DEPARTMENT OF HUMAN GENETICS AND GENETICS AND GENOMICS HOME AREA

GRADUATE STUDENT HANDBOOK

ACADEMIC YEAR

2019-2020

The genetics & genomics Home area

Hosted by the UCLA Department of

David Geffen School of Medicine at UCLA
695 Charles E. Young Drive South
Los Angeles, CA  90095-7088
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# Department of Human Genetics Directory

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<td>Student Affairs Officer</td>
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<td>Charina McDonald</td>
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<tr>
<td>Anne Carson</td>
<td>CAO, Human Genetics</td>
<td>Miscellaneous administrative questions</td>
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**Graduate Programs in Bioscience (GPB) Leadership**

*Please contact Issa Lutfi prior to contacting personnel below*

| **Dr. Greg Payne** | General academic advising  
Senior Associate Dean of  
Bioscience Graduate Education,  
School of Medicine,  
Associate Dean of Graduate  
Education, Life Sciences,  
Director, GPB |  
Conflict resolution  
Any sensitive issues that don’t have another appropriate  
point of contact |
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<td><strong>Stacie McKinney</strong></td>
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GPB-wide orientation  
Student Advisory Committee  
Graduate Applications and admissions  
General GPB questions  
GPB website  
GPB-wide events and event calendar  
GPB student mailing list  
GPB Facebook, Headlines blog  
General outreach, marketing, recruitment |
| **Diana Azurdia** |  
All issues related to inclusion and diversity  
Mentor training  
Student groups (e.g. SACNAS, AMEBA, Black Student in Bioscience, SEDS) |

**Information Technology**

| **IT Help Requests**  
https://dgit.healthsciences.ucla.edu/pages/support | **Computing Support**  
Troubleshooting  
Bioinformatics Labs |
|---|---|---|
| **Room Reservation**  
http://www.gonda.ucla.edu/rooms/humgen |  |  |
NOTE: From the first quarter of graduate study to the last, students are required to enroll in no less than 12 units per quarter. This is achieved by combining required courses and electives, which carry a fixed number of units, with laboratory research (596 - 599 courses). While required courses and electives have fixed unit values, the unit value for courses numbered 596-599 will equal the number of units needed, in addition to required courses and electives, to reach the required 12 units per quarter.

PROGRAM FOR DIRECT ADMIT AND GRADUATE PROGRAMS IN BIOSCIENCES (GPB) STUDENTS

Students are required to take a minimum of one course of the series Human Genetics 236A-236C or, under exceptional circumstances, an equivalent graduate-level course approved by the Faculty Graduate Adviser. Students also take the course series Molecular Biology 254A through 254D, and must complete a course on ethics in research. To sign up for classes, visit my.ucla.edu.

By the beginning of the second year, students shall have chosen a mentor. Two quarters of teaching (“TA-ship”) are required as per GPB policy; it is recommended to carry out one each in the second and third years. Students must enroll in the 375 course of the department for which they will teach, and must also take the 495 TA Training course offered by that department.

To complete the 12 units per quarter, students can take electives, and one of the following -

- Hum Gen 596 Lab Research
- Students who have joined a lab: Hum Gen 597 Preparation for PhD Qualifying Exam
- Students who have Advanced to Candidacy: Hum Gen 599 Dissertation Research
REQUIRED COURSES

- **236A. Advanced Human Genetics A: Molecular Aspects.** (4 units) Lecture, three hours.
  Recommended preparation: prior knowledge of basic concepts in molecular biology and genetics. Advanced topics in human genetics related to molecular genetics and relevant technologies. Topics include genomic technologies, human genome, mapping and identification of disease-causing mutations, transcriptomics, proteomics, functional genomics, epigenetics, and stem cells. Reading materials include original research articles and reviews or book chapters. Letter grading. *(Fall)*

- **C234. Ethics and Accountability in Biomedical Research.** (2 units) (Same as Microbiology and Immunology CM234.) Designed for graduate students and undergraduates who have credit for a life sciences or biomedical individual studies 199 course. Responsibilities and ethical conduct of investigators in research, data management, mentorship, grant applications, and publications. Responsibilities to peers, sponsoring institutions, and society. Conflicts of interest, disclosure, animal subject welfare, human subject protection, and areas in which investigational goals and certain societal values may conflict. Concurrently scheduled with course C134. S/U grading. *(Spring when offered)*

