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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. Presently, approximately 100 graduate students are pursuing their Ph.D. degrees within the NGP. Incoming graduate students can choose to perform their dissertation research in laboratories of more than 100 NGP training 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 in four separate USC campuses. Administration of the NGP is located in the Hedco Neuroscience Building (HNB) on the University Park Campus. This campus is home to just under half of the laboratories run by NGP training 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. Many training faculty are located on the Health Sciences Campus (HSC), which is the home of just over 40% of NGP training faculty laboratories. The University operates frequent shuttles that travel between UPC and HSC. This campus has training 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 Cell and Neurobiology, Neurology, Ophthalmology, Physiology and Biophysics, Psychology, Psychiatry, and in the Schools of Pharmacy and Dentistry (Occupational Sciences, Biokinesiology, and Physical Therapy). NGP also includes a growing number of 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 by car of the University Park (UPC) and Health Science (HSC) campuses. Last, 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.

Thus, you will have many opportunities to perform exciting, high impact neuroscience research at USC. You will become an expert in the field of the area of research 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 will provide 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 assist you in meeting your milestones and following NGP rules. **The careful and 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 also apply to you.** It is **your** responsibility to comply with all guidelines of the Program. Claims by students such as "I did not know the rules" are unacceptable. We have included 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. Our students typically experience few problems, and the Directors and Administrative Staff are always available to answer 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 as we work to improve the quality of the Program. We will inform you of any such changes promptly and clearly. Major rule changes 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!

Pat Levitt, PhD
Director, Neuroscience Graduate Program

Judith Hirsch, 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 Brian Leung, and I am the elected student representative, or "Czar," of the Neuroscience Graduate Forum (NGF), of which you are automatically a member. 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 programs conducting neuroscience research (Engineering, Psychology, etc.). 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.

As your Czar, I act as the primary liaison between the graduate students and faculty. I attend all faculty meetings and the NGP Executive Committee meetings to represent the students and their interests. If you do have an issue, be sure to let me know so that it can be brought to the faculty's attention; a strong working relationship between students and faculty members is essential for maintaining a successful program! My goal this year, as Czar, is to hold events with USC NGP alumni and current students. However, I be in Europe for a quarter of the year, and luckily, our past Czarina, Rachel Yuan (rachelyu@usc.edu), generously volunteered to step-in while I am several time-zones away. We also have several other officers (listed below) who specialize in different aspects of NGF, so feel free to contact them directly with any relevant questions or concerns you may have. As officers of NGF, our collective goal is to make sure everyone develops a successful and fulfilling graduate career; we hope that everyone will enjoy their time here and want everyone to be aware of the many opportunities in graduate school and beyond, so don't hesitate to reach out if you need help with something! Let me take this opportunity to introduce the other officers:

Alex Markowitz (almarkow@usc.edu) is this year's Vice-Czar. Alex is the organizational backbone of NGF, maintaining records of all NGF meetings and events. Alex will also work to promote interaction between our program and the community beyond: he will organize an "Alternative Careers in Neuroscience" workshop in the spring that will provide students with an opportunity to meet scientists currently working in a range of academic and non-academic settings. Additionally, he will serve as our representative at USC's graduate student government (GSG) meetings, keeping us posted on events and activities that GSG hosts for all graduate students.

Brian Zingg (bzingg@usc.edu) will serve as our Health Science Campus (HSC) Liaison. Approximately 40% of students in the NGP choose to join labs at the HSC, and communication can be a bit difficult due to the distance between the campuses. Brian will help maintain cohesion within the program even across campuses, keeping students at HSC updated with UPC events and vice versa. He will also facilitate teleconferencing for students who cannot make it to the main campus for NGF or NGP Director's meetings.

Our Treasurer, Ted Hsu (tedhsu@usc.edu) keeps track of our expenses, ensuring that NGF and its committees have enough money to spend on our events. Students are encouraged to be proactive in setting up professional workshops, panels, etc that would help enrich the program; contact Ted with any questions you may have for funding such events.

Our Webmaster, Samson King (samsonki@usc.edu) maintains our NGF website, www-scf.usc.edu/~ngf/, and mailing list. The mailing list is the primary means by which we send out announcements and event updates, so please email Samson if you still need to be added to the list. Samson and I also administrate the "USC Neuroscience Graduate Forum" Facebook group as another channel for keeping everyone updated. If you haven't already found us on Facebook, send us a request to join the group and start getting to know your fellow colleagues!

Hilary Dorton (hdorton@usc.edu) is our Historian. She will be keeping photo and video records of all of our events. Feel free to send any photos of your own from NGP and NGF events to her as well – they're a great way to show off our program on our website!

Our Programming Officers are A.J. Cooper (cooperaj@usc.edu) and Jonathan Cheung (jacheung@usc.edu). You can think of A.J. and Jon as the social chairs of NGF. They'll arrange several social events throughout the year to give you a chance to mingle with other graduate students in the program, oftentimes while exploring the many sights and activities that LA has to offer. If you have any ideas for a fun adventure, don't hesitate to let them know!

And you are likely already familiar with our New Student Liaisons, Alicia Quihuis (quihuis@usc.edu) and Clarissa Liu (clarisml@usc.edu). Alicia and Clarissa have been hard at work all summer preparing you all for your transition to USC. They are in charge of setting up first year students with graduate student mentors and will also help facilitate the new student recruitment weekends for next year's class. Feel free to reach out to them with any questions that may come up during your transition into the program.

Beyond this core group, many other graduate students are very involved in making the NGF a wonderful organization. From organizing and participating in our annual program-wide events, to acting as student representatives on several faculty committees, to facilitating collaborations within and beyond USC and originating ideas for special workshops, the level of involvement of our students is truly what makes our program unique. I hope you will carry on the tradition and choose to be an active member of the NGF.

Our first NGF meeting will take place soon after classes begin, so keep an eye out for an email announcement. For starters, we will have an info session on fellowships and how to survive first year. If you have any questions about NGF, NGP, or USC/LA in general, please feel free to contact me (brianple@usc.edu) or drop by my office on the HSC campus (ZNI321). First year will be stressful and things get challenging, but remember that we've all been through it and we will always be ready to lend a hand!

Best of luck in the coming year, and welcome to our NGF Trojan family!

Brian Leung
Ph.D. Candidate, Neuroscience Graduate Program
Czar, Neuroscience Graduate Forum
brianple@usc.edu

PROGRAM LIFE

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

Key program leadership includes:

Contact	Title	Responsibility
Dawn Burke (213) 740-4551 dawnburk@usc.edu HNB 115	Graduate Program Manager	NGP Program Support (See detailed list below)
Deanna Solórzano (213) 740-2245 dsolorza@usc.edu HNB 120-H	Graduate Program Student Services Advisor	NGP Student Support (See detailed list below)
Ariana Perez (213) 740-8796 arianape@usc.edu HNB 120-J	Graduate Program Administrative Assistant	NGP Administrative Support (See detailed list below)
Pat Levitt (323) 361-7868 plevitt@med.usc.edu CHLA- Saban Research Institute, 309 HNB 117	Director of NGP	Program oversight Advisement
Judith Hirsch (213) 821-2210 jhirsch@usc.edu HNB 503	Associate Director of NGP	Program oversight Advisement

NGP Administrative Responsibilities

Administrative Tasks	Main Contact
Admissions/Recruitment	Dawn Burke / Deanna Solórzano
Annual Performance Review (APR)	Deanna Solórzano
Budget	Dawn Burke
Commencement/Hooding Ceremony	Dawn Burke
Departmental Clearance (NSCI)	Dawn Burke
Directors-Student meetings	Ariana Perez
Distinguished Speaker Seminars	Ariana Perez
Grades	Dawn Burke
Grant Writing Workshops	Ariana Perez
Internal Requisitions	Ariana Perez
NGF Committee Liaison	Ariana Perez
NGF Sponsored Events (Budget Oversight)	Dawn Burke
NGF Symposium Day	Ariana Perez
Orientation	Deanna Solórzano
Retreat	Ariana Perez
Rotation Tracking, and Mentor Matching	Deanna Solórzano
Schedule of Classes	Dawn Burke
Semester evaluations	Deanna Solórzano
Student Candidacy and Graduation: Degree checks, petitions, and graduation verification	Dawn Burke
Student Milestones: Committee Forms, Part A and B of Qualifying Exam, APR, and IDP	Deanna Solórzano
Student Stipend's	Dawn Burke / Deanna Solórzano
T32 Training Grant	Dawn Burke
USC Fellowships and Nominations	Dawn Burke
Website management and information updates	Ariana Perez

New Student Orientation Checklist

* Requirement before you can register for classes.
** Registration required

Information for All Students

- ❑ **Immunization Requirements***

  - Measles (domestic & international)
  - Tuberculosis (international)

  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 http://engemannshc.usc.edu/ or call the Student Health Center to make an appointment, 213-740-9355.

- ❑ **Degree Verification**
  Required if USC has not received final transcripts (undergraduate or graduate) from last institution attended. Take an official copy of your final transcript(s) to Degree Progress located in TRO 100. Requirement must be fulfilled by end of your 1st year.

- ❑ **Academic Advisement and D-Clearance***
  The NGP Director and Associate Director serve as members of the Advisement Committee. They will advise all new students on the courses they need to take before each semester of their first year.

  For D-Clearance for any NSCI course, complete the Departmental Clearance Request form found at: https://dnburke.wufoo.com/forms/m1qq1yco0qfpq1p/. For any other D-Clearance requests, please see the schedule of classes.

