother or child before or after birth). Eligible students holding TA or Associate In positions (all salaried ASE positions) must use all available ASE/UAW contract childbirth benefits first. This policy will supplement those benefits to provide a combined total of up to six weeks. The student will continue her academic program and maintain registration status. She will continue to pursue her academic goals during this accommodation period (i.e., registered for independent study).

Students will continue to be paid by their existing employer. With prior approval by GD, support for a TA replacement may be charged by the academic unit to the GD Childbirth Accommodation Program. Support for an Associate In or GSR replacement will only be considered under exceptional circumstances. For GSR replacements, in particular, the PI must justify that extraordinary circumstances, such as a pressing proposal deadline, could warrant the addition of a substitute employee, who presumably will be unfamiliar with the specifics of the research project. Substitute funding will not be provided to support another GSR in the same research group during the period of the childbirth accommodation who otherwise was already being supported by the PI. Any replacement student employee would only qualify for fee remissions if they reach 25% time during a given quarter. International students holding F-1 or J-1 visas who may be considered for replacement appointments are not eligible for an exception to work over 50% time.

Women doctoral students supported by university fellowships, traineeships or graduate student researchers, will experience no change in their financial support during childbirth accommodation. Women doctoral students supported by extramural fellowships will likewise experience no change in their financial support if the outside agency defers to the University in matters of leave policies.

Note: Students will not receive financial support under this provision if they do not already hold a GSR, Associate In, or TA appointment. Support for a replacement student employee will also not be continued beyond the end date of the original appointment of the mother covered by this policy.

Eligibility: In addition to the criteria above, a doctoral student requesting childbirth accommodations must: 1) Maintain full time academic status throughout the accommodation period, and 2) Apply prior to the accommodation period requested (retroactive requests will not be considered).

Applying for the GD Childbirth Accommodation Program: A student must:

1) Contact your Graduate Program Coordinator to initiate the request

- 2) Secure the applicable endorsements from the academic program Graduate Adviser, the student's TA, Associate In or GSR supervisor, as appropriate
- 3) Return the form to the Graduate Program Coordinator to document and then forward to GD.

# **RESOURCES FOR STUDENT PARENTS**

Links to resources for student parents can be found on the NGP website (neurograd.ucsd.edu/resources/health-wellness.html).

# **GD PROBATION PROCESS**

Graduate students who do not meet the requirements for good standing are advised by letter of their status and the implications of that status by the Graduate Division Dean. A copy of the letter is also sent to the program. If it is a student's first instance of academic difficulty and the GPA is above 2.0, the letter serves as a warning and advises of the next step(s).

In subsequent quarters if the student:

- a) Raises the GPA above a 3.0, then no further action is taken.
- b) Raises the GPA but not to a 3.0, student may have probation extended by request of the program with a plan for improvement and the Graduate Division Dean approval.
- c) Shows no change, same as b, dependent upon the overall GPA.
- d) Lowers the GPA further, a hold on a subsequent quarter's registration may be placed.

Any student with more than 8 units of "U" and/or "F" grades or less than a 2.0 overall GPA is barred from future registration including the next available quarter.

Note: Due to the processing of grades after the next quarter has begun, registration holds are usually placed on the 2nd quarter after the problem arises (i.e. fall quarter problem, registration hold placed on spring registration. During the summer, however, registration holds may be placed on students for fall quarter).

Regardless of the severity of the problem, students are advised to maintain communication with the department. It is the program's and student's responsibility to also monitor the student's quarterly "unofficial record" received.

The GD Academic Policies and Procedures can be found at: <a href="http://grad.ucsd.edu/academics/policies-procedures/index.html">http://grad.ucsd.edu/academics/policies-procedures/index.html</a>

