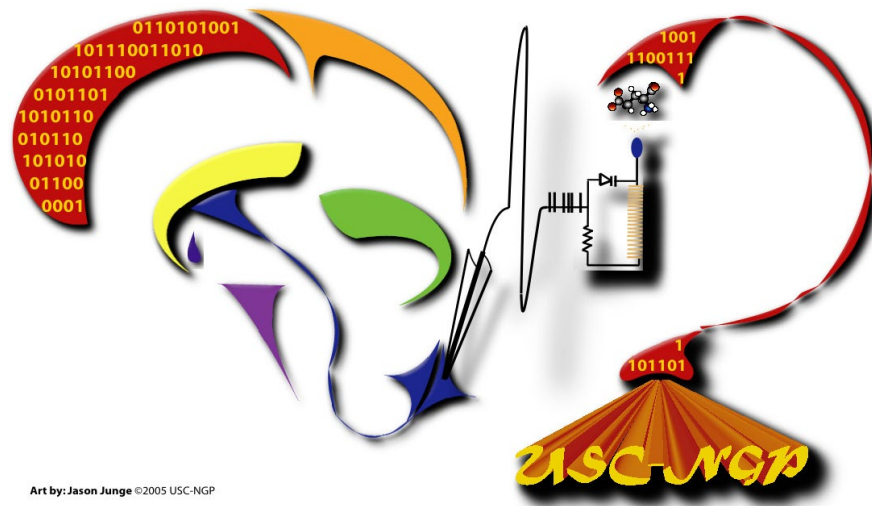


University of Southern California

Neuroscience Graduate Program



Orientation Handbook – 2023

<https://ngp.usc.edu/current-students/handbook/>

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WELCOME

Welcome to the Neuroscience Graduate Program (NGP) at USC. Neuroscience is a discipline that integrates many traditional academic fields. The Neuroscience Graduate Program (NGP) at USC was established to foster training that leads to focused research within an interdisciplinary context. USC created the NGP in 1994 as a university-wide doctoral program to bring together researchers from diverse experimental and academic backgrounds with the goal of coordinating neuroscience research and graduate training. The NGP is the largest university-wide interdisciplinary PhD program, and holds a special administrative place at USC, being overseen by the Office of the Provost rather than a department or school.

The NGP, and neuroscience in general, continues to grow at USC. At any time, there are 90-100 graduate students pursuing their Ph.D. degrees in the NGP, and currently 120 NGP faculty members. The faculty hold primary appointments in more than 20 departments in the Dornsife College of Letters, Arts & Sciences, Viterbi School of Engineering, Keck School of Medicine, the Schools of Pharmacy, Dentistry or Gerontology, or at affiliates of USC, such as Children's Hospital of Los Angeles.

Laboratories associated with the NGP are located on four separate USC campuses. Administration of the NGP is located in the Hedco Neuroscience Building (HNB) on the University Park Campus (UPC), with a satellite office in the Center for Health Professionals Building (CHP) on the Health Science Campus (HSC). Currently, UPC is home to just under half of the laboratories run by NGP faculty, including buildings housing the Sections of Neurobiology, Human and Evolutionary Biology and Molecular Biology of the Department of Biological Sciences, and the Departments of Psychology, Economics, Computer Science, Biomedical Engineering, Electrical Engineering, Dornsife Center for Brain and Creativity, and the School of Gerontology. The largest number of faculty are located on the Health Sciences Campus (HSC). This campus has faculty in the Zilkha Neurogenetic Institute, the Mark and Mary Stevens Neuroimaging and Informatics Institute, the Broad Center for Regenerative Medicine and Stem Cell Research, in the Departments of Integrative Anatomical Sciences, Neurology, Ophthalmology, Physiology and Biophysics, Psychiatry, and in the Schools of Pharmacy and Dentistry (Occupational Sciences, Biokinesiology, and Physical Therapy). The University operates frequent shuttles that travel between UPC and HSC. NGP also includes faculty at USC affiliate, Children's Hospital of Los Angeles (CHLA), which has programs that emphasize developmental neuroscience and translational developmental neurogenetics. CHLA is located approximately 15- 20 minutes from the University Park (UPC) and Health Science (HSC) campuses. There are NGP faculty and students located at the USC Imaging Genetics Center (IGC), which is approximately 30 minutes west of UPC in Marina Del Rey. Finally, a few faculty have research programs at USC-Rancho Los Amigos in Downey and a satellite facility in Alhambra.

Thus, you will have many opportunities to perform exciting, high impact neuroscience research at USC. You will become an expert in your chosen research area, which will be the subject of your dissertation. Further, you will obtain professional training that will arm you with the additional tools and knowledge that will facilitate your successful future in science-related

occupations. In the past 10 years, 98% of our graduates hold positions related to their neuroscience training.

To take maximal advantage of the NGP, you will need to know the way the program operates administratively. This orientation handbook provides you with this information. Over the years, many faculty, staff and students have contributed to the evolution of this handbook. It will assist you in adjusting to life as a graduate student in Los Angeles and at USC. Most importantly, it will serve as a source to which you will refer during your graduate studies to provide you with guidance in meeting your milestones and following NGP and USC Graduate School rules. **Thorough reading and understanding of the content in the Orientation Handbook is a requirement for all students. In addition, rules established by the USC Graduate School apply to NGP students. It is YOUR RESPONSIBILITY to know and comply with all guidelines of the Program. A claim by any NGP student, such as “I did not know the rules”, is an unacceptable excuse for not meeting a program milestone or specific requirements and rules.** We have included descriptions of as many specific rules as possible, but it is your responsibility to learn about the general university rules governing PhD programs that may supersede those of the NGP; these can be found at the Graduate School’s website (<https://graduateschool.usc.edu/>). Our students typically experience few problems, and the Directors and Administrative Staff are available and very helpful in answering any questions that you may have. Please note that some USC Graduate School and NGP requirements, rules, and options might change from time to time to improve the quality of the Program. We will inform you of any such changes promptly and clearly. Major rule changes regarding NGP guidelines may be ‘grandfathered’ at the discretion of the NGP Director and Executive Committee. Changes will not add further obstacles to your success in obtaining your PhD in Neuroscience at USC.

If you have any questions about the program, do not hesitate to ask. We think you will find that all of the faculty, students, and staff that make up NGP are here to help you achieve your goals of becoming an outstanding neuroscientist.

Good luck, and thanks again for choosing USC and our program for your graduate studies!

Ruth Wood, PhD
Director, Neuroscience Graduate Program

John Monterosso, PhD
Associate Director, Neuroscience Graduate Program

Congratulations on your entrance to the Neuroscience Graduate Program at USC!

First off, welcome to the Trojan Family! My name is Rebecca Stark, and I am the elected student representative, or “Czarina,” of the Neuroscience Graduate Forum (NGF). The purpose of the NGF is to foster a supportive community among the students of the Neuroscience Graduate Program (NGP), as well as any students in other departments at USC conducting neuroscience research. We organize various meetings and events that are intended to help students explore the many aspects of a career in neuroscience, to address any general concerns that the students may have, and to provide opportunities for interactions between students and NGP faculty members. Luckily, you are automatically a member of NGF just by being accepted into NGP!

As your Czarina, I act as the primary liaison between the graduate students and faculty of NGP. I attend all faculty meetings along with the NGP Executive Committee meetings to represent the students and their interests. If you ever find that you have an issue in the program that you would like addressed, please let me know and I will bring it to the faculty’s attention. Having a strong working relationship between NGP students and faculty members is essential for us in creating a collaborative environment as well as supporting our aspirations in striving to be the most successful program we can be!

Along with my role as Czarina, the NGF Executive Committee has several other officers who have their unique roles within the forum. Our Professional Development Chairs will be hosting seminars focusing on both academic and non-academic careers to allow NGP students to explore a variety of future career options in neuroscience. They will also be holding panels and workshops to help with other aspects of professional development; last year, NGF hosted events to connect students with NGP alumni, identify career paths, and learn more about important NGP milestones (such as the qualifying exams) from the perspective of older NGP students. NGF also strives to provide opportunities for students to build connections. Our fantastic Programming Officers have a slate of social events for NGP to gather and engage with each other, with events offered throughout the year! Last year, NGF had several fun events, including beach days and a happy hour with NGP alumni! NGP students are also involved in several outreach and volunteer causes, including teaching neuroscience to young students at nearby schools and hosting high school and undergraduate students in research internships – you will hear about all these opportunities and more throughout this next year. As you can see, the NGF committee is working hard to plan and organize several events for you and the entirety of NGP for the 2023-2024 academic year.

Allow me to introduce the officers of the 2023-2024 NGF Executive Committee:

Chao Wang (cwang467@usc.edu) and Laura Korobkova (Korobkov@usc.edu) are our Professional Development Chairs. As mentioned above, Chao and Laura will oversee the organization of a professional development seminar series, aptly called Between 2 Lobes, that showcases the variety of academic and industry careers that neuroscience PhDs can pursue after graduating from NGP. They will also work to implement other professional development workshops and opportunities for our students to develop skills outside the lab that will be useful regardless of plans after graduation.

Amaryllis Tsiknia (tsiknia@usc.edu) and Bayla Breningstall (bbrening@usc.edu) are our Programming Officers, or more colloquially known as the Social Chairs. Amaryllis and Bayla will be planning exciting activities for the upcoming year to bring our program together socially. NGP students are dispersed across multiple campuses, and so these events are a way to make sure that we always feel connected.

Riley Elmer (relmer@usc.edu) and Joshua Martinez (joshuacm@usc.edu) are our New Student Liaisons (NSL), but you're all familiar with them already! Riley and Joshua are here to help you transition smoothly to life in graduate school at USC and will be your go-to for advice and suggestions on making your first year experience the best it can be. They will also coordinate mentor-matching between your cohort and existing NGP students, as well as facilitate the recruitment process for next year's cohort later in the Spring. Feel free to reach out to them as the semester begins and as you start this new journey here in Los Angeles and at USC!

Gaon Kim (gaonkim@usc.edu) is our NGF Ambassador. Gaon connects our program with other organizations such as the Graduate School Government (GSG) and will keep us all up to date with happenings in the GSG, including finding other networking opportunities, workshops, social events, and more ways you can become involved here at USC.

Minh Bui (mtbui@usc.edu) is our Historian and Media-Coordinator. Minh will be taking photos and videos of the various activities and events throughout the year and also runs our various social media accounts - Facebook, Instagram (@usc.ngf), Twitter (@uscngp), and LinkedIn. We also share news of NGP students' achievements on our social media pages. So, feel free to send any photos of your own NGP experiences and adventures!

Last but certainly not least is the role of First Year Liaison, which is currently open and available for one of you to take after the beginning of the semester. This position is tasked with keeping us informed on how your cohort is doing (socially, academically, etc.), as well as contributing directly to event planning and committee discussions. As a cohort, you will decide on a representative, but there is no need to worry about this until after the first few weeks of class!

Beyond NGF, there are several other ways students are involved in USC organizations and the community. There are a variety of groups such as the Equity, Diversity & Inclusion Committee focused on creating a disparity-free and supportive graduate experience, to the Younger Researchers Program that gives you a chance to mentor high-school students with university-level research. There are also committees that plan the annual NGP retreat and symposium. Be on the lookout for all these opportunities and more throughout the course of the year! The NGF executive committee works hard to cover the many aspects of graduate student life for all of us in NGP and is already planning events for the start of the academic year. By serving on this committee, our collective goal is to ensure a successful and fulfilling graduate experience. At any point, please reach out to any of us with suggestions, relevant questions, or potential ideas that you may have! Lastly, please do not hesitate to reach out to me with any questions about NGF, USC, or Los Angeles in general. We all know that the first year can be a challenging and stressful experience, and so are here to help you overcome any challenges that you may have or offer support whenever you are in need.

We wish you the best of luck in this upcoming year and are happy to welcome you to our NGF Trojan Family!

Fight on!
Rebecca Stark

Neuroscience Graduate Forum Czarina
rcstark@usc.edu

PROGRAM LIFE

The NGP is an interdisciplinary, university-wide training program that is administered with an independent budget from the Office of the Provost, with each school and affiliate contributing to the NGP based on faculty and student distribution. Most NGP-relevant information, including the roster of faculty, courses, events, and seminars, can be found on our website: ngp.usc.edu.