- **254A Concepts in Molecular Biosciences.** (3 units) (Formerly numbered Biological Chemistry 254A.) Lecture, three hours; discussion, two hours. Limited to human genetics and molecular biology graduate students. Five-week course covering four basic experimental approaches of biochemistry and molecular biology in context of various specific topics, including (1) structural biology, with protein and nucleic acid structure and molecular recognition, (2) use of cell-free and purified in vitro systems to dissect reaction mechanisms, (3) biochemical approaches to dissecting complex reactions/pathways in cells, and (4) enzymology and protein chemistry. Letter grading. *(Fall)*

- **254B Concepts in Molecular Biosciences.** (3 units) (Formerly numbered Biological Chemistry 254B.) Five-week course. Lecture, three hours; discussion, two hours. Enforced requisite: course 254A. Important biological problems that have been genetically analyzed in different organisms or small number of related problems. Major genetic approaches used in relevant organisms, including both forward and reverse genetic approaches, genetic interactions between genes (genetic enhancers and suppressors), transgenic technology, and systematic genomic strategies. Letter grading. *(Fall)*

- **M254C Concepts in Molecular Biosciences.** (3 units) (Formerly numbered Biological Chemistry 254C.) Five-week course. Lecture, three hours; discussion, two hours. Enforced requisites: courses 254A, 254B. Molecular mechanisms underlying complex problems in cell biology. Experimental approaches used to define mechanisms involved in protein targeting, cell structure, and subcellular organization, cell communication, and intracellular signaling. Analysis of pathways that connect these cellular processes. Letter grading. *(Winter)*
• **M254D Concepts in Molecular Biosciences.** (3 units) (Formerly numbered Biological Chemistry 254D.) Five-week course. Lecture, three hours; discussion, two hours. Enforced requisites: courses 254A, 254B, 254C. Application of biochemical, molecular biological, genetic, and cell biological approaches to understand specialized topics in life and biomedical sciences, including developmental disease, stem cell biology, synaptic transmission in nervous system, cancer, and heart disease. Letter grading.

• **375. Teaching Apprentice Practicum.** (1 - 4 units) Credit for being a TA—each time the student teaches, s/he enrolls in that department’s 375 course.

• **495. Preparation for Teaching.** (2 units) Credit for being a TA—each time the student teaches, s/he enrolls in that department’s 495 course.

• **596. Directed Individual Research in Human Genetics.** (4 - 12 units) S/U

• **597. Preparation for M.S. Comprehensive Examination or Ph.D. Qualifying Examinations.** (2 - 12 units) S/U

• **598. Thesis Research for M.S. Candidates.** (2 to 12 units) S/U

• **599. Research for and Preparation of Ph.D. Dissertation.** (4 - 12 units) S/U
POSSIBLE ELECTIVE COURSES

- **Important to note, some of these courses have prerequisites, contact the course instructor/director to inquire on requirements and availability, as some courses are not consistently offered every year.**

- **Statistics C236. Introduction to Bayesian Statistics.** Units: 4 Lecture, three hours; discussion, one hour. Recommended requisite: course 200A or 200B. Designed for graduate students. Introduction to statistical inference based on use of Bayes theorem, covering foundational aspects, current applications, and computational issues. Topics include Stein paradox, nonparametric Bayes, and statistical learning. Examples of applications vary according to interests of students. Concurrently scheduled with course C180. S/U or letter grading.

- **Biostatistics 200A. Methods in Biostatistics A.** Units: 4 Lecture, three hours; discussion, one hour; laboratory, one hour. First course in biostatistical methods intended for graduate students in biostatistics to prepare students pursuing careers as practicing biostatisticians. Prior knowledge of probability or statistics not assumed. Students should have working knowledge of calculus and be very comfortable with mathematical and algebraic reasoning. Introduction to basic concepts in analysis, presentation of data, and statistical aspects of design of studies. Special emphasis is given to application of statistical methods to public health, medical, biological, and health sciences. Interpretation and communication of statistical findings is stressed. Focus on methodology, applications, and concepts rather than mathematical statistics or probability theory. S/U or letter grading.


- **Biomathematics M207A. Theoretical Genetic Modeling.** Units: 4 (Same as Biostatistics M272 and Human Genetics M207A.) Lecture, three hours; discussion, one hour. Requisites: Mathematics 115A, 131A, Statistics 100B. Mathematical models in statistical genetics. Topics include population genetics, genetic epidemiology, gene mapping, design of genetics experiments, DNA sequence analysis, and molecular phylogeny. S/U or letter grading.

