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Introduction

Neuroscience is a multidisciplinary approach to understanding nervous systems at levels ranging from the molecular and cellular to the whole organism. The goal of the Neuroscience Graduate Program is to prepare students for careers in research, teaching and/or scientific administration. Students are expected to learn the fundamentals of neuroscience, starting with a required course sequence to become knowledgeable concerning a range of research methods, and to demonstrate capability in original research. The specific research training received by a graduate student is the responsibility of the Major Professor/mentor, under whose guidance and in whose laboratory the student carries out research projects leading to the degree. Our students benefit from an interdisciplinary training approach, tailored by the major advisor but enriched by the readily available expertise and laboratory facilities of program faculty with backgrounds ranging from chemistry through molecular biology to psychology. In addition to this training, regular Neuroscience Colloquia (NRSC 287) make students aware of current scientific advances as well as the range of opportunities open to neuroscientists whose interests and talents can lead to careers in academia as well as the biotechnology industry and science administration. This handbook is designed to guide your development as a graduate student in the Neuroscience Program at the University of California, Riverside.

The Academic Program (Ph.D.)

The general requirements of the Neuroscience Ph.D. Program include

- completion of basic coursework
- completion of two quarters of teaching
- completion of dissertation research proposal and passing the qualifying examinations
- preparation of the Ph.D. dissertation
- successful defense of the dissertation

The normative time for completion of the Ph.D. degree requirements is fifteen quarters (5 years). Students are strongly encouraged to identify a Major Professor and begin laboratory research as soon as possible after arriving at UCR. Most coursework and preparation for qualifying examinations is completed during the first two years, while maintaining research as the highest priority. The remaining 2-3 years are devoted to research and to the writing and defense of the dissertation, although students continue to participate in graduate seminars and may take additional coursework during this period.

Briefly, you are expected to achieve three major goals during your time in the program: 1) pass the qualifying examinations by the end of your seventh quarter or no later than the ninth quarter in residence; 2) prepare an original written dissertation proposal 3) produce and file your dissertation by the end of your fifteenth quarter.
The following is a timeline guide to achieving these goals and other requirements:

1. **Choose your Major Professor.** Your choice of Major Professor is critically important and must be done carefully and thoughtfully. This is the Neuroscience faculty member who is primarily responsible for your scientific training. Your research direction will be shaped by the direction of research conducted in the laboratory of this faculty member. In addition to providing the critical role of mentor in the student’s scientific development, the Major Professor will serve as Chair of the student's Guidance and Dissertation Committees and provide research facilities and the intellectual guidance required to complete the dissertation. Since you cannot truly begin your own research until you have selected a Major Professor, it is critical that you make this decision as soon as possible, by the end of the 3rd quarter at the very latest. There are two important principles to understand: (1) you need the permission of a faculty member to work in their lab or to be your Major Professor, and (2) you are permitted to switch labs and Major Professors, provided that you have permission from the new Major Professor.

It is also strongly recommended that new students **join the Society for Neuroscience (SFN)** before the end of their first quarter. See the SFN webpage for membership benefits and applications: [http://web.sfn.org/](http://web.sfn.org/).

2. **Meet with your Guidance Committee as soon as possible,** preferably during your initial quarter of study. The Guidance Committee is assigned by the Graduate Advisor in consultation with the student and faculty. The Guidance Committee will be chaired by the student’s current research supervisor and will design a course of study which will: (a) make up any course deficiencies; (b) meet the Program’s course requirements; (c) prepare the student for research in the student’s chosen area of specialization; and (d) formally evaluate the student’s performance at least once per year. The Committee also will assist the student in selection of an appropriate Major Professor. Guidance Committees typically consist of three members. The Graduate Advisor is not expected to attend meetings of the Committee but, is expected to be notified of all meetings in advance and the results of all meetings and has the right to attend any or all of them.

3. **Rotations.** Students who have not selected a Major Professor are strongly urged to complete two or three, five to ten-week laboratory rotations during their first academic year at UCR. If a student has already chosen a laboratory for his/her thesis work, rotations are not necessary. If a student is uncertain about the laboratory for his/her thesis research, laboratory rotations are helpful. During a rotation, students spend time familiarizing themselves with research techniques utilized in the laboratory of a Neuroscience Program faculty member. Rotation laboratories are chosen in consultation with the Graduate Advisor and individual faculty members.

4. **Complete course requirements,** including (1) Fundamentals of Neuroscience 200A, B and C; (2) at least one Research Methods course; (3) at least two courses or one course sequence from one of the following three areas: [i] behavioral science, [ii] physiology and pharmacology, [iii] biochemistry, cell & molecular biology; (4) enrollment and participation in the Colloquium in Neuroscience (NRSC 287) each quarter in academic residence. Additionally, every student will take at least two seminars, Special Topics in Neuroscience (NRSC 289, 2 units; Fall and Spring Quarters), during each year of academic residence. Students in the Ph.D. program must normally have completed a Bachelor’s degree in one of the biological sciences, with a preparation deemed equivalent to that required for the bachelor’s degree from UCR. Students who are admitted to graduate standing with deficiencies in preparation may be required by their Major Professor and Guidance Committee to take appropriate undergraduate courses.
Complete your teaching requirement. A minimum of two quarters of service as a Teaching Assistant in Neuroscience or related-area courses is required regardless of whether financial support comes from Fellowship or Research Assistantships, etc. All students will participate in the Graduate Division’s Teaching Assistant Development Program (TADP). During the quarter your Teaching Assistantship begins, you are required to attend (1) the New TA Orientation and (2) the TADP’s TA training seminars and workshops. See the TADP website for schedules and contact information: http://www.graddiv.ucr.edu/TADPtoc.html. You can also contact the TADP Coordinator by e-mail: admintadp@ucr.edu.

All international students must take the SPEAK test and obtain a passing grade before they can be appointed as a TA. Students receiving a “clear pass” on the SPEAK test (scores ≥ 50 out of 60) have no further requirements and can be appointed to TA positions. Students receiving a “conditional pass” (scores of 40-45) can be appointed as a TA for three quarters, but are required to take English classes at the Learning Center and retake the test. Their TA appointment is on a probationary basis with the approval of the Graduate Dean. Students receiving a “no pass” (scores of 20-35) may not be appointed as a TA until they have retaken the test and obtained a clear or conditional pass. Contact Stacy Sweeney at the UCR Extension Center for more information regarding the SPEAK test: (951) 827-1701 (esl@ucx.ucr.edu).

5. Qualifying Examinations. After completing the course requirements and no later than the ninth quarter in residence, the student will be given a qualifying examination in two parts. Work on Part I will begin by the fourth quarter in residence.

In Part I the student will prepare a research proposal assigned by the Guidance Committee on topics relevant to the student’s research area. The format should along the lines of a grant proposal to a major funding agency (e.g., NIH, NSF, etc.). The student is required to demonstrate an ability to integrate material from original research papers and review articles and to discuss avenues for future research. The grant proposal must be given to members of the oral exam committee at least two weeks prior to the oral exam (see Part II, below) and should include all required components (e.g., face page, budget, resources, CV) required by that agency. However, students need animal protocols or hazardous waste forms and are not required to obtain letters of collaboration from faculty that are not in the Program.

