Message from the Group Chair

The Ph.D. in Vision Science is conferred in recognition of the candidate's command of a comprehensive body of knowledge in the field of vision science and its related disciplines, and their ability to initiate, organize, and pursue the investigation of significant problems in vision science. The program offers appropriate education for careers in teaching and/or research, in institutions of higher education, research centers and industry, where advanced analytical, conceptual and research capabilities are required.

The following provides a summary of the major degree requirements as established by the Graduate Division of the University of California at Berkeley and the Graduate Group in Vision Science.

Karsten Gronert, Vision Science Graduate Group Chair
Program Requirements (PhD)

The PhD in Vision Science is based largely on research training. The Vision Science Graduate Group is organized in such a way that students are afforded a great amount of flexibility to investigate their research interests. Required course work is primarily taken during the first year, and individual curricula and research are arranged in consultation with the student’s Academic Advisor and Thesis Mentor. Normative time for completion of the PhD in Vision Science is five years. The basic PhD requirements include: 20+ units of core coursework, advancement to candidacy, individualized research, and a dissertation.

Program Sequence
The following table serves as a quick guide for the progression of the typical VS graduate student through the program.

<table>
<thead>
<tr>
<th></th>
<th>First</th>
<th>Second</th>
<th>Third</th>
<th>Fourth</th>
<th>Fifth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Coursework</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab Rotations</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qualifying Exam</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advance to Candidacy</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Thesis Proposal</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Independent Research</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Dissertation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
Grades
Graduate students are required to maintain a cumulative grade point average of 3.0 in all academic coursework and must make satisfactory progress toward their degree. For each required course, a B or higher is considered a pass; a B- or lower is equivalent to a failing grade. All students must retake all non-passing grades at the next course offering, or as designated by the Chair. Students who do not achieve a passing grade in the Proseminar Series by the end of the second year will be placed on academic probation. Students must remain in good standing in order to continue being funded by the program; academic probation is a potential basis for removing funding. The “official” Grade Point Average (GPA) is posted on the student’s transcript. **Students are responsible for reviewing transcripts to ensure the grades are properly posted and classes taken are accurately listed.** Contact the Admissions and Student Affairs Office (ASAO) for questions or issues regarding transcripts. Berkeley transcripts are available online at [CalCentral](https://calcentral.berkeley.edu).

Full-time Status
Graduate students at UC Berkeley are required to maintain “full-time” student status at all times during the academic year. For all students, full-time status is considered enrollment in 12 semester units of graduate or upper division courses each semester. Units may be coursework or research units (VS299).

Coursework
As a PhD students you are eligible to take any course on campus during the academic year. This is a great perk and should be taken advantage of but please be aware that your tuition and fees **does not** extend into the summer so any summer courses taken will be paid out of pocket.

Core Curriculum
The Core Curriculum comprises a series of four courses split between the Fall and Spring semester of your first year. The series is intended to provide a general overview of the main topic areas in Vision Science for students of widely varying backgrounds. The Core Curriculum requirement must be fulfilled by the end of their first year. Each course must be passed with a B or better. Failure to achieve a B or better will require the course to be retaken the following year for a letter grade. *Credit is obtained under the following course titles (3 units/course, letter grade).*

VS260A - Optical and Neural Limits to Vision  
VS260B - Introduction to Ocular Biology  
VS260C - Introduction to Visual Neuroscience  
VS260D - Seeing In Time, Space and Color
Oxyopia Seminars
Oxyopia seminars are presented to the Vision Science and campus community on a weekly basis during the academic year. These seminars are given by local and visiting researchers and are an excellent way for students to become more familiar with the most recent developments in vision research. All graduate students, faculty and postdocs are welcomed and encouraged to attend.

All first-year and second-year students must take Oxyopia for a letter grade. Starting in their 3rd year, all VS students are required to make an annual presentation on a current research project at the Oxyopia lecture series.

Credit obtained under course VS 298, Section 1 (1 unit; letter grade).

Student Evening Research Seminar (SERS)
The goal of the Student Evening Research Seminar (SERS) is to provide a forum for VS graduate students to discuss and develop strategies for giving effective presentations and to have an opportunity to practice giving scientific presentations in an informal setting. SERS is required course for all first-year and second-year students although all graduate students, faculty and postdocs are welcome and encouraged to attend.