- **Biomathematics M207B. Applied Genetic Modeling.** Units: 4 (Same as Biostatistics M237 and Human Genetics M207B.) Lecture, three hours; laboratory, one hour. Requisites: Biostatistics 200B, 202B (may be taken concurrently) or equivalent coursework or consent of instructor. Covers basic genetic concepts (prior knowledge of human genetics not required). Topics include statistical methodology underlying genetic analysis of both quantitative and qualitative complex traits. Laboratory for hands-on computer analysis of genetic data; laboratory reports required. Course complements M207A; students may take either and are encouraged to take both. S/U or letter grading.
- **Biomathematics M211. Mathematical and Statistical Phylogenetics.** Units: 4 (Same as Biostatistics M239 and Human Genetics M211.) Lecture, three hours; laboratory, one hour. Theoretical models in molecular evolution, with focus on phylogenetic techniques. Topics include evolutionary tree reconstruction methods, studies of viral evolution, phylogeography, and coalescent approaches. Examples from evolutionary biology and medicine. Laboratory for hands-on computer analysis of sequence data. S/U or letter grading.

- **EE Biol M200A. Evolutionary Biology.** Units: 4 (Same as Earth, Planetary, and Space Sciences M216.) Lecture, two hours; discussion, two hours. Current concepts and topics in evolutionary biology, including microevolution, speciation and species concepts, analytical biogeography, adaptive radiation, mass extinction, community evolution, molecular evolution, and development of evolutionary thought. S/U or letter grading.


- **Hum Gen CM224. Computational Genetics.** Units: 4 (Same as Bioinformatics M224 and Computer Science CM224.) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: Computer Science 32 or Program in Computing 10C with grade of C- or better, Mathematics 33A, and one course from Civil Engineering 110, Electrical and Computer Engineering 131A, Mathematics 170A, or Statistics 100A. Designed for engineering students as well as students from biological sciences and medical school. Introduction to computational analysis of genetic variation and computational interdisciplinary research in genetics. Topics include introduction to genetics, identification of genes involved in disease, inferring human population history, technologies for obtaining genetic information, and genetic sequencing. Focus on formulating interdisciplinary problems as computational problems and then solving those problems using computational techniques from statistics and computer science. Concurrently scheduled with course CM124. Letter grading.

- **Hum Gen C244. Genomic Technologies.** (4 units) Lecture, three hours; discussion, one hour. Requisite: Life Sciences 4. Survey of key technologies that have led to successful application of genomics to biology, with focus on theory behind specific genome-wide technologies and their current applications. Concurrently scheduled with course C144. S/U or letter grading.

- **Hum Gen M265. Computational Methods in Genomics.** Units: 4 (Same as Bioinformatics M225 and Computer Science M225.) Lecture, two and one half hours; discussion, two and one half hours; outside study, seven hours. Introduction to computational approaches in bioinformatics, genomics, and computational genetics and preparation for computational interdisciplinary research in genetics and genomics. Topics include genome analysis, regulatory genomics, association analysis, association study design, isolated and admixed populations, population substructure, human structural variation, model organisms, and genomic technologies.
Computational techniques and methods include those from statistics and computer science. Letter grading.

- **Statistics M254. Statistical Methods in Computational Biology.** Units: 4 (Same as Bioinformatics M223 and Biomathematics M271.) Lecture, three hours; discussion, one hour. Preparation: elementary probability concepts. Requisite: course 100A or 200A or Bioinformatics M221. Introduction to statistical methods developed and widely applied in several branches of computational biology, such as gene expression, sequence alignment, motif discovery, comparative genomics, and biological networks, with emphasis on understanding of basic statistical concepts and use of statistical inference to solve biological problems. Letter grading.

- **Hum Gen 282. Topics on Scientific Careers.** Units: 2 Lecture, two hours. Limited to graduate students. Covers topics related to scientific careers such as scientific writing and presentation (including to non-scientific audiences), grant writing and reviewing, curricula vitae, hiring process, social media usage, developing short- and long-term goals, and balancing career and non-work life. Exploration of differences between industry, government, teaching-college, and research-college careers. Active participation and oral and written presentations required. S/U grading.

- **Bioinformatics 275A. Applied Bioinformatics Lab for Biologists: Fundamentals.** Units: 2 Laboratory, six hours (five weeks). Introduction to contemporary methods and techniques in bioinformatics that are used to analyze high-throughput genomic data. Topics include introduction to UNIX, Next Generation Sequence (NGS) data analysis, ChIP-seq, BS-seq and RNA-seq, and others. S/U grading.