Part II will be the oral qualifying examination conducted by the Qualifying Committee in accordance with the regulations set forth in the UC Riverside Graduate Student Handbook. The Qualifying Committee, consisting of at least five members, will be nominated by the Graduate Advisor in consultation with the student and the student’s Major Professor and will be officially approved by the Graduate Dean. The Major Professor typically is not a member of the Qualifying Committee, although exceptions can be made under appropriate circumstances. One member of the Qualifying Committee, not from the Student’s academic unit, will be designated as the outside member. The Committee reads and evaluates the research proposal and conducts the examination. Oral exams typically last about 2-3 hours, consisting of a short (20-30 minutes) presentation of the research proposal by the student, followed by a question and answer period. **No more than two attempts to pass the oral examination will be allowed.**

7. Work on the Dissertation. Once a student has advanced to candidacy by passing the Qualifying Examinations, a Dissertation Committee of three faculty members will be nominated by the student and supervisor and appointed by the Graduate Dean. The Dissertation Committee will be chaired by the student’s Major Professor. Members of the committee will usually be selected from the faculty
who were on the Qualifying Committee. The student is required to submit a written dissertation proposal to the Dissertation Committee for comments and approval. Normally, this should be an updated version of the grant proposal written for Part I of the Qualifying Exam, in the format of an appropriate funding agency (e.g., NIH, NSF, etc.) and including detailed descriptions of the proposed experiments. The Dissertation Committee will meet at least once every six months with the student to review the student’s progress.

8. **Dissertation Defense.** Before the dissertation is given final approval, the student must present a public lecture on the dissertation research to faculty and students in the program. Following the public lecture, the student will meet with the Dissertation Committee for an oral defense in accordance with the regulations of the Graduate Division. Please refer to the timetable found at the end of this handbook.

**Satisfactory Academic Progress**
Normative time for the Ph.D. degree in Neuroscience is fifteen quarters (five years and one quarter). Normative time is defined as the period of full-time registration required to earn the degree, assuming that the student enters with a bachelor’s degree and has no course deficiencies or need to take any remedial work. For most programs at UCR, this falls between five and seven years. Because the Ph.D. is a research degree, the University gives programs considerable latitude in establishing degree requirements. As stated above, in the Neuroscience Program the individual student’s program of study is planned in consultation with his or her guidance committee, which supervises the student’s progress prior to the appointment of the dissertation committee. After the student advances to candidacy, the dissertation committee oversees the student’s progress in the final stages of his or her degree program.

For all students, evaluations of progress are carried out each spring by the student’s Major Professor. All evaluations are reviewed by the Graduate Advisor, who is responsible for making specific recommendations to the Graduate Division concerning the student’s progress. The Graduate Advisor may also approve exceptions to the normal time schedule occasioned by unusual circumstances. Students are notified in writing of the results of the annual evaluation, and copies are forwarded to the Graduate Division.

**Unsatisfactory Academic Progress**

It is hoped that you will make good progress in your degree program. Failing to do so will have serious consequences for your career in graduate school. If you do not reach deadlines such as qualifying exams in a timely fashion, if your GPA drops below the minimum level of 3.00 (3.50 for Fellowship recipients), if you have 12 or more units of “I” grades, or if your advisor feels that you are not advancing as you should, the Graduate Division can and will block your registration. In addition, opportunities for receiving funding through the Program become severely limited.

**M.S. Degree**

A Thesis Plan (Plan I) or Non-Thesis Plan (Plan II) M.S. degree in Neuroscience is available under special circumstances, when the work leading to the Ph.D. degree cannot be completed. Whether either of these options is appropriate will be decided by the student’s Guidance Committee, typically either at the end of the first year, or at the time of the qualifying examination. See General University requirements for Plan I and Plan II M.S. degrees: [http://graduate.ucr.edu/masters.html](http://graduate.ucr.edu/masters.html).
NEUROSCIENCE GRADUATE STUDENT ASSOCIATION (NGSA)

Neuroscience graduate students, with the support of the faculty, have formed the Neuroscience Graduate Student Association (NGSA). This association is intended to provide a means for graduate students to become involved in institutional issues and to promote social and scholarly activities amongst members of the UCR neuroscience community. A NGSA representative is a full member of the Neuroscience Graduate Program's Admission and Seminar Committees, and is invited to attend and vote on issues in Program faculty meeting, enabling neuroscience graduate students to take a proactive role in their education. Graduate students interested in the neurosciences are encouraged to join NGSA. To do so or to obtain more information, contact the 2012-13 NGSA President Zev Wisotsky and his e-mail address is zev.wisotsky@email.ucr.edu.
Advancement to Candidacy
Oral Qualifying Exam Procedures for the Ph.D.

- **Nominating Qualifying Committee:** Five committee members are nominated which most are affiliated with the program and should normally be voting members of the UC Academic Senate. One member of the Qualifying Committee is designated as the “Outside Member”, not holding an appointment in the student’s graduate program. Exceptions must be supported by a memo of justification from the Graduate Advisor.

- At least 4 weeks prior to the Qualifying Exams, send your nomination to Perla Fabelo, Graduate Student Affairs Officer, by completing the online form at: [https://ucrbsgsac.wufoo.com/forms/nrscphd-oral-exam-request-form/](https://ucrbsgsac.wufoo.com/forms/nrscphd-oral-exam-request-form/). The Qualifying Committee must be approved by the Graduate Advisor and the Graduate Division prior to the examination.

- Note: International students must advance to candidacy before the first day of instruction of Fall Quarter to qualify for reduced non-resident tuition.

- The Graduate Student Affairs Officer completes the Report of Departmental Requirements for the Ph.D. degree The Graduate Advisor certifies that the student has fulfilled all course requirements and notes any remaining requirements.

- The Graduate Student Affairs Officer prepares the “Report of the Qualifying Examination” (Form ‘3’) and provides the form and the student’s academic file to the Chair of the student’s Qualifying Committee a few days before the oral exam.

- Upon completion of the exam, the committee Chair obtains signatures of all the committee members on Form ‘3’ report and returns it with the student’s file to the Graduate Student Affairs Officer, who then forwards it to the Graduate Division. This must be done within 48 hours after the exam is completed. Advancement to Candidacy paperwork is then processed. Once completed, the Advancement to Candidacy fee will be assessed.

The Dissertation Committee may be nominated when you pass the Oral Qualifying Examination to avoid registration holds. You may send the following form to nominate the dissertation committee: [https://ucrbsgsac.wufoo.com/forms/nrscphd-dissertation-defense-request-form/](https://ucrbsgsac.wufoo.com/forms/nrscphd-dissertation-defense-request-form/)
General Requirements

Applicants must meet the general admissions requirements of the Riverside Division of the Academic Senate and the UCR Graduate Council as set forth in the Graduate Studies section…..including completion of an undergraduate degree (B.S. or B.A.). Applicants should have adequate background in biological sciences and physical sciences, ideally including courses in the following or equivalent areas: General Biology (1yr), Genetics, General Chemistry (1yr), Organic Chemistry, Physics, Calculus, and Statistics. Additionally, at least 20 quarter-units of courses distributed among the following areas are required, although applicants may be admitted with limited course work deficiencies and required to make up deficiencies as specified by the admissions committee: Biochemistry; Cell Biology; Molecular Biology; Physiology; Animal Behavior; Learning and Memory; Perception; Computer Science; and Neuroscience, Neurobiology, or Physiological Psychology, with laboratory.