Credit obtained under VS 201B, Section 3 (2 units, S/U).

Survey of Laboratories
The goal of this course is to introduce first-year students to the faculty and labs in the Vision Science program. During the first year of the graduate program, students are presented with an overview of the various research opportunities represented in the Vision Science group. Weekly one-hour lecture and/or lab tours are presented by Vision Science faculty.

Credit obtained under course VS201A – Seminar in Vision Science (2 units, S/U)

Ethics
In preparation for participation in research, each student is required to take the Ethics in Scientific Research course for a letter grade within the first 2 years of enrollment. Training in the responsible conduct of research is required for all students. This course examines a range of ethical issues that arise in the process of doing science.

Credit obtained under course VS230 – Ethics in Scientific Research (2 units, letter grade)

Teaching Methods
As Graduate Student Instructors in the School of Optometry, all first-year students are required to enroll in a Teaching Methods Course. This course provides instruction in teaching methods and materials and opportunities to practice teaching in classrooms and laboratories.

Credit obtained under course VS300 – Teaching Methods in Vision Science (1 unit, S/U)
**Additional Coursework**
The following represents fields of study that may be beneficial for student success but are not required courses.

- **Statistics** – Strongly recommended for most areas of Vision Science. Meet with your Graduate Advisor to discuss your statistics background and appropriate courses for your intended area of research.
- **Advanced Courses and Seminars** – These are given as a continuation of the different themes established in the proseminar series. Courses offerings vary, and a complete list will be provided each semester. Please visit the Vision Science website or the Schedule of Classes for the most current listing.
- **Beyond Vision Science** – Students may also consider courses offered by other departments on campus, according to their needs.

Additional Coursework is not recommended during the first 2 semesters. Students are encouraged to meet with their research advisor to discuss their needs and the options that are available to them.

**Lab Rotations**
First-year students are required to complete two lab rotations – one per semester. Students may choose to complete a 3rd rotation during the summer of the first year. The objective of the research rotation is to allow students to become familiar with different areas of research, learn new experimental techniques, obtain experience in unique research laboratories, and ultimately to identify a lab in which to conduct dissertation research. The research being performed during a rotation may correspond to the initial stages of a thesis project or may be on a totally different topic.

The rotation sponsor (temporary research advisor) will evaluate each student’s performance during a rotation. The rotation sponsor will submit a written report at the conclusion of the rotation period. Progress is monitored by the Chair, VS Advisory Committee and the ASAO, who will review rotation evaluation reports.

Students should actively seek rotation projects and meet with faculty no later than 2 weeks before the start of the semester. Prior to starting a research rotation, the student and proposed faculty sponsor must complete a Research Rotation Authorization Form. Forms are due no later than the 2nd week of classes.

*Credit obtained under course VS299 – Research (3 units, Satisfactory/Unsatisfactory -1st year only. Second year and beyond must be taken for a letter grade and can have variable units)*

**Teaching**
Teaching is a critical component of the graduate education in Vision Science. All Vision Science PhD students are required to spend at least two semesters as Graduate Student Instructors (GSIs), teaching in the Optometry professional school curriculum. GSI
appointments provide Vision Science students with teaching experience in a mentored environment and help to expand their knowledge of clinical aspects of vision science. Virtually every career path after graduation, in or out of academia, will involve some form of teaching. In addition to the required two semesters as a GSI in Optometry courses, Vision Science students can apply for additional teaching experience, including courses in other departments such as Integrative Biology, Psychology, and Molecular and Cell Biology, with approval from their research mentor.