- **Bioinformatics 275B. Applied Bioinformatics Lab for Biologists: Intermediate** Units: 2 Laboratory, six hours (five weeks). Requisite: course 275A. Contemporary methods and techniques in bioinformatics that are used to analyze high-throughput genomic data. Topics include Galaxy server, R, MATLAB, Python, and variant calling. S/U grading.

Please visit [https://sa.ucla.edu/ro/public/soc/](https://sa.ucla.edu/ro/public/soc/) to view these courses in the schedule of classes.
### Recommended Timeline

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<th>Year/Quarter</th>
<th>Summer</th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
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| **1st year** |        | • 1st rotation  
• Hum Gen 236A  
• Hum Gen 596 | • 2nd rotation  
• Hum Gen 596 | • 3rd rotation  
• Hum Gen 596  
• Choose dissertation lab  
• Ethics course: MIMG 234 |
| **2nd year** | • Begin dissertation research in lab  
• TA (1 quarter)  
• Constitute doctoral committee & meet annually | • Diss. Research  
• Mol Bio 254 A&B  
• Hum Gen 597 | • Diss. Research  
• Mol Bio 254 C&D  
• Hum Gen 597 | • Diss. Research  
• Hum Gen 597  
• First Exam this year  
• Update myIDP |
| **3rd year** | • Diss. Research  
• TA (1 quarter)  
• Annual committee meeting | • Diss. Research | • Diss. Research | • Second Exam  
• Update myIDP |
| **4th year** | • Diss. Research  
• Annual committee meeting | • Diss. Research | • Diss. Research | • Diss. Research  
• Update myIDP |
| **5th year** | • Diss. Research  
• Annual committee meeting | • Diss. Research | • Diss. Research | • Diss. Research  
• Diss. Defense  
• File Diss. |
Program Requirements

Human Genetics
School of Medicine

Graduate Degrees
The Department of Human Genetics offers the Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Human Genetics.

Master's Degree

Advising
Students entering the master's program are expected to identify a faculty mentor to serve as their adviser. For as long as no faculty mentor is identified, the departmental Faculty Graduate Adviser (appointed by the Chair) will serve as the adviser.

In the event of conflict between a student and the faculty mentor, the Graduate Student Adviser will be available for confidential consultation. Before taking any action, the Graduate Student Adviser should consult with members of the student’s thesis committee and/or the department’s Chair and/or Vice-Chairs.

Areas of Study
The field of human genetics incorporates multiple areas of modern experimental biology (including but not limited to molecular and behavioral genetics, epigenetics, biochemistry, cell and developmental biology, imaging, and large-scale omics approaches such as genomics, transcriptomics and functional genomics) and of computational biology (including bioinformatics and biostatistics).

Foreign Language Requirement
None.

Course Requirements
Students are required to take a minimum of one course of the series Human Genetics 236A-236C (or, under exceptional circumstances, an equivalent graduate-level course approved by the Faculty Graduate Adviser) and must complete a course on ethics in research. Elective courses must be taken to complete the minimum of nine courses (36 units) required for the master's degree, with at least five of them (20 units) being at graduate level. No more than two independent study courses (eight units) in the 500 series may be applied toward the minimum course requirement of 36 units for the master's degree, and only one of these (four units) may be applied toward the minimum requirement of 20 units in graduate courses.

Teaching Experience
Not required.

Field Experience
Not required.

Comprehensive Examination Plan
None.
**Thesis Plan**

Every master's degree thesis plan requires the completion of an approved thesis that demonstrates the student's ability to perform original, independent research.

A written thesis is required for master's degree students. A thesis committee composed of at least three faculty members helps the student to plan the thesis research and makes a recommendation on granting the terminal degree.

**Time-to-Degree**

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<th>DEGREE</th>
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<th>NORMATIVE TTD</th>
<th>MAXIMUM TTD</th>
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<tr>
<td>MS</td>
<td>9</td>
<td>9</td>
<td>24</td>
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**Doctoral Degree**

**Advising**

The departmental Faculty Graduate Adviser (appointed by the Chair) will serve as adviser of students who have not yet selected a laboratory for their doctoral studies. Once students select a faculty mentor, typically at the end of the first year, the faculty mentor automatically becomes the student's adviser. A doctoral committee is constituted by the end of the second year, and its members act as additional advisers. Students are expected to meet with that committee at least once a year until graduation.

In the event of conflict between a student and the faculty mentor, the Graduate Student Adviser will be available for confidential consultation. Before taking any action, the Graduate Student Adviser should consult with members of the student’s thesis committee and/or the department’s Chair and/or Vice-Chairs.