Key program leadership includes:

Contact	Title	Responsibility
Dawn Burke dawnburk@usc.edu UPC: HNB 117 HSC: CHP 201 (213) 740-4551	Director of Student Services	NGP Program Support
Charly Viola charlenv@usc.edu UPC: HNB 120-H HSC: CHP 201 (213) 740-2245	Graduate Program Manager	NGP Student Support
TBA UPC: HNB 120-J (213) 740-8796	Student Services Advisor	Advisement NGP Administrative Support
Ruth Wood riw@usc.edu UPC: HNB 117 HSC: BMT 410	Director of NGP	Program Oversight Advisement
John Monterosso johnrmon@usc.edu UPC: BCI 252	Associate Director	Program Oversight Advisement

New Student Orientation Checklist

* Requirement before you can register for classes

** Registration required

Information for All Students

☐ **Immunization Requirements***

Immunization requirements must be satisfied prior to registering for classes. For more information on required documentation or on immunization clinics available on campus, go to <https://sites.usc.edu/new-student-health-requirements/immunizations/> or call the Student Health Center to make an appointment: (213) 740-9355.

☐ **Degree Verification**

Required by the end of your first year, if USC has not received final transcripts (undergraduate or graduate) from the last institution attended. Submit an official copy of your final transcript(s) to the Office of Academic Records and Registrar via:

ELECTRONIC:

Sent directly from previous institution to etrans@usc.edu

MAIL:

University of Southern California
700 Childs Way, JHH 106
Los Angeles CA, 90089-0912

☐ **Conditional Admission**

If you received a welcome letter from the Graduate School indicating that you have “conditions on your admission” these must be cleared by the end of the first semester. If you have an ALI hold, please visit this link to clear your hold:

<http://ali.usc.edu/ise-exam-sign-up/>

☐ **Rotation Advisement and D-Clearance***

The NGP Director and Associate Director will meet with all new students each semester in the first year to advise on rotation selections.

For NSCI D-Clearance, complete the [Departmental Clearance Request form](#).

For any other D-Clearance requests, please see the schedule of classes.

☐ **Update OASIS with local address and USC email information**

Go to www.usc.edu/oasis. Your email address and both your local and permanent mailing addresses must be current at ALL times to ensure that you receive important documents such as the health benefits card and paychecks.

☐ **Registration**

On-line registration: <https://webreg.usc.edu/Login>

You will be asked to enter the following information:

Students ID: 10-digit ID #

PIN: 6-digit Birth date (mm/dd/yy)

If you have not yet received your student ID #, contact Charly Viola.

☐ **USC Student ID card (USCard)****

All requests must be submitted online through USCard Services. Go to mycard.usc.edu to complete your application and submit your photo.

International students must complete Immigration Status Verification with the Office of International Services (OIS) before you are able to obtain your USCard.

☐ **USC Computer Account Activation****

If you have not already activated your USC Net ID, for instructions, call (213) 740-5555 or visit www.usc.edu/firstlogin

☐ **Stipend Payment Information**

Go to page 16 for a detailed description of required documentation for stipend payments.

☐ **Payment of Fees**

The following are fees to be paid by all students online through the myUSC portal. The NGP does not provide fee support for the following:

- Topping Student Center Fee
- New Student Fee (first semester only)
- Graduate Programs Fee
- All “access” or “laboratory” fees appearing on fee bill

Do not pay for tuition, health insurance, the health center fee, or tuition refund insurance. If any of these fees appear on your fee bill contact Dawn Burke.

☐ **General Lab Safety Trainings**

The General Lab Training is required for all students prior to working in a lab. If you plan to work in a lab with animals, biohazard reagents, or radioactive materials, you will need to take additional safety training courses during the semester. Register for the course through the USC Environmental Health & Safety: ehs.usc.edu/training/registration/ Please note that if you do laboratory work at sites other than UPC or HSC, there may be additional local training module requirements. The laboratory PI will inform you of these.

Additional Requirements for International Students

☐ **ISE Exam***

If #6 on your SEVIS I-20 states, "The student does not have the required English proficiency" you are required to take the International Student English Exam. You can register online for the ISE Exam with the American Language Institute: <http://ali.usc.edu/ise-exam-sign-up/>

☐ **Immigration Status Verification (ISV)***

Upon entry to the U.S., international students must immediately complete ISV so OIS

can properly activate their SEVIS record. Review the ISV website for steps and detailed information: <https://ois.usc.edu/new-students/firstweeks/immigration-status-verification-isv/>

Required Immigration Documents:

- Signed USC I-20 pages 1 and 2
- Passport photo ID page
- I-94 card
- Travel History (Visit this [website](#) & click *View Travel History*). If the website does not load your Travel History, [complete this form](#).
- F-1 student visa stamp

Contact OIS for further information:

Zoom Drop-in Advising: <https://ois.usc.edu/drop-in-advising/>

Email: ois@usc.edu or Phone: (213) 740.2666

OIS recommends that you photocopy and safeguard your important immigration documents because it is much easier to replace lost or stolen items if there is a record.

Registration Process

Action

1. First Year Students:

Students will receive registration instructions for fall and spring during the NGP New Student Orientation.

2. Obtain departmental clearance

"D-clearance" allows students to register for different courses offered in different schools throughout the university. For NGP courses (NSCI), use the link below to request d-clearance. Your d-clearance will be entered into the system within 3-5 days.

<https://forms.office.com/r/GzvnN5947U>

3. Register for classes via web-registration:

<https://webreg.usc.edu/Login>

Note: Student with ALI and academic holds will need to either register in person at Royal Street Parking Structure Suite 106, or email askali@usc.edu with your USC ID number and name.

4. Late or retroactive registration petitions

Must be submitted through the Office of Academic Records and Registrar:

https://ask.usc.edu/app/answers/detail/a_id/494

Contact

Charly Viola

NGP Administration

D-Clearance link can also be found on the NGP website: ngp.usc.edu and select "Current Students - Forms"

See USC's Office of Academic Records and Registrar website for detailed instructions:

<http://arr.usc.edu/>

Click on "Registration" under the services heading.

Office of Academic Review
Petition fees are \$150 and are the student's responsibility to pay if they fail to register on time.

Student Health and Insurance

For all NGP students, the student health center, student health insurance, and dental insurance fees are paid by their fellowship or mentor as long as students are enrolled in classes and considered full-time (6 units or more). These benefits begin the first day of classes. You are automatically enrolled in the USC Health Insurance Plan if registered for 6 or more units.

The Student Health Insurance Office will mail the insurance card and information packet about a month after the start of classes to your “local” address listed on the myUSC portal.

Student health center services: <https://studenthealth.usc.edu/>

Dental insurance information: deltadentalins.com/usc

Getting started videos: <https://studenthealth.usc.edu/getting-started/introductory-videos/>

Counseling & Mental Health Services

USC Counseling & Mental Health Services provides a broad range of resources to assist you should concerns or challenges arise. Counseling Services are staffed with a diverse group of psychologists, psychiatrists, social workers, and marriage and family therapists. The centers provide individual counseling, group counseling, crisis services, psychiatric services, and outreach programs, including relationship and sexual violence prevention and services. Information regarding both health centers and specific programs is listed below.

All NGP faculty, program leadership, and administrators are informed of counseling programs and will support your engagement of these services. Do not hesitate to contact any of us for more information.

You can make an appointment by phone or online. The central number for both centers is (213) 740-9355 and online appointments for both centers can be scheduled at: <https://studenthealth.usc.edu/counseling>

**Engemann Student Health
Center University Park Campus**
1031 West 34th Street
Los Angeles, CA 90089
(213) 740-7711

**Eric Cohen Student Health Center of
USC Health Science Campus**
San Pablo St. Suite 104
Los Angeles, CA 90033
(323) 442-5631

Crisis and Consultation Services

Crisis services are focused on providing immediate emotional support and resources. If you have concerns about yourself or someone you know, please do not hesitate to call. Crisis therapists are available 24/7 at (213) 740-9355. For more information on crisis support, visit <https://sites.usc.edu/counselingandmentalhealth/services/crisis-support/>.

Relationship and Sexual Violence Prevention and Services (RSVP)

RSVP among other services, “provides immediate therapy services for situations related to gender and power-based harm (e.g., sexual assault, domestic violence, stalking). For more information, visit <https://studenthealth.usc.edu/sexual-assault/>. In case of an emergency or if you need immediate assistance, please call (213) 740-9355.

Confidential Resources**Office of the Ombuds**

Exceptions to confidentiality include imminent risk of serious harm, and child and elder abuse and neglect. If there are patterns and trends, the Ombuds are also able to share upward feedback with appropriate University personnel.

<https://ombuds.usc.edu/>

Relationship and Sexual Violence Prevention and Services

<https://sites.google.com/usc.edu/rsvpclientservices/home?authuser=0>

WorkWell Center

<https://workwell.usc.edu/services/counseling/>

Student Counseling and Mental Health Services

Student Health has a full and complete explanation of confidentiality and privacy:

<https://studenthealth.usc.edu/patient-privacy-and-confidentiality/>

After Hours Contacts**Medical Assistance:**

Please call (213) 740-WELL (9355) and follow the recorded instructions. You will be connected to an on-call physician or nurse.

Counseling Assistance:

Please call (213) 740-9355 and follow the recorded instructions. You will be connected to an on-call counselor.

Relationship and Sexual Violence Prevention and Services (RSVP):

Please call (213) 740-9355 for sexual assault or gender-based harm.

Emergency on or near Campus:

Call USC DPS at (213) 740-4321

For life-threatening emergencies DPS can assist with student transport to the nearest emergency facility.

Emergency off campus: Dial 911

NGP Program Events

1. Distinguished Speaker Series

An important part of your training is the opportunity to attend and participate in research seminars and colloquia given by visiting scientists. The NGP Distinguished Speaker Series brings 4 student-hosted neuroscientists to visit the program during the fall and spring and typically includes lunch or a reception with students. **Irrespective of the campus location, all NGP students are expected to attend the NGP Distinguished Speaker seminars.**

Seminars provide an opportunity to broaden your scope of interests and knowledge in the many diverse subfields of neuroscience. You will develop skills in articulating your research interests and research progress and make important contacts for future training and advancement.

You may also want to review seminar offering from other departments and academic units:

- Brain and Creativity Institute: <https://dornsife.usc.edu/bci/events/>
- Hearing & Communication Neuroscience: <https://sites.usc.edu/hcn/events/>
- Keck School of Medicine: <https://keck.usc.edu/keck-events/>
- Neurobiology Section: <https://dornsife.usc.edu/neurobiology/seminar-series/>
- Stem Cell: <https://stemcell.keck.usc.edu/events/>

2. Annual NGP Retreat

The NGP sponsors a weekend retreat at an informal offsite location in the Los Angeles area. The retreat is free for all NGP students, and **all students are required to attend**. Through informal social gatherings, meals, and discussions, the retreat is an opportunity for all new students and their senior peers to exchange experiences as NGP students and learn about the diversity of neuroscience research at USC. Talks are given by a few NGP faculty and graduate students. For first-year students, the retreat can assist in making decisions about potential rotation laboratories.

2023 – 2024 Annual NGP Retreat: October 13-15

3. Annual NGF Symposium

Every spring the Neuroscience Graduate Forum (NGF) sponsors a graduate-student symposium consisting of student talks, faculty talks, and poster presentations that **all NGP students are required to attend**. These presentations are an opportunity to show the NGP community the research that students are presenting and provide a forum for students to learn to deliver scientific presentations.

All NGP students are required to give a talk or present a poster at the Annual NGF Symposium. First-year students may present materials from their rotations, undergraduate research, other prior research, or from a peer-reviewed paper that they wish to introduce to the NGP community. Awards are given for outstanding student posters in a variety of categories. Awards for NGP Student of the Year and the Bosco Tjan Faculty Mentor Award also are given at Symposium Day.

2023 – 2024 Annual NGF Symposium: TBA

4. Journal Clubs

Journal clubs and similar gatherings will be an important part of your academic and professional development. Fair and scholarly critiquing of research reports is an activity that will persist throughout any science-related career. Journal clubs provide an opportunity to develop these skill sets. While not required, you should plan to attend a journal club regularly throughout your time as an NGP student.