Vision Science GSIs are assigned to one of the following Optometry courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>VS203A</td>
<td>Geometrical Optics</td>
</tr>
<tr>
<td>VS203B</td>
<td>Optical System and Physical Optics</td>
</tr>
<tr>
<td>VS205</td>
<td>Visual Perception and Sensitivity</td>
</tr>
<tr>
<td>VS206A/D</td>
<td>Anatomy and Physiology of the Eye / Neuroanatomy and Neurophysiology of the Eye and Visual System</td>
</tr>
<tr>
<td>VS206B/C</td>
<td>Anatomy and Physiology of the Eye and Visual System</td>
</tr>
<tr>
<td>VS217/219</td>
<td>Oculomotor Functions and Neurology / Binocular Vision and Space Perception</td>
</tr>
<tr>
<td>OPT226A</td>
<td>Systemic Pharmacology / Ocular Pharmacology</td>
</tr>
</tbody>
</table>

First-year VS students are typically Junior GSIs who then teach in the same course during their second year as Senior GSIs. In addition to teaching Optometry students, Senior GSIs are responsible for mentoring Junior GSIs. In particular, Senior GSIs should collect whatever course materials are available from previous years and send these to the Junior GSIs well before the beginning of the class, so that they have time to properly prepare for teaching. In addition, before class begins, both Junior GSIs and Senior GSIs should meet together with the faculty Course Instructor(s) to discuss their respective responsibilities in the course, and faculty instructors should provide GSIs with access to course materials on bCourses well before the course begins. There is a google drive used by all Vision Science students where much of this information can already be found.

Depending on the course, Vision Science GSIs may be involved in preparing and administering labs, teaching review sessions, responding to student emails, and/or grading exams. It is the responsibility of the faculty instructor(s) to write exam questions, the answer key, and the grading rubric for assigning points to individual questions, to determine final letter grades for each student, and to enter these grades into Cal Central.
All first-year GSIs must complete the Online Course on Professional Standards and Ethics in Teaching. This should be done by the end of the third week of the fall semester of the first year. The course is on the Graduate Student Instructor Teaching and Resource Center website. For International students, you will need to complete an additional course on English Language Proficiency if English is not your native language. More resources on this are also available at the GSI Resource Center website.

First-year GSIs are also required to enroll in VS300, “Teaching Methods in Vision Science,” in both the fall and spring semesters. This class satisfies the UC Berkeley requirement that GSIs complete a course in pedagogy in their field. Austin Roorda is the VS300 Instructor. Austin Roorda is also the Faculty Advisor for GSI (Graduate Student Instructor) Affairs in Vision Science. If you have any questions or concerns about your role as a GSI, please contact him at aroorda@berkeley.edu. These could include questions about expectations for GSIs before you begin teaching as well as issues that arise during your time as a GSI.

**Designated Emphasis Programs**

To augment their training, PhD students may choose to add a designated emphasis (DE) to their program. A DE is a specialization, such as a new method of inquiry or an important field of application, which is relevant to two or more existing doctoral degree programs. If a student is accepted and the program requirements are met, the student will receive a DE distinction as part of their PhD degree. Each DE program has its own set of course and program requirements, and interested students are responsible for their own application and admission to the DE program. DE programs require that a DE-affiliated faculty member be a member of the student’s qualifying exam committee. Example DE programs are listed below (more DEs are available and the list is expanding).

- Computational and Data Science and Engineering
- Computational and Genomic Biology
- Nanoscale Science and Engineering

At this time, the Vision Science Graduate Group is not officially included in all DEs. If a student is interested in a specific DE for which VS is not included, that student should make a case for inclusion in that DE to the VS Chair.

**Qualifying Exam**

Vision Science students are expected to take their Oral Qualifying Examination (QE) in the fourth semester. If there are extenuating circumstances beyond the student’s control, then the student can petition the Chair of the Vision Science Group for an exception to this time frame.

The central goal of the QE is to evaluate and establish the student’s aptitude and readiness for completing a PhD research project.
Students should submit a research proposal that follows the NIH R21 format (NEED TO ADD NIH LINK) to all their committee members at least one week prior to the examination date. The Exploratory/Development Research Proposal does not require preliminary data but should provide a conceptual framework of the thesis research and background/justification through literature, other sources, and/or preliminary data. In some cases, students may wish to complete their QE by the end of the second semester. In such cases, presenting a fully developed research proposal may not be possible, and this will be taken into consideration.

The exam consists of two main parts:
- An oral presentation which covers the Exploratory/Development Research Proposal and related topics. This can include a PowerPoint/Keynote presentation.
- General questions from the committee on three general subject areas that the student selects based on the proposed thesis research and expected field of knowledge.