Graduate Division

- Graduate Division’s World Wide Web site
  http://www.graddiv.ucr.edu/
- Graduate Student Handbook, published by the Graduate Division
  http://graduate.ucr.edu/pub_forms.html
- Graduate Studies section of the UCR General Catalog http://www.catalog.ucr.edu
FEES
2012-2013 academic year, per quarter for graduate students at UCR are as follows:

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<th>Service</th>
<th>Amount</th>
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<tr>
<td>Student Service Fees</td>
<td>324.00</td>
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<tr>
<td>Tuition</td>
<td>3,740.00</td>
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<tr>
<td>Recreation Center Fee</td>
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<td>Student Center Fee</td>
<td>110.00</td>
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<tr>
<td>GSA Fees</td>
<td>24.18</td>
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<tr>
<td>Health Insurance Fee (if applicable)</td>
<td>619.00</td>
</tr>
<tr>
<td>Student Services Fee</td>
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<tr>
<td><strong>Total California Residents</strong></td>
<td><strong>$4,882.18</strong> per quarter</td>
</tr>
</tbody>
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Non-Resident Tuition          | 5,034.00 |
**Total Non-Resident**        | **$9,916.18** per quarter |

Technology Fee:               | 2.00 per unit |

**NOTE:** Nonresident Ph.D. students advanced to candidacy receive a 75% reduction of nonresident tuition for a maximum of three calendar years. (fees as of 08/12)

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**Financial Support**

The main sources of graduate student support are Fellowships, Graduate Student Research Assistantships obtained through research grants awarded to the faculty, and Teaching Assistantships. Students who enter the Ph.D. program with strong undergraduate records are encouraged to apply for National Science Foundation or Howard Hughes Medical Institute fellowships. Students who have advanced to candidacy are encouraged to pursue funding in the form of training grants or fellowships. Other support is available through a variety of fellowships and grants from a number of university, state, and federal sources. Students in good academic standing and making acceptable progress in either the MS or Ph.D. program are typically supported by the Department.

**Departmental Financial Support**

**Teaching Assistantships (TAs):** This is usually a 50% time job, meaning that you theoretically work 20 hours per week on the average. The type of work varies according to the class. If it is a lab course, a 50% appointment means teaching two three-hour labs per week; if it is a discussion course, which means leading four one-hour discussion sections. Appointments are made for one quarter at a time, meaning that you will receive three monthly paychecks for each appointment. The rate of pay for a 50% Teaching Assistantship is $1,848.55 per month for the academic year 2011-2012. Students with Teaching Assistantships receive a partial remission of fees (PFR) and payment of the Graduate Student Health Insurance Program Fee (GSHIP).

**Graduate Student Research Assistantships (GSRs):** This is also generally a half-time position, with somewhat more flexible hours than Teaching Assistantships, and may be more than half-time during summer. These positions are usually supported by grant funding, and arrangements must be made through the professor one wishes to work with. Students with GSRs receive a partial remission of fees (PFR) and payment of the Graduate Student Health Insurance Program Fee (GSHIP).
NOTE: TAs and GSRs must be making acceptable progress toward their degree objective, must be advanced to candidacy within 12 quarters after entry, and must have fewer than 8 units of incomplete grades. In addition, TAs and GSRs must maintain a 3.00 GPA. Graduate students may not be employed more than 50% time or 20 hours per week during the academic year in any combination of appointments. During quarter breaks and in the summer they may be employed full-time.

Summer support: Students conducting research during the summer months typically receive financial support through grant funding.

Other Sources of Financial Support

Fellowships: UCR offers a variety of multi-year fellowship packages for incoming students that may include stipends, full or partial payment of tuition and fees, and appointment as TA or GSR. An applicant is judged on the quality of previous academic work, on evidence of ability to do research and other creative accomplishments, and on promise of becoming a productive scholar. Contributions to campus goals of achieving a diverse student body may also be considered.

Applications are made through your major department by submitting the application for admission and the required supporting documents (letters of recommendation, transcripts, test scores, etc.) To be considered for a fellowship, submit your admissions application by January 5.

Dissertation Research Grants provide funds to doctoral candidates for research expenses associated with the dissertation. Applicants must be advanced to candidacy and plan to be registered during the period of the award. Proposals may be funded up to a maximum of $1,000. These funds may not be used for preparing the dissertation copy or as a stipend for personal support. Contact the Graduate Division for applications.

Graduate Student Association (GSA) Minigrants help to pay the travel expenses of students who have been invited to present scholarly papers or posters at regional and national professional conferences. The program is administered by the Graduate Student Association and requires that departments agree to provide matching funds. Contact the GSA or the graduate student affairs officer for minigrant applications.

Graduate Diversity Programs

Dissertation-Year Fellowships

The Dissertation-Year Fellowship Program provides financial support during the final year of dissertation work. Recipients must demonstrate high potential, promise and the desire for an academic career. Faculty mentors assist fellows in acquiring skills necessary to become candidates for faculty positions at major universities. Support is also provided to enable fellows to present their research at other UC and CSU (California State University) campuses.

Students may be nominated for the following fellowships:

1. Graduate Research Mentorship Programs (GRMP)
2. Dissertation-Year Fellowship Awards (DYFA)
3. Chancellor’s & College Dissertation Fellowships (C&CDF)

For more information on Graduate Diversity Programs, contact the Director, Maria Franco-Aguilar at (951) 827-3680 or e-mail maria.franco-aguilar@ucr.edu

In addition to the fellowships, assistantships, grants, and loans administered by the University, graduate students may also be eligible for other types of support provided by federal agencies and private foundations. Organizations that have awarded fellowships and research support to UCR students include the National Science Foundation, National Institutes of Health, U.S. Public Health
Service, U.S. Department of Education, Fulbright Program, Phi Beta Kappa Alumni Scholarships for International Scholars, and Sigma Xi. If students wish to explore these sources of support for study, they should consult the Annual Register of Grant Support and other similar directories either at the reference department of the Science library or through the Financial Support section in the Graduate Division (http://www.graddiv.ucr.edu/FinSuptoc.html). There are many sites on the World Wide Web devoted to various sources of aid for graduate students.

* California Student Aid Commission Home Page: http://www.csac.ca.gov/
* Financial Aid Information Page: http://www.finaid.org (check FASTWEB)
* National Science Foundation: http://www.nsf.gov/
* The Foundation Center's Home Page: http://www.fdncenter.org/
* Purdue University (includes general listings): http://www.purdue.edu/DFA/
* FellowshipOffice National Research Council: http://www.nas.edu/subjectindex/fel.html

For more information contact Karen Smith at (karen.smith@ucr.edu) with the UCR Graduate Division.

**Extramural Support**

There are many opportunities for Graduate Students from outside funding sources from federal agencies and private foundations. UCR subscribes to several searchable databases listed on the Office of Research Affairs web site at www.ora.ucr.edu:

UCLA also offers a comprehensive database called GRAPES (Graduate and Post doctorate Extramural Support). The web address is http://www.gdnet.ucla.edu/grpinst.htm

**Funding Definitions:**

**Partial Fee Remission (PFR):** Students who are appointed at 25% or more time during an academic quarter as a GSR or TA are entitled to PFR. This entitlement pays part (but not all) of the students' mandatory university fees. The Graduate Student Affairs Officer provides Graduate Division with a list of the students who are eligible for this entitlement before the student bills are printed. If an award is placed on the system after bills are printed, the student's bill will not reflect the correct fees they owe.