# 2021-2022 ENROLLMENT AND REGISTRATION CALENDAR

Requirement	Fall	Winter	Spring
Deadline to enter holds for the enrollment/registration cycle	5/14	11/1	2/7
Schedule of Classes available	5/18	11/3	2/4
Enrollment begins for all continuing students	5/21	11/8	2/12
Effective date for fee payment holds	TBD	TBD	TBD
Billing statement available on <u>TritonLink.</u> (eBill available continuing students)	9/2	12/2	3/2
Registration fee payment deadline (after this date, <u>late</u> <u>fees</u> apply)	9/17	12/17	3/18
Deadline for mandatory health insurance waiver - all students (after this date, \$50 late waiver fee will apply until late waiver deadline, see below.)	9/10	12/10	3/13
Quarter begins	9/20	1/3	3/23
Late registration fee payment deadline (to avoid being dropped from enrolled classes or wait listed courses)	9/22	1/3	3/28
First day of classes	9/23	1/3	3/28
Late health insurance fee waiver deadline (no waivers will be accepted beyond this date)	9/15	12/15	3/17
Deadline to change grading option	10/22	1/28	4/22
Deadline for Graduate students to <u>file for leave of absence</u> , in absentia or to apply for <u>half-time</u> status for current quarter	10/8	1/14	4/8
Deadline for Graduate students to change units	12/3	3/11	6/3
Deadline for all students to drop classes without "W" grade on transcript	10/22	1/28	4/22
Deadline for Graduate students to drop with "W" grade on Transcript	11/29	3/4	5/27
Finals week	12/4- 12/11	3/12- 3/19	6/4- 6/10
Quarter ends	12/11	3/19	6/10

# **EVENTS AND ACTIVITIES**

#### FALL WELCOME DINNER

A purely social event for students and faculty to welcome the incoming students to the program, held during fall quarter.

## STUDENT JOURNAL CLUB

The Student Journal Club is organized entirely by students. Each week a student presents a paper from the laboratory of the seminar speaker for that following week. The goal of Journal Club is to create an open venue for friendly but lively scientific discussion. Refreshments are provided.

## **RESEARCH ROUNDS**

Research Rounds is a weekly seminar course that meets in Fall, Winter and Spring quarters, in which graduate students beyond their second year in the program present their current research. All students in their first and second years are required to take Neurosciences Research Rounds (NEU 276) for six quarters. Students engage in scientific discussion as well as constructive criticism on the presentations meant to enhance the skills of both the audience and presenters. All members of the Neuroscience community are welcome to attend these presentations.

#### **SEMINAR SERIES**

The Graduate Program's weekly Neurosciences Seminar Series meets on Tuesdays at 4:00 p.m. in the CNCB Marilyn Farquhar Conference Room and features invited speakers from around the country. Students have the opportunity to meet with the speakers over lunch or dinner each week. The Salk Institute also organizes frequent lectures as do many of the other departments and institutions in and around UCSD. The Neuroscience related seminars are announced in the "This Week" email sent by the Graduate Program Coordinator. See <u>neurograd.ucsd.edu/news-events/seminar-series.html</u> for more information.

#### **SPRING RETREAT**

The program organizes a retreat each spring that fosters interactions among program faculty and students. The retreat is typically held off campus over a weekend and features lectures, discussion groups, and social events.

# FACILITIES

# NEUROSCIENCE GRADUATE PROGRAM: ADMINISTRATIVE OFFICES AND STUDENT LOUNGE

Center for Neural Circuits & Behavior (CNCB), 2<sup>nd</sup> floor, rooms 276 & 277.

A conference table, refrigerator, and microwave are provided in the student lounge/conference room, CNCB room 274. An LCD projector is available for check-out for student presentations.

# **BIOMEDICAL LIBRARY**

The Biomedical Library (BML) is located the School of Medicine campus next to the Biomedical Sciences Building, The BML has an extensive collection of journals and manuscripts in neuroscience, medicine, molecular biology, psychiatry and related fields. While this library should meet most of the students' needs, additional titles are available from the BML's branch library at the UCSD Medical Center in Hillcrest, from the Scripps Institution of Oceanography (SIO) Library, and from other libraries on the main campus. Volumes not available at any of UCSD's libraries can be requested from one of the UC system's other libraries without charge. UCSD's journal and manuscript catalogs ('Melvyl' and 'Roger') can be searched at BML or remotely by users with UCSD e-mail accounts.

# UCSD RESEARCH CENTERS AND CORES

The Office of Research Affairs maintains an extensive list of UCSD Core Facilities.

# **COMPUTATION & COMPUTING**

- Halicioğlu Data Science Institute (HDSI)
- Institute for Neural Computation (INC)
- San Diego Supercomputer Center (SDSC)

# MICROSCOPY & IMAGING

- <u>Cellular and Molecular Medicine Electron Microscopy</u>
- <u>Center for Functional MRI</u>
- National Center for Microscopy and Imaging Research (NCMIR)
- Radiology Imaging Lab
- UCSD School of Medicine Microscopy Core Leica Center of Excellence

# <u>OTHER</u>

- Altman Clinical and Translational Research Institute (ACTRI)
  - o ACTRI Biomarker Lab
  - ACTRI Biostatistics Core
- <u>California Institute for Telecommunications and Information Technology (Calit2)</u>

- Core Bio Services
- GlycoAnalytics Core
- Institute for Genomic Medicine Genomics Center
- Multi-Disciplinary Labs (MDL)
- Mouse Phenotyping and Pathology Core