What students should expect at the qualifying exam:
- Exams are scheduled for 3 hours; they typically last from 2-3 hours.
- Expect to be interrupted with questions from your committee during the presentation. This part of the exam is likely to occupy more than half of the time.

Exam outcomes:
- Students can pass, fail, or receive a partial fail.
- Students who pass move on to the next stage towards advancing to candidacy: forming a Thesis Committee and preparing a formal Thesis Proposal.
- If a student fails all or certain parts, then the committee will decide on the action to be taken.
- If a student fails only certain parts, then the chair or a member of the qualifying committee will make a recommendation for remediation and decide if another oral exam is required on these parts.
- Students who fail are entitled to retake the exam one more time.
- Students must wait three months from the initial exam date to retake the exam or parts of it, but they may not re-test beyond six months of the original exam.

Committee Composition:
The qualifying exam committee requires four faculty members comprising:
- One Committee Chair, a Vision Science faculty member who is not the student’s Research Advisor.
- Two other Vision Science faculty members who serve as “inside members”. If appropriate, one of these faculty members may be substituted with a non-VS faculty member or in some cases, a non-UCB faculty member.
- One non-Vision Science faculty member, also known as an “outside member.” The non-VS representative must be a faculty member on the Berkeley campus who is a
member of the Academic Senate. Eligible faculty will typically have the title of Professor, Dean, Associate Professor, or Assistant Professor. Faculty with titles such as Adjunct Faculty, Lecturer, or Visiting Professor are not eligible to be outside committee members, but may in some cases serve as inside members.

The ASAO and Head Graduate Advisor will be able to assist in identifying eligible members of the committee. (For a quick-reference guide please see Appendix I)

Responsibilities of the Student:
- Choose three general subject areas that relate to your proposed thesis research - these are the fields of knowledge in which you are to be examined.
- Consult with your Research Advisor and Committee members on the research proposal and subject areas.
- Present proposed subject areas to your committee chair for approval.
- Consult the ASAO to review the committee and complete the Application for Qualifying Examination form (accessed via CalCentral) required by the Graduate Division.
- Have the Chair of the Vision Science Group review and give final approval of exam committee members and subject areas.
- Arrange a date, time and location (including reserving the room) for the exam that works for all members. Schedule no less than a three-hour time slot.
- Meet with members as necessary to review your preparation for the exam.
- Prepare a presentation using slides and/or other visual material to complement it. It should be about 30-45 minutes long.
- Practice your presentation and do a mock exam with your lab and other colleagues.
- Ensure any audiovisual requirements are in order prior to the QE. Confirm the time and place of exam with all committee members and ASAO the week before the exam. ASAO will send an email reminder to the committee and the student one week prior to the exam, after confirming that the Graduate Division has approved.

Responsibilities of the QE Chair and Committee:
- Help the student refine the subject areas and advise on appropriate reading materials and the expected fields of knowledge.
- Meet with the student prior to the exam to review the student’s progress in preparing for the QE.
- Contact the student’s research mentor to get confidential feedback and evaluation of the student’s academic and research progress and performance.
- ASAO will give the QE chair and committee access to the student’s VS and Grad Div records & files for review.
- In addition to acting as examiners, the QE committee, led by the chair, is required to write a report for the benefit of the research mentor. The discussion of the content of this report should take place immediately after the QE. The exam chair or a selected
member of the committee should communicate directly with the student’s research mentor. The report should address:

- Content – the student’s understanding of the material that was presented
- Delivery – the student’s ability to clearly and effectively present the material
- Recommendation – Make recommendations that will help the student in remainder of his or her academic program, including any potential concerns.

Responsibilities of the Research Mentor:
The research mentor will not be present at the QE, but he or she is expected to be actively involved in helping to prepare the student for the exam. Mentors should meet or communicate with the QE chair to review the QE report. Mentors should also meet with the student as soon as possible after the QE to review the evaluations and recommendations from the committee.

**Advancement to Candidacy**
As stated by the UCB Graduate Division, students need to “File the advancement form no later than the end of the semester following the one in which you passed the Qualifying Examination”. So, a student following the normal schedule in the Vision Science program who passes his or her QE by the end of the Spring of their second year, is expected to submit the Advancement to Candidacy form (found on CalCentral) by December of the same year.