Journal clubs are informal meetings of students, postdocs, and faculty that share interests in a particular field. The usual format is to discuss a recent research paper. The styles of the journal clubs vary; one participant may be asked to present the paper and lead the discussion, or the group in attendance participates collectively in discussions. Active participation in a journal club is a reflection of your own commitment and interest in performing world-class neuroscience research in a chosen area. Your motivation for attending a journal club speaks to your commitment to pursue rigorous, highly competitive research for your dissertation. Reading current literature helps to place your own research in a context of current advances in your chosen area of neuroscience. These extremely important skills and experiences are essential in your transformation from graduate student to professional.

General Program Information

1. Building Access

Buildings at USC and affiliated campuses have security measures in place that require keys, keypad codes, or ID card coding. **You must obtain access to buildings for evening and weekend work through your rotation laboratory.** Your faculty mentor for each rotation will direct you to an administrative office to obtain the appropriate access. Access is provided only for the duration of your rotation. All inhabitants of USC buildings should take matters of security very seriously. Please do your part to maintain the safety of the people, property, and animals upon which we depend. Flagrant breaches of security, such as propping open locked doors or giving out your key code to anyone are dealt with severely by the University.

2. Library Facilities

The Science and Engineering Library (SSL), located in the Seaver Science Center, is the principal science library at UPC. The Norris Medical Library (NML) is the primary resource on the Health Sciences campus. Both sites have an excellent collection of current and past journals, and books. You have electronic access to libraries across the USC campus and to the scientific journals for which USC has a subscription and may also request materials via interlibrary loan. The collection of neuroscience-relevant journals is substantial, and this allows you to access PDF format articles for use in your academic and research endeavors. You must follow U.S. copyright policies regarding the use of all journal articles. There are computer terminals and printers available that provide you with access to multiple databases, including PubMed. Most of the important journals in our field are indexed in this database. You also will be able to access scientific journals remotely by using your USC login and password to explore databases. The reference librarians at Science and Engineering or Norris Medical Libraries are available to assist you with learning how to use different databases. The libraries also hold bioinformatics sessions that provide an opportunity to develop skills in accessing the databases available for meta-analyses of novel datasets.

To check books and other materials out of any USC library, present your USC ID card, which serves as a library card. When checking out materials please be sure to verify return dates, as due dates vary. The NGP is fortunate to have access to skilled librarians who can help research any neuroscience related topic, <https://libraries.usc.edu/locations/science-engineering-library/science-engineering-library-faculty-and-staff>

All USC Library locations, hours, online resources, room reservations, and general information can be found at <https://libraries.usc.edu/>.

3. **Mail**

All first-year students can receive incoming mail in an assigned box in the Hedco Building mailroom – contact NGP Administration to get one assigned. You can also place outgoing campus mail and stamped U.S. mail in the corresponding bins in the mailroom for pickup by Mailing Services. There are also mailboxes on campus and a FedEx location in the University Village.

4. **Summer Support**

Your decision to be a Ph.D. student is a **12-month commitment** until you complete your dissertation and graduate. During the summer, you are expected to work intensively in the laboratory, engage in full-time research, take courses to fulfill program requirements, or participate in a national course to learn a new discipline or skill set. Summer TA-ships are not available, so you must be supported by your mentor or on a training grant, if available.

5. **USC Network Access**

Students living in USCHousing who need access to USC's Wired Network for Students (ResNet) should refer to IT Services for detailed instructions: <http://itservices.usc.edu/resnet/>.

Students using another Internet service provider may utilize USC's virtual private network (VPN) client to access restricted USC resources. Students will need VPN software to access USC's wireless network. For more information, visit <http://itservices.usc.edu/vpn/>.

USC students, faculty and staff can access USC's high-speed wireless network at most sites on campus and eateries. For information about how to get on USC's wireless network visit <http://itservices.usc.edu/wireless/>.

For additional support, contact Information Technology Services at (213) 740-5555.

Financial Support

The NGP stipend for 2023-2024 is \$39,200 for all students; exceptions may apply if a student receives a USC Provost fellowship or an external fellowship. **Students are responsible for implementing a personal budget based on the schedule of stipend payments.** Contact Dawn Burke or Charly Viola for more details or with any questions.

The USC Graduate School requires that PhD students must maintain a GPA of 3.0 or higher to be considered a student in good standing, and thus eligible for financial support.

Year 01 Funding

First-year students will receive one of the following financial awards during the 2023 – 2024 academic year:

- NGP Fellowship Award
- USC Provost Fellowship Award
- Dornsife Fellowship Award
- Direct Admit Funding from a laboratory

The awards include an annual stipend that will cover your first year of research and rotations. The stipend award is \$39,200 for the 2023 – 2024 academic year, and first-year students receive their annual stipend over a 12-month period. The fellowship is described as "50% time appointment," and according to University rules, the remaining 50% of time is to engage in academic activities, including laboratory research and coursework. First-year students arriving July 1st to begin an early rotation may have an altered disbursement schedule, but the total amount of the annual stipend does not change.

Year 02 and Onward Funding

Upon completion of the first year in NGP, students join a dissertation laboratory and are funded by their faculty mentor. Year 02 funding begins August 16, 2024 and will be disbursed in 10 or 12 monthly installments, depending upon the school in which your mentor holds their primary appointment. There may be a gap between your last stipend check and the first payment as a year 02 student, so budget accordingly!

There are five main sources of support for graduate students:

- Research Assistantships
- Teaching Assistantships
- University Fellowships
- Training Grants
- Extramural Individual Fellowships and Grants

1. Research Assistantships

Research Assistantships (RA) are the main mechanism by which students will receive their stipend while in the NGP. RAs are funded by research grants or other institutional funds awarded to a faculty member or group. There is no citizenship requirement for student support on federal research grants awarded to NGP faculty. Please note that an RAship is not equivalent to a university staff position.

2. **Teaching Assistantships**

While most NGP students are supported through RAs or individual fellowships, TAs provide an additional opportunity for stipend support during graduate training. Students may not accept a TA until they have passed the Competency Examination in year 02 of study. Only rarely will the Director consider a petition for special permission to TA during year 02.

The NGP has a limited number of TA opportunities that are assigned by Dawn Burke, in consultation with the course directors. Other TAs are offered by various departments; the NGP does not assign these TA positions but does work in consultation with the various departments to assist students in securing a TA. The workload associated with TAs is variable, depending on the course and the familiarity of the TA with the subject matter. **You may not spend more than 20 hours per week fulfilling your TA duties.** Whatever course you are assigned, you must take your responsibilities seriously. By accepting a TA position, you are under obligation to meet the requirements set by the course director and to do your best for students in the course.

While not required by the NGP, teaching experience is valuable for your future as a scientist and educator. The NGP encourages all Ph.D. students to serve as a TA for at least one semester. Some students, with their mentor's input, may TA a second semester. NGP places a restriction of 3 semesters on the number of times a student may TA. Please keep in mind that your performance will be assessed through an evaluation process, and that, as with any other job, your TA position can be terminated for poor performance in the classroom. Participation has several requirements that are noted below.

- **TA Training:** Is required for all NGP students who will serve as a teaching assistant for any course offered by Dornsife College of Letters, Arts and Sciences. All students who plan to be a TA will be informed by a Dornsife administrator regarding registration for the required coursework.
- **ITA Oral Exam:** All International TA's must take the ITA Oral Exam offered through the American Language Institute, with potential exceptions as noted: <https://ali.usc.edu/ita/>

3. **University Fellowships**

There are a limited number of USC Fellowships available to Ph.D. students during their course of study. Students compete for fellowships through an application process overseen by the USC Graduate School. Internal or University fellowship announcements sent to the NGP will be forwarded to students and faculty in the program. Check the USC Graduate School web site to become familiar with the different institutional fellowships.

4. **Training Grants**

The National Institute of Health (NIH) and the National Science Foundation (NSF) sponsor pre- and postdoctoral training grants. Federal training grants require US citizenship or permanent resident status to be eligible for appointment. These grants may support general neuroscience training or focus on an area of neuroscience (e.g., aging or audition). Typically, only a subset of NGP faculty may be appointed to a particular training grant. This means that only NGP students performing research in those faculty laboratories will be eligible for an appointment on a particular training grant. Each training grant has specific guidelines for the

nomination and selection process. Currently, there is one training grant at USC focusing on neuroscience: the NIH Hearing and Communication Neuroscience (HCN) Training Grant. There are other NIH training grants in which NGP faculty may participate (e.g., Developmental and Stem Cell Biology; Aging). Speak to your mentor about your eligibility to be nominated for a position on these or other training grants.

Please note that federally sponsored training grants require U.S. citizenship or permanent resident status.

As noted above, the NIH-mandated annual stipend for pre-doctoral trainees is less than the NGP stipend. For those NGP students on training grants, the USC Graduate School will provide a ‘top-off’ of your extramural award. Please contact Dawn Burke for specific details on the top-off amount for your award.

5. Extramural Individual Fellowships and Grants

There are many sources of grants, fellowships available to students, and the NGP encourages all students to submit at least one application during their training. Particularly appropriate are individual fellowships from NIH and NSF, but private foundations may also be available, depending upon your area of study. USC offers grant-writing workshops during the academic year and summer that are open to all domestic PhD students. Detailed information about fellowships can be obtained from the following sources:

- NGP website: <http://ngp.usc.edu/current-students/fellowship-opportunities/>
- The USC Graduate School: <http://awardsdatabase.usc.edu/>

You may be notified each semester of other fellowship opportunities. NGP strongly encourages applications for such fellowships, for stipend support, for the honor of receiving a competitive fellowship, and for professional development-- acquiring skills to communicate research ideas in a grant proposal format. Your mentor can work with you on producing a competitive application; fellowships often require a mentor statement of a training plan as well. The NGP provides generic descriptions of program activities that can be used in part to describe the training environment. Finally, Drs. Wood and Monterosso can work with first-year students who wish to apply for an NSF grant, prior to joining a laboratory. In addition, current NGP students with NSF fellowships are available for advice.

The stipends provided by these extramural awards are often less than \$40,000. For those students who receive nationally competitive extramural fellowships or are selected for a position on a training grant, the USC Graduate School provides a stipend ‘top-off’ of either \$10,000 or up to a total stipend of \$40,000, whichever is less.

6. Payroll and Tax Information

International Fellowships:

International fellowship holders should have received a preliminary email notice from the Glacier system. You must claim or qualify for your country’s tax treaty. This will enable you to print the correct Glacier system tax forms. In Glacier, enter “applying for ITIN.”

Domestic Fellowships:

Domestic fellowship holders need to be certain that their local addresses are correct in the myUSC portal.

Domestic Direct Admit:

Domestic direct admits are Teaching Assistants and/or Research Assistants. To be set up in Workday (USC payroll system) you will need to provide the Business Office (see the Directory section) with your Award Offer Letter, driver's license, and original social security card, OR valid U.S. passport with adult photograph. Expired passports are not accepted.

Paying taxes on Fellowships

U.S. federal law prevents us from providing tax information or advice. We suggest that you consult with a tax professional such as a tax lawyer or a tax accountant if you have questions. While receiving your fellowship, domestic students will not receive a W-2.

The IRS provides information regarding taxation of fellowship awards:

<https://www.irs.gov/forms-pubs/form-1098-t-tuition-statement>. In addition, the USC Student Financial Services website provides information regarding the IRS 1098-t form <https://sfs.usc.edu/tax/>. These links are not meant to be a comprehensive list of tax resources or forms and may become outdated over time.

International students may want to consult the Office of International Services (OIS):

<http://ois.usc.edu/>

PROGRAM HANDBOOK

Academic Procedures

1. Program of study for the Ph.D.

Graduate study in the NGP is designed to provide each student with a broad, fundamental background in neuroscience coupled with detailed knowledge and expertise in their chosen area of concentration. The coursework in Neuroscience centers on two core courses, two concentration courses, a communications course, quantitative methods training, and an ethics in research course. Because neuroscience involves multiple disciplines, selection of courses to fulfill concentration area requirements are flexible. In addition, various faculty members give advanced courses and seminars on specialized research topics each semester. Each student's curriculum can therefore be tailored to the particular area of interest of that individual. Irrespective of your research area, NGP expects all students to achieve core competency in the discipline of neuroscience and expertise in specialty areas.