# **NEIGHBORING CORE FACILITIES**

- La Jolla Institute for Allergy and Immunology
- <u>Salk Institute for Biological Studies</u>
- Sanford Burnham Prebys Medical Discovery Institute
- <u>Sanford Consortium for Regenerative Medicine</u>
- <u>Scripps Research Institute</u>
- UC San Diego
- UC San Diego Moores Cancer Center

# CAMPUS PARTICIPATING INSTITUTIONS

# THE SALK INSTITUTE FOR BIOLOGICAL STUDIES

10010 North Torrey Pines Road, La Jolla, CA 92037-1002 or UCSD Mail Code 0932 Phone: (858) 453-4100

# THE SANFORD-BURNHAM INSTITUTE MEDICAL RESEARCH FOUNDATION

10901 North Torrey Pines Road, La Jolla, CA 92037 Phone: (858) 646-3100

# THE SCRIPPS INSTITUTION OF OCEANOGRAPHY

University of California, San Diego 9500 Gilman Drive, MC 0210, La Jolla, CA 92037-0210 Phone: (858) 453-2830

## THE SCRIPPS RESEARCH INSTITUTE

10550 North Torrey Pines Road, La Jolla, CA 92037 Phone: (858) 784-1000

# SHILEY EYE CENTER

University of California, San Diego 9500 Gilman Drive, MC 0946 La Jolla, CA 92093-0946 Phone: (858) 534-6290

# UCSD MEDICAL CENTER

200 West Arbor Drive, San Diego, CA 92103 Phone: (619) 543-6222

# VETERAN'S ADMINISTRATION MEDICAL CENTER

3350 La Jolla Village Drive, La Jolla, CA 92037 Phone: (858) 552-8585

# FUNDING, HOUSING & BENEFITS

# **STIPENDS**

The first year of student funding is provided by the Neurosciences Graduate Program. This includes full payment of tuition and fees and a stipend of \$34,500/year for the from September 1, 2021 to August 31, 2022. The program also covers the non-resident supplemental tuition for all first year non-residents, if applicable.

The Graduate Program covers partial support during the second year and the thesis advisor is responsible for the remaining support. Beginning with the third year, the thesis advisor is responsible for full support. Before joining a lab, students should make sure that the thesis advisor is able to cover the student's stipend and fees for the duration of the thesis project.

A standard support level (currently \$34,500/year) has been set by the Neurosciences Graduate Program for all Neurosciences graduate students. Faculty members are expected to pay graduate students at this level, in addition to providing funding for tuition and fees, and nonresident supplemental tuition (international students only). Earnings from university employment (i.e. Teaching Assistantships, Instructors, Readers, Tutors, etc.) may be used to bring stipends up to the standard support level (\$34,500/year), but they may not to be used to increase earnings above the standard support level. In general it is expected that students will not hold any employment outside UCSD while they are registered as full time students receiving financial support.

All first year students receive a \$1,500 start-up fellowship to help cover the costs of moving. The program also provides up to \$1,200 per student for first year students to attend the annual Society for Neuroscience meeting and a \$500 bonus for first-years to purchase educational supplies. This money does not roll over from year to year. Contact the Graduate Program Coordinators for details and processing.

## **MSTP STUDENT SUPPORT**

The Graduate Program will provide the financial support equivalent to a second year student during fall quarter of the first year and the thesis advisor will take financial responsibility for the student (stipend and tuition/fees) winter quarter of the first year.

#### REIMBURSEMENTS

When students incur pre-approved program expenses (i.e. Journal Club refreshments, recruitment hosting, etc.), they may turn in the original receipts and information (i.e. your name, date, what the expense was for, and a list of attendees) to the Neurosciences Graduate Program Office for reimbursement.

#### **OUTSIDE FUNDING**

All students are encouraged to apply for outside sources of funding, such as fellowships. In addition to being a strong plus on one's academic record, such funding can benefit the student by making more laboratories available for thesis research. Most fellowships also provide some money for travel and supplies.

A student who is awarded an extramural fellowship (non-UCSD) as the Principal Investigator, not an institutional training grant slot, will be given a \$2,400 annual bonus in addition to their stipend. The bonus will be issued during the life of the fellowship as long as you are a current student. If the extramural fellowship is received in the first year, the Graduate Program will provide the bonus. Thereafter, it will be provided by the thesis advisor with his/her approval.