Forming the thesis committee and writing a thesis proposal are the main requirements for advancing to candidacy. Students are expected to meet with their thesis committee to discuss their specific aims and research plans. The Exploratory/Development Research Proposal from the qualifying exam can be used as a draft/template to prepare the final thesis proposal, but this is not required. The format for the thesis proposal is the [NIH R21 grant application](https://nih.grants.nih.gov/grants/guide/pa-00-061.html).

Graduate students are responsible for submitting the required Application for Advancement in PhD Candidacy form along with the signed Thesis Proposal Approval form no later than the last day of their 5th semester in the program.

**Thesis Committee**
For the most up-to-date listing of Graduate Division rules, please see the [Guide to Graduate Policy section F4.7](https://gradguide.ucb.edu/section/f4-7). Some items to note when creating your committee are:

- Your thesis chair should be your research mentor
- Two co-chairs can replace one chair
- For a quick reference guide, please see Appendix I

**Thesis Proposal**
As part of the advancement to candidacy, students are required to prepare a thesis proposal for approval by the thesis committee. The thesis proposal must be completed within one semester after completing the QE. A student following the normal schedule would complete
the thesis proposal by the end of the first semester of the third year – at the same time that the Advancement to Candidacy form is filed.

Rationale for the Thesis Proposal

● Leads to better dissertations: A detailed thesis proposal will provide the student with a document that is an approved guideline for the remainder of the PhD work. By getting substantive input from the thesis committee at this early stage, students will have a clearer path toward completion of the research toward their PhD degree.

● Provides practice in writing research proposals, an important element of graduate student training. Requiring the preparation of the PhD proposal to be in a NIH R21 grant application format will help to train the student to prepare future grant applications. Furthermore, the student will not only get advice on the research plan but can expect to get expert advice from the thesis committee on the proposal document itself. This will provide a more tangible way for the thesis committee to guide the research and mentor the student.

● Protects graduate students: The thesis proposal will serve to avoid instances where thesis committee members are not engaged or familiar with the student’s work and disapprove of the thesis dissertation at a late stage.

Thesis Proposal Format
The thesis proposal must be formatted as an NIH R21 grant application. The specific elements are:

● Specific Aims (1 page): State major hypotheses and outline the experiments to test them

● Background and Significance (1-2 pages): Include a focused literature review on the area, as well as some text stating why this research is important

● Research Strategy (3-4 pages, not including references): Include a description of the relevant research that has already been done by you and describe planned future research

Changes to Research Plan
Although the intent for the proposal is to generate an actual detailed plan for work toward completion of the PhD degree, students are not to be obliged to follow the original proposal in their dissertation research. Having an approved and detailed thesis proposal will be an easier starting point for discussing changes in research direction with the supervisor and thesis committee.

Preparation
Students are expected to work closely with their research mentor to prepare the proposal. In many cases, the student’s research project is part of a larger research project in the mentor’s laboratory.
Enforcement
Thesis proposal completion/non-completion will become part of the annual review, which takes place at the end of each Fall. Third year students (and their mentors) who have not had a thesis proposal approved will have to address this with the review committee at that time. Non-completion of the thesis proposal may lead to academic probation, which consequently can lead to dismissal from the program.

Thesis Research
Thesis research should be completed within 5-6 years of matriculation.

Responsibilities of the Student:
- Update their thesis committee in an annual group meeting on progress and anticipated filing date. This keeps the committee involved and helps avoids timing conflicts after filing.
- Complete and obtain approval for dissertation.
- You will be required to file your dissertation with Graduate Division by their Spring deadline in order to participate in the Symposium or Commencement ceremony. If you do not meet this deadline and still wish to participate in the Commencement ceremony, you will be able to do so the following Spring (e.g., If you file Summer 17, you can walk in Spring 18).
- You are required to give an exit seminar as part of the VS Dissertation Symposium.

Responsibilities of the Mentor:
- Review and advise on research progress.
- Submit a grade for the student's research activities each enrolled semester. The course number is VS299.

Annual Reviews
To ensure that students are making satisfactory progress, each year they are required to undergo an Annual Review by the program.