Please see the *Timeline to Degree* section for a detailed guide of all required coursework and program milestones. Course options are listed under the *Neuroscience Related Courses* on the NGP website (<http://ngp.usc.edu/graduate/curriculum/>). This list is updated each semester and is a helpful resource when considering course selections.

2. Academic Requirements

Quantitative Methods Boot Camp

The NIH has instituted robust requirements for graduate students to receive advanced training in quantitative methods and research reproducibility. The NGP requires all entering first-year students to participate in a “boot camp: to learn basic methods to manage, analyze, simulate, and visualize research data. The training is based in MatLab but designed to have broad application. Students who can demonstrate substantive experience in quantitative methods, including programming with computer languages typically used for data analyses may instead serve as informal “TAs” for the camp, in coordination with the student instructors. This training provides NGP students the requisite background to take graduate-level courses offered at USC, and thus fulfills part of the quantitative training requirement of the Program. All entering NGP students are also required to take a graduate-level course in quantitative/statistical methods (see below).

Grades

The rules of both the Graduate School and NGP require that all students maintain a grade point average (GPA) of 3.0. In addition, a minimum grade of “C” (2.0) is required for a course to count for graduate credit. Here is a listing of letter grades and the corresponding grade points:

A (4.0)	B- (2.7)	D+ (1.3)
A- (3.7)	C+ (2.3)	D (1.0)
B+ (3.3)	C (2.0)	D- (0.7)
B (3.0)	C- (1.7)	F (0.0)

If your GPA falls below 3.0, you will not qualify for a Teaching or Research Assistantship or a fellowship, and you will be at risk of being dismissed from the NGP as a graduate student in good standing. It is possible to receive a one-semester exception, to provide the student with an opportunity to raise their GPA to 3.0 or greater. **It is your responsibility to work with the NGP Administration to petition the Director and Graduate School to obtain the one-semester exception.**

Note that in addition to the University requirement, the NGP requires that you achieve a cumulative 3.0 or better for the core courses NSCI 524 and NSCI 525. Failing to achieve this GPA in the two courses will trigger a review by the NGP Administration to determine whether dismissal from the program is warranted.

These rules have important consequences for interpreting your grades in graduate courses. The custom in Neuroscience graduate courses is to use the range from “A” to “B-”, though on rare occasion, very poor performance warrants a “C”. As usual, an “A” denotes excellent performance. However, during graduate training, a grade of “B-” denotes unsatisfactory performance, equivalent to the “C” - “D” range during undergraduate training. In a similar way, a “B” can be thought of as signaling performance that is adequate but not outstanding. Students who receive a “C” or below are failing in their efforts to demonstrate core competency.

Unit Requirements

Overall course requirements for earning a Ph.D. from USC include the completion of 60 course units. In the NGP, at least 25 of the 60 units must be in the form of formal course work; the remainder may be in the form of research/dissertation units.

To take advantage of the many relevant courses offered by USC and the graduate program, students may take more than 25 units of coursework. Student are urged to discuss course plans with their mentor and can consult the members of their Guidance Committee about coursework that will enhance progress towards completion of the degree.

Specific Course Requirements (25 units)

1. Advanced Neurosciences (NSCI 524/525), (8-units)
These required neuroscience core courses, taken during the first year, offer an advanced overview of brain research, from molecular biology to cognitive neuroscience. The courses are purposefully broad, intending to provide students from different disciplines the basic language to approach all of brain research. The goal is to provide students with the tools to be able to read and critique any article published in the *Journal of Neuroscience*, the official journal of the North American Society for Neuroscience.
2. Quantitative and Computational Course
One 4-unit course (or two 2-unit courses)

3. Additional Course Requirement

One 4-unit course from one of the following additional topics:

- a. Cell, Molecular, and Developmental Biology
- b. Systems and Behavior
- c. Cognitive

Only one of the two 4-unit courses may be 400 level (advanced undergraduate/graduate). If 400 level 2-unit classes are used to fulfill one course requirement, the other must be satisfied with one 4-unit 500 level class. If 500 level 2-unit classes are used to fulfill one course requirement, the other can be satisfied with either a 400 or 500 level 4-unit class. The Graduate School allows a total of 8 units of 400 level classes to fulfill the 25-unit requirement.

4. Neuroscience Communication (NSCI 539), (4-units total)

The Neuroscience Communications course provides each student with an opportunity to organize and give presentations to peers, receive constructive feedback to improve presentation skills, and to provide constructive feedback to their NGP student peers. Skills in science communication to non-scientists also are developed. Four semesters of NSCI 539 are required for a total of 4-units.

5. Responsible Conduct of Research (INTD 500), (1-unit)

The purpose of this course is to engage current research trainees in discussions about the responsible conduct of science.

6. Statistics (PM 510, PSYC 501, or equivalent), (4-units)

Students with a strong background in statistics may submit a petition to Dawn Burke to take a 500-level computer science, informatics or another relevant course that addresses probabilistic approaches to quantitative research. The course syllabus for the substitute course must be provided, as well as evidence of previous formal, advanced statistics training to obtain approval from the Director.

One of the following requirements may be fulfilled by a 3-unit course, for a total of 24 units of coursework:

- Quantitative and Computational Course
- Additional Course Requirement
- Statistics

Registration and Enrollment

With a full TA or RA appointment, you are entitled to 12 units of tuition remission each fall and spring semester, although you need only enroll for 6 units/semester to be considered a full-time graduate student. Do not use research credits (NSCI 790) to fill your course schedule beyond the number of units required, as there are financial consequences for you. Tuition remission is intended only for courses directly relevant to the Neuroscience Ph.D. Program. As noted above, the NGP recognizes that the discipline of neuroscience is strongly interdisciplinary, so that relevance is broadly defined for maximal flexibility in designing a course of study.

Depending on your financial support each summer, you will register for GRSC-802 or NSCI 790. GRSC-802 is a 0-unit course that allows students to maintain access to the Student Health Center during the summer.

First-year students will meet with NGP Director (Ruth Wood) or Associate Director (John Monterosso) for advice on course enrollment and rotations. Students in year 02 and beyond should consult their NGP faculty mentor for advice on course enrollment. The NGP Administration will have the final approval of all courses, including the ones offered by other departments, each semester.

Please be aware of registration deadlines. Note that students should not exceed registering for 12 units in any semester, as students will be financially responsible for any additional units. Announcements and reminders will be sent to all students regarding semester registration procedures and deadlines. The student is responsible for following all deadlines and instructions outlined within the correspondence.

Course Waivers and Substitutions

Petitions to waive required coursework will be deferred until the student has established their dissertation mentor and set a course of study. Course unit credit for advanced courses that you may have taken as an undergraduate at other institutions are not considered. Advanced graduate courses that have been taken in a Master's or another PhD program may be considered, by petition only to the Director. The form can be found on the NGP website. While a specific required course may be waived because of a strong background in a particular area (e.g., statistics), another relevant course must be taken in order to meet the 25-unit minimum requirement.

If a student would like to fulfill a course or statistics requirement with a course that is not on a preapproved list, they must write to the Director of Student Services, Dawn Burke, and attach the course syllabus to request the substitution of the alternative course. In no case will a student be allowed to complete less than one course. Approval of the petition is not guaranteed. The substitution will only be considered if the argument for an alternative course clearly meets the value of "breadth with depth" embedded in the NGP curriculum.

Dual Program Enrollment Policies

The USC Graduate School rarely permits students to enroll concurrently in NGP and in another graduate or certificate program. NPG students must first obtain approval from the NGP Director and provide evidence of the research mentor's approval to petition enrollment in another program. Failure to follow these procedures is considered a basis for dismissal from NGP. Please note that the NGP has no financial obligations with regard to the secondary program. Thus, students will be solely responsible for tuition fees. **The final decision is made by the Vice Provost for Graduate Studies.**

NGP Students' Options for Handling a Problem with Mentor

On occasion, a student may encounter difficulty with a mentor. In many cases, open communication with the mentor will lead to resolution of the problem. But of course, not always. When a problem persists, NGP students have several additional options:

1. For students who have a formed committee, consultation with the committee chair can be a good option. The committee chair will often have relevant knowledge, and the discussion can be kept confidential (if that is preferable). In some cases, the student and chair may agree that it is best to meet with the full committee to discuss the issue.

2. Students can meet with the ombuds, at either UPC or HSC (<https://ombuds.usc.edu/>).
3. Students can meet with the NGP Director (Ruth Wood) or Associate Director (John Monterosso).

3. **Advising for Students Prior to Joining a Lab**

For students that have joined a lab, their mentor will be their primary resource for advisement, including guidance on course enrollment decisions. However, for students who do not have an established mentor (primarily, students in their first year) the NGP administrative team will serve as an advisement resource. To this end, students will meet with either Director Ruth Wood, or Associate Director John Monterosso during each semester of their first year. These meetings can be quite helpful in selecting students' rotation laboratories and maximizing opportunities for joining a dissertation laboratory that matches student interest in the neurosciences. Throughout the first year, students are encouraged to consult with the NGP team on grades, course selection, rotation selection, and program milestones and expectations.

Academic Warning Dismissal

NGP takes factors other than the minimum GPA into consideration in determining a student's qualifications for an advanced degree. A student's overall satisfactory academic progress is defined by academic GPA, demonstration of specific research skills and aptitudes, regular research progress, ethical conduct in research, the mentor's semester evaluation, Guidance and Dissertation committees' annual reports, and timely completion of program milestones. Continuation in the NGP is determined by the above standards. Please keep in mind that the Program is very heavily research-focused, with expectations of substantive accomplishments through a significant time and effort commitment. All progress in performing dissertation research is monitored closely by the laboratory mentor and Guidance/Dissertation committees. During the first year of study, the program evaluation of research progress occurs through laboratory rotations by faculty. A student must hold a graduate trainee position in good standing in a laboratory of a NGP faculty member as their mentor, or their appointment in the program will be terminated. When a decision during a semester is made by either the student to move to a new laboratory, or by the faculty member to terminate their role as mentor, a new laboratory must be identified and agreed upon by the student and new mentor; a plan of dissertation research must be in place at or before the start of the following semester.

It is the responsibility of the NGP administrative leadership to provide each student with warnings regarding their academic and research performances. Therefore, students who fail to meet the above standard will receive an academic warning letter from the NGP Director. Any time after the written warning, the NGP Director has the right to recommend dismissal from the NGP and to deny future readmission. Procedures on disputed academic warnings or dismissals are described in **SCampus**. Any violations of the rules stated in this guide, e.g., maintaining a GPA under 3.0, lack of research progress and effort, not passing either the Competency or Qualifying Examinations twice, or violation of University rules as described by the USC Graduate School, is grounds for dismissal. It is the responsibility of the student to understand these expectations and to familiarize themselves with USC Graduate School rules with regard to dismissal. It also is the responsibility of the student, once a warning is received, to correct the violations within one semester.

4. **Lab Rotations**

Choosing a Laboratory Rotation

The process of selecting a laboratory for a research rotation involves taking the time to set up a meeting and discuss potential research projects with an NGP faculty member. All first-year students are encouraged to meet with several faculty to establish a dialogue regarding research projects and lab availability. We strongly recommend scheduling all meetings with faculty in advance. The conversation with faculty should include the following:

- Is the faculty member accepting rotation students?
- Does the faculty member have funding to support a student from year 02 forward?
- Do the lab research projects align with personal research interests and goals?

If any answer to the above questions from the faculty member is no, you cannot select that laboratory for a rotation.

Students can begin contacting potential rotation laboratories for a first rotation prior to the start of the fall semester. There is no need to commit to the 2nd and 3rd rotations until you've had discussions with NGP faculty. It is important to emphasize that the conversations with prospective faculty commit neither the student nor the faculty member to agree to the rotation. You likely will meet with multiple faculty members about a possible rotation. Once you decide to rotate with one specific laboratory and the head of the laboratory agrees, you must notify the other faculty with whom you met that you will not be joining their lab for that rotation. This can be done by email or an in-person meeting.

Laboratory Rotation Protocol

Students rotate through three labs during the fall and spring semesters, and each rotation lasts 9 weeks on average. However, students may petition the Director if they wish to do two rotations in the same lab, which generally means the student will join that laboratory in year 02. This requires petitioning the Director for permission and a written letter from the laboratory mentor stating that they will commit to financially support the student in year 02.