Many fellowships and scholarships are available, most notably through the National Science Foundation (NSF) and the National Institutes of Healthy (NIH). An extensive list of UCSD and national fellowships are listed on our website (<u>neurograd.ucsd.edu/resources/fellowships.html</u>). Information about other funding sources is

available from the Graduate Division on the UC San Diego Graduate Funding Blog (<u>https://grad.ucsd.edu/financial/index.html</u>).

There are many different deadlines for submission, depending upon which type of fellowship you are applying for. It is highly recommended that you check the websites early for deadlines.

# HOUSING

Two years of graduate and family housing is offered through UCSD. For more information about the UCSD housing communities, application, and availability, please visit the UCSD Housing, Dining & Hospitality (HDH) website (<u>hdhgradfamilyhousing.ucsd.edu/</u>). In addition to campus housing, many of our students live throughout San Diego. Popular locations include UTC, Hillcrest, North Park, University Heights, Normal Heights, and Little Italy. Check out Off Campus Housing Services (<u>offcampushousing.ucsd.edu/</u>) to search property listings, find roommates, or post available rentals.

The graduate housing opportunities listserv is available for UCSD graduate students who have off-campus or on-campus housing needs or housing opportunities to share. Students post their own messages regarding housing needs. To subscribe or unsubscribe from the listserv, visit <a href="http://mailman.ucsd.edu/mailman/listinfo/grad-housing-op-l%C2%A0">http://mailman.ucsd.edu/mailman/listinfo/grad-housing-op-l%C2%A0</a>. Current subscribers can also access an archive of past list postings. If you have questions or trouble subscribing to the grad housing listserv, contact the GradLife Intern at <a href="mailto:grad-housing-op-l@mailman.ucsd.edu">gradlife@ucsd.edu</a>. Once you are on the listserv send your messages by email to <a href="mailto:grad-housing-op-l@mailman.ucsd.edu">gradlife@ucsd.edu</a>.

# **HEALTH BENEFITS & RESOURCES**

For more information about Health & Wellness resources, please visit the NGP website (<u>neurograd.ucsd.edu/resources/health-wellness.html</u>).

## UCSD STUDENT HEALTH SERVICES

Health, vision and dental coverage is included in the fees paid by the program or your PI. The Student Health Insurance Plan (SHIP) is mandatory and can be waived only with approval of the Student Health Services Insurance Representative after review of proof of existing comparable insurance. <u>http://studenthealth.ucsd.edu</u>

For more information, please visit the UC Health Insurance Plan (SHIP) website (wellness.ucsd.edu/studenthealth/insurance/Pages/default.aspx).

Location: Student Health Services Student Health & Wellness Center Library Walk (West of the Price Center & South of Geisel Library) Hours: Monday-Friday, 8:00am-4:30pm, except Wednesday, 9:00am-4:30pm, closed daily 12:00 – 1:00 pm General Information Line: (858) 534-3300 or 534-2124 Appointments: (858) 534-8089

#### COUNSELING AND PSYCHOLOGICAL SERVICES (CAPS)

Counseling services are available without charge from UCSD's Counseling and Psychological Services (CAPS) (wellness.ucsd.edu/caps/Pages/default.aspx#students#students).

Central Office: Galbraith Hall 190 Hours: Mon-Fri, 8:00am-4:30pm Phone & Crisis: 534-3755

Individual counseling is available for a limited number of sessions per year. There are also several counseling groups which meet regularly, some designed around specific issues and some exclusively for graduate students or for women in science.

#### CAPS4GAPS:

Counseling and Psychological Services for Graduate and Professional School Students (<u>https://wellness.ucsd.edu/CAPS/resources/by-group/Pages/grad.aspx</u>)

#### UCSD PSYCHIATRY:

Mental health care for students (<u>https://health.ucsd.edu/specialties/psych/clinic-based/Pages/college-mental-health.aspx</u>).

# **OFFICE FOR STUDENTS WITH DISABILITIES**

The primary objective of the Office for Students with Disabilities <u>https://osd.ucsd.edu/</u> is to integrate these students into general campus programs and activities, and encourage their independence within and outside the campus community. The following services are available to meet the individual needs of students with disabilities:

- Disability management advising
- Academic support coordination: readers, interpreters, note takers, lab/library assistants
- Equipment repair service
- On-campus transportation
- Special parking coordination
- Special on-campus housing coordination
- Registration/enrollment assistance
- Test-taking arrangements
- Resource library
- Liaison with the California State Department of Rehabilitation.
- Referrals to resources, services and agencies
- Campus accessibility map (CAM)

Documentation of disability will be required for the delivery of most of these services. For additional information contact:

University Center 202 <u>http://disabilities.ucsd.edu</u> (858) 534-4382 (858) 534-9709 (TTY) Reserved for people who are deaf or hard of hearing

Rides and physical access for low-mobility students: <u>https://osd.ucsd.edu/resources/ride-</u>services.html

## SEXUAL ASSAULT RESEARCH CENTER (SARC)

SARC offers free confidential advocacy and support for sexual violence and gender-based violence (dating violence, domestic violence, talking). <u>https://students.ucsd.edu/sponsor/sarc/</u>

Location: Student Services Center, 5<sup>th</sup> floor, Suite 500 Hours: Mon-Fri, 8:00am-4:30pm Phone: 534-5793 Email: <u>sarc@ucsd.edu</u>

# **GENERAL INFORMATION**

#### **CALIFORNIA RESIDENCY**

Since the University of California waives tuition for all California residents, all students (except foreign students) are expected to establish California residency prior to the start of their second year. Students who do not establish California residency will be responsible for their nonresident supplemental tuition (approximately \$15,000/year). You should begin the process to establish residency immediately following your arrival to California.

To qualify for residency, the student must demonstrate that he/she has resided in California for at least one year. Residency is established by severing residential ties with other states and creating them with California: getting a California driver's license and registering your car with the state; establishing a residence; registering to vote; and/or paying California taxes. For detailed information please visit the following website:

http://students.ucsd.edu/finances/fees/residence/index.html.

At orientation, first year non-resident students are provided a list of documents and/or actions to collect and/or establish within their first year in California to satisfy all reclassification requirements. Questions regarding your application should be directed to the Residence Deputy, at <u>residencedeputy@ucsd.edu</u> or (858) 534-5486.

#### MAILING LISTS

neuro-students-l@ucsd.edu (note lower case "L")

Most information relevant to students in the Neurosciences Graduate Program is distributed via the 'neuro-students' e-mail list. Many enthusiastic discussions of student concerns occur through use of this list. For this reason, all students are encouraged to check their e-mail account regularly. Information regularly received via 'neuro-students' include: announcements of lectures, program events, and social activities; information on fellowships, post-doc opportunities, taxes and student health insurance; research questions from other students; changes in university policies, and a variety of other important information.

neuro-faculty-l@ucsd.edu (note lower case "L")

This listserv distributes mail to all the Neurosciences Graduate Program Faculty Members.

neuro-postdocs-l@ucsd.edu (note lower case "L")

This listserv is for post-docs who do research in Neurosciences. It is voluntary and not comprehensive.

neuro-seminar-l@ucsd.edu (note lower case "L")

This listserv distributes information on seminars and lectures for the Neurosciences Graduate Program as well as other departments. If you are on any of the above listservs, you are automatically subscribed to the "neuro-seminar" email list.

#### To subscribe/unsubscribe to a particular mailing list, go to:

<u>http://blink.ucsd.edu/technology/email/services/lists/MM-subscriber.html</u> select the mailing list you wish to be a member of and follow the instructions as directed on the online form.

Please note that incoming students will automatically be added to the program mailing lists by the program coordinators.

#### STUDENT ID

You may obtain a student ID via Student Business Services through the online Photo Tool at: <u>https://students.ucsd.edu/finances/campus-cards/photo-tool.html</u>. Or you may go to the Student Business Services Campus ID Office.

#### **GRADUATE DIVISION (GD)**

The Graduate Division's main website is an important resource for graduate students providing information regarding academics, funding, housing and a host of additional information. http://grad.ucsd.edu

#### GRAD LIFE @ UCSD

http://gradlife.ucsd.edu This site will give you access to event and resources information specifically for graduate students.

#### **GRADUATE AND PROFESSIONAL STUDENT ASSOCIATION (GPSA)**

GPSA is the collective voice of all graduate and professional students on campus at UCSD. They provide input from graduate students to committees all over campus. They regularly host social invents to engage the graduate student population, and career and professional development seminars. They are also a resource for students when they want to see change at an institutional level. Two representatives from the Neurosciences program typically serve on GPSA, though there are appointed and officer positions as well that many students in our program have served in. Check out https://gpsa.ucsd.edu/index.html for more information including how to get funding for new events and ideas on campus, along with travel grants. Find them on Facebook as well for all social and academic events they host.

#### UCSD EDUCATION TECHNOLOGIES SERVICES

Location: Applied Physics & Mathematics building, room 1313

Providing computer network services and support to the UCSD community. Services include assistance with email, wireless access, on & off campus network access. For details see website: <a href="http://acms.ucsd.edu/students/index.html">http://acms.ucsd.edu/students/index.html</a>.