Responsibilities of the Student:
- Academic Review
  - Complete the Self-Review form which should be returned to the ASAO and shared with your advisor.
  - Schedule a meeting with your Academic Program Advisor.
  - Both items should be completed by August 31.

  Thesis Research Progress Meeting
  - Schedule a meeting with your entire Thesis committee
  - Provide a research progress report in the form of powerpoint/keynote presentation
  - Discuss future research plans/strategies, expected graduation date and career plans with your committee
● Bring Annual Progress Report form to the meeting (NEED LINK TO FORM). The thesis chair will submit the completed and signed form to ASAO.
● The Annual Research Progress Meeting needs to be completed by ____ (???)

Responsibilities of the Academic Advisor:
● Review the student's Self-Review document.
● Meet with and discuss progress of each of their assigned students.
● Complete the Advisor Survey form and submit it to the ASAO.
● Consult with the mentor, rotation supervisor, instructors, and any other relevant people as needed to make a proper assessment of student progress.
● Assist in reviewing progress of all Vision Science students at the annual Academic Advisors meeting.

Each year, following the VS Academic Advisors meeting, each student will be sent a letter outlining their progress. This letter will outline achievements, upcoming milestones, and any concerns about progress that were raised by the committee.

**Normative Time/Time to Graduation**
Graduate Division defines normative time as, “...the elapsed time (calculated to the nearest semester) that students would need to complete all requirements for the doctorate. Normative times for doctoral programs have been recommended by program faculty and approved by the Graduate Council. The usual total normative time for doctoral programs is 12 semesters.”

There are certain situations in which Normative Time can be modified. These are…
- Students who are parents
- Students with disabilities
- Student previously enrolled in master’s programs at Berkeley

For more information please refer to the Graduate Division Guide to Policy.

**Student Involvement**
Each year the Vision Science Graduate Group puts on a variety of events, in which student involvement is a critical component of success. The ASAO office will need everyone’s assistance, but in particular the first- and second-year students will be called upon to act as leads for certain events.

During the first year, students will be the leads for Bay Area Vision Research Day (BAVRD). During students’ second year, they will be the leads for Visit Day and New Student Orientation. As a lead, students will help plan and execute these events together with the ASAO. Beyond the second year, students will be called upon to volunteer for various student panels and social events with the expectation that everyone volunteers occasionally. The
ASAO will do their best to make sure that the work is fair and equitable, however the help of every student is needed to ensure this happens.

Student Funding

The Vision Science Group is hosted by the School of Optometry and funded by a number of internal and external sources. The Vision Science Group Program financially supports students to fully cover the cost of graduate stipends, tuition and fees, and graduate conference travel for the first 2 years if the student is not funded by an external grant or fellowship. Starting in Year 3 support is provided by the thesis mentor.

Teaching

All students are required to teach for at least two semesters as a GSI. GSI appointments for students that are supported by an NIH training grant are at 24% (9.6 hrs week average per semester), while all other students are appointed at 25% (10 hrs week average per semester), although there is no difference in financial compensation for these two types of appointments. Salary for the GSI appointment is included in the stipend package that is provided by the program or sponsoring faculty. Students are expected to fulfill their teaching requirements in years 1 and 2. However, on a case by case basis, completion of the teaching requirement may be moved to years 3-5. For questions about this, please contact ASAO.

Training Grant and Research Mentor Funding

The NIH National Eye Institute Training Grant is the main source of funding for most Vision Science students in the first two years. It is the goal of the Vision Science Graduate Group to fully support all students (stipend, tuition, fees & health care) for five years. Federal government policy dictates that only US Citizens and Permanent Residents are eligible for NIH funding. Not all students are supported by the Training Grant, and some may be supported by competitive UC Berkeley fellowships or are fully sponsored by a Vision Science Faculty member. The Vision Science Graduate Group fully supports students for their first two years of study. Starting in Year 3, full support is provided by the thesis mentor, usually by individual faculty research grants, and in some cases a combination of faculty research grants and a GSI appointment. Students are encouraged to apply for individual fellowships, support from foundations, or career development grants. Optometry (OD), medicine (MD) and other clinical degree graduates in the VS program that are funded through the NIH training grant are supported at the higher post-doctoral stipend level and have opportunities for substantial student loan repayment through the NIH loan repayment program (LRP): www.lrp.nih.gov/