**Graduate Student Health Insurance (GSCHIP):** Students who are appointed at 25% or more time during an academic quarter as a GSR or TA are entitled to have their GSCHIP fees paid for them. The Graduate Student Affairs Officer provides Graduate Division with a list of the students who are eligible for this entitlement before the student bills are printed. If an award is placed on the system after bills are printed, the student's bill will not reflect the correct fees they owe. The actual dollar amount of GSCHIP changes as the insurance prices change from year to year. Students who have private Health Insurance comparable to the University's coverage can apply for waivers of the GSCHIP fees. If a student has comparable health insurance coverage s/he may apply for an exemption of the GSCHIP premium by filing the appropriate paperwork with the Health Center. Deadline dates for petitioning for exemption from GSCHIP are firm. Contact the Student Health Insurance coordinator at (951) 827-5683 or (951) 827-3031 for information.

**Non-Resident Tuition Remission (NRT or NRTR):** Non-residents of California (either Domestic or International) who are appointed at 45% or more as a GSR are entitled to have their Non-Resident Tuition paid for them.
The Graduate Student Affairs Officer provides Graduate Division with a list of the students who are eligible for this entitlement before the student bills are printed. If an award is placed on the system after bills are printed, the student's bill will not reflect the correct fees they owe. International Students cannot ever establish residency and will owe Non-Resident Tuition for their entire student careers. (However, when a student Advances to Candidacy, his/her Non-Resident Tuition is reduced to 0% for a period of nine quarters.) Domestic non-resident students must establish California residency by the second year of study. You must petition in person at the Office of the Registrar, Student Services Building, for a change of classification from nonresident to resident status. All changes of status MUST be initiated before the first day of classes for the term for which you intend to be classified as a resident. Students planning to file for residence status after their first year should talk with the Residence Deputy well before the appropriate residence determination date, preferably during their first few weeks in California.

**Fee Differential:** The left-over university mandatory fee amount for a student with a PFR and GSHIP and NRTR entitlements. This dollar amount changes as GSHIP and PFR increase. Most students are required to pay this.

**Departmental Grant In Aid (DGIA):** Departments or individual faculty members with unrestricted funds (many federal grants will not allow payment of student fees) can grant fellowship-like awards to individual students. This is most often used to pay the Fee Differential. The Graduate Student Affairs Officer provides Graduate Division with a list of the students who are to receive these awards, indicating the account and fund information. Graduate Division then awards it to the student through the Financial Aid System.
CURRENT PROGRAM OFFICERS

Acting Program Director and Graduate Advisor for Enrolled Students
Dr. Scott Currie, (2380 Spieth Hall) Overall responsibility for ensuring that the Program meets its goal of recruiting and providing the best possible training for its graduate students. Administers Program resources, makes committee appointments and provides leadership in setting policy as well as responsible for overseeing the processing of all graduate student applications and for the initial assignment of guidance committees. E-mail: Scott.Currie@ucr.edu, (951) 827-2411.

Graduate Advisor for Admissions/Recruitment - Dr. Margarita Curra-Collazo (3113 Biological Sciences Building). E-mail: margarita.curra@ucr.edu, (951) 827-3960.

Graduate Student Affairs Officer - Perla Fabelo (1140 Batchelor Hall) Assists students on admissions, financial aid, fellowships, housing, academics and student life; process and maintain student files; program planning, interpreting and implementing of University policies and regulations. E-mail: perla.fabelo@ucr.edu, (951) 827-4716.

NGSA President – Zev Wisostky, zev.wisotsky@email.ucr.edu

For information on the graduate program’s faculty, visit the Neuroscience Graduate Program web site at: http://neuro.ucr.edu

BIOLOGICAL SCIENCES GRADUATE STUDENT AFFAIRS CENTER STAFF
1140 Batchelor Hall

Director – Kathy Redd oversees the operation of the Center. She is also the primary contact for the Biomedical Sciences, Cell, Molecular and Developmental Biology and Microbiology. E-mail: kathy.redd@ucr.edu, (951) 827-5621

Graduate Student Affairs Officer – Dawn Huffman is the primary contact for Environmental Toxicology, and Biochemistry. E-mail: dawn.huffman@ucr.edu, (951) 827-4116.

Graduate Student Affairs Officer – Melissa Gomez is the primary contact for the Biology and Entomology. E-mail: Melissa.gomez@ucr.edu, (951) 827-5913.

Graduate Student Affairs Officer – Deidra Kornfeld is the primary contact for the Botony & Plant Sciences, Plant Pathology and Genetics, Genomics and Bioinformatics. E-mail: deidra.kornfeld@ucr.edu, (951) 827-5688

Graduate Student Affairs Officer - Perla Fabelo is the primary contact for the Neuroscience, Statistics and Applied Statistics. E-mail fabelo@ucr.edu, (951) 827-4716

Graduate Student Affairs Assistant – Estella Davalos is the primary contact for Scheduling. Email: estella.davalos@ucr.edu, (951) 827-2599.
# BNN Administrative Unit Guide - Staff Duties

## Administrative Contact Information:
- **BEV** – beverly.mcnell@ucr.edu or x25902 (LSP 2740)
- **DEBBIE** – debbie.drake@ucr.edu or x25935 (located in LSP 2725)
- **HEATHER** – heather.mcdermott@ucr.edu or x25903 (located in LSP 2710)
- **JAY** – jay.palma@ucr.edu or x24367 (located in LSP 2705)
- **JERI** – jeri.haley@ucr.edu or x22965 (located in LSP 2720)
- **JESSICA** – jessica.pacheco@ucr.edu or x22282 (located in LSP 2730)
- **KRISTINE** – kristine.vitacek@ucr.edu or x25904 (located in LSP 2715)
- **AMMIE** – ammie.debus@ucr.edu or x23602 (located in LSP 2735)
- **TARA** – tara.pastucha@ucr.edu or x25937 (located in LSP 2805)
- **TERRI** – terri.romano@ucr.edu or x25909 (located in Spieth 1216A)

## General Front Office Duties:
- **HEATHER** – Answers main BNN phone (x25903), Distribution of all unit keys and FOBs (Key hours: 7:30am – 10:30 and 3:30 to 4:30pm). Handles incoming and outgoing mail, Fed Ex/UPS/DHL, Media Requests, Seminar announcements and parking permits. Approves online room reservations for BSB1103, LSP 2550, Spieth 1239 and 3365.
- **KRISTINE** – Back-up to above duties

## Payroll/Personnel:
- **JAY** – Responsible for Staff recruitments and processing Payroll and Personnel transactions for faculty, staff, and students in the BNN Unit. Oversight of monthly payroll entry, online changes to employee appointments and back-up for monthly timesheets.
- **KRISTINE** – (pending training) Responsible for entering monthly payroll hours, filing and general payroll/personnel assistance to Personnel Specialist (Jay). Completes necessary volunteer documents.
- **TARA** – Collection of monthly timesheet and verifies calculation of hours.
- **AMMIE** – Monthly reconciler of time entry (DOPE). Tracks and updates pending appointments changes in PPS.
- **DEBBIE, JESSICA, BEV** - Payroll reviewers. **JERI** – Payroll Expense transfers and back-up to Jay. Each handle Annual Certifications for Contract & Grant Funding.
- **HEATHER** - Distributes paychecks or other reimbursement payments.