#### TRITONLINK

TritonLink <u>http://students.ucsd.edu/</u> is a service provided through the UCSD's website, Infopath, and is a subset of Blink. Services available to students through TritonLink include:

<u>Schedule of Classes</u>: Includes all course information. In addition, TritonLink shows class size limits and seats available, additional meetings (such as review sessions, make-ups, etc.) as they are scheduled throughout the quarter.

<u>Academic History</u>: Allows students to view and print an unofficial version of their transcript. Information includes course work taken, grades, GPA, and transfer courses.

# Remember Neurosciences Graduate Students are required to check their academic record every quarter and report any grading or course registration errors to the Graduate Program Coordinator.

<u>Addresses</u>: Students can verify and update their addresses (mailing and e-mail), emergency contacts, and directory publishing restrictions.

<u>Billing Statements</u>: Students can view charges and payments on their account, view billing statements, and see account transactions for the last thirty days.

<u>Classes and Wait Lists; Weekly Planner</u>: Students can see their class schedule for enrolled and wait listed courses. Information includes section days, times, and location, grading option, and instructor. Additional meeting information, such as review sessions, films, and final exams will also appear as they are added throughout the quarter. In addition, students may view a weekly planner, which shows how their courses are scheduled throughout the week. It also shows time conflicts and allows students to customize their planner with additional information. A separate final exam planner is available approximately the sixth week of each quarter.

<u>Holds</u>: Students may check for holds on their record, and find information about how the hold will affect their registration and whom they need to speak to have any holds removed.

WebReg: Students may add, drop, change course and wait list sections on-line.

<u>Residency for Tuition Purposes</u>: Students may verify their residency status for tuition purposes.

# **STUDENT RESOURCES**

# **UCSD CENTERS**

- APIMEDA (Asian Pacific Islander Middle Eastern Desi American): <u>https://apimeda.ucsd.edu/</u>
- Black Resource Center: <u>http://brc.ucsd.edu/index.html</u>
- Center for Ethics and Spirituality: <u>https://students.ucsd.edu/sponsor/ethics-spirit/index.html</u>
- Cross-Cultural Center: <u>http://ccc.ucsd.edu/index.html</u>
- International Student Programs Office: <u>https://ispo.ucsd.edu/programs-workshops/index.html</u>
- Intertribal Resource Center: <u>http://itrc.ucsd.edu/index.html</u>
- LGBTQ Resource Center: <u>https://lgbt.ucsd.edu/</u>
- Raza Resource Centro: <u>https://raza.ucsd.edu/</u>
- Student Veterans Resource Center: <u>https://students.ucsd.edu/sponsor/veterans/index.html</u>
- Undocumented Student Services Center: <u>https://students.ucsd.edu/sponsor/undoc/</u>
- Women's Resource Center: <u>http://women.ucsd.edu/index.html</u>

# UCSD ORGANIZATIONS

- Black Graduate Student Union: email: <u>ucsdbgsa@gmail.com</u>
- Black Student Union: <u>https://blacktritons.wixsite.com/ucsdbsu</u>
- GSA list of resources: <u>http://gsa.ucsd.edu/resources/</u>

# **PROFESSIONAL/CAREER DEVLOPMENT**

- Gradvantage: <u>http://gradlife.ucsd.edu/academic-professional/career-development/grAdvantage/index.html</u>
- Career Center: <u>https://career.ucsd.edu/current-grad-students/index.html</u>
- APDCC (Consulting): <u>http://apdconsultingclub.org/</u>

# **STUDENT BASIC NEEDS**

- UCSD hub of basic needs information <u>https://basicneeds.ucsd.edu/</u>
- CalFresh (SNAP): <u>https://basicneeds.ucsd.edu/food-security/calfresh/index.html</u>
- Emergency Loans: <u>https://basicneeds.ucsd.edu/financial-wellness/index.html</u>
- Rent Deferment for UCSD HDH (grad housing): <u>https://hdh.ucsd.edu/arch/docs/Rent-Deferment.pdf</u>
- San Diego Region Resources: <u>https://211sandiego.org/</u>

# **CONFLICT RESOLUTION**

# CARE AT SARC (SEXUAL ASSAULT RESOURCE CENTER)

Care at SARC is the UC San Diego confidential advocacy and education office for sexual violence and gender-based violence (dating violence, domestic violence, stalking). The office is on-call 24 hours a day and on weekends throughout the year. <u>https://care.ucsd.edu/</u>