A fourth rotation only occurs as necessary when a student has difficulty identifying a dissertation lab before the end of the spring semester of their first year. The student must consult with Charly Viola as soon as possible to obtain approval for the additional rotation. At the end of each rotation, students should have a discussion with the laboratory PI about their rotation performance and if the laboratory is a good fit for their dissertation research. Students cannot make their final mentor selection until the end of the third rotation.

Laboratory Performance Expectations

Pursuing a PhD as a student in the NGP is a wonderful opportunity to grow and mature as a first-class researcher, but it is challenging. Our faculty are high performance scientists and expect graduate students to put in the necessary time and energy to be successful, while at the same time doing well in coursework. Rotations will be flexible with respect to the lab work. In your first year, there typically will be 5 hours of scheduled class time/week. Along with attending a journal club, seminars, and the required and ancillary course readings and study time, the majority of your time will be spent in the laboratory doing rotation research.

The laboratory in which you perform your rotations often will have ongoing, small projects. To make sure that you have hands-on laboratory experiences, students usually work on one of these projects as part of the rotation. While rotation students often are trained by senior graduate students, postdoctoral fellows or research faculty in the laboratory, you should expect to meet regularly (individual and laboratory/group meetings) with the laboratory PI during the rotation. If a PI is rarely available to meet, this is an indicator of limited future access during the important years of dissertation research. Keep in mind that the rotation should provide you with insight regarding the research focus of the laboratory, the style of the laboratory PI with regard to mentoring, and other members (graduate students, postdoctoral fellows, research staff) of the laboratory with whom you will interact daily. This information will help you make an informed decision regarding your final selection.

At the end of each rotation, the PI will provide a written evaluation of your performance. This evaluation is part of the criteria used for evaluating students to receive appointments on training grants and for monitoring student progress in their first year in the NGP. Please note that the evaluation is not tied to getting a specific experiment to work. Rather, demonstrating a serious commitment to spending time in the laboratory, proficiency in reading original literature in the area of research, the ability to learn new methodologies and analytical skills, and participation in laboratory-specific activities contribute to the evaluation. Poor performance in a laboratory rotation is taken as seriously as poor performance in a core course. Multiple poor performances in rotations may be grounds for dismissal from the NGP.

The specific time periods for each rotation are indicated in the Rotation Documents that must be completed and signed by the lab PI and student. **The rotation contract form must be submitted before the start of each rotation.** This is the only mechanism through which the program can track your research progress in the first year. **You cannot start a rotation early or end late.** Upon completion of each rotation, students have one week to submit a written summary of their work to Charly Viola. These forms are located on the NGP website in the Current Students section, under forms.

The laboratory rotation schedule for 2023 – 2024 is as follows:

Lab Rotation #1: September 5th – November 3rd

Rotation Contract #1 Due: August 28

Rotation Summary #1 Due: November 10

Lab Rotation #2: November 6th – January 26th

Rotation Contract #2 Due: October 30

Rotation Summary #2 Due: February 2

Lab Rotation #3: February 5th – April 5th

Rotation Contract #3 Due: January 29

Rotation Summary #3 Due: April 12

Students should consult the faculty member regarding lab schedules and expectations during holidays that fall within a rotation. If you have a pre-planned personal activity that will take you away from the laboratory, you must inform the laboratory PI prior to the beginning of the rotation. In addition, be sure to contact the laboratory PI if you encounter an unexpected health or other personal issue that may interfere with your time in the laboratory. Faculty look for red flags, and not showing up to the laboratory regularly, or being unengaged while there, is a major concern that can be addressed by open communication.

Laboratory Final Selection - Mentor Matching

Students are responsible for securing their preferred dissertation research laboratory during May of the spring semester. Like rotations, consent by both student and laboratory PI are required. In order to complete the final selection process, ensure that all 3 sets of the Rotation Documents (Rotation Contract and Rotation Summary) are complete and submitted to the NGP office. Once the selection has been made, email Charly Viola, noting your proposed faculty mentor. Charly will contact the identified faculty member to request written approval and letter of financial support. Unless there is an approved petition for a fourth rotation, mentor selections must be finalized by the end of the spring semester. While the NGP Administration and other faculty are here to be as helpful as possible, ultimately it is each student's responsibility to secure a dissertation laboratory. Failure to do so is grounds for dismissal from the NGP.

Mentors are responsible for your stipend and health insurance support after you complete the first year of study (beginning August 16th of year 02). See the list of business officers, arranged by department, under the Directory section. Contact the appropriate department officer for information regarding stipend payment and health insurance, beginning in year 02.

5. Progress to Degree

Student Evaluations

The NGP Administration reviews the performance of each student each semester. Grades, participation in classes, research rotation performance or dissertation research progress (evaluated by their mentor, Guidance/Dissertation Committee), TA performance (if applicable), progress in satisfying degree requirements, meeting NGP milestones, the extent to which the student followed previous recommendations, and other matters relevant to professional advancement are considered during the review process. Students will receive an evaluation letter from the NGP Director containing one of three ratings:

- (1) Acceptable performance
- (2) Acceptable performance, assuming you take certain actions
- (3) Unacceptable performance

Students should meet with their mentor at the end of each semester to discuss their overall progress and review the evaluation. A rating of '2' or '3' triggers a meeting with either the Director or Associate Director to discuss remedies. Evaluations serve to monitor student progress and are used solely for internal tracking and making decisions about status in the program. They are not placed in the student's official records or transcripts that are shared outside of the University. Two successive ratings of a (3) or more than two semesters with ratings of a (3) over the course of the program are grounds for dismissal from the NGP.

Annual Progress Report (APR)

Starting in year 2, all students must meet in person with their Guidance or Dissertation committee at least once every academic year (August - July). Schedule a meeting time well in advance (4-6 months) and make sure that all of the committee members can attend. This must be made in advance because faculty travel and may have many responsibilities outside of their laboratory. If your mentor or another member of your Guidance or Dissertation Committee will be on sabbatical, you still must schedule an annual APR meeting. For this situation, the faculty member may join by video or audio conferencing. Keep in mind that the committee chair and the mentor must be present for the APR. Notify Charly Viola if you encounter difficulty scheduling the meeting. The Qualifying Examination serves as the required APR meeting for that academic year.

The APR meeting is organized for the student to provide an update to their committee, including details of research and academic progress, to receive constructive feedback, to raise any concerns, to hear about future experimental plans, and for the committee to help solve problems that may have arisen since the last meeting. Note that students are encouraged to seek out research, academic or personal advice by meeting individually with members of their Guidance or Dissertation Committees at any time.

The student is responsible for submitting the APR summary form at the time of the annual meeting. The committee chair must submit a written summary and all committee members must sign the completed form. The completed/signed form must be submitted to Charly Viola within 2 weeks of the meeting. The form is on the NGP website under Current Students.

Individual Development Plan (IDP)

The Individual Development Plan (IDP) is a planning tool designed to help students identify annual progress, professional development needs, and career objectives. The IDP also serves as a valuable communication tool between PhD students, their research mentor, and their Guidance/Dissertation Committees. Students have the option of using an NGP form (modified from Vanderbilt University with permission), accessed from the NGP website, or a generic form from the American Association for the Advancement of Science (AAAS):

<http://myidp.sciencecareers.org/>.

The IDP is part of the USC NGP mentoring and professional development activities for each student. The IDP is meant to:

- Self-identify progress in training and accomplishments and goals from the previous year
- Identify short-term solutions for improving performance
- Set goals for the upcoming year, which may include learning new methods, defining specific research, academic and professional development activities, and the time commitment needed to reach these goals
- Define ways to develop specific skills and experience needed to complete research training and prepare for individualized long-term career goals

The IDP is not used to evaluate students. Rather, self-identification of short-term goals will provide trainees a clearer sense of expectations and help identify milestones for achieving objectives. The IDP provides a framework for long-term career planning by initiating ongoing conversations between the mentor, student, and Guidance/Dissertation Committee members.

After the student has completed the IDP and discussed the contents with their mentor, they must submit the signed document to Charly Viola by August 15th every year. First-year students have until September 8, 2023 to meet this milestone.

6. Appointment of Guidance Committee

Students must establish their Guidance Committee using the [Appointment of Committee form](#) prior to the end of the third semester. Students who enter the program in 2023 must establish their Guidance Committee by **October 15, 2024**.

Choosing a committee is important and you should consult with your mentor about the committee composition. Ideally, you will develop a close professional relationship with these faculty members, which will be of mutual benefit throughout your academic and professional career. Communicating with committee members regarding their expectations of both academic and research progress is imperative.

The Guidance Committee must include exactly 5 members. At least 3 must be NGP faculty, and 1 of the NGP faculty must be tenured.

- **Member 1 – Chair:** Must be NGP faculty; cannot be NGP Associate Member; cannot be your mentor.
- **Member 2 – Mentor:** Must be NGP faculty.
- **Member 3:** Must be NGP faculty.
- **Member 4:** May be NGP, non-NGP, or External faculty.
- **Member 5 – Outside Member:** Must be USC faculty. If NGP faculty, must be in a different department than your mentor. If not NGP faculty, may be from the same department as your mentor.

A non-USC faculty member from another university can serve as an **External Member** (Member 4). They cannot serve as or replace the Outside Member and require approval from the NGP Director. To request approval, email Charly Viola their current CV or resume and a short statement on the value they will add to your committee.

The NGP Director has final approval over proposed Guidance Committees.

7. Competency and Qualifying Examinations

Successful completion of the Competency Examination and the Qualifying Examination will admit a student to official candidacy for the Ph.D. degree at USC. Historically, almost all students have passed. The exams are meant to test students' core competencies in neuroscience and abilities to develop and conduct a dissertation research project. The exams are challenging but are not designed to trick students.

Scheduling both the Competency Examination and Qualifying Examination:

Contact Charly Viola to begin the examination scheduling process. **There are specific semester deadlines for completing each exam.** This information can be found in the *Timeline to Degree* section. Should there be any issues about meeting these requirements, you must make an appointment to speak to the Director or Associate Director(s) as soon as possible.

Competency Examination:

The Competency Examination provides an opportunity for a student to express a deeper understanding of the area of neuroscience that is relevant to their chosen research focus. The Competency Examination serves as a way for the student to become familiar with relevant research literature and eventually, to become able to place the experiments described in the dissertation proposal (written component of the Qualifying Examination) in the context of the larger field. This ability speaks to the background and significance of the research, an important component of any grant application.

The Competency Examination must be completed before the end of the summer semester in year 02. The Guidance Committee chair will obtain one question from each committee member, excluding the Outside member. The chair must approve the questions and then e-mail them to Charly Viola.

Charly will email the student the exam, instructions, and deadline the morning of the student's start date. Answers are due back to Charly via email by 5pm PST exactly 4 weeks after the student received the exam questions. **There are no exceptions.** Turning in the answers after the established deadline will result in automatic failure, and the student will have to retake the exam. Students will dedicate significant time to completing the exam, which will greatly reduce the time and effort available for laboratory research and coursework. Ideally, students would be able to suspend their lab work entirely while completing the exam, although for some projects this is not feasible, and a small amount of lab work may be required. Students should discuss time allocation with their mentor and Guidance Committee chair prior to beginning the competency exam and refer any remaining questions to the Director.

Students can ask for clarification only from the chair or the guidance committee member who submitted the question. They may not discuss the questions or their answers with anyone else prior to submission. Each answer should be approximately 5 single spaced pages in length, not including references.

Any primary research publications, references, or source material can be read by the student to facilitate answering the exam questions but must be acknowledged. Plagiarism is unacceptable, and is grounds for failing the exam, as well as dismissal from the University. Students are required to read through the University Student Conduct Code found on this webpage: <https://policy.usc.edu/scampus-part-b/>. Students must sign a Plagiarism Prevention Agreement, certifying that they have reviewed the University Student Conduct Code and will not plagiarize any portion of their qualifying exam.

Competency Examination – Guidelines for Questions:

In preparation for the Competency Examination, it is recommended that the student meet with each committee member to discuss the student's general research area of interest and likely topic. This discussion will assist each committee member in formulating a question relevant to the student's interests and project. Please keep in mind that the questions will not focus on the research project. Rather, the questions will challenge the student to demonstrate a fundamental and current understanding of research that has contributed to specific neuroscience principles.