- ❑ **Conditional Admission**
  If you received a welcome letter from the Graduate School indicating that you have "conditions on your admission" they must be cleared by the end of the first semester. If you have an ALI hold, you must go to the Parking Structure D (PSD 101, x00079) to clear this hold.

- ❑ **Registration**
  On-line registration: Go to https://webreg.usc.edu/Login.

  You will be asked to enter the following information:
  Students ID: 10-digit ID # (you must have this available when you take exams and filling out university forms.
  PIN: 6-digit Birth date (mm/dd/yy)

  If you have not yet received your student ID#, contact Deanna Solórzano (HNB 120-H, 213-740-2245, dsolorza@usc.edu).

- ❑ **USC Student ID card (USCard)****
  You must complete the following before you are able to obtain your USCard.
  - Passport Verification with Office of International Services (OIS) - *International students only*
  - Registration for classes - *Domestic students only*

  Go to USCard Customer Service office located in (PSX) at the University Park campus or in the Seaver's Lobby at the Health Science campus.

- ❑ **USC Computer Account Creation** **
  Once you obtain your USCard and register for classes, you need to activate your USC computer account. For instructions, call 213.740.5555 or visit www.usc.edu/firstlogin.

- ❑ **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.

- ❑ **Stipend Payment Information**
  Go to page 19 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:
  - 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 to remove (HNB 115, 213.740.4551, dawnburk@usc.edu).

- ❑ **General Lab and Radiation Safety Trainings**
  The General Lab and Radiation Safety Trainings are 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. If you missed the scheduled training for some reason, you may also register for the course through the USC Administrative Operations, Environmental Health & Safety at: http://adminopsnet.usc.edu/department/environmental-health-safety.

Additional Requirements for International Students

- ❑ **ISE Exam (International Students ONLY)***
  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 for the ISE Exam at the American Language Institute, in person at PSD 106, or online at http://ali.usc.edu/.

- **Passport Verification(PPV) -** *International Students ONLY* *****
  All new international students must register for a PPV session before fall 2016 begins. Visit the New Students website for more information at https://ois.usc.edu/new-students/firstweeks/passport-verification-ppv/.

  Please be prepared to bring the following materials with you:
  - Photocopy of your I-20
  - I-94 card
  - Photocopy of passport
  - Completed "New International Student/Scholar Information" form
  - Photocopy of visa

  Contact OIS for further information. The OIS office is located in PSD, Suite 101 (Phone 213.740.2666, email: ois@usc.edu).

  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	See
1. First Year Students: Attend advisement appointment with Drs. Levitt and Hirsch (one meeting per semester in your first year).	Deanna Solórzano, HNB 120H, 213.740.2245, dsolorza@usc.edu
2. Attend Academic Advisement Meeting and obtain approval of the appropriate advisor for your proposed course schedule.	For all first year students, approval should be obtained from Drs. Levitt and Hirsch. For all students in their second year or beyond, obtain approval from your dissertation advisor.
3. Almost every course requires departmental clearance (d-clearance). Obtaining d-clearance allows students to register for different courses offered in different schools throughout the university. For NGP courses (NSCI), email your d-clearance request. You must include your full name, student ID number, USC email, the requested course and five-digit course number. Your d-clearance will be entered into the system within 3-5 days. You may then 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 PSD 106 or email askali@usc.edu with your USC ID number and name.	Dawn Burke, HNB 115, 213.740.4551 D-Clearance link can 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 of how to register. http://arr.usc.edu/ Click on "Registration" under the services heading.
4. Petitions for late or retroactive registration must be submitted through the Office of Academic Records and Registrar. http://arr.usc.edu/services/onestop/petition_services.html	Office of Academic Review **Petition fees are $150 and are the student's responsibility to pay if the student fails to register on time.**

Student Health and Insurance

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

Use the following link to view the student health center services, http://engemannshc.usc.edu.

Student Counseling Services

USC Student Counseling Services provides a broad range of programs to assist you during your time at USC should challenges arise. Counseling Services is located at Engemann Student Health Center, which is located at 1031 West 34th Street, Los Angeles, CA 90089.

Counseling Services is staffed with psychologists, psychiatrists, social workers, and marriage and family therapists. The center provides individual counseling, group counseling, crisis services, psychiatric services, and outreach programs, including relationship and sexual violence prevention services.

To make an appointment call 213-740-7711.

Dental Care

For detailed information regarding student dental insurance, please see http://engemannshc.usc.edu/insurance/insurance-plan/.

To obtain instructions for downloading your Delta Dental card go to https://engemannshc.usc.edu/files/2012/12/How-to-print-an-ID-card.pdf

NGP Program Events

1. Seminars and Journal Clubs

An important part of your training is the opportunity to attend and participate in **research seminars and colloquia**. These are hour-long public lectures given by visiting scientists. The events page of the NGP web site (http://ngp.usc.edu/events/) keeps an up-to-date calendar of all neuroscience-related seminars across the University and at CHLA. There are a number of major Neuroscience seminar series, as well as seminars in Computer Science, Engineering, Psychology, Gerontology, Education, Social Work, Economics and other disciplines that students may attend. **Attendance is required at two seminars of your choosing each month during the fall and spring semesters. Your attendance is done on the honor system. The NGP Distinguished Speaker series has 4 student-hosted neuroscientists who visit the program during the academic year. All NGP students should make every effort to attend these seminars.** A listing of neuroscience-themed seminar series is summarized below:

- NGP Distinguished Speaker Series – UPC
- Section of Neurobiology Seminars – UPC
- Zilkha Neurogenetics Institute (ZNI) Seminars– HSC
- The Broad Center for Regenerative Medicine and Stem Cell Research Seminars – HSC
- The Hearing and Communications Sciences NIH Training Program – Various Locations
- The Saban Research Institute Seminars– CHLA
- Engineering, Neuroscience and Health Seminars- HSC

Seminars provide an opportunity to broaden your scope of interests and knowledge in the many diverse subfields of the neurosciences. These seminar series typically provide NGP students with an opportunity to meet visiting scientists at lunch or receptions. You will develop skills in articulating your research interests and research progress, and make important contacts for future training and advancement. You may receive emails regarding participation in lunches or dinners with speakers. These are coordinated by the sponsoring units, and for the NGP Distinguished Speaker series, by the NGP Special Events Committee.

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 your career. Journal clubs provide an opportunity to develop these skill set. 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. 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 researcher.

At the moment, there are four active journal clubs. All information regarding dates and locations can be found at: http://ngp.usc.edu/journals/.

- Vision Journal Club
- Developmental Neuroscience Journal Club
- Molecular Neurobiology Journal Club
- Neurodegenerative Journal Club.

If these journal clubs do not represent your scientific interests, you are encouraged to gather a group of your student colleagues and contact appropriate NGP faculty members about starting a new Journal Club.

Other administrative units also sponsor seminars and journal clubs that you may wish to attend. Notices for these other events can be found on the following websites or posted on various bulletin boards.

- USC Events Calendar (calendar.usc.edu/)
- Viterbi School of Engineering Calendar (viterbi.usc.edu/news/events/)
- PIBBS Seminars (http://pibbs.usc.edu/)
- USC BISC Grad Programs Blog: (http://uscbiscgrad.blogspot.com/)
- Zilkha Neurogenetics Institute: (http://keck.usc.edu/zilkha/)
- Eli and Edythe Broad Center for Regenerative Medicine and Stem Cells: (http://keck.usc.edu/broadcenter/)

2. Annual NGF Symposium

Every January the Neuroscience Graduate Forum (NGF) sponsors a graduate-student symposium that **all NGP students are required to attend**. Students performing neuroscience-relevant research in other PhD programs may also attend. The students organize this event, in which they present talks and posters. These presentations are an opportunity to show the NGP community the work that students are executing and provide a forum for students to learn how to deliver scientific presentations. **NGP students, in all years of study, are required to present a talk or a poster at the Annual NGF Symposium.** First-year students may present materials from their rotations, from their undergraduate research, or from a paper that they want to share with the NGP community.

During the 2016-2017 academic year, the Annual NGF Symposium will take place on **January 20, 2017** at the Radisson Hotel on Figueroa Street. Please look for announcements regarding the details of the event.

3. Annual NGP Retreat

At the beginning of the fall semester, the NGP sponsors a weekend scientific retreat at an offsite location in the Los Angeles area. The retreat is free for all NGP students. The event provides a venue for students and faculty to socialize in a casual setting. **All students are required to attend.** The retreat is an opportunity for all new students and their senior peers to learn about the diversity of neuroscience research being done in the NGP. A required science ethics workshop is held at the retreat for all students, as well as student-organized

activities that are team-building. Talks are given by a few NGP training faculty, graduate students, and one or two outside guests. In addition, a NGP faculty luminary is honored with a Keynote address each year. For first year students, the retreat can assist in making decisions about potential laboratories in which to rotate. All students must register for the annual retreat with Ariana Perez shortly after the beginning of the fall semester.

This fall, the retreat will take place on **September 23 - 25 at the American Jewish University, Brandeis-Bardin Campus** (http://confbbc.aju.edu/).

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 research rotation will direct you to an administrative office to obtain the appropriate coding or keys. Note that access is provided for the duration of your rotation. All inhabitants of USC buildings 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 is dealt with severely by the University.

2. Library Facilities

The Seaver Science 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 a book collection. You have electronic access to libraries across the USC campus and to the scientific journals for which USC has a subscription. 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 librarian at Seaver Science 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 extensive 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. Their contact information is listed below:

Ben Lea, blea@usc.edu, 213 740 5775
Zoe Pettway Unno, zunno@usc.edu, 213 740 1502

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

3. **Mail**

All new students can receive incoming mail in their assigned box in the Hedco Building mailroom, which is next to the elevator in the main lobby. The mailing address is listed below:

University of Southern California
Neuroscience Graduate Program
3641 Watt Way
Los Angeles, CA 90089-2520

The digits 2520 serve as the mail code for campus mail to reach the Hedco Building. You can also place outgoing campus mail and stamped U.S. mail in the corresponding bins in the mailroom for pickup by Mailing Services.