## OFFICE OF THE OMBUDS

An alternate chancel for confidential, neutral, and informal dispute resolution services for the UC San Diego community. <u>http://www.ombuds.ucsd.edu/</u>

## OFFICE FOR THE PREVENTION OF HARASSMENT AND DISCRIMINATION (OPHD)

OPHD's mission is to educate the UC San Diego community about issues of bias, harassment, and discrimination and assist with the prevention and resolution of these issues in a fair and responsible manner. <u>http://ophd.ucsd.edu/</u>

## STUDENT LEGAL SERVICES

Provides legal counseling, education and referral needs. <u>https://students.ucsd.edu/sponsor/student-legal/</u>

# **TRANSPORTATION & PARKING SERVICES**

Transportation and Parking Services sponsors a variety of programs and services designed to make it easier for students to live at UCSD without a car.

They operate an extensive network of free shuttle routes, looping around the campus, connecting to peripheral parking lots, and linking the campus to the Hillcrest Medical Center, Scripps Institution of Oceanography, Torrey Pines Center, and the Amtrak Coaster commuter train. Some routes operate year-round and others only while school is in session. Shuttles do not run on university holidays. At winter and spring quarter breaks and at the Thanksgiving holiday, special shuttles connect to San Diego International Airport and the Amtrak station downtown.

In addition to the shuttle system, the campus Transportation office offers a Triton U-Pass that provides unlimited access to all regional mass transit bus and trolley/light rail routes provided by the San Diego Mass Transit System (MTS). The U-Pass is available during fall, winter and spring quarter with no additional cost to the student. Students should go to the Campus Parking Office in mid-September to pick up their U-Pass sticker each year.

During the summer, students may purchase a Triton Summer Pass. Information about purchasing a Summer Pass is available at: <a href="http://transportation.ucsd.edu/alternatives/transit/summer-pass.html#Using-your-Compass-Card">http://transportation.ucsd.edu/alternatives/transit/summer-pass.html#Using-your-Compass-Card</a>

If you choose to bring a car to campus, be aware that a parking permit is required on UCSD property, Monday through Friday, 7:00 a.m. to 11:00 p.m., and 10:30 a.m. to 11:00 p.m. Saturday and Sunday. . No parking permit is required on <u>university holidays</u>. Yellow lines border student spaces. A student ("S") parking permit is valid in these spaces at all times., Student permits are never valid in spaces marked "A" Permit Required, 24 Hours a Day; 7 Days a Week, or in any other 7/24 parking space. Parking permits and applications forms can be obtained at the Parking Office. Go to the UCSD Parking and Transportation website: <u>http://transportation.ucsd.edu</u>.

Student parking permits:

- \$90/mo. "B" permits, valid for 90 consecutive days, are available to graduate students.
- \$240/qtr. "S" permit

Alternate schedule permits ("B" permit only), \$57/mo or \$171/qtr. Choose three days a week; cannot change days during a quarter. Change to days can be made when renewing for another quarter. Parking Sales and Services also offers a variety of short-term permit options:

- Occasional Use: up to 10 days of parking per quarter:
- \$50ea. in "B" lots
- Motorcycle, motorized scooter, motorized bike permit for up to 30 consecutive days, \$50/mo.
- Pay Station Rates: \$3 per hour

For more detailed information on:

- Shuttle Schedules
- Free Campus Bus Sticker
- Parking Permits/Regulations

Contact Rideshare Operations at (858) 534-8841, or search Transportation & Parking Services on TritonLink or Blink (www.blink.ucsd.edu).

The University Parking offices are located both on the central campus and at the UCSD Medical Center, and parking permits can be obtained at either location, or <u>online</u>. Campus Parking Office: Gilman Parking Structure, 6:30- a.m 6:30 p.m. weekdays (858) 534-4223

Medical Center Parking Office: 4202 Bachman Place #8205, 6:30 am – 2:00 p.m. (858) 534-4223

# **APPENDICES**

# **APPENDIX I: MASTER'S OF SCIENCE DEGREE**

Upon completing all required coursework, passing the Minor Proposition Course and fulfilling the teaching requirement, the student is eligible to receive his/her Master's degree. The GD requires a minimum of 36 units of graduate coursework, not including 296 or 299 research courses. Only students who have not previously received a Master of Science degree in Neurosciences or a Master of Science degree in a similar subject are eligible to receive their Master of Science degree in Neurosciences from UCSD.

The minimum residence requirement is three academic quarters, at least one of which must follow the Comprehensive Exam/Minor Prop. A candidate must be registered in the quarter in which the degree is to be awarded.