The Guidance Committee members and student should also discuss question format style:

- Write a brief review of a specific topic
- Summarize, critically evaluate, and synthesize a large body of knowledge

Competency Examination – Grading:

Each committee member will grade their question on a scale of 1.0 – 5.0 using 0.5 increments if necessary (1.0 as poor and 5.0 as exceptional). Students must receive a mean score of 3.3 or above **and** a minimum grade of 3.0 on each question to pass the exam. There are 3 possible outcomes:

- **Mean score 3.3 or above and no grade below 3.0:** Pass.
- **Mean score between 3.3 and 3.0 and no grade below 3.0:** The full committee must vote pass or no pass. Two or more negative votes by the committee will result in not passing.
- **Mean score below 3.0 or one or more grade below 3.0:** No pass.

Failure to Pass the Competency Examination:

Should the student not pass, they will receive a written warning and must meet with their committee chair to review the critiques of the exam answers. The student must retake and pass the Competency Examination under the following guidelines:

- For all questions scored under a 3.0, a new question will from the committee member must be submitted for the retake examination.
- The student must retake and complete the examination within 3 months of receiving written notification of failure.

Following university guidelines, a second failure will result in dismissal from the NGP and the University. Guidance Committee members may not be changed between first and second attempts at passing the exam, except in an exceptional circumstance, such as a committee member leaving the University.

The Qualifying Examination

Students must submit the [Request to Take Qualifying Examination Form](#) no later than 30 days prior to the exam date. The form can be found on the NGP website under the Current Students section. All committee members may participate remotely, and remote participation should be indicated in writing on the Report on Qualifying Examination. Remote attendance policies are subject to change per the Graduate School.

At the end of the oral component, the committee will inform you of the outcome of both the written and oral components of the qualifying exam. All committee members must sign the Report on Qualifying Examination Form, which must be returned to Charly Viola by the committee chair. **Students are not allowed to handle this form.**

The qualifying examination has two portions that must be completed: the Writing Component and the Oral Component. The purpose of the Writing Component is to ensure that the student's dissertation research proposal is sound and likely to yield substantive and original findings. Students are encouraged to utilize the written component as a basis for fellowship grant applications, which is the typical format. The Oral Component is of

particular importance for students to demonstrate a sophisticated understanding of the proposed research. Students should be able to defend the written proposal, including the rationale, experimental design, data analyses, interpretation of results and potential pitfalls and solutions. Students should be able to answer questions that relate to topics tangential, but nonetheless relevant to the proposal. In addition, the oral exam is used to discern that any weaknesses identified in the written exam have been corrected.

The writing component in conjunction with the oral component must be completed before the end of the summer semester of the third year.

The Writing Component of the Examination:

The Writing Component is a research proposal, preferably in the format of a common federal funding source, e.g., an NIH NRSA pre/post-doctoral fellowship, NIH R01/R21 research grant, or NSF grant. After consultation with the mentor, the student will determine the agreed upon format choice. The subject will be the student's dissertation project. The final draft must be emailed to the committee, cc-ing Charly Viola, **no later than 3 weeks before the oral exam is scheduled**. There are no exceptions to this deadline, as faculty must have adequate time to carefully evaluate the written proposal. If a student feels they cannot meet this deadline, they must immediately contact their committee chair, mentor, and the NGP Director to arrange an adequate solution. Failure to meet this deadline will require rescheduling of the oral exam.

The written proposal should be viewed as a solid framework for the dissertation research project. New data often can inform a necessary change to experimental approaches, or even the introduction of new experiments. There should be preliminary data to support the proposal, but it need not be excessive, and the NGP and faculty recognize that the dissertation project may change to varying degrees. This flexibility is a normal part of the scientific process and should not delay submission and completion of the Qualifying Examination.

The written proposal must include preliminary/pilot research results obtained by the student, as expected for any grant application. This pilot data should accomplish at least one of the following goals:

- Demonstrate some familiarity with techniques to be used
- Establish the validity of underlying hypotheses
- Justify the experimental design

Note that it may not be necessary to obtain positive results to meet these goals.

Students often underestimate the time needed to write a proposal, so ensure that there is sufficient time dedicated to writing. Speak to your mentor or committee members about typical time allotments that they use for writing grant applications. The research data in the proposal should be original and performed by the student. In addition, while you must write a complete initial draft of the document, you are encouraged to seek advice from your mentor in revising subsequent versions. This is a learning opportunity, and it is expected that such interactions will improve the final document submitted to your committee for evaluation. Students have the opportunity to take grant-writing workshops offered by NGP and the Graduate School. Typically, workshop formats consist of drafting fellowship proposals that

can help the student with proposal organization, quality and clarity of the science writing.

If a majority of the committee concludes that the written portion of the exam is so weak that the oral portion cannot counterbalance the poor performance, the student does not proceed to the oral and the exam is failed. The committee may provide the option of a retake, but is not required to do so. If a majority of the committee decides that a retake is not warranted, the student is dismissed from the program.

The Oral Component of the Examination:

The date for the oral component of the exam is scheduled by the student through the NGP office after consultation with the Guidance Committee. Arrange a mock oral exam with post-qual students or postdocs with similar interests to prepare for the oral component. Remember that no one, including NGP faculty, can answer every question perfectly. Maintaining composure during the exam is important and will help you focus on the research.

There are questions addressing common topics that your Guidance Committee members may ask during oral exam. A partial list follows:

- The rationale for performing the proposed studies
- Specific details of experimental design, including statistical methods
- The scientific or technical basis of methods used
- Data interpretation, experimental pitfalls, and alternative approaches
- The global significance or health-relatedness of the project
- Relation of your project to other work in the field
- Your knowledge of literature relevant to the project
- Your ability to synthesize and summarize ideas

In preparing for the exam, remember that it is a unique opportunity to receive constructive feedback regarding your proposal from seasoned scientists, which, is exactly what successful researchers experience throughout their careers.

NOTE: Only committee members and the student taking the examination may be present during the oral component, although the Director or Associate Director(s) may choose to attend. Other students, faculty or guests may not attend.

Grading Procedures for the Writing and Oral Components of the Qualifying Examination:

The status of the Qualifying Examination (pass/fail) will be determined by the student's committee after a short meeting of committee members immediately following the oral examination. The decision is determined by a majority vote of all Guidance Committee members. The committee chair should write a summary representing the opinions of those who voted 'pass' and those who voted 'no pass'. Should the majority of committee members vote to not pass the student, they will be informed in person and then receive a written letter of the outcome.

Failure to Pass the Qualifying Examination:

If a student receives a 'not pass', there are two options for the committee to decide:

- 1) Fail, with the option to retake either specific sections of the exam or the whole exam, at the discretion of a majority of the committee. The student may not be required to repeat

parts of the qualifying examination that were passed on the first administration. The retaking of a failed qualifying examination or any portion of a qualifying examination must take place between one and six months from the date of the first examination. If not otherwise enrolled, the student must be enrolled in GRSC 800a and GRSC 800b Studies for the Qualifying Examination in the term in which any portion of the exam is repeated. If this option is chosen, the student must meet with their chair to review the committee's critiques regarding the written proposal and oral presentation.

- 2) Fail, with the result of dismissal from the program.

NGP and USC Graduate School guidelines state that a second failure of the Qualifying Examination will result in automatic dismissal from the university. Students who are dismissed may access rules for disputing academic dismissals in SCampus.

8. **Dissertation Committee**

The Dissertation Committee is formed following successful completion of the Qualifying Examination and must be formed within 6 months of the oral exam date. The committee may be composed of a subset of faculty of the student's Guidance Committee or different faculty members.

The Dissertation Committee must include a minimum of 3 tenured or tenure-track USC faculty. At least 2 must be NGP faculty, and 1 of the NGP faculty must be tenured.

- **Member 1 – Chair:** Must be tenured or tenure-track and NGP faculty. Cannot be your mentor or NGP Associate Member.
- **Member 2 – Mentor:** Must be NGP faculty.
- **Member 3:** May be NGP, non-NGP, or External faculty.
- **Member 4:** May be NGP, non-NGP, or External faculty.
- **Member 5 – Outside Member:** Must be USC faculty. If NGP faculty, must be in a different department than your Mentor. If not NGP faculty, may be from the same department as your Mentor.

A non-USC faculty member from another university can serve as an **External Member** (Member 3 or 4). They cannot serve as or replace the Outside Member and require approval from the NGP Faculty Director. To request approval, email Charly Viola the external member's current CV or resume and a short statement (one paragraph) on the value they will add to your committee.

The Appointment of Dissertation Committee form is located on the NGP website under Current Students, under forms.

9. **Dissertation Composition**

The USC Graduate School requires at least two semesters of dissertation coursework before the dissertation defense. Please see Dawn Burke with questions.

The following is a general discussion of the approach one should take when writing the dissertation. NGP dissertation committees typically request that the dissertation include general introductory and summary chapters. The chapters that form the bulk of the dissertation, which report original research, should be written in the form of a manuscript suitable for publication in a peer-reviewed scientific journal.

Published manuscripts for which a student is the first or co-first author may serve as chapters of the thesis. Reformatting of these chapters will be necessary to ensure a uniform format (text, references, figures, tables). In addition, students must receive approval for the content and organization of the dissertation by their mentor and dissertation committee members in advance of writing.

While not a program requirement, the NGP expects that all students will have at least one first author, original data publication prior to their dissertation defense. Irrespective of your professional goals, your research publications contribute greatly to postgraduate success for obtaining academic or private sector positions. Your annual IDP should set goals to achieve first author publications prior to the dissertation defense.

Visit the Thesis Center webpage to begin the Graduate School Thesis/Dissertation Submission process: <http://graduateschool.usc.edu/current-students/thesis-dissertation-submission/>

Before you start writing

- Select a journal
Consider the format, appropriateness, prestige, and costs of journals in your field. Concentrate on refereed journals that publish full-length papers based on the chapters in your dissertation that report original experiments and data. Brief communications typically do not serve as an individual chapter of your dissertation. Your introductory chapter of your dissertation eventually may be appropriate for a book chapter or review article in a journal.
- Be cautious of very high-profile journals (e.g., Science and Nature)
These are prestigious, but chances of acceptance are very low, and the selection process is capricious and can take a long time. Seek impartial opinions about the significance of your work before deciding whether it's worth the effort.
- Consider authorship carefully
You should be first author or designated co-first author on papers that compose your dissertation. In the field of neuroscience, the dissertation mentor generally is the senior and corresponding author when the manuscript is submitted. For submitted manuscript on which you serve as first author, the senior author is typically the corresponding author to the journal (because students may graduate and move prior to the article being accepted for publication). In addition, the senior author (laboratory PI) is responsible for ensuring that research conducted in their laboratory meets the expectations and standards of the funding agency (internal or external) and ensuring responsible conduct in research guidelines are followed. The senior author (typically your mentor) is responsible for making the final determination for authorship, and typically will seek your input. The NGP recommends following the International Committee of Medical Journal Editors' definition of authorship (see <http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html>), but many journals have their own guidelines for determining authorship. Most journals now require each author's role in the research reported in the manuscript to be specified. Students should understand these rules before discussing authorship decisions with your mentor. Keep in

mind that writing a manuscript is a collaborative process that often requires discussions and negotiations so that in the end, all authors will endorse the contents, as required by the journal. Please keep in mind that ultimately, the university owns the data generated from intramurally or extramurally funded research. USC has guidelines regarding shared credit for intellectual property by those involved in conceptualizing, performing and/or managing the research studies. The laboratory PI is responsible for all aspects of research project oversight.

- Practice your writing and start early
Most students grossly underestimate how long it will take to finish writing. Start outlining your papers early; this is often the most effective way to determine what experiments still are needed. The NGP incorporates a number of writing experiences through coursework, qualifying exams, and workshops. Thus, we expect that all NGP students will improve their writing skills during their time in the Program. Manuscripts often are edited substantially. Find peers who are willing to read and comment on early drafts. Do the same for them. Mutual editing of this sort may be among your most valuable experiences to hone your writing skills.
- Great communication is the key to success, and it helps avoid misunderstandings.
Discuss everything with your laboratory mentor. Come to agreement on the nature and scope of your dissertation. How many chapters will there be? Which publishable data will be included? If certain data are not included, understand your rights to co-authorship of the eventual publications. Learn your rights regarding intellectual property, which can be found on the USC web site.
- Discuss everything with your dissertation committee
Committee members, along with your mentor, are charged by the University to approve the dissertation document. They expect to be involved and committed early on to your success. In addition to the required academic year meeting for the entire committee, we encourage you to meet with members of your committee individually to seek input and advice. While conflicts between students and their mentors are uncommon, your committee members, as well as the Director and Associate Director(s) can help in such instances.
- Consider certain practical matters
Will you need technical support for graphics, digital micrographs, statistics, or special access to other equipment or supplies? What word processing, data analysis, and graphics software will you use? Who will pay publication costs, including paper reprints if desired? Each of these issues should be discussed with your mentor prior to embarking on writing.

While you are writing

Write your chapters as journal articles. From the start, write each chapter in the format of a paper in your chosen journal. Published full-length papers may serve as individual chapters but will need to be reformatted to achieve common organization for the entire dissertation document.

Feed drafts of the papers to your mentor and committee members. Since they are separate

papers, each chapter should be self-contained. However, there may be detailed experimental results, or simulation data, that would unduly lengthen the paper. Consider including these in the Appendices of your dissertation. Moreover, the journal may accept them for electronic-only publication as Supplemental Materials. Submit the articles individually to your committee members for their preliminary approval. As a courtesy, provide them with plenty of time to read and respond. This may save you much aggravation later.

Do not offend anyone. Think about your dissertation dedication and acknowledgements section well in advance and include all who have made important contributions. Be tactful. While being constructively critical is perfectly acceptable, a vitriolic or personal attack on the published work of others is never a good idea. Publishing early is OK. Sometimes, competition from others or the need to show progress for continued grant funding will require you to publish papers well before the dissertation. This is a good idea.

Your dissertation should be coherent. A bundle of re-formatted papers or, even worse, a stack of published reprints, is not acceptable for the dissertation. Your chapters should be thematically related. Most dissertations of NGP students include general introductory and summary chapters. The Dissertation Committee may make this recommendation to the student. The introductory chapter may be in a different format. This may be a literature review, a summary of background work done by others, etc. In some instances, the questions that you answered in the Competency Examination, or the introduction to your thesis proposal, can help to start the process of writing this section. A concluding chapter summarizes and discusses the significance of your work. Students often include a discussion of their ideas regarding future directions research.

Steps before your defense

At least one semester before a student is planning on defending, it is imperative to make sure that they are on track to graduate. On the NGP website students can find the [Dissertation and Defense Checklist](#) that will serve as a guide for all necessary steps to defend. The checklist includes links to all documents that must be submitted, as well as links to the Graduate School Thesis and Dissertation Center. There is also a list of information needed for NGP to generate and distribute the dissertation announcement to the Neuroscience community.

Begin the process of scheduling the defense date with the Dissertation Committee early, as faculty calendars get booked well in advance. The student, committee chair, and faculty mentor must be physically present for the dissertation defense, unless the relevant dean and the Vice Provost for Academic Programs provide written permission for remote participation. Students must notify NGP staff of requested remote attendance at least 3 weeks in advance of the dissertation defense so NGP can petition for written approval. Remote attendance policies are subject to change per the Graduate School.

After you finish writing and defending

Students must complete the Thesis Center Checklist by the consecutive [checklist submission deadline](#) following their dissertation defense. Only minor revisions can be made following the dissertation defense; substantial changes or adding new content are not permitted.

Publish as soon as possible. As noted above, the NGP expects that all PhD students have at least one peer-reviewed manuscript accepted for publication prior to graduating. In the past

10 years, greater than 90% of NGP graduates have achieved this milestone. As a warning, the more time that elapses from the primary research being completed, the more difficult it is to generate publications (bearing in mind it may take more than a year to finally see your work in print from first submission).

In your new position as a postdoc, faculty member, or industrial researcher, you may not have the time to complete manuscripts from your dissertation work. Publishing your thesis research will reflect well on your future, regardless of which professional path you choose to follow.

10. **Terminal Master's Degree**

The USC Neuroscience Graduate Program (NGP) is a Ph.D.-granting advanced program in the interdisciplinary study of the neurosciences. On very rare occasion and for a variety of reasons, a graduate student in the NGP will be unable to complete the full course of study for a Ph.D., but nonetheless will have done a significant amount of work in the Program. The student may petition the NGP Director to obtain a terminal Master's degree. The student also must inform the administrative staff of the NGP to file the necessary paperwork and petition with the university. The Director may bring the petition to the Executive Committee for deliberation. The student will be notified of acceptance or rejection of the petition. In order to receive the Master's degree, a student must fulfill the following requirements:

- Students must complete the minimum 25 units of course work required of Ph.D. students. The units must include the NGP core course and additional course requirements when the student entered the NGP.
- Students must successfully complete the required NGP Competency and Qualifying Examinations that demonstrate discipline and research competencies.
- Students can opt for a thesis or non-thesis Master's (see below for full description).

A Master's thesis may be composed of an accepted or published manuscript (review or original research report) for which the student serves as first author (organized in thesis format) OR a thesis document that typically is a draft of a data manuscript in preparation:

- 1) An introduction to the particular area of research in which the student was engaged
- 2) An overview of the specific research project
- 3) A description of the methods and results (negative or positive) obtained by the student in their thesis laboratory
- 4) A discussion of experimental interpretation and pitfalls.

While there is not a page requirement for the thesis document, a range from 25-50 double-spaced pages, including figures, is typical. A reference list and figures that depict research findings should be included in the thesis. A Master's thesis requires review and approval by a thesis committee (mentor and 3 other NGP faculty). The thesis is presented to the USC Graduate School for final approval and publication.

A non-thesis Master's will include a research paper that ranges in length from 30-40 pages. The paper will detail:

- 1) A historical introduction to a specific area of neuroscience research related to the research activity in which the student has engaged

- 2) A critical review of the current state of research findings and functional mechanisms
- 3) A detailed proposal of future research opportunities, articulating a few examples of specific experiments.

A reference list should be included in the research paper. The research paper must be approved by the student's mentor and two other NGP faculty members, serving as the review committee. The research paper is not presented to the USC Graduate School for approval.

Other Considerations

A student opting for a terminal Master's degree may not receive University support (RA or TA) once the petition is granted. A student receiving a Master's in Neuroscience may not remain enrolled in the Neuroscience PhD program. The student is fully responsible for scheduling meetings and obtaining approval of the Master's thesis document or Master's research paper in sufficient time for the processing of the requisite forms to be submitted by the NGP administration to the USC Graduate School for final approval.

ETHICS AND YOUR RIGHTS AS A STUDENT

Many well-defined rights, responsibilities, and expectations govern the close relationship between a graduate student and faculty mentor. Ideally, this code of ethics helps ensure that your time in graduate school will be productive and rewarding in preparing for your future professional work. In less-than-ideal situations, it may be necessary to invoke these standards to ensure that your rights as a student are not violated. IT IS THE RESPONSIBILITY OF EACH STUDENT TO BE AWARE OF THEIR RIGHTS AND RESPONSIBILITIES AS A TRAINEE IN THE NGP AND A STUDENT AT THE UNIVERSITY OF SOUTHERN CALIFORNIA. The course “Ethics and Accountability in Biomedical Research” – INTD 500 – or equivalent, covers these rights, responsibilities, and expectations in the context of case studies and group discussion. In addition, a mandatory session on ‘Ethics and Professional Conduct’ is held at every NGP retreat. Finally, these matters are discussed in two excellent booklets. These are:

1. **SCampus and USC Student Affairs**

The SCampus, a USC publication, is a good source of information about sexual or other types of personal harassment, basic rights and responsibilities of students, academic integrity, review and appeals procedures, procedures for disputing grades, sexual harassment, and other issues. You can view this guidebook online, <https://policy.usc.edu/student/scampus/>.

The USC Student Affairs Office has a Student Support and Advocacy unit that students can contact regarding bias incidents, crisis management, and misconduct of faculty with regard to responsible conduct in research, informal and formal grievances, grade disputes, and any harassment incidents. You can visit the Student Support and Advocacy website for more information: <https://campussupport.usc.edu/>. The student is responsible for official filing appeals or charges, and the university is responsible for the process. NGP can provide information to facilitate the student in identifying the most appropriate university office. See also reference to Relationship and Sexual Violence Prevention and Services (RSVP) under Student Counseling services.

2. **On Being a Scientist**

This outstanding brochure from the National Academy of Sciences covers three major topics: the nature of scientific research, social mechanisms in science, and the role of scientists in society. Of particular interest in the present context is the second topic, which deals with the peer review process, replication of observations, the nature of scientific progress, human error, fraud, plagiarism, allocation of credit for research results, and special problems associated with collaborative research. There is also a brief but excellent annotated bibliography. Read it online or order copies at: <http://www.nap.edu/catalog/4917.html>.

The important topics not covered in these booklets are rules governing the use of human subjects in biomedical research and ethical considerations regarding these of animals in research.

Serious violations of ethical standards have been extremely rare in our program. If you have the slightest concern about any issues governing student and faculty responsibilities, and your role to conduct research that meets high ethical standards, do not hesitate to contact the NGP Director, Ruth Wood or Associate Director, John Monterosso.

Your discussions will be held in confidence. Of course, feel free to consult other faculty or peers that you trust. Ultimately, it is the student's responsibility to determine whether they will file grievances through the procedures described in SCampus. USC has many support services to advise students on concerns they may have related to research and academic integrity. The Director and Associate Director(s) cannot be responsible for overseeing and resolving research and academic ethics concerns that a student may have, but they will assist in identifying the appropriate University resources.

TIMELINE TO DEGREE

	FALL	SPRING	SUMMER
	1 st Semester	2 nd Semester	
1st Year Milestones:	-Attend the NGP retreat -Lab rotations, contracts and summaries -Quantitative Methods Boot Camp	-Present at NGF symposium -Lab rotations, contracts and summaries -Finalize mentor match by the end of the spring semester.	-Begin research project -IDP
Courses:	-NSCI 524- 4 Units -NSCI 539- 1 Unit -NSCI 790- 7 Units *Registration	-NSCI 525 – 4 Units -NSCI 539 – 1 Unit -NSCI 790 – 7 Units *Registration	-INTD 500 – 1 Unit -Statistics – 4 units -GRSC 802 or NSCI 790 depending on source of support
	3 rd Semester	4 th Semester	
2nd Year Milestones:	-Attend the NGP retreat -Establish Guidance Committee by October 13, 2024	-Present at NGF symposium **Competency Examination	-Continue Research -APR -IDP
Courses:	-NSCI 539-1 Unit -1 of the key courses from the 4 tracks. -NSCI 790 *Registration	-NSCI 539-1 Unit -1 of the key courses from the 4 tracks. -NSCI 790 *Registration	-GRSC 802 or NSCI 790 depending on source of support
	5 th Semester	6 th Semester	
3rd Year Milestones:	-Attend the NGP retreat	-Present at NGF symposium ***Qualifying Examination	-Continue Research -Appointment of Dissertation Committee. -IDP
Courses:	-NSCI 790 – 6 Units *Registration	-NSCI 790 – 6 Units *Registration	-GRSC 802 or NSCI 790 depending on source of support ****Degree Verification
	7 th Semester	8 th Semester	
4th Year Milestones:	-Attend the NGP retreat	-Present at NGF symposium	-Continue Research -APR -IDP
Courses:	-NSCI 794 – 2 Units	-NSCI 794 – 2 Units	-GRSC 802 or NSCI 790 depending on source of support
	9 th Semester	10 th Semester	
5th- 6th Year Milestones	-Attend the NGP retreat	-Present at NGF symposium *****Dissertation Defense and Graduation	-Continue Research -APR -IDP
Courses:	-NSCI 794 – 2 Units	-NSCI 794 – 2 Units	-GRSC 802 or NSCI 790 depending on source of support

NOTES/LEGEND***Registration:**

-All students must have a minimum of 6 units to be considered full time and no more than 12 units per semester prior to passing the Qualifying Examination. After advancing to candidacy all students must be registered in NSCI 794 every fall and spring semester to maintain full time status.

**** Competency Examination**

-Must be completed by the end of the year 02, no exceptions.

*****Qualifying Examination**

-A minimum of 25 course work units must be completed before taking the Qualifying Examination.

- Both components must be completed by the end of year 03, no exceptions.

******Degree Verification:**

-Review your degree progress on OASIS to check any deficiencies or problems. Contact Dawn Burke with any concerns or questions.

*******Dissertation Defense and Graduation:**

-A total of 60 units are required for the doctoral degree.

-If you decide to postpone your degree date you MUST contact Dawn Burke and the Director MUST approve all requested changes

-Report to Dawn Burke your intent to participate in hooding ceremony by the 2nd week in February.

-Inform your mentor of hooding ceremony instructions and participation.

-Provide NGP Administration with your Dissertation Defense information so she can create and distribute your dissertation defense announcement.

-Make an appointment with Dawn Burke for finalization of paperwork submission and information after dissertation defense.

-Ensure thesis is uploaded by deadline.

-Complete the NGP exit survey.

DIRECTORIES

Important University Numbers

Emergency Contact Information

In case of emergency, please call the Department of Public Safety Emergency Line first:

UPC: (213) 740-4321

HSC: (323) 442-1000

Department of Public Safety Non-Emergency Line:

UPC: (213) 740-6000

HSC: (323) 442-1200

Bookstore

UPC: (800) 447-8620

HSC: (323) 442-2674

Cashiers Office

UPC: (213) 740-7471

USC Credit Union

STU 106

HSC: (323) 442-3040

SRH 101B

Degree Progress

(213) 740-7070

Graduate Admissions Office

(213) 740-1111

Graduate School

(213) 740-9033

Information Technology

HSC IT: (323) 442-4444

UPC IT: (213) 740-5555

HNB Audio Visual: (213) 905-2474

Library Services

Circulation: (213) 740-4350

Administration: (213) 740-0049

Information Commons: (213) 740-7988

Reference Consultations: (213) 740-6938

Lyft Rides Program

<https://transnet.usc.edu/index.php/how-to-use-lyft/>

Office of International Services

(213) 740-2666

Royal Street Parking Structure Suite 101

Parking (Transportation Services)

(213) 740-3575

McCarthy Way Parking Structure

Registrar One Stop Center

<http://www.usc.edu/dept/ARR>

(213) 740-8500

TRO 101

Room Reservation Contacts

DRB – (213) 821-1808

HNB – (213) 740-9176

RRI – (213) 821-4464

ZNI – (323) 442-3219

Student Financial Services

(213) 740-7471

sfs.usc.edu

Jefferson Boulevard Parking Structure

USCard Office

(213) 740-8709

McCarthy Way Parking Structure

USC Eric Cohen Student Health Center – HSC

USC Engemann Student Health Center – UPC

<https://engemannshc.usc.edu/>

<http://engemannshc.usc.edu/myshr/>

(213) 740-9355

NGP Faculty

All NGP Faculty are listed on the [Faculty Directory](#) with contact information and material on research interests.

New Neuroscience Graduate Students - Fall 2023

<u>Name</u>	<u>Email</u>	<u>School(s) Attended</u>
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Neuroscience Graduate Students

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Vasquez, Layla	2020	Dr. Brian Dias	lsvasque@usc.edu
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Wheeler, Koral	2019	Dr. Meredith Braskie	koralwhe@usc.edu
Xia, Shangzhou	2022	Dr. Zhen Zhao	sxia3216@usc.edu
Zang, Cong	2021	Dr. Hosung Kim	congzang@usc.edu

LA LIFE

Housing

On Campus:

The USC Student Housing Office is in McCarthy Way Parking Structure. Please see the housing website for more information <https://housing.usc.edu/>.

Off-Campus:

The USC Student Housing website also has contact information for off-campus housing. It is also helpful to speak with fellow graduate students about housing options, as well as possible roommates. Please note that off-campus housing near UPC is limited and may be difficult to secure.

There are several newspapers that have listings of apartments and houses for rent.

- Los Angeles Times - www.latimes.com/
- Daily Breeze (Redondo-Hermosa-Manhattan Beach) - www.dailybreeze.com/
- The Star News (Pasadena) - www.pasadenastarnews.com/
- The Eastsider (Eagle Rock, El Sereno, East Los Angeles) - <https://www.theeastsiderla.com/>

You can also check listings in the student newspaper at USC, the *Daily Trojan*. Some students have also had success with the *Apartments for Rent* website www.rent.com.

In addition, listed below are several locations where current graduate students reside.

Culver City	Los Feliz
Downtown Los Angeles	Santa Monica
Arts District, Korea Town, and Little Tokyo	Silver Lake
Eagle Rock	South Pasadena / Pasadena
Echo Park	Venice
Hollywood – North and West	Wilshire District

Transportation and Parking

USC Transportation Services

USC operates various transportation services. The shuttle service provides transportation to the housing areas off campus and to campus parking lots Monday through Friday. It also provides convenient and frequent connection between the UPC and HSC, as well as Union Station. There are additional shuttles that run to the Marina Del Rey campus, the Soto Street Buildings (HSC), and the City Center (AT&T Building). For information on shuttle schedules and locations go to <http://transnet.usc.edu/>.

You can also call the Campus Cruiser Escort Service or a USC Lyft. Either service will transport you to locations within approximately one mile of the center of campus (including

the off-campus housing area). If you are working late at night in the lab, it is a good idea to use this service rather than walk to the parking structure alone. For information on both services go to <http://transnet.usc.edu/>.

If you will be commuting to campus by car you will need to purchase a USC Parking permit, which will entitle you to park in certain designated areas on campus. For current costs, you can go to <http://transnet.usc.edu/>. Permits are sold at the USC Trojan Transportation center, located in McCarthy Way Parking Structure at UPC. Regardless of where you park you should always lock your car and make certain that you leave nothing of value in your car.

If you live close to campus and choose to commute on a bicycle, take necessary precautions with the storage of your bike. It is advised to purchase a lock and be sure to use the bike racks that are available all over campus. For information on bicycle rules and regulations, as well as licensing and registration procedures, go to <https://dps.usc.edu/services/bikes/>.

Public Transportation

The transportation system in Los Angeles is called the Metropolitan Transportation Authority (MTA). There is excellent express bus and rail services from several cities into the downtown area. Some routes include stops right at USC.

The rail transit system in Los Angeles has several lines, which serve as a major transportation resource for students. Below is a list of the most commonly used rail lines:

- Blue Line runs from Downtown Los Angeles to Downtown Long Beach
- Expo Line runs from Downtown Los Angeles (with stops at USC) to Downtown Santa Monica
- Gold Line runs from Azusa to East Los Angeles, passing through Pasadena and Union Station
- Red Line runs from Union Station to North Hollywood. With a station stop for CHLA, located at Sunset Blvd and Vermont Ave.

For information about Metro bus schedules and current fares, you can go to <http://www.metro.net/>, call the toll-free number 800.COMMUTE (266.6883), or download the app to your cell phone.

For a map of the rail lines go to http://media.metro.net/riding_metro/maps/images/rail_map.pdf.

In addition, LADOT has a Dash Line that will take you to and from USC to Downtown Los Angeles. For information about the LADOT and Dash Lines, you can go to <http://www.ladottransit.com/>, call the toll-free number 1-800-COMMUTE or download the app to your cell phone.

Culture and Recreation

Los Angeles has no shortage of cultural and recreational activities. There is something for everyone!

Amusement Parks	Disneyland Knott's Berry Farm Magic Mountain
Art Museums	Huntington Library and Art Gallery J. Paul Getty L.A. County Museum of Art Museum of Contemporary Art (MOCA) Norton Simon
Museums	California Afro-American Museum Getty Center La Brea Tar Pits L.A. County Museum of Natural History L.A. County Museum of Science and Industry Museum of Tolerance Page Museum
Music Concerts	Hollywood Bowl Microsoft Theatre Music Center Walt Disney Concert Hall
Horse Races	Santa Anita Race Track
Sports	Baseball – Dodgers and Angels Football – College and Pro (LA Coliseum)
Zoos / Aquariums	Los Angeles Zoo San Diego Wild Animal Park San Diego Zoo Sea World

For more information about what's going on in LA, you can visit:

- Los Angeles Magazine, www.lamag.com/
- Los Angeles Times, www.latimes.com/
- L.A. Weekly, www.laweekly.com/

Recreational facilities in the Los Angeles area are outstanding. There are beaches, parks, golf courses and tennis courts. The mountains are an hour away where hiking and skiing are the main attraction.

There is also plenty going on at USC, including plays, concerts, first-run movies, film retrospectives, and art shows. Most popular, however, are the athletic events, especially the football games. The best ways to learn about the cultural and recreational goings-on at USC are the student newspaper, the Daily Trojan, available at kiosks around campus. You can visit the [Student Affairs website](#) for a list of activities, as well as the [Graduate Student Government website](#).

At both UPC and HSC campuses, there are state of the art recreational centers. Access to both facilities is free to registered students with a current I.D. For information on both facilities and their features go to <https://sait.usc.edu/recsports/>.

Catalina

USC maintains a research lab on Santa Catalina Island at Big Fisherman Cove near Two Harbors. You should see this lab at least once to explore research possibilities and experience the somewhat exotic locale. Catalina Express, a commercial carrier, operates regular boat service from San Pedro to Two Harbors most of the year. Please visit their website for more information: <http://www.catalinaexpress.com/>

Banking and Shopping

Banking (near USC)

In the neighborhood surrounding USC there are several banks and ATMs within walking or biking distance.

USC Credit Union (ATM)

UPC – Campus Center/Student Union Building
HSC – Seaver Residence Hall

Citibank (ATM)

3615 S Vermont Ave
Los Angeles, CA 90007

Bank of America (ATM)

3400 S Vermont Ave
Los Angeles, CA 90007

Wells Fargo (ATM)

2801 S. Figueroa St.
Los Angeles, CA, 90007

At **CHLA**, ATMs of most major banks (Wells Fargo, Bank of America, Citibank) are located within 1-2 blocks.

NEVER GO ALONE TO AN AUTOMATIC TELLER MACHINE AFTER DARK and do not cash checks for anyone you do not know.

Department Stores

Contact other graduate students for ideas where to shop. The Dash shuttle bus (Line F) has stops in Downtown Los Angeles from USC where there are several department stores and shops. For information on the Dash lines, departure and drop off locations, fare, and trip planning go to <http://www.ladottransit.com/dash/>.

Supermarkets

In the neighborhood surrounding USC there are two supermarkets within walking or biking distance.

Smart and Final
3607 South Vermont

Ralph's
2600 South Vermont

Elsewhere in Los Angeles there are other large chain supermarkets. There are many to choose from, including Albertsons, Ralph's, Vons, Food-4-Less and Super King. Whole Foods, Gelson's, Trader Joe's and Costco are alternatives to traditional supermarkets.

Also look for farmers markets on or near the various campuses.

USC Travel Portal Services

USC utilizes the Christopherson Business Travel (CBT) agency to assist with travel arrangements. Visit the [Travel & Expense Portal](#) for full agency details, service fees, reference codes, and contact information.

Other Important Locations

California Department of Motor Vehicles (DMV)

3615 S. Hope St.
Los Angeles, CA 90007
800-777-0133

The DMV is near the 110 freeway, 2 blocks east of campus. There are numerous other offices scattered across the city, please visit [the DMV website](#) for more information.

Post Office

3585 S. Vermont Ave
Los Angeles, CA 90007
(213) 731-9458

The Post Office is just across the street from campus. You may purchase money orders there as well. There is also a mail stop in the McCarthy Way Parking Structure that provides a limited number of postal services.

Addendum, 9/14/2023:

I. “Specific Course Requirements”, pages 20-21

The following **addition** was made:

One of the following requirements may be fulfilled by a 3-unit course, for a total of 24 units of coursework:

- Quantitative and Computational Course
- Additional Course Requirement
- Statistics

II. “Failure to Pass the Qualifying Examination”, pages 32-33

The following was **updated** to be consistent with a revision to the USC catalogue:

- 1) The Committee recommends **termination** of the student’s Ph.D. degree objective
- 2) If it is the first administration of the Oral Qualifying Examination, the committee agrees to offer the student a **re-examination** to be administered after 1 month and within 6 months of the ‘no pass’ exam. **There are no exceptions to this deadline.** If this second option is chosen, the student must meet with their chair to review the committee’s critiques regarding the written proposal and oral presentation.