4. **Neuroscience Teas**

The Neuroscience Tea at the Hedco Building is held every weekday except Friday, from 3:00 to 4:00 P.M., in the large conference room. Coffee, tea, cookies, and other treats are provided. The Teas are meant to foster collegiality and interdisciplinary communication among neuroscientists. The atmosphere is very informal, with people free to come and go as they wish.

5. **Summer Support**

Your decision to be a Ph.D. student is a 12 month commitment until you graduate. Thus, there is an expectation that you will work intensively in the laboratory, engaged in full-time research, and perhaps take a course to fulfill program requirements, or participate in a national course to learn a new discipline or skill set. During the summer, you must be supported by your mentor or a position on a training grant (if available), as there are no summer TA-ships available.

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 full time status during the summer.

6. **USC Network Access**

For students living in on-campus housing, who need access to USC's Wired Network for Students (ResNet), refer to this website below for detailed instructions, http://itservices.usc.edu/resnet/.

If already using another Internet service provider, students 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, go to 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

First-year students will receive one of the following financial awards during the 2016-2017 academic year.

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

These awards include an annual stipend that will cover your first year of research and rotations. This year the stipend award is $31,000. Please speak with Dawn Burke for a specific payment breakdown for the academic year. The fellowship is described as "50% time appointment," with all students guaranteed $31,000. According to University rules, the remaining 50% of time is for you to engage in academic studies. Support from the faculty mentor begins August 16, 2017. NGP students often apply for and obtain prestigious extramural fellowships, such as from NIH, NSF or private foundations. The stipends provided by these extramural awards are often less than $31,000. 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 $35,000, whichever is less. Please see the *Extramural Individual Fellowships and Grants* section below for more information.

The basic stipend level throughout your PhD studies is set by the NGP. Thus, all NGP students will receive the set level of stipend, health insurance and tuition support. The only exception to this is if a student receives an external fellowship, as above.

The USC Graduate School enforces the rule that PhD students must maintain a GPA of at least 3.0 in order to be considered a student in good standing, and thus eligible for financial support.

Upon completion of the first year in NGP, students join a dissertation laboratory. NGP students typically work long, and sometimes irregular hours. This schedule is determined in large part by the research project and the demands of completing experiments successfully. Irrespective of the funding source of their stipend, NGP students are expected to put in the time and energy to complete their dissertation in a timely fashion. There 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. RA's are funded by research grants or other institutional funds awarded to a faculty member.

2. Teaching Assistantships

While most NGP students are supported through RAships or individual fellowships, TAships provide an additional opportunity for stipend support during graduate training. Students cannot accept a TAship until they have passed Part A of the Qualifying Exam in year 02 of study. Only rarely may a student petition the Director for special permission to be a 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 TAship opportunities come from 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 TAship. The workload associated with TAships is variable, depending on the course and the familiarity of the TA with the subject matter. You should not spend more than 20 hours per week in fulfilling your TA duties. Whatever course you are assigned, please take your responsibilities very seriously. By accepting a TA position, you 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 the course to register for.

- ITA Oral Exam: All International TA's must take the ITA Oral Exam offered through the American Language Institute.

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 forward to students and training faculty in the program.

4. Training Grants

The National Institute of Health (NIH) and the National Science Foundation (NSF) sponsor pre-and postdoctoral training grants. These grants may support general neuroscience training, or focused on an area of neuroscience (e.g. aging, audition). Typically, only a subset of NGP training 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 a specific set of guidelines for the nomination and selection process. Currently, there are two training grants at USC in the Neurosciences: 1) the NIH Neuroscience Training Grant [Pat Levitt, Principle Investigator (PI), Judith Hirsch, Co-Principle Investigator (Co-PI)]; and 2) the NIH Hearing and Communication Neuroscience (HCN) Training Grant (Sarah Bottjer and Neil Segil, Co-PIs). You may obtain more information regarding each training grant by contacting the training grant PIs, or from the NGP administrative office. 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. Individual Fellowships and Grants

There are many sources of grants, fellowships and other forms of financial aid available to students, and the NGP encourages all students to submit at least one application during their training. The NGP offers a grant-writing workshop twice annually to assist students in developing skills needed to prepare a competitive proposal. These workshops are open to both our domestic and international students in their second or third year. USC also offers grant-writing workshops during the academic year and summer that are open to all domestic PhD students. Particularly appropriate are individual fellowships from NIH and NSF, but private foundations may also be relevant options depending upon your area of study. Detailed information can be obtained from the following sources.

- NGP website http://ngp.usc.edu/graduate/external-fellowship-opportunities
- The USC Graduate School http://www.usc.edu/schools/GraduateSchool/current_fellowships_ext.html
- Doheny Library reference section has a database that contains hundreds of grants to choose from. Fill out an application at the reference desk. A customized printout will be returned to you. There is no charge for students.

You may be notified throughout each semester of other fellowship opportunities. NGP strongly encourages applications for such fellowships, both for stipend support and for professional development acquiring skills to articulate research ideas in the format of grant proposals.

Payroll and Tax Information

International Fellowships:

International fellowship holders should have already 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." If you have any questions regarding the Glacier paperwork please contact Dawn Burke.

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. In order 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 U.S. Passport with adult photograph **DO NOT** bring expired passports, as University Payroll will not accept them.

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 following link, http://www.irs.gov/pub/irs-pdf/p970.pdf contains information regarding tax treatment of fellowship awards. In addition, the USC Student Financial Services website provides information regarding the IRS 1098-t form https://sfs.usc.edu/. These links are not meant to be a comprehensive list of tax resources or forms.

International Students may want to consult the Office of International Services (OIS) at: 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 his or her chosen area of concentration. The coursework in Neuroscience centers on two core courses, two concentration courses, a communications course and an ethics in research course. 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 of its students to achieve core competency in the discipline of neuroscience and expertise in specialty areas.

Please see the *Time 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 resource for students to review regularly when considering course selections.

2. Academic Requirements

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 for 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 her/his GPA to 3.0 or greater. It is your responsibility to petition the NGP Director and the 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 Advisement and Executive Committees 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 these 60 units must be in the form of formal course work; the remainder may be in the form of research/dissertation units.

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. One 4-unit key course (or two 2-unit courses) from two different tracks. (8 units)

   The four tracks are
   a. Cell, Molecular, and Developmental Track
   b. Systems and Behavior Track
   c. Computational and Neuroengineering Track
   d. Cognitive Track

3. Neuroscience Communication (NSCI 539), (4 units total)
   The Neuroscience Communications course provides each student with an opportunity to organize and give presentations, receive constructive feedback to improve presentation skills, and to provide constructive feedback to their NGP student peers.
   Four semesters of NSCI 539 are required for a total of 4 units.
4. 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.
5. Statistics (PM 510, PSYC 501, or equivalent), (4 units)

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.

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 full time status during the summer.

Note that the tuition remission is intended only for courses directly relevant to the Neuroscience Ph.D. Program. We note, however, that the discipline of neuroscience is strongly interdisciplinary, so that relevance is broadly defined for maximal flexibility in designing a course of study. Each student is urged to discuss his or her course plans with their research mentor. The student also can consult the Advisement Committee or members of their Guidance Committee about coursework that will enhance progress towards completion of the degree.

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 Masters or other 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 requirement.

If a student would like to fulfill a key-course requirement with a course that is not on a preapproved list, they must write to the Director and Associate Director (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 key course. Approval of the petition is not guaranteed. The substitution will only be considered if the argument for an alternative third course clearly meets the value of "breadth with depth" embedded in the NGP curriculum. The request may be strengthened by demonstrating either (i) adequate prior background in a third track different from the two separate tracks in which the student proposes to fulfill curricular requirements or (ii) that the replacement course provides a different kind of breadth appropriate to the student's training and development. A petition to waive the statistics course requirement may be filed with Dawn Burke; the waiver must be approved by the Director, and requires evidence of graduate level expertise. If a waiver is granted, a related course (e.g. computer science, mathematics, informatics) is taken as a substitute.

Additional Enrollment Policies

All students must receive academic advisement before they can enroll in classes each semester. Year 01 students will meet with the Advisement Committee (Pat Levitt, Judith Hirsch) for advice on rotations and course enrollment. Students in year 02 and beyond should consult their NGP faculty mentor for advice on course enrollment, and obtain authorization from one member of the Advisement Committee. Your advisor must approve all courses, including the ones offered by other departments, before registering 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.

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. For instance, students will be solely responsible for tuition fees. **The final decision is made by the Vice Provost for Graduate Studies.**

3. Advising

In addition to assisting students in deciding your course of study, the NGP Director and Associate Director are interested in helping you with other matters. Problems may arise and in rare instances, a student and faculty mentor feel that it would be best for the student to find a new laboratory. The Director and Associate Director of NGP, as well as members of student's Guidance Committee will support student wishes in these matters. If a student perceives serious problems, we encourage you to contact either the NGP Director or Associate Director early, prior to problems escalating, to discuss specific resolutions.

If you would like assistance with professional or personal challenges, please make an appointment to meet with either the Director or Associate Director. They are here to offer advice, provide referrals, and inform you of your rights in disputes with training faculty or peers. Oftentimes, they can help resolve problems.

The Advisement Committee 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 Advisement Committee 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, specific research skills and aptitudes, ethical conduct in research, and faculty evaluations. Continuation in the NGP is determined by the above standards. Please keep in mind that the Program is a 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.