External Fellowship Opportunities

- Ezell Fellowship
- NSF Fellowship
- DOE Fellowship
Fellowship Bonus Program
The VSG has a Bonus Program for individual fellowship recipients to provide an incentive to encourage VS graduate students to apply for their own funding. Any student who is awarded a fellowship that is administered through our sponsored projects office (e.g., NSF), will receive a salary increment of $2,500 above the standard program salary of $31,000 for the duration of fellowship, or above the level of his or her fellowship stipend, whichever is higher. If a student is working in a lab, then the PI of the lab will be expected to pay the bonus, if funds are available.

Some awards are not administered through the sponsored projects office (e.g., Ezell fellowship from the American Optometric Foundation), and in these cases, the student may receive the full amount as a one time personal check; these fellowships or awards are not eligible for the VSG Bonus Program.

Graduate Student Appeals Procedure

The purpose of this procedure is to afford graduate students in the Vision Science Graduate Group an opportunity to resolve complaints about dismissal from graduate standing, placement on probationary status, denial of readmission, and other administrative or academic decisions that terminate or otherwise impede progress toward academic or professional degree goals. This procedure may also be used to resolve disputes over joint authorship of research in accordance with campus joint authorship policies.

For any other issues please contact Program Chair Karsten Gronert, Head Graduate Advisor Michael Silver, or ASAO.

A. INFORMAL RESOLUTION PROCEDURES

A student may pursue informal resolution of a complaint by scheduling a meeting with the Head Graduate Advisor to discuss the complaint and to explore possible avenues of resolution. If informal resolution is pursued, it must be initiated and should be completed within 30 days. At any point in this process, if a satisfactory solution cannot be reached, the student may initiate formal resolution by putting the complaint in writing.

B. FORMAL RESOLUTION PROCEDURES
A written complaint must include information regarding the action in question and the date it occurred, the grounds upon which the appeal is based, and the requested outcome. The complaint must be based on one or more of the following grounds:

1. Procedural error or violation of official policy by academic or administrative personnel.
2. Judgments improperly based upon non-academic criteria including, but not limited to, discrimination or harassment on the basis of sex, race, national origin, color, age, religion, sexual orientation, or disability.
3. Specific mitigating circumstances beyond the student’s control that were not properly taken into account in a decision that affects the student’s academic progress.

A written complaint must be received by the Head Graduate Advisor within thirty days from the time the student knew or could reasonably be expected to have known of the action that is the subject of the complaint. The group should complete its investigation and notify the student of the outcome of the complaint within sixty days of the date it was received.

If the complaint is about an action taken by the Head Graduate Advisor, the complainant may elect to take the complaint directly to the Group Advisory Committee. In such a case, the time limits described in the preceding paragraph still apply.

The time frame for filing a written complaint may be extended by the group if the student has been involved in continuing efforts toward informal resolution and if the informal resolution process was initiated within thirty days of the time the student knew or could reasonably be expected to have known of the action that is the subject of the complaint. All time frames referred to in this procedure refer to calendar days. Summer and between semester recesses are not included within these time frames.

Upon receipt of a written complaint, the Head Graduate Advisor will assign an individual to investigate the complaint and will make a recommendation to the Head Graduate Advisor regarding the outcome of the complaint. Generally, the investigation will include an interview with the complainant, a review of any relevant written materials, and an effort to obtain information from available witnesses (i.e., interviews or written statements or documents). The Head Graduate Advisor will notify the student in writing of the outcome of the complaint. A written complaint under this procedure satisfies the requirement of a unit level resolution process pursuant to the Graduate Appeals Procedure.

C. APPEAL TO THE GRADUATE DIVISION

If the student is not satisfied with the outcome of the complaint under the group’s procedure, they may bring the complaint to the Formal Appeal Procedure of the Graduate Appeals Procedure. The formal appeal must be received in the Office of the Dean of the Graduate Division within fifteen days of the date of the written notification of the result of the unit level procedure. Copies of the Graduate Appeals Procedure may be obtained from the Office of the Dean of the Graduate Division.
D. COMPLAINTS INVOLVING DISCRIMINATION

If the complaint involves allegations of discrimination or harassment on the basis of sex, race, national origin, color, age, religion, sexual orientation, or disability, the department or unit should consult the appropriate campus compliance officers prior to commencing informal or formal resolution.