## Travel and Other Reimbursements:
- **HEATHER** – Main contact for Travel and other reimbursements.
- **TARA** – Back up contact for travel and other reimbursements.

## Printing and Reprographics:
- **HEATHER** - Main contact for all Printing and Reprographic requests
- **TARA/KRISTINE** – Back-up for P&R

## Purchasing:
- **TERRI** – Main Purchasing Agent for unit
- **TARA** – Responsible for Stockroom maintenance and assists with general purchasing and Recharges
- **HEATHER** – Bookstore recharges. She is also responsible for management of the equipment inventory for the unit.
- **ADAM** – Purchasing and Stockroom assistance (also general assistance to BNN Unit).

## Computers:
- **DEBBIE** - Microcomputer support and back-up for Telecommunication assistance.
- **JESSICA** – Back-up Microcomputer support.
- **AMMIE** - Primary Telecommunication assistance (Enterprise Directory, telephone or data Problems or installation requests).
CONTRACTS & GRANTS OR OTHER FINANCIAL MATTERS:

AMMIE – Monthly financial ledger reconciliation, Vehicle Inventory, Purchasing Card Administrator (ProCard) and transfers, Utility billing management, Web Recharge (with Jeri) for Storeroom, Fly food, Shop, Stem Core Center. Gift processing & misc deposits.

DEBBIE – CBNS Contracts and Grants – Proposals and ongoing managing of PI funds. Responsible for monthly statements to PIs and Stem Cell Center. One of Department SAAs (Systems Access Administrator).

JESSICA P. – Biology Contracts and Grants – Proposals and ongoing managing of PI funds. Responsible for monthly statements to PIs.

JERI – Supervisor for Financial Operations for BNN Unit; supervises above employees and back-up for their areas. Responsible for Contracts and Grants for the Natural Reserve System including proposals and ongoing managing of awards. Responsible for monthly statements for Interdepartmental Graduate Programs, Natural Reserve Centers and Departmental Operating Funding for Biology and Cell Biology & Neuroscience. One of Department SAAs. Back-up to Bev (FAO) and in charge for all BNN business in her absence.

ROOM RESERVATIONS:

BSB/Spieth/LSP Locations –
1239 (Darwin Room), 3365 (Moore Room), 1103 and 2550 (CBNS Conference rooms) can be reserved by logging onto internet reservation site: frs.ucr.edu (no www” required with this address). Heather will be primary contact for approval once you submit request through this website. (Tara and Terri are backup).

BSB (additional rooms) - 2101, 3101 (Conference Rooms), are reserved by emailing bndmin@ucr.edu and Heather is main contact, Terri and Tara are backup contacts.

GRADUATE STUDENTS AND POST DOCS: Terri assigns offices according to department listing of available space.

BIOLOGY SHOP:

LAURIE – Constructs, redesigns and repairs mechanical, electronic and refrigeration equipment for teaching and research on a recharge basis - x22117 or laurie.graham@ucr.edu

FACILITIES:

LAURIE – Contact for any equipment of mechanical problems. For problems such as lights, plumbing, or other building maintenance, you can submit a Trouble Ticket to Physical Plant’s website accessed through RSpace. Or please contact Heather in the front BNN office to assist with submitting one.

BEV – Contact for any renovation or other Physical Plant billable work order.

LAB PREP STAFF:

Assistance with instructing personnel on autoclave use (Spieth), requesting service/repair on autoclaves (Spieth), short term loan of lab equipment, use of teaching labs outside of scheduled classes, trouble tickets for teaching labs. Primary receiving of purchased goods. Located in Spieth 1229; Phone: x23830 and email contact:
For general inquiries: labprepbiology@ucr.edu or you can direct your concerns to a specific person: esther.valdez@ucr.edu, jon.allen@ucr.edu, mikyong.kim@ucr.edu, xinxia.li@ucr.edu, rachael.keast@ucr.edu.

If you do not find service you are in need of, please contact Heather in BNN front office at x25903 and she will direct you.
BNN BUSINESS OFFICE GUIDELINES
(The Interdepartmental Graduate Program in Neuroscience falls under the BNN Department Unit)

The purpose of the BNN Business Office (2840 LSP) is to provide administrative support. To this end, we have established the following guidelines:

**Hours of Operation** - Normal Business Hours are: (7:30a.m.-12:00p.m., 1:00p.m.-4:30p.m.).

**Office Supplies** - The office supplies available in the business office are for department use only.

**Administrative Analysts** are responsible for assistance with submission of contract and grants and with all accounting functions for funding through the unit.

**Assistant Analyst** is responsible for ledger review, pro card, petty cash reimbursements, and distribution of keys.

**Administrative Assistants** are responsible for a number of administrative tasks including coordination of travel reports, check requests, recharge transactions, etc.

**Administrative Specialist** is responsible for employment forms, collection of time sheets and entering time into the payroll/personnel system.

OTHER IMPORTANT DEPARTMENT INFORMATION

**E-mail Accounts** - All graduate students will use the e-mail account assigned to them upon entry to campus program. If you have any questions, contact Perla Fabelo, graduate student affairs officer.

**Keys/Codes** - To receive building keys or access codes to the Vivarium or Biological Sciences Building, obtain a *key record form* from the Business Office and obtain the appropriate signatures from responsible faculty members and/or supervisors, and the Department Chair and/or BNN Administrator. A deposit of $5.00 per key/code is required (building entry key and TA master key are now $15.00 each), payable in the Business Office. Keys are issued by Jay Palma in the Business Office. Hours will be posted.

Keys are not issued to the Storeroom. If, during normal working hours, the Storeroom door is locked, an entry key may be checked out from the business office front desk.

Only the Chair or Department Administrator can provide signature authorization to enter the Vivarium. Also, before access is granted, a prospective vivarium user must be endorsed via the Campus Veterinarian's Office. Obtain a copy of the Key Record form, obtain required signatures and pay key deposits. Upon completion of these elements, see front desk for keys and access to the keyless entry system and intrusion alarms.

A copy of the Department Key Policy is available in the business office. If you are issued building keys, PLEASE, DO NOT LOSE THEM! Lost keys compromise our building security.
**Photocopying** - To enable you to use the applicable department copy machines, please see Heather McDermott in 2840 LSP. She will assign you a number for personal use and for class use. The department does not pick up charges for dissertation preparation. If you are enrolled in a 297 or 299 course, the department will cover up to $90.00 (900 copies) total copy charges per year. The Unit does have a Fax Machine and there will be a log for students to complete information and Debbie Drake bills for these at the end of each month. Please contact front desk staff or Debbie for more information at your time of need.

**Mail Boxes** - Graduate students are assigned mail boxes, which are located in LSP. If you have not been assigned one, see the front desk. The mail is delivered twice a day, once around 10:00 a.m. and once around 2:30 p.m. It is very important to check your box daily. Personal mail is not to be delivered to or from the University and the University's name MAY NOT APPEAR ON PERSONAL CHECKS OR BANKING ITEMS.

**Offices** – The Department makes every attempt to give each graduate student in good academic standing desk space. Assignments are overseen by the Department Administrator in coordination with the appropriate Chair, graduate advisors and the faculty.