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 for academic reasons and also 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, failing either part (A or B) of the qualifying exam 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 a NGP training faculty member. All first year students are encouraged to meet with several faculty in order to establish a dialogue regarding research projects, and lab availability. Simply contact the faculty member to arrange a visit. 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 during the conversation, any answer to the above questions from the faculty member is no, you should not select that laboratory for a rotation.

The process of contacting potential rotation laboratories for a first rotation can begin prior to the start of the fall semester. There is no need to commit to the 2nd and 3rd rotations until a student has 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.

Laboratory Rotation Protocol

During the fall and spring semesters, students are to rotate through three labs, with rotations lasting, on average, 9 weeks. However, students may petition the Director if they wish to do two rotations in the same lab. This process requires a written letter from the laboratory mentor stating that she/he can commit to financially support a student in year 02.

If necessary, a fourth rotation is also an option during May and June of the first year. This occurs only when a students has difficulty in identifying a dissertation lab before the end of the spring semester of year 01. The student must consult an Advisement Committee member as soon as possible; the Director must approve the additional rotation. Please see Deanna Solórzano for further information.

At the end of each rotation, students should have a discussion with the laboratory PI to establish whether the laboratory is a good fit for the student's dissertation research, as well as their rotation performance. Students cannot make their final selection of a dissertation laboratory until the end of the third rotation.

Laboratory Performance Expectations

Rotations should be flexible with respect to the lab work. The laboratory in which you perform your rotations often will have ongoing, small projects. Because of limited time during the semester, student's usually work on one of these projects as part of the rotation. Students should expect to meet regularly (individual or laboratory meetings) with the training faculty member during the rotation. Unavailability is usually not a good indicator of future access during the important years of performing 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 be interacting on a daily basis. This information will help you make an informed decision regarding your final selection.

The laboratory PI in whose laboratory you rotated 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, being engaged in reading original literature in the area of research, learning new methodologies and analytical skills, and participating 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 may be used as 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 year 01. The laboratory PI provides a written evaluation of your performance. In addition, upon completion of each rotation, the student has one week to submit a written summary of their work to Deanna Solórzano. These forms are located in Appendix F/G, or can be downloaded from the NGP website in the Graduate Program section.

The laboratory rotation schedule for 2016-2017 is as follows:

Lab Rotation #1: September 12 – November 18
Rotation Contract # 1 due: September 6
Rotation Summary #1 due: November 28

Lab Rotation #2: November 28 – February 17
Rotation Contract #2 due: November 21
Rotation Summary #2 due: February 24

Lab Rotation #3: February 27 – May 5
Rotation Contract #3 due: February 21
Rotation Summary #3 due: May 12

Students should consult the training 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 an unexpected health or other personal issue arises that may interfere with your time in the laboratory.

Laboratory Final Selection - Mentor Matching

Students are responsible for identifying their preferred dissertation research laboratory during May of the spring semester. In order to make the final selection, 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 the Advisement Committee and Deanna Solórzano, noting your proposed faculty mentor. Deanna 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 May. This is critical, as students who have not been accepted into a dissertation laboratory by this time will not be considered for appointment to the Neuroscience training grant. Failure to identify and be accepted into a dissertation laboratory is grounds for dismissal from the NGP.

Laboratory mentors (PIs) are responsible for your stipend and health insurance support after year 01 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 Advisement Committee meets twice a year to review the performance of each student in the Program. Grades, participation in classes, research rotation performance or dissertation research progress (evaluated by the laboratory PI), 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. The result of this evaluation will be a letter from the Advisement Committee to each student, and a copy sent to the student's mentor. The letter will contain one of four ratings:

(1) Acceptable performance

(2) Acceptable performance, assuming you take certain actions

(3) Unacceptable performance

(4) No evaluation

Students should meet with their advisor at the end of each semester to discuss in detail 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. Students receiving a (4) should have their advisor contact the Director AS SOON AS POSSIBLE to avoid a hold on registration. Keep in mind that these evaluations serve to monitor student progress and are used solely for internal tracking. 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) 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). Be sure to 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 other 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 Skype. Should there be difficulty scheduling the meeting, please contact the Director or Associate Director, who can help with this issue. Please note that Part B of the qualifying exam (the oral exam) serves as the required APR meeting for that academic year.

The meeting is designed 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, and for the committee to help develop plans for solving any problems that may have arisen.

The student is responsible for obtaining each committee members signature on a form at the annual meeting. The form must include the committee chair's written summary. The completed/signed form must be submitted to Deanna Solórzano within 2 weeks of the meeting (see Appendix A or the NGP website for a copy of the form).

Individual Development Plan (IDP)

An Individual Development Plan (IDP) is a planning tool designed to help USC NGP 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 a NGP form (modified from Vanderbilt University with permission), accessed from the NGP web site, or a generic form from the American Association for the Advancement of Science (AAAS), which may be downloaded at http://myidp.sciencecareers.org/.

The annual IDP is required and must be submitted to Deanna Solórzano by August 15th every year. First year students have until September 16, 2016 to meet this milestone. 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 also provides a framework for long-term career planning, serving to initiate ongoing conversations between mentor and NGP student, as well as with Guidance/Dissertation Committee members.

After the trainee has filled out the IDP, the contents of the document should be discussed with the research mentor. After discussion, a copy of the IDP should be submitted electronically to Deanna Solórzano in the NGP office no later than the beginning of the fall semester.

6. Appointment of Guidance Committee

Prior to the end of the third semester, students must establish a guidance committee consisting of five members. Students who enter the program in 2016 must establish a guidance committee by **October 14, 2017**.

Choosing a committee is important. Ideally, you will develop a close relationship with these faculty members, which will be of mutual benefit throughout your academic and professional career. Consult with your mentor about the committee composition. Keep in mind that it is most important to communicate with committee members regarding their expectations of both academic and research progress.

The Guidance Committee consists of 5 faculty members. At least 3 of the 5 members of the Guidance Committee must be training faculty members of the NGP. The Chair of the Committee is not the mentor, but is one of the NGP faculty members. NGP training faculty holding a non-tenure track research appointment may serve on the Guidance Committee, but may not serve as the Chair. At least one of the NGP members of the Guidance Committee

must be tenured, and one member of the Guidance Committee must be defined as the 'outside' member. The outside member may be a member of the NGP, but must have a primary academic appointment in a different school from the mentor. If the outside faculty member is not a member of the NGP, they may be appointed in the same school as the student's mentor. While unusual, a faculty member from another university may serve on the Guidance Committee as an additional 6th member. The student and mentor must petition the NGP Director, who together with the Vice Provost for Graduate Studies, has final approval.

USC Graduate School does not permit changes to the Guidance Committee between Part A and Part B examinations, except for extenuating circumstances such as the departure of a committee member from the University. You must petition the NGP Director to request a change in membership. The request must be approved by the Director and the USC Vice Provost for Graduate Studies.

7. Qualifying Examination

Successful completion of both parts of 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 student core competencies in neuroscience and abilities to develop and implement a research project. The exams are challenging, but are not designed to trick students.

Scheduling the Qualifying Examinations:

To begin the Qualifying Exam process, first contact Deanna Solórzano. **There are specific semester deadlines for completing Parts A and B exams.** This information can be found in the *Time 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 as soon as possible. Keep in mind that the USC Graduate School requires at least two semesters of dissertation coursework before the dissertation defense. Please see Dawn Burke with additional questions.

Part A of the Qualifying Examination:

Part A provides an opportunity for a student to express a deeper understanding of the area of neuroscience that is relevant to their chosen research focus. Part A 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 (Part B) in the context of the larger field. This speaks to the background and significance of the research, an important component of any grant application.

Part A must be completed before the end of the spring semester in year 02. The chair of the Guidance Committee will obtain one question from the 4 inside committee members. The outside member of the committee does not provide a question. The Chair must approve the questions and then e-mail them to Deanna Solórzano who will then distribute to the student. **Thus, all questions, contracts and instructions will be given to the student by Deanna Solórzano.**

When picking up the exam from Deanna Solórzano, the student will be provided with a specific deadline. Answers are due back to Deanna 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 will require the student to retake the exam. It is important to note that student activities, such as research and coursework, are not to be suspended during this time period.

Any primary research publications, references or source material can be read by the student to facilitate answering the exam questions. Students can ask for clarification only from the guidance committee member who submitted the question, but 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.

Plagiarism is unacceptable, and is grounds for failing the exam, as well as dismissal from the University. Students are required to read the "Guide to Avoiding Plagiarism" found on this webpage: http://www.usc.edu/student-affairs/student-conduct/ug_plag.htm. Students must sign a Plagiarism Prevention Agreement, certifying that they have viewed the "Guide to Avoiding Plagiarism" and will not plagiarize any portion of their qualifying exam.

Part A – Guidelines for Questions:

In preparation for the Part A, it is recommended that the student meet with each committee member individually to discuss the student's general research area of interest and likely topic. This discussion will assist in formulating questions 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 must agree on one format style.
Below are the two formats to choose from:

- write a brief review of a specific topic
- summarize, critically evaluate, and synthesize a large body of knowledge

Part A – Grading:

Each committee member will grade his/her question on a scale of 1.0 – 5.0 using 0.5 increments if necessary (1.0 as poor and 5.0 as exceptional). A mean score of 3.3 or above is passing; below 3.0 is failing. In cases in which the mean is between 3.0 and 3.3, or two or more questions are graded below 3.0, the full committee must vote pass or fail. Two or more negative votes by the committee will result in failure.