**Major Fields or Subdisciplines**

The field of human genetics incorporates multiple areas of modern experimental biology (including but not limited to molecular and behavioral genetics, epigenetics, biochemistry, cell and developmental biology, imaging, and large-scale omics approaches such as genomics, transcriptomics and functional genomics) and of computational biology (including bioinformatics and biostatistics).

**Foreign Language Requirement**

None.

**Course Requirements**

During the first year, students take the course series Molecular Biology 254A through 254D, and must complete a course on ethics in research. In subsequent years, students are required to take a minimum of one course of the series Human Genetics 236A-236C or, under exceptional circumstances, an equivalent graduate-level course approved by the Faculty Graduate Adviser.

**Teaching Experience**

Students teach for two quarters as a teaching assistant in a department of the College of Letters and Science. The teaching is to be performed preferably in years two and three. Students are encouraged
to teach in Life Sciences 4 (the genetics component of the Life Sciences Core Curriculum) as teaching a general course in genetics reinforces understanding of fundamental aspects of the field.

**Advancement to Candidacy**
Students are advanced to candidacy upon successful completion of the written and oral qualifying examinations.

**Doctoral Dissertation**
Every doctoral degree program requires the completion of an approved dissertation that demonstrates the student's ability to perform original, independent research and constitutes a distinct contribution to knowledge in the principal field of study.

**Final Oral Examination (Defense of Dissertation)**
Required for all students in the program.

**Time-to-Degree**

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<th>DEGREE</th>
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<th>MAXIMUM TTD</th>
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<tr>
<td>PhD</td>
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<td>16</td>
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**Individual Development Plan**
Each year all students are required to prepare and/or update an Individual Development Plan. An Individual Development Plan is an essential planning tool used to map out academic and professional development throughout graduate school.

**Termination of Graduate Study and Appeal of Termination**

**University Policy**
A student who fails to meet the above requirements may be recommended for termination of graduate study. A graduate student may be disqualified from continuing in the graduate program for a variety of reasons. The most common is failure to maintain the minimum cumulative grade point average (3.00) required by the Academic Senate to remain in good standing (some programs require a higher grade point average). Other examples include failure of examinations, lack of timely progress toward the degree and poor performance in core courses. Probationary students (those with cumulative grade point averages below 3.00) are subject to immediate dismissal upon the recommendation of their department. University guidelines governing termination of graduate students, including the appeal procedure, are outlined in *Standards and Procedures for Graduate Study at UCLA*.

**Special Departmental or Program Policy**
Doctoral students must complete and pass the Departmental Written Qualifying Examination (also known as the 'First Exam') by the end of their fourth year in the program. Students will be allowed two opportunities to pass the examination within the above time frame and if the examination is not passed, the student will be recommended for termination of graduate study.
UCLA is accredited by the Western Association of Schools and Colleges and by numerous special agencies. Information regarding the University’s accreditation may be obtained from the Office of Academic Planning and Budget, 2107 Murphy Hall.

FIRST, SECOND, AND FINAL ORAL EXAMINATIONS

Academic Senate regulations require all doctoral students to complete and pass University written and oral qualifying examinations prior to doctoral advancement to candidacy. Also, under Senate regulations the University oral qualifying examination is open only to the student and appointed members of the doctoral committee. In addition to University requirements, some graduate programs have other pre-candidacy examination requirements. What follows in this section is how students are required to fulfill all of these requirements for this doctoral program.

Students are required to prepare two short research proposals broadly related to the field of human genetics.

The Departmental Written Qualifying Examination (also known as the 'First Exam) and the University Oral Qualifying Examination (also known as the 'Second Exam') must be passed before students are advanced to candidacy for the doctoral degree. The two examinations are distinct and cannot be combined into a single examination. Prior to the examinations, students nominate a doctoral committee composed of at least four faculty members following university guidelines which must be approved by the Graduate Division. The faculty mentor is excused from participating in the Departmental Written Qualifying Examination, which is administered by the remaining members of the doctoral committee. All members of the doctoral committee, including the faculty mentor, administer the University Oral Qualifying Examination.

The Departmental Written Qualifying Examination (1st Exam) takes place during early stages of the student’s dissertation research project, preferably during the second year, and must be passed by the end of the fourth year in order to avoid a recommendation for termination from the program. The goal of the Departmental Written Qualifying Examination is to evaluate the student's ability to think as a scientist, i.e., to propose and critically evaluate experiments or method developments that would potentially expand knowledge in the principal field of study. To this end, the student writes a proposal following the style of the National Institutes of Health (NIH