**Coursework Boxes** - Teaching Assistants for introductory Biology courses will be assigned locked boxes for collection of coursework. These boxes are located across from the main office and the key for them is kept in a cabinet in Spieth 1118.

**Centralized Facility for Advanced Microscopy and Microanalysis (CFAMM) (B116 Bourns Hall):** The campus has excellent resources for conducting many types of microscopy including electron microscopy. The centralized electron microscopy facility provides state-of-the-art facilities for doing transmission and scanning electron microscopy. The centerpieces of the facility are Philips scanning electron microscopes and transmission electron microscopes, which are capable of digital imaging. The facility is managed by Krassimir Bozhilov (x2-2998 E-mail: krassimir.bozhilov@ucr.edu), who is assisted by Steve McDaniel, the biological specialist. The staff offers training on both instruments. Steve McDaniel can also train students to prepare tissue for both scanning and transmission electron microscopy on a recharge basis. The facility provides all ancillary equipment needed for tissue preparation for these instruments.

You may learn more about these microscopes by visiting the microscope web-site: [http://micron.ucr.edu](http://micron.ucr.edu).

**Light Microscopy Core Facility:** The campus has an outstanding light microscopy core facility. This facility, run by Dr. David Carter, maintains a comprehensive suite of instrumentation for fluorescence imaging and interactive experimentation, including two high resolution confocal systems (Leica SP2 UV and Zeiss 510), a high speed ocular viewing system (Meridian InSight Point) and a fully automated confocal workstation for chemical compound screening (Atto Pathway HT). In addition the facility supports an inverted Zeiss microscope equipped for micromanipulation and microinjection and a workstation for image processing and analysis. Several high performance software packages are available for image analysis. Free workshops are offered periodically for training on these instruments. For more information about the light microscopy core and training, please see [http://www.cepceb.ucr.edu/facilities/facilities.htm#Microscopy](http://www.cepceb.ucr.edu/facilities/facilities.htm#Microscopy).
Vivaria

Hours are 8:00a.m.-12:00p.m. and 1:00p.m.-5:00p.m., M-F.
All Vivaria are under the Management of the Campus Veterinarian
215 University Office Building, X2-5845

If you need to order, receive, or transport animals, you should work closely with your Vivarium Manager. Strict policies exist within the University with respect to guidelines and standards imposed by the National Institutes of Health (NIH) and the Animal Welfare Act.

**Biology Vivarium** - Leslie Karpinski is Manager of the Biology Vivarium (Spieth basement). E-mail: leslie.karpinski@ucr.edu, x2-5912.

**Psychology Vivarium** – Jim Sinclair is Manager of the Psychology Vivarium. (LSP B418) and assists in the Spieth Hall Vivarium. E-mail: james.sinclair@ucr.edu, x2-4528.

**Boyce East Vivarium** – Linda McCloud is Manager of the Boyce East Vivarium (Boyce Hall, 6th floor). E-mail: linda.mcloud@ucr.edu, x2-4620.

**Boyce West Vivarium** - Sally Scott is Manager of the Boyce West Vivarium (Boyce Hall, 6th floor). E-mail: sally.scott@ucr.edu, x1-5319.

**Campus Veterinarian** – Dr. Akiko Sato, V.M.D., Diplomate ACLAM is our campus-wide Veterinarian, in charge of overseeing all animal care on campus (215 Univ. Office Bldg). E-mail: akiko.sato@ucr.edu, x2-5845.

**Campus Vet Administrative Assistant** – Marie Peikert is the Administrative Assistant for the UCR office of the Campus Veterinarian and is responsible for issues of billing for vivarium services. She is located in room 216 University Office Building (UOB). E-mail: marie.peikert@ucr.edu, X26332.
UCR has a long history as a distinguished teaching campus and regards Teaching Assistant (TA) training as a crucial part of graduate instruction. The Teaching Assistant Development Program (TADP) sponsors activities designed to help TAs develop their teaching skills and to prepare them to be successful professors. Each Teaching Assistant is required to attend an orientation program, 2 pre-quarter seminars, 3 in-quarter workshops, and to have a classroom presentation videotaped so that he or she may receive expert feedback on teaching. TADP oversees the quarterly student evaluations of TAs and sponsors annual awards for outstanding TAs. In addition, TADP has a mentor TA program, in which TAs of proven ability have the opportunity to mentor their less experienced colleagues.
The SPEAK Exam (TOEFL Academic Speaking Test)

To be appointed a TA, any student whose native language is not English must pass an English proficiency exam. This includes not only international students but also any student whose first language is not English. The SPEAK exam is scheduled by the International Education Programs in University Extension approximately two weeks before the beginning of every quarter.

Those who score a conditional pass can be appointed as a TA but are required to participate in the appropriate English language classes at the Extension Center and retake the test. Individuals in this range may be appointed as TAs for up to two quarters on a probationary basis with the approval of the Graduate Dean. For those students within the probationary range, a determination of their continuing eligibility to serve as TAs will be made by the Graduate Dean on the basis of:

- Departmental recommendation, including an assessment of the student's academic ability.
- Student teaching evaluations.
- Other evidence of commitment to/performance in teaching (e.g., faculty evaluations or statements of support, videotapes).
- Evidence of a good-faith effort to improve English skills; and Relative proximity to the level of competence represented by a clear pass.
MONITORING EXAMINATIONS

1. The final responsibility for monitoring of examinations rests with the instructor in charge of the course. A faculty member should be present or immediately available if TAs are proctoring exams. There should always be at least two proctors in the room. If additional proctors are needed, the course instructor should attempt to arrange for faculty or TAs not assigned to the course to serve in this capacity.

2. Proctors should attempt to minimize the opportunity (temptation) for cheating:
   a. Clearly announce the expected disposition of books, papers, etc. (if they are allowed in the examination room). Make the consequences of violation of the announced procedure clear (see #3 below).
   b. Space students as far apart as possible.
   c. Use randomized seating arrangements, seating charts, or multiple versions of exams if appropriate.
   d. Ask students to move to a different seat if suspicious behavior is observed.

3. If suspicious behavior is observed, it should be confirmed by another instructor/TA, if possible. Suspicious materials present at an examination (i.e., notes, open books not used or disposed of according to announced policy; see #2a) should be taken by the instructor (or by the TA and turned over to the instructor). If suspected of cheating, a student should be informed by the instructor as soon as possible. It is up to the discretion of the instructor whether a student should be allowed to finish an examination if s/he is suspected of cheating. TAs SHOULD NOT MAKE SUCH A DECISION. These incidents should immediately be reported to the Department Chair and the Department Administrator.
CLASSROOM/LABORATORY SAFETY

You should familiarize yourself with the Biology IIPP (Injury, Illness and Prevention Program), the Department CHP (Chemical Hygiene Program), and the Emergency Procedures for Spieth Hall/Biology. Copies are available in the Business Office as well as in each major teaching and research laboratory. See Dan Rios or Paula Southard if you have any questions or need additional information.

1. **Proper Attire in a Laboratory Environment** - As a TA in a lab environment, you must set a good example for students. You are required to wear closed toe shoes, no sandals. Short shorts are not allowed. Wear eye protection when appropriate. Safety glasses should have side shields.