E. OTHER COMPLAINT PROCEDURES

Graduate students may contact the Office of the Ombudsman for Students, the Title IX Compliance Officer, the Vision Science Equity Advisor, or the 504/ADA Compliance Officer for assistance with complaint resolution. There also are other complaint resolution procedures listed in the Graduate Appeals Procedure for use regarding complaints that do not fall under this procedure.
APPENDIX

I) DOCTORAL COMMITTEE MEMBERSHIP
This is a quick reference and meant to help guide you in selection of qualifying and thesis committee member. However, you should always check with the Head Graduate Advisor and ASAO for eligibility.

<table>
<thead>
<tr>
<th>Title</th>
<th>Professorial Title</th>
<th>Senate Member</th>
<th>Officer of Instruct</th>
<th>Tenured Outside Member</th>
<th>Chair</th>
<th>Co-C chair</th>
<th>One of Five Members</th>
<th>Sixth Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROFESSOR SERIES:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full &amp; Associate</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Assistant</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>IN-RESIDENCE PROFESSOR SERIES:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full &amp; Associate</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Assistant</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>FULL-TIME SALARIED ADJUNCT PROFESSOR IN HEALTH SCIENCES:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full &amp; Associate</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Assistant</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>ACTING PROFESSOR SERIES:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full &amp; Associate</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Assistant</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>ADJUNCT SERIES*: (including non-salaried appointments in Health Sciences)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Ranks</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y#</td>
<td>Y#</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>PROFESSOR OF PRACTICE*:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y#</td>
<td>Y#</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Visiting</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>PROFESSOR OF CLINICAL &quot;X&quot; SERIES:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full &amp; Associate</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Assistant</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>CLINICAL PROFESSOR SERIES:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Ranks</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>VISITING PROFESSOR SERIES:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Ranks</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>PROFESSOR EMERITUS SERIES:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>All Ranks</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROFESSOR FROM ANOTHER UC CAMPUS**:</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All Ranks</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LECTURER SERIES:</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecturer &amp; Sr. Lecturer</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y##</td>
</tr>
<tr>
<td>LSOE &amp; Sr. LSOE***</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>LPSEO &amp; Sr. LPSEO***</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y##</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESEARCH SCIENTIST/SCHOLAR W/LECTURER APPOINTMENT:</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All Ranks</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESEARCH ASSOCIATE, RESEARCH FELLOW &amp; PROJECT SCIENTIST/SCHOLAR:</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All Titles</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y##</td>
<td></td>
</tr>
</tbody>
</table>

*Dean of Graduate Studies will consider exceptions to individual committee membership with plausible justification from the graduate program
* Only one person in this category per committee unless there are more than five members.
** May serve as inside or outside member
# Adjunct professors and Professors of Practice of all ranks may serve as chairs of doctoral committees as long as a ladder rank faculty member serve as a co-chair
### Voluntary basis
*** Must have full-time status
CALENDAR OF EVENTS
This is a general overview of the various events that happen throughout the year and are to subject to change.

AUGUST
- New Student Orientation
- Annual Self-Review and Advisor Survey Due (Submit to ASAO)

SEPTEMBER
- BAVRD (Rising 2nd Yrs)
- VS Picnic
- First-years meet with assigned Academic Advisor

OCTOBER
- Doctoral Review on GLOW Due

NOVEMBER
- Annual Meeting
- VS Retreat

DECEMBER
- After “Finals” Treats
- Lab Rotation Form Due (1st Yrs)

MARCH
- Visit Day

APRIL
- BAVRD Transition Meeting

MAY
- Dissertation Symposium
- Commencement
- Lab Rotation Form Due (1st Yrs)
- Student Retreat (1st Yrs)

JUNE
- Ice Cream Social

Revised 8/17 Gronert/Silver/Bryne/Aizenman/Caloud