To obtain the Master's degree, the student must fulfill departmental requirements through Plan II, Comprehensive Examination, as outlined in the instructions for preparation of the GD form "Application for Candidacy for the Thesis or Comprehensive Examination, Plan I or II, for the Degree of Master of Arts or Science."

Please contact the Graduate Program Administrator for instructions and forms.

# PROCEDURES

- Forms must be filed with the GD no later than three weeks after the first day of the quarter in which degree requirements are to be completed.
- File upon passing the comprehensive examination (Minor Proposition Exam). All appropriate signatures and dates must be included.
- List only courses/units required for Master's degree program. A minimum of 36 units of graduate course work is required. Candidates must have a GPA equivalent to 3.0 in upper division and graduate course work undertaken, with a total of no more than eight units of F and/or U grades. GD guidelines for the number of units that must be completed are as follows: at least 14 units in graduate courses in the major field, 10 additional units in graduate courses, and 12 units in graduate or upper-division courses. No credit will be allowed for 296 & 299 research courses.

The Neurosciences Graduate Program requirements are as follows: complete all required coursework, pass the Minor Proposition course and fulfill the teaching requirement.

# **APPENDIX II: GENERAL PETITION**

Used for requesting various changes in student academic status and seeking exceptions to policy to university academic policy.

# FORM:

GRADUATE STUDENT GENERAL PETITION

# STUDENT OBTAINS FORM FROM GRADUATE COORDINATOR

# PROCEDURES BY REQUEST AND SECTION

Upon completion of appropriate sections as described below, petition must be signed by specified faculty as noted in approval section.

# A. READMISSION

- A student whose status had lapsed due to an interruption in registration must petition for readmission.
- A student must submit supplementary transcripts of all academic work undertaken since last enrollment at UCSD, pay the readmission fee of \$60.00, and submit a statement of activities and a General Petition.
- A Statement of Legal Residence (OAR form) is required for all students returning after an absence of two or more quarters.
- > After an absence of one year or longer, PhD candidates will be required to reapply.
- Students must have been in good standing (GPA 3.0 or higher with no more than 8 units of U or F) at time of withdrawal.
- Cashier validated petition and other forms, as required, must be submitted to GD prior to the first day of the quarter.

# **B. LATE ENROLLMENT**

- Use General Petition for enrolling students after the end of the second week of the quarter. GD approval required.
- Must submit letter(s) from course instructor(s) stating student will complete full quarter's worth of work, or has been attending class since quarter began.
- Applicable late fees will be assessed, including late payment of fees, regardless of the funding source or prepayment.

# C. REPETITION OF COURSES

A graduate student assigned a grade of D, F, or U may petition to repeat the course on the same grading basis for which it was first taken.

- Degree credit for the course will only be given once, but the grade assigned for each enrollment shall be permanently recorded.
- The grade assigned for each enrollment shall be used in calculating the grade-point average.
- Petition must be submitted to GD for approval prior to enrollment in course to be repeated for credit. Contact the graduate coordinator for the form and information.

# D. WAIVING ACADEMIC RESIDENCY

- Residence requirements between advancement to candidacy and completion of the degree may be waived under special circumstances.
- > Justification must be given under "Other" section of petition.
- Ph.D. residence requirements are: minimum of 6 quarters, at least three of which must follow advancement.

# **E. FILING BETWEEN QUARTERS**

- Registration will be waived for a student completing between quarters if they were registered in the previous quarter.
- > Degree will be conferred at the end of the next quarter.

## F. FILING FEE

- A student on an approved leave of absence who has completed all requirements except for the final defense of the dissertation/thesis or taking of the final examination, may petition to pay a filing fee (one half of the Educational Fee) in lieu of full tuition/fees.
- > Cashier validated petition must be submitted with student's Final Report.

# G. OTHER GENERAL PETITION REQUESTS:

- Use the remarks section when justification or clarification is required for other petitioned items.
- May also be used when requesting exceptions to academic policy not covered in other petition sections.
- Retroactive course/grade changes must be listed on "Other" section of petition, however: No grade or course add/drops may be changed after one calendar year from the time the error was recorded.
- Requests must include all information necessary for posting. For every course, this includes: course/course number/section ID/grading option/number of units/quarter for each change requested.
- Justification and/or explanation must be given.

- Course instructor must sign petition.
- > Extension of an incomplete grade must be just and requested on a general petition.
- Extension considered only in extenuating circumstances considered beyond the student's control.
- Request must be filed before the incomplete lapses to a permanent F or U.

All petitions must include: Course/Course Number/Quarter in which the course was taken, reasons for requesting the extension, and how/when the "I" is to be completed.