2. **Laboratory Safety Training** - As an employee of the University, you are required to attend Lab Safety Training provided by Environmental Health & Safety (EH&S). Please make arrangements through EH&S at x2-5528 to enroll in a session. Please attend this training as soon as possible.

3. **Classroom/Laboratory Accidents** - Report all lab accidents to the business office. Fill out a "Report of Injury" form and give the completed form to Valerie in the business office. For minor cuts and abrasions, treat with first aid and send student to Student Health Center. For major accidents, call 9911 Emergency. From the phone in the Teaching Labs call x2-5222 (Campus Police). Hallway and elevator phones are connected directly to Campus Police and may be used for any emergency. Use the shower and/or eye wash if necessary. In case of a serious injury, you should prepare an outline of the circumstances that led to the injury as well as your responses to the accident. This should be done as soon as possible after the class meeting so that the memory of the chain of events is clear in your mind. This outline should include as much detail as possible.

4. **Small Chemical Spills** - A spill kit is provided in each training laboratory. If a spill kit is not found in the lab on the first day, see Jon Allen. As a Teaching Assistant, be knowledgeable about hazardous materials used in the lab. Read the appropriate "Material Safety Data Sheet," commonly referred to as MSDS. In the event of a chemical or radioactive spill or laboratory accident resulting in a potential hazard to personnel or the environment, call EH&S at x2-5528 immediately. After hours/weekends, call University Police at x2-5222. In either case, responsible officials will be dispatched to you as soon as possible.

**Right to Know Law** - The "Material Safety Data Sheet" is required from vendors whenever chemicals are ordered. If such materials required an MSDS, it is sent to the ordering person and must be kept in the lab. The law stipulates that MSDS must be available to users of hazardous chemicals. See your faculty member for the binder or contact Dan Rios (x2-3600), or Environmental Health & Safety (x2-5528) for the materials if you have any questions.

While working with hazardous materials (either chemicals, micro-organisms or isotopes) in the teaching lab, your knowledge and familiarity with these materials is extremely important! In the event of an accident, your knowledge and understanding of the hazards associated with these materials will determine the appropriate response and, most importantly, may prevent injury to your students and yourself.
5. **Emergency Evacuation Procedures** - Refer to the evacuation procedures in the "Emergency Procedures for Spieth Hall/Biology" located in each laboratory. Know the best evacuation route. Bring your list of students with you. Assist those who need help. Shut the door where room is located. Guide your students to the designated assembly area and check in with your Building Supervisor for Emergency Conditions (BSEC). Remain in assembly area and await further instructions.

6. **Disposing of Hazardous Waste**
   (a) **Glass**: Each lab facility has a separate trash container labeled "GLASS ONLY." Place glass in these containers. (b) **Sharps**: Other sharp objects (i.e., razor blades, etc.) are to be disposed of in designated containers only! (c) **Recyclable**: Please deposit waste in proper containers. ("Recyclable" waste consists of paper, cardboard, etc. No food wrappers should be put into these containers.) (d) **Non-recyclable**: Please deposit waste accordingly into proper containers.

   **Organic Waste/Animals**: Make arrangements through your PI or faculty advisor to burn the material. Use double plastic bags and deposit into the freezer in the pathological incinerator room in the Spieth basement (Room 328). Carcasses contaminated with infectious organisms must be sterilized before they are packaged and placed in the freezer. Check with Environmental Health & Safety about the method to be used to sterilize the carcasses. DO NOT USE YOUR OWN METHOD. [http://www.ehs.ucr.edu/](http://www.ehs.ucr.edu/)

   **Chemical Waste**: Note that laws exist that regulate disposal of hazardous material; disposal of "unknowns" is prohibited. To minimize unknowns, it is strongly recommended that you label and date the items and dispose of them before labels peel off or become illegible. Non-radioactive, hazardous waste must be placed in containers marked with the identity of the material. Also, the "Chemical Storage/Disposal Record" of Environmental Health & Safety must be completed, and is available in the Business Office. Use of radioactive materials requires users to obtain a permit through Environmental Health & Safety (see your faculty advisor). Environmental Health & Safety issues special containers to dispose of radioactive waste. Again, consult the Department Chemical Hygiene Plan and Radioactive Waste Manuals.

   **Microorganisms**: When human pathogens are used, check with Esther Valdez in Lab Prep.

   **Syringes**: Laws exist establishing procedures for purchasing, storing, using, and disposing of syringes. Teaching Assistants and lab workers should be particularly careful about accountability and use of syringes in lab courses and projects under their supervision. Syringes and needles shall be stored under lock and key. After use, a hypodermic safety device should be used to destroy the needle and the plastic barrel. Broken syringes must be double-bagged and labeled "CAUTION." Place the labeled bag into the broken glass container, or other designated container, for disposal by the Custodian.
Ph.D. Degree - Target Outline

Name

Chair of guidance committee

Entered degree program

<table>
<thead>
<tr>
<th>Target Date</th>
<th>Date Completed:</th>
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### Year 1 – Lab Rotations
- Meet with guidance committee: first quarter
- Meet with guidance committee: third quarter
- Annual review of progress by Major Professor: third quarter

### Year 2 – Establish Home Lab
- Name qualifying committee: Fall quarter
- Research proposal to committee: Winter quarter
- Annual review of progress by Major Professor: Spring quarter
- Oral qualifying examination: Spring or summer
- Name dissertation committee: Spring quarter

### Year 3
- Meet with dissertation committee: Spring quarter
- Annual review of progress by Major Professor: Spring quarter

### Year 4
- Meet with dissertation committee: Fall quarter
- Annual review of progress by Major Professor: Spring quarter

### Year 5
- Meet with dissertation committee: Fall quarter
- Dissertation to committee: Winter quarter
- Annual review of progress by Major Professor: Spring quarter
- Defend dissertation: Spring quarter
Neuroscience Graduate Program
Guidance Committee Approval Form

This form is to be completed in the first quarter in residence.

(Please type or print)

Name______________________________________ Date_____________________

I would like to request the following members be appointed to my Guidance Committee. They have all agreed to serve on this committee.

________________________________, Chair

________________________________

________________________________

Approved:________________________________ ________________________________

(Guidance Committee Chair) (Graduate Advisor)
ANNUAL STUDENT PROGRESS REPORT
Neuroscience Graduate Program

NAME OF STUDENT: ________________________________ DATE PREPARED: ___________________

PROGRAM:  M.S. ☐ Ph.D. ☐ DATE ENTERED PROGRAM: _______

QUALIFYING EXAM: WRITTEN _______________________________ ORAL ___________________

DISSERTATION TITLE:
_________________________________________________________________________________________
_________________________________________________________________________________________

EXPECTED COMPLETION DATE: _____________________________________________________________

__________________________________________

ACADEMIC PROGRESS
(Comment on course work, deficiencies, research, etc.)

COURSE WORK (Please comment if student has completed core courses and proposed course work to be taken):

Have deficiencies been satisfied? ☐ Yes, ☐ No, If no please state the deficiencies that need to be met:

RESEARCH: (Please describe the students research accomplishments this year and indicate goals for next year):
RESEARCH: cont.