Failure to Pass Part A:

Should the student fail, she/he will receive a written warning and must meet with the chair of his/her committee to review the critiques of the exam answers. The student must retake the Part A exam 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.

Part B of the Qualifying Examination

The semester before taking Part B of the qualifying examination, the student is required to submit the *Request to Take Qualifying Examination Form*, which can be found on the NGP website under the Graduate Program section. As a reminder, Guidance Committee members cannot be changed between the Part A and Part B examinations. At the end of your examination, the committee will inform you of the outcome of the written and oral sections of the Part B qualifying exam. All committee members must sign the *Report on Qualifying Examination Form*, which must be returned to Deanna Solórzano by the committee Chair. Students are not allowed to handle this form.

Part B of 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. 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 spring semester of the third year.

Part B – 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 given to the committee no later than 3 weeks before the oral exam is scheduled. There are no exceptions to this deadline, as training 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 the NGP and training faculty recognize that the dissertation project may change to varying degrees. This is a normal part of the scientific process, and should not delay submission and completion of Part B.

The committee may decide, upon reading the written component, that there are significant weaknesses that cannot be addressed during the oral presentation. In this case, the oral exam is cancelled and according to USC Graduate School rules, the student fails Part B. The

guidance committee also may decide that either the written component is sound, or has modest weakness that may be addressed during the oral exam. In this case, the oral exam will proceed.

The 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. The research results 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 that will be submitted to your committee for evaluation.

Part B – Oral Portion of the Examination:

The date for the oral exam is scheduled by the student through the NGP office after consultation with the Guidance Committee. In order to prepare for the oral component of the Part B, arrange a mock oral exam. The mock exam should be presented to post-qual students or postdocs in your lab or in labs with related interests. Remember that no one, including NGP training faculty, can answer every question perfectly. Maintaining composure during the exam is important and will help you focus on the research.

There are common types of questions asked during oral exams. A partial list follows:

- Specific details of experimental design, including statistical methods
- The scientific or technical basis of methods used
- 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, in fact, 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****

Part B – Grading Procedures for the Writing and Oral Components:

The status of the Part B exam (pass/fail) will be determined by the student's committee after a short meeting of committee members immediately following the examination. The decision for Part B is determined by a majority vote of all Guidance Committee members. The committee chair must write a summary representing the opinions of those who voted 'pass' and those who voted 'fail'. Should the majority of committee members vote to fail the student, she/he will be informed in person and then receive a written letter of the outcome. The student must meet with the chair of his/her committee to review the critiques of the committee regarding the written proposal and oral presentation. The student must retake the Part B exam within 6 months of written notification of failure. **There are no exceptions to this deadline.** NGP and USC Graduate School guidelines state that a second failure of Part B 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 Part B of the qualifying exam. The committee must be formed within 6 months after passing Part B and may be composed of a subset of faculty of the student's Guidance Committee or different faculty members.

The dissertation committee consists of a minimum of at least three USC faculty, two of whom must be NGP training faculty, at least one of whom must be tenured, and an outside member who may be a member of the NGP, but whose primary academic appointment is in a different school from the laboratory mentor. Note that the committee chair must be tenured or tenure track, and CANNOT be your mentor. The outside member may be a member of a USC graduate program other than the NGP. If the outside faculty member is not a member of the NGP, they may be appointed in the same school as the student's mentor. Finally, as noted for the Guidance Committee, a faculty member from another university may serve as a committee member with approval of the Director and Vice Provost for Graduate Studies. The form to file for approval of the dissertation committee members can be downloaded from our website under Current Students - Forms.

9. Dissertation Composition

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.

Manuscripts for which a student is the first author and are published and 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 her/his 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 publication prior to their dissertation defense. This achievement is important for professional development and postgraduate success for obtaining academic or private sector positions. The annual IDP should set goals to achieve first author publications prior to the dissertation defense

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. Short or technical papers are much less important. Book chapter or review formats are not permissible.

- 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. 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 on papers that compose your dissertation. In the field of neuroscience, the dissertation advisor generally is the senior and corresponding author when the manuscript is submitted. Your advisor should work with you on determining the validity of others being listed as co-authors. 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 the article being accepted for publication). In addition, the senior author (laboratory PI) is responsible for ensuring that research conducted in her/his 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 (laboratory PI) also is responsible for making the final determination for authorship. 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. Students should understand these rules before making a decision with your advisor. Keep in mind that writing a manuscript is a collaborative process that often requires discussions and negotiations so that in the end, all authors can endorse the contents that are to be reported.

- 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 data will be included? If certain data are not to be included, understand your rights to co-authorship of the eventual publications. Learn your rights regarding intellectual property.

- Discuss everything with your dissertation committee
  Committee members, along with your advisor, are charged by the University to approve the dissertation document. They should and must 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 NGP Director and Associate Director 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?

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.

Feed drafts of the papers to your advisor 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 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 seldom 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 presentation of background work done by others, etc. In some instances, the questions that you answered in Part A of your qualifying exam helps 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.

After you finish writing and defending

Ask members of your committee if they would like a hard copy of your dissertation. Make a hard of your approved dissertation for your advisor. Consider final copies for spouse, parents, significant others, etc.

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 since the primary research is done, the more difficult it is to complete these 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 as a scientist.

10. Terminal Masters 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 Masters degree. The student also must inform the administrative staff of the NGP to file the necessary paperwork and petition with the university. The Director will 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 Masters degree, a student must fulfill the following requirements:

- Students must complete the course work required of Ph.D. students for a minimum of 25 units. 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 Part A and Part B exams that demonstrate discipline and research competencies.
- Students can opt for a thesis or non-thesis Masters (see below for full description).

A Masters thesis may be comprised of an accepted or published manuscript for which the student serves as first author (organized in thesis format) OR a thesis document that typically is a draft of a 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 is typical. A reference list and figures that depict research findings should be included in the thesis. A Masters thesis requires review and approval by a thesis committee (mentor and 3 other NGP training faculty). The thesis is presented to the USC Graduate School for final approval and publication.

A non-thesis Masters 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 thesis. The research paper must be approved by the student's mentor and two other NGP training 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 Masters degree may not receive University support (RA or TA) once the petition is granted. The student is fully responsible for scheduling meetings and obtaining approval of the Masters thesis document or Masters 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 advisor. Ideally, this code of ethics helps insure 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 insure 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**
   This USC publication is a good source of information about women's issues, 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/.

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. You can read it on-line for free or order copies at the following URL: 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 Directors of NGP, Pat Levitt (plevitt@usc.edu) or Judith Hirsch (hirsch@usc.edu). Your discussions will be held in confidence. Of course, feel free to consult other faculty or peers that you may trust, or any of the support services of the university.

TIMELINE TO DEGREE

	FALL	SPRING	SUMMER
	1st Semester	**2nd Semester**	
1st Year Milestones:	-Attend the NGP retreat. -Lab rotations -Submission of contracts and summary forms due after each rotation.	-Lab rotations cont. -Present at NGF symposium -Email Advisement Committee with preferred mentor match due the 1st week in May. By end of Spring semester, thesis mentors must be confirmed.	-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
	3rd Semester	**4th Semester**	
2nd Year Milestones:	-Attend the NGP retreat. -Establish Guidance Committee. Must be established by October 14, 2016.	-Present at NGF symposium ****PART A: Written Exam**	-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
	5th Semester	**6th Semester**	
3rd Year Milestones:	-Attend the NGP retreat.	-Present at NGF symposium *****PART B: Proposal and Oral 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**
	7th Semester	**8th 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
	9th Semester	**10th 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 PART B – Oral Examination. After advancing to candidacy all students must be registered in NSCI 794 every fall and spring semester to maintain full time status.

****Part A** – Written Examination
-Part A – Written Exam must be taken by the end of the 4th semester, no exceptions.

****Part B – Oral Examination**
-A total of 25 course work units must be completed before taking PART B – Oral Exam

-Part B – Oral Exam must be taken by the end of the **6th** semester, 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 decided to postpone your degree date you MUST contact Dawn Burke and the Director MUST approve all requested changes

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

-Inform your PI of hooding ceremony instructions and participation.

-Provide Deanna Solórzano with your Dissertation Defense information for postings, recording and announcements.

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

-Ensure thesis is uploaded by deadline.

DIRECTORIES

Important Univesrsity Numbers

Emergency Contact Information
In case of Emergency, please call this phone number first:
Department of Public Safety Emergency Line:
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

Campus Cruiser
http://transnet.usc.edu/index.php/campus-cruiser-program/
UPC: (213) 740-4911
HSC: (323) 442-2100

Cashiers Office
UPC: (213) 740-7471
USC Credit Union
STU 106
HSC: (323) 442-3040
SRH 101B

Center for Academic Support
(213)740-1741
STU 301

Center for Women and Men (CWM)
www.usc.edu/cwm
(213) 740-4900
ESH 365

Counseling Services
https://engemannshc.usc.edu/couns0eling/
(213) 740-7711

Degree Progress
(213) 740-7070

FedEx Office
(213) 746-4234

Graduate Admissions Office
(213) 740-1111

Graduate School
(213) 740-9033

Information Technology
Dornsife DTS: (213) 740-2775
ITS Customer Support: (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

Office of International Services
(213) 740-2666
GFS 120

Parking (Transportation Services)
(213) 740-3575
PSX

Registrar One Stop Center
http://www.usc.edu/dept/ARR
(213) 740-8500
TRO 101

Room Reservation Contacts
DRB – Susan Cooper: (213) 821-1808
RRI – Katie Boeck: (213) 821-4464
ZNI - Emily Chou: (323) 442-3219

Student Account Services
(213) 740-7471
PSB 106

USCard Office
(213)740-8709
PSX

USC Engemann Student Health Center – UPC
https://engemannshc.usc.edu/
(213) 740-9355

USC Eric Cohen Student Health Center – HSC
http://ecohenshc.usc.edu/
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NGP Faculty

All NGP Faculty appear on ngp.usc.edu/faculty/ with contact information and material on research interests.

New Neuroscience Graduate Students - Fall 2016

Name	School Attended
Jocelyn Argueta	University of California, Irvine
Rita Barakat	University of California, Berkeley
Andres Camarena	University of California, Irvine
Edward Catich	Saint Louis University
Alexandra Donovan	California State University, Long Beach
Clio Gonzalez Zacarias	University of Warwick/University of Gothenburg
Ahyun Jung	Kaist
Yuni Kay	Pomona College
Adam Lundquist	North Central College
Adam Mezher	University of California, Berkeley
Brendan Miller	Arizona State University
Daniel Peng	University of Edenburgh
Sandhya Prathap	University of Southern California
Sadhna Rao	Indiana University – Purdue University
Amanda Rios	University of Sao Paulo
Meral Tubi	Case Western Reserve University
Artemis Zavaliangos-Petropulu	University of Southern California
Jing Zou	China Agricultural University

Returning Neuroscience Graduate Students

Name	Lab PI	E-mail
Ahn, Seohee	Dr. Judith Hirsch	seoheeah@usc.edu
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Bacon, Eliza	Dr. Roberta Brinton	ebacon@usc.edu
Barakat, Rita	First Year	rbarakat@usc.edu
Bareghamyan, Aida	Dr. Donald Arnold	baregham@usc.edu
Barres, Victor	Dr. Michael Arbib	barres@usc.edu
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Zou, Jing	First Year	jingzou@usc.edu
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LA LIFE

Housing

On Campus:

The USC Student Housing Office is in Parking Structure X. 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
Downtown Los Angeles
Arts District, Korea Town, and Little Tokyo
Eagle Rock
Echo Park
Hollywood – North and West
Los Feliz
Santa Monica
Silver Lake
South Pasadena / Pasadena
Venice
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 Uber. 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/.

Zimride is another transportion option for USC students, faculty, staff and alumni. It is a private social network for ridesharing. USC Zimride requires a @usc.edu email address. Membership is free and easy. To find out more about Zimride visit www.zimride.com/usc/.

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 PSX 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 chose 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 Azuza 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. In addition

you can visit the Student Affairs website, https://studentaffairs.usc.edu/, for a list of activities, as well as the Graduate Student Government website https://gsg.usc.edu/.

At both UPC and HSC campuses, there are state of the art recreational centers. Access to both facilities are 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 ATM's 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 https://www.ccfm.com/.

USC - Travel Services
USC has several travel agencies to assist with travel arrangements. For full agency details, service fees, reference codes, and contact information follow this link http://procurement.usc.edu/travel/agencies/.

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 website for more information, https://www.dmv.ca.gov/portal/dmv.

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 Parking Structure X (PSX) that provides a limited number of postal services.

ANNUAL PROGRESS REPORT
NEUROSCIENCE GRADUATE PROGRAM

Part A: Student information (to be completed by student)

Name:

Date of last APR meeting: Date of this APR meeting:

If circumstances have interrupted or delayed normal progress towards degree completion at any point (e.g., family or medical leave, switching labs or degree programs, etc.), provide a brief explanation (including when and for how long):

Part B: Committee evaluation (to be completed by committee chair)
(Note: in NGP, the committee chair is NOT the student's mentor.)

Summarize the student's research and academic progress during the past academic year:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Part C: Committee **Signature**

Mentor: _____ _____

Committee chair: _____ _____

Outside Member: _____ _____

Additional member(s) : _____ _____

Additional member(s) : _____ _____

Part D: Review and signature of program director:_____

Division of Financial and Business Services
Payment Services

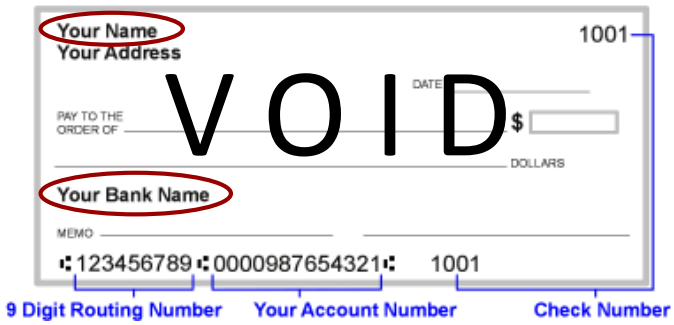
DIRECT DEPOSIT AUTHORIZATION
FOR EMPLOYEE/STUDENT REIMBURSEMENTS AND STIPENDS

☐ New Application ☐ Change of Bank ☐ Cancel Authorization

☐ Employee ☐ Student

I hereby authorize the University of Southern California to initiate deposits (credits) and/or corrections to prior deposits (previous credits) to the financial institution indicated below. The financial institution is authorized to credit and/or correct the amounts to my accounts. This authority is to remain in full force and effect until I revoke it by giving at least ten (10) days prior written notice to USC Payment Services.

Employee Information	
Name:	10-digit USC ID:
Email:	Telephone:
Authorized Signer:	Date:
Authorized Signer's Signature:	
Financial Institution Information	
Financial Institution:	Account-holder Name:
Bank Routing Number:	Bank Account Number:



IMPORTANT: *Affix copy of voided check below and fax to 888-498-1118 (secure online fax) or deliver in person to Payment Services, University Gardens Building, Suite 210. Deposits may only be made to checking or share draft accounts. Processing of this request may take up to three (3) weeks.*

Neuroscience Graduate Program General Petition Form

This form is to be submitted prior to the start of Fall and Spring semesters of your first year

Name: _____ ID#:_____

Phone #:_____ Email: _____

Cohort Year: _____

Request:

☐ 4th Lab Rotation:

☐ Course Substitution:

Required Course	Units	Substitution	Units

☐ Summer Internship: _____
Company/start date

☐ Extension of Time to Complete Degree: _____
Through your final semester

☐ Leave of Absence: _____
For the following semester(s)

☐ 794 a&b Concurrent Registration: _____
Semester

☐ Program Withdrawal: _____
For the following semester

☐ Readmission: _____ Semesters absent: _____
For the following semester *Must be < 4*

☐ Other

Please provide a short explanation of your request in the lines below. Please attach additional paperwork if necessary.

_____
_____
_____
_____
_____

Student's signature: _____ Date: _____

Faculty Advisor Signature: _____ Date: _____

Director Signature: _____ Date: _____

International students requesting a Leave of Absence must obtain a signature from the Office of International Services (GFS 120)

The student's visa requirements have been reviewed and the request for a Leave of Absence is hereby recommended.

OIS Signature: _____ Date: _____

Individual Development Plan (IDP) for Neuroscience Graduate PhD Students at USC

An Individual Development Plan (IDP) is a planning tool designed to help PhD students identify annual progress, professional development needs, and career objectives. The IDP also serves as a valuable communication tool between PhD students and their research advisor.

Goals of the IDP
An annual IDP is one component of a broader professional development strategy and mentoring program. Specifically, it helps PhD students:

- Identify progress in training and document accomplishments to date
- Identify short-term needs for improving performance
- Set goals for the upcoming year, including discussing how to spend time
- Define ways to develop specific skills and experience needed to complete research training and prepare for long-term career goals

Benefits of the IDP
Identifying short-term goals will give trainees a clearer sense of expectations and help identify milestones for achieving objectives. The IDP can also jumpstart long-term career planning and provide a tool for structuring conversations between mentors and trainees.

Overview of the IDP Process
The development, implementation, and revision of the IDP require a series of steps to be conducted by a trainee and her or his research mentor. These steps are an interactive effort, *beginning with the trainee.* After the trainee has filled out the IDP, she or he should discuss it with their research mentor. After both the student and the research mentor sign the IDP, the IDP should be turned in to the relevant Director of Graduate Studies (DGS). The IDP should be completed annually in April and turned in to the DGS by the end of May each year.

Process	For Trainee	For Mentor
Review expectations for training	Review general expectations and responsibilities for your stage of training (see pages at the end of this document)	Identify additional expectations you have for your trainee that aren't listed in the general expectations
Part 1: Evaluate progress and skills	Evaluate your progress this year; assess your skills as they relate to seven core competency areas for research scientists	
Part 2: Set goals	Set specific goals for your research and professional development for the next year	
Part 3: Implement IDP	Discuss your IDP with your mentor; implement IDP and periodically review your progress with your mentor.	Review the IDP with your trainee and provide feedback; establish a regular review process

Acknowledgments: This IDP is adapted from resources developed by ScienceCareers, Scripps Research Institute, and the National Postdoctoral Association

Individual Development Plan (IDP)

A. Information/Signatures

Name of predoctoral student:

Department or program:

Year in predoctoral training:

Predoctoral trainee signature: Date:

PI name:

PI signature: Date:

B. Annual Progress Report

1. What were your main goals for the past year?

2. Which goals did you meet? If you did not meet a goal, why not?

3. List all major accomplishments this year in career development (e.g. presentations, publications, teaching, committees, course work, etc.). Include mentoring of graduate or undergraduate students in the laboratory.

4. Describe your level of satisfaction with your career development in the past year using a scale of 1-5 with 1 being highly satisfied. Provide a rationale for your choice.
   1 – Highly satisfied

2 – Somewhat satisfied
3 – Neither satisfied nor dissatisfied
4 – Somewhat dissatisfied
5 – Highly dissatisfied

C. Self-Assessment of Skills

Using the table on Page 4, reflect on your level of development in seven competency areas important for success in research: 1) Scientific Knowledge; 2) Research Skills; 3) Communication; 4) Professionalism; 5) Management and Leadership Skills; 6) Responsible Conduct of Research; 7) Career Advancement.

For each competency area, put an "x" in the column that most accurately describes your current level of expertise. Mark only one column per competency.

Always consider your career stage when assessing your competencies. Avoid comparing yourself to colleagues who are significantly more junior or senior than you.

For example, as a second year student, you may have a broad based knowledge of science that is appropriate to your career stage, but seemingly inadequate compared to a student who is about to defend his or her thesis. In this case, "appropriate for career stage", not "needs development", is the best choice.

Ask your research mentor to review your answers with you.

Pay close attention to the skills for which you and/or your mentor answered, "No basis to evaluate" or "Needs development." Are these skills you need to hone for your anticipated career path? Similarly, review skills that you identify as "strengths." You may wish to consider career paths that capitalize on these skills.

Core Competencies	No basis to evaluate	Needs development	Appropriate to career stage	Strength
Scientific Knowledge				
Broad based knowledge of science				
Deep knowledge of specific research area				
Critical evaluation of scientific literature				
Research Skills				
Technical skills related to research area				
Experimental design				
Statistical analysis				
Interpretation of data				
Creativity/innovative thinking				
Navigating the peer review process				
Communication				
Basic writing and editing				
Writing scientific publications				
Writing grant proposals				
Writing for nonscientists				
Speaking clearly and effectively				
Formulating and asking sound questions				
Presenting research to scientists				
Presenting to nonscientists				
Teaching in a classroom setting				
Training and mentoring individuals				
Seeking advice from advisors and mentors				
Negotiating difficult conversations				
Professionalism				
Demonstrating workplace etiquette				
Complying with rules and regulations				
Upholding commitments and meeting deadlines				
Maintaining positive relationships with colleagues				
Contributing to discipline (e.g. professional society member)				
Contributing to institution (e.g. committee participation)				
Management and Leadership Skills				
Providing instruction and guidance				
Providing constructive feedback				
Dealing with conflict				
Planning and organizing projects				
Time management				
Managing research resources responsibly				
Leading and motivating others				
Creating vision and goals				
Serving as a role model				
Responsible Conduct of Research				
Careful recordkeeping practices				
Understanding of data ownership/sharing issues				
Demonstrating responsible authorship/publication practices				
Demonstrating responsible conduct in human/animal research				
Able to identify and address research misconduct				
Able to identify and manage conflict of interest				
Career Advancement				
Creating and maintaining a professional network				
Identifying career options				
Tracking professional development and accomplishments (e.g. writing and maintaining a CV or résumé)				
Interviewing				

Adapted from ScienceCareers MyIDP, which is based on the National Postdoctoral Association's Core Competencies for Postdoctoral Scholars

D. Goals for the Upcoming Year

1. In the upcoming year, what:

a. Publications do you plan to submit?

b. Meetings, conferences, and workshops do you plan to attend?

c. Fellowships or other funding applications do you plan to submit?

d. Collaborations do you plan to establish?

e. Other professional training or activities do you plan to participate in (e.g. teaching, university service, courses, internships, etc.)?

2. Career goals

a. Approximately when do you hope to finish your predoctoral training?

b. If you plan to finish within 12-18 months, estimate when you will begin a job or postdoctoral search.

c. What is your "Next Step" career goal (e.g. postdoctoral training, research job, science policy)?

d. What is your long-term career goal? (*ScienceCareers* MyIDP can help you evaluate your options in light of your interests and skills.)

e. What further training is required before it is appropriate to start a career search?

3. How can your PI help you achieve your goals for the upcoming year? What do you need from your PI?

4. [Question for Mentor to discuss with Student] How can I, as Mentor, assist the student to develop and achieve his or her specific career development goals for the upcoming year?

Long-Term Goal Setting (Optional)

This section of the IDP is optional. It will be useful for trainees who seek additional structure and strategies for long-term career planning. We encourage trainees to discuss these goals with their research mentor; the BRET Office of Career Development is also available for confidential career advising appointments.

For each of the competencies evaluated in Part D (Self-Assessment), put an asterisk next to those items marked "needs development" or "no basis to evaluate" which are also critical for your long-term career development (i.e. beyond your graduate and/or postdoctoral training). Then, use the table below to set S.M.A.R.T. goals to develop your skills in these areas. S.M.A.R.T. stands for:

S = Specific M = Measurable A = Action-oriented R = Realistic T = Time-bound

Some examples are provided in italics. Add as many rows as needed to address the items with an asterisk. Remember, though, that it may not be realistic to work on every goal at once! Prioritize the most important goals work on them first. Adjust the timelines to avoid burnout.

Competency	**Specific plan for improvement that is action-oriented and realistic**	**How will you measure success?**	**Timeline (could be a self-imposed deadline, or an event like an upcoming conference)**
Seeking advice from advisors & mentors	*Ask my PI and collaborator to meet monthly to discuss project progress; schedule meeting times and locations for next 6 months*	*We meet at least 5 times and develop a concrete plan to publish our project results*	*Schedule meeting times by the end of next week; develop publication plan by end of semester*
Identifying career options	*Attend monthly PhD Career Connections seminars this academic year*	*Attend 80% of seminars; Network with speakers; for those whose career interests me, ask them for contact info and follow up*	*By the end of the academic year*

Graduate Training Year 1: Trainee Expectations & Responsibilities

The first year of graduate school is designed to help students develop a solid foundation in biomedical science, learn to glean information from the primary research literature, and become acquainted with the research environment. As your scientific interests crystallize you will choose a PhD-granting program and a laboratory in which to conduct thesis research.

General

- Do I know how to evaluate prospective research mentors and PhD programs?
- Am I working hard enough to impress prospective research mentors as a dedicated student who will be committed to their thesis research project?

Scientific Knowledge, Research Skills, and Responsible Conduct of Research

- Am I spending enough time and effort on my coursework to become literate in graduate level biomedical sciences?
- Am I spending enough time and effort in my lab rotations to make an informed decision about choosing a research area and a research mentor?
- Do I understand how my rotation project fits into the "big picture" of what my rotation lab is studying?
- Can I design an experiment that would generate a conclusive answer from the results?
- Can I execute an experiment and record the results in a form that could be published?
- Can I effectively read a primary research paper to understand the authors' goals, results, and interpretations?
- How do I know when to trust what I read in the literature or hear in a seminar?
- Have I identified areas of research that interest me most?

Communication

- Can I communicate my research goals and results effectively in an oral presentation to my colleagues?
- Have I had an open discussion with prospective research mentors about their expectations of PhD students?
- Do I view email to professors and answers to homework and test questions as professional writing samples, always using appropriate grammar and correct spelling?

Professionalism and Management and Leadership Skills

- Do I understand the standards of professional scientific conduct and am I committed to upholding them?
- Am I forming appropriate support relationships with mentors, peers, and administrative staff?
- Do I understand how research is funded and expectations for sharing the results of grant-funded research?
- Do I understand how research training is funded and expectations of students funded by institutional training grants?
- Do I follow through on tasks I commit to completing?
- Do I attend required courses and complete assignments on time?
- Do I balance my coursework and lab rotations adequately?
- Am I a good lab citizen, aware of how my actions impact others (e.g. taking steps to replenish reagents and supplies so they are available for others)?

Career Advancement

- Do I understand the format of a CV and biosketch?
- Have I created my CV so it can be updated continuously?
- Have I identified the career and professional development resources available to me?

Graduate Training Year 2: Trainee Expectations & Responsibilities
The second year of graduate school is critical for mastering the discipline, knowledge and skills needed for success as a research scientist and for acquiring the kind of insight into yourself and the scientific universe that will allow you to make the most of your talents and interests.

General
- Have I established a clear set of goals that I wish to accomplish this year and next?
- Have I discussed these goals with my mentor?
- Have I established a dissertation committee suitable to advise me in my thesis research?

Scientific Knowledge, Research Skills, and Responsible Conduct of Research
- What courses do I need as a foundation for my thesis research? Am I spending enough effort on my coursework?
- What primary literature should I be reading? Which reviews?
- Am I attending seminars within and outside my area to deepen and broaden my scientific knowledge base?
- What is my thesis project?
- Who will be on my dissertation committee?
- When will I take my qualifying exam? What is the format? On what criteria will I be evaluated?
- Am I spending enough time and effort in the lab to accomplish my research goals?
- Can I design an experiment that would generate a conclusive answer from the results?
- What technical skills do I need to execute my dissertation research?
- Can I execute an experiment and record the results in a form that could be published?
- Am I beginning to interpret my results and assimilate new knowledge to ask good scientific questions?
- Have I discussed expectations for publication and authorship with my research mentor and collaborators?

Communication
- Can I organize, interpret and present my research results using appropriate graphics and text?
- Can I communicate my research results effectively in an oral and visual presentation to my colleagues?
- Am I practicing talking about my research to a general audience (e.g. friends and family)?
- Will I apply for fellowships, and if so, which ones? What are the application requirements and deadlines?
- Who are key people, in addition to my PI, for helping me think through ideas?

Professionalism and Management and Leadership Skills
- Am I actively participating in departmental or program activities such as seminars, retreats, works-in-progress presentations, and journal clubs?
- When I attend seminars, do I formulate questions about the results that are presented?
- Have I formed appropriate support relationships with mentors, peers, and administrative staff?
- Am I managing my time effectively in the lab and spending enough time to prepare for qualifying exams?

Career Advancement
- Am I exploring career options to understand how to position myself for success?
- Am I reflecting on what motivates me professionally and personally?
- Have I begun to develop and practice my ‘elevator speech’ to describe my professional identity and goals?
- Have I established a contact database and begun to build my network of professional contacts? (LinkedIn and Microsoft Outlook have built-in tools for this.)

Graduate Training Year 3: **Trainee Expectations & Responsibilities**

The third year of graduate school is the first year entirely dedicated to research in the laboratory. This year, you will build multi-tasking skills, further your academic knowledge, expand your network through collaboration and technical interactions, and define and advance your research project. The third year is the pivotal point to grasp the entirety of what a good scientist must consider and do to be successful. Your sense of belonging to the scientific community should develop. Your longer term goals should emerge in order to make appropriate decisions with respect to scientific projects and your career. If you are on track to finish your PhD training within a year and you plan to do a postdoctoral fellowship, you should start contacting potential postdoctoral advisors.

General

- Have I defined my specific interests and objectives for my PhD studies?
- Have I evaluated my strengths and weaknesses and made adjustments to improve or accommodate them?
- Have I developed a focused set of goals that will lead to publication of a paper and development of my thesis within the next year?
- Have I discussed these goals with my mentor and dissertation committee members?

Scientific Knowledge, Research Skills, and Responsible Conduct of Research

- What reading must I be doing to become an expert in my field?
- What knowledge will broaden the scope of my work? How do I stay abreast of new discoveries?
- Am I attending enough, or too many, seminars? Am I critical enough of the literature or of what I hear in a seminar?
- What scientific conferences should I attend? Have I investigated sources of funding to attend conferences and present my research, such as travel awards from the Graduate School?
- How do I refine my research project and become more focused?
- Am I spending enough time and effort inside and outside the lab to accomplish my objectives?
- Am I thinking creatively, troubleshooting my own experiments, and developing my independence?
- How do I efficiently translate results into publication quality data?

Communication

- How good am I at presenting my research results?
- How can I improve my presentation skills? Whom should I get feedback from?
- Have I presented my work at and/or attended a scientific meeting? Have I written an abstract or paper? If not, how far am I from my first publication?
- How can I improve my writing?
- Can I effectively explain how my research advances my field and scientific understanding more generally?

Professionalism and Management and Leadership Skills

- Do I assume responsibility for understanding the expectations of my dissertation committee at the conclusion of a committee meeting?
- Do I understand the overall philosophy of research/the scientific method?
- How effectively do I negotiate differences of opinion with mentors, peers, and other scientists?
- How could I improve my multi-tasking skills?

Career Advancement

- Am I continuing to explore career options and build my professional network?
- Am I taking advantage of opportunities to network with seminar speakers and at professional conferences?
- Have I considered what careers may be a good match for my skills, interests, and values? (*ScienceCareers* MyIDP is an excellent tool for this.)
- Are there gaps in my knowledge or experience that I should aim to fill to prepare for my career? Have I set goals for filling these gaps? (See *ScienceCareers* MyIDP for a goal-setting tool.)

Graduate Training Year 4: **Trainee Expectations & Responsibilities**

As a fourth year graduate student you should be focused on your research, writing papers and communicating your findings. By now, you should have acquired considerable expertise in your chosen field and you should be exhibiting this expertise through more effective planning and implementation of experiments, through mentoring newer lab members and through discussions with others in your scientific community. By the end of the fourth year, your thesis project should be nearing completion, or at the very least, a detailed set of objectives for completion should have emerged. You should be able to read the literature critically, identify important new problems, develop hypotheses and design experiments to test them. These skills will be demonstrated by preparing and defending an original research proposal. Finally, you should begin planning for your postdoctoral fellowship or job search.

General

- Am I developing my original research project?
- Do I understand the expectations for successful completion of my thesis research?
- Do I have a clear plan for completing my PhD thesis research?
- Have I thought about my next career stage in light of my strengths, weaknesses, and passions?
- Have I discussed a timetable for completion and career plans with my mentor(s) and committee?

Scientific Knowledge, Research Skills, and Responsible Conduct of Research

- Am I establishing and demonstrating expertise in my chosen area of study?
- Am I staying up with the current literature in my field and becoming an expert in my area of research?
- Can I read the literature critically and identify assumptions, implications and/or alternate interpretations?
- Am I interpreting my own data, questioning my assumptions, and identifying implications of my findings?
- Am I asking important questions and independently designing experiments to generate answers?
- Am I developing good scientific judgment?
- Am I willing to learn new techniques and to take risks?
- Am I working with sufficient focus and intensity to drive discovery and complete my research objectives?

Communication

- Have I published a paper, or am I preparing manuscripts for publication?
- Can I write an original and competitive research proposal?
- What have I discovered? Why is it important? Can I articulate this? Can I deliver an effective seminar?
- Am I seeking out and taking advantage of opportunities to present my research?
- Am I at presenting my research results authoritatively?
- Am I attending local and national meetings and presenting my results?

Professionalism and Management and Leadership Skills

- Am I developing confidence as a member of the scientific community?
- Do I ask questions and enter into discussions in seminars, conferences and journal clubs?
- Am I managing my time for experiments, reading, and writing?
- Am I serving as a role model to junior students in the lab?

Career Advancement

- (*12 months in advance of thesis defense*) If I am planning to do a postdoctoral fellowship, have I started to identify and contact potential postdoctoral advisors? Have I explored postdoctoral fellowship funding options to determine if I need to apply for funding within the first year of my postdoctoral training?
- Have I started to narrow down my career interests and focus my networking efforts to build contacts and seek advice from professionals in specific career fields?
- Are there gaps in my knowledge or experience that I should aim to fill to prepare for my career?
- Is my CV or résumé up-to-date? Does it specifically highlight my skills and accomplishments that relate to my career area of interest?

Graduate Training Year 5+: **Trainee Expectations & Responsibilities**

In the fifth year you should be focused on completing your experimental work, writing research papers and your thesis, and making plans for a post-graduate postdoctoral fellowship or job. You should have an outline of your thesis approved by your faculty advisor. You are expected to be an expert in your specific field of research and have command of the literature, and you should be able to articulate how your research advances your field. By the end of the fifth year you should have defended your thesis or have a clear timeline for finishing. If you are planning a postdoctoral fellowship, you should have interviewed with potential postdoctoral advisors and investigated postdoctoral fellowship funding options.

General

- Have I set my thesis defense date?
- Have I made plans for the next stage in my career? If not, what must I do to complete these goals?

Scientific Knowledge, Research Skills, and Responsible Conduct of Research

- Can I demonstrate that I am an expert in my field?
- Can I present and defend my work in an authoritative manner?
- Can I articulate how my work contributes to the knowledge in my field?
- Can I demonstrate that I have a breadth of knowledge in areas related to my area of research expertise?
- Am I able to balance bench work with writing papers and finalizing my thesis?
- Have I reached a high level of proficiency in the laboratory?
- Do I have a clear path and timetable for completion and publication of my thesis research?
- Do I think creatively about the implications of my research to other work in the field?

Communication

- Have I presented my research in national or international meetings?
- Have I prepared and practiced my thesis defense?
- (*if applicable*) For postdoctoral interviews, have I prepared and practiced a research presentation that can be understood by a diverse scientific audience?
- Have I demonstrated writing skills through publication of my research or writing chapters of my thesis?

Professionalism and Management and Leadership Skills

- Can I confidently discuss the current literature in my area of expertise?
- Do I ask questions and enter into discussions in seminars, conferences and journal clubs?
- Have I maintained good communications with mentors, peers and administrative staff?
- Have I effectively communicated with my committee about finalizing and defending my thesis research?
- Am I a role model in the laboratory to junior students?

Career Advancement

- Can I clearly articulate my career goals?
- Is my CV or résumé up-to-date?
- Is my CV or résumé tailored to my career area of interest? Does my CV or résumé specifically highlight my skills and accomplishments that relate to that career path and omit irrelevant information?
- Have I reviewed and polished my online presence?
- Have I prepared for interviews?

Neuroscience Graduate Program Plagiarism Prevention Agreement

I have thoroughly read and understand the "Guide to Avoiding Plagiarism" (http://www.usc.edu/student- affairs/student-conduct/ug_plag.htm). I certify that I have not plagiarized any portion of my written qualifying exam, nor will I engage in plagiarism at any point in my graduate studies at USC.

Name: _____

Signature:_____ Date:_____

Neuroscience Graduate Program Laboratory Rotation Contract

Instructions: Complete all fields in this form at the beginning of your rotation and return the form with your signature (and the faculty member's signature) to Deanna Solórzano. Upon completion of the rotation, you will need to complete the rotation summary form to conclude participation in this lab, which will include the faculty members' comments and signature.

Name:_____ ID#:_____

Lab Rotation #_____ Dates:_____through_____

Lab Phone # (where student can be reached) _____

Research Project:

_____

_____

_____

_____

_____

_____

_____

Student Signature:_____ Date:_____

Faculty Name:_____

Faculty Signature:_____ Date:_____

Important Question to Faculty: If you accept this student into your lab, how will the student be supported during her/his PhD studies?

_____

_____

_____

Neuroscience Graduate Program Rotation Summary

To be completed after rotation.

Name:_____ ID#:_____
Lab Rotation #_____ Dates:_____through_____

Research Project:

_____

_____

_____

_____

Student's Summary of Research Project and Lab Experience:
(Attach additional pages if needed)

_____

_____

_____

_____

Student Signature:_____ Date:_____

Faculty Evaluation of Student's Rotation Performance:

Technical Competency:

_____

_____

Productivity:

_____

_____

Motivation to learn:

_____

_____

Faculty Name:_____

Faculty Signature:_____ Date:_____