ACCOMPLISHMENTS: (Please indicate any special accomplishments, meetings attended, awards, etc. received by the student this year):

SUGGESTIONS/COMMENTS:

____________________________________________________

STUDENT SIGNATURE       MAJOR PROFESSOR/CHAIRMAN

GRADUATE ADVISOR
NRSC Graduate Program – Professional Development Requirement

- **Grant and professional writing**
  - NRSC 200A. Fundamentals of Neuroscience: Molecular and cellular mechanisms (3) F. Lecture, 3 hours. Students are required to submit a short original grant proposal, which is a significant portion of their grade. Feedback and constructive criticism are provided by the Instructor while students are formulating their proposal topic and aims, and after submission of the complete document. [See attached Grant Proposal Guidelines. **REQUIRED COURSE**.]

  - Part 1 (Written) Qualifying Exam. Students prepare a research proposal assigned by the Guidance Committee on topics relevant to the student’s research area. The format is along the lines of a grant proposal to a major funding agency (e.g., NIH, NSF, etc.). The student is required to demonstrate an ability to integrate material from original research papers and review articles and to discuss avenues for future research. The grant proposal must be given to members of the oral exam committee at least two weeks prior to the oral exam (Part II) and should include all required components (e.g., face page, budget, resources, CV) required by that agency. **DEGREE REQUIREMENT**.

  - ENTM 242. Development of Hypotheses and Research Design (3) F, W, S. Lecture, 1 hour; discussion, 1 hour; written work, 3 hours. Teaches fundamentals of research topic selection, development of hypotheses, and selection of experimental designs. Students prepare full-length federal grant proposals, then review and rank them in grant panel review format. **OPTIONAL, NOT REQUIRED**.

  - Fellowship Application Preparation and Research Proposal Writing: In Fall 2011 Maggie Curras-Collazo (Graduate Advisor, Recruitment & Admissions) and Mike Adams (Director of NRSC Graduate program) organized a workshop on fellowship proposal writing aimed at NSF Graduate Research Fellowship program, EPA STAR and Ford fellowship programs. The workshop targeted first- and second-year students in the NRSC Graduate program primarily. However, one student in MA lab and 4 from the Graduate Student Mentoring Program, sponsored by the Graduate Division, that were mentees or peer mentors of MCC also participated. Altogether, 11 students were provided training over 2 meeting times (about 8 hrs total). The workshop involved presentation of written proposals by applicants and evaluation and critiques by all participants, and instructors. Instructors also provided one-on-one feedback before and after the workshop. After and before One NRSC student, Matt Valdez, received an NSF GRFP Fellowship award. This activity is being planned for 2012 and faculty have suggested that it be continued in subsequent years as a formal course in professional development for graduate students.
Public speaking

- **NRSC 289.** Special Topics in Neuroscience (Seminar). Students take this seminar twice per year. During Fall, students are required to give oral presentations of papers related to a topic chosen by the instructor. During Spring, they are asked to present their own laboratory research, serving as practice for their oral Qualifying Exam (Part II). **REQUIRED COURSE.**

- **NRSC 200A.** Fundamentals of Neuroscience: Molecular and cellular mechanisms (3) F. Lecture, 3 hours. In addition to submitting a written grant proposal, students are required to give an oral presentation to the class on their proposal topic. This is often a student’s first oral presentation in the graduate program. **REQUIRED COURSE.**

- **NRSC 200C.** Students are required to make a presentation on a behavioral neuroscience model system not covered in class. The presentations occur during the last few classes of the quarter. Each presentation should be designed to last a maximum of 40 minutes. The student is responsible for providing at least 1 original article about the model at least 1 week prior to the presentation. Everyone is required to read the papers and should actively participate in discussions. **REQUIRED COURSE.**

Pedagogy

- TADP training and 2 quarters of required TA experience. As is other UCR graduate programs, all NRSC students are required to complete TADP training prior to their first TA assignment. Two quarters of TA experience are required for the Ph.D. **DEGREE REQUIREMENT.**

Other

- **Outreach to K-12:** NRSC faculty have promoted and facilitated opportunities for graduate student involvement in outreach. Since 1999 NRSC program faculty have organized social and educational events during Brain Awareness Week that have engaged the UCR community. More recently, graduate students have been empowered to assist and, in 2012, plan and conduct these events. In March 2012 graduate students under the auspices of the NRSC Graduate Student Association (GSA) organized social and educational events associated with the 2012 Brain Awareness Week. This event included poster presentations, games and activities, and free food/drinks, activities that targeted the local neuroscience community of faculty, graduate students and graduate students and postdocs. Faculty members K.R. and MCC assisted the graduate students in planning and MA provided subsidies that made this large scale event possible. Over 100 persons (of which 60 were UG students) attended this event. These outreach activities by graduate students provides a framework and culture addressing the broader impact requirements of research proposals funded by NSf and other extramural agencies.
ENTRANCE REQUIREMENTS:

- Calculus (Math 9A-9B)
- Physics (Phys 2A-2B-2C)
- General Chemistry (Chem 1A-1B-1C)
- Organic Chemistry (Chem 112A-112B)
- General Biology (Biol 5A-5B)
- Genetics (Biol 102)
- Statistics (Stat 100A-100B)

- at least 20 quarter-units among the following areas: Biochemistry; Cell Biology; Molecular Biology; Physiology; Behavioral Biology, Learning and Memory; Perception; Computer Science; and Neuroscience, Neurobiology, Physiological Psychology, with laboratory.

SPEAK TEST:

- Clear Pass
- Conditional Pass

REQUIREMENT I (Core Courses)

- NRSC/PSYC 200A
- NRSC/PSYC 200B
- NRSC/PSYC 200C - Fundamentals of Neuroscience

REQUIREMENT II

At least one course from the following:

RESEARCH METHODS

- NRSC 201 – Graduate Neuroscience Laboratory (preferred)
- CBNS/PSYC 120L – Undergrad. Neuroscience Laboratory
- CHEM 125 - Instrumental Methods
- CHEM 221A - Advanced Analytical Chemistry
- CHEM 221A - Advanced Analytical Chemistry

At least two courses or one course sequence from the following three areas:

1. BEHAVIORAL SCIENCE AREA

- CBNS/PSYC 127 - Behavioral Control Systems
- PSYC 203A - Experimental Psychology
- PSYC 203B
- PSYC 203C

2. PHYSIOLOGY AND PHARMACOLOGY AREA

- BMSC 210A, BMSC 210B - Human Physiology
- ENTM 201, Insect structure and function
- BMSC 220 - Neurosciences
- CBNS 120 - Cellular Neuroscience

3. BIOCHEMISTRY, CELL & MOLECULAR BIOLOGY AREA

- BCH 110A, BCH 110B, BCH 110C - General Biochemistry
- BIOL/CMDB 200, BIOL/CMDB 201 - Cell and Molecular Biology
- BIOL/CMDB 241 - Bioorganic Chemistry
- BIOL 203 - Cellular Biophysics

REQUIREMENT III – Must enroll in the Colloquium in Neuroscience each quarter it is offered in residence.

- NRSC 287 - Colloquium in Neuroscience

REQUIREMENT IV – Must enroll in at least two seminars Special Topics in Neuroscience per year until passing the oral qualifying exam. One seminar per year is required after passing the qualifying exam.

- NRSC 289 – Special Topics in Neuroscience

REQUIREMENT V - Teaching Assistant service is required for two quarters.

(1) Course _______ Quarter/Year ___________; (2) Course _______ Quarter/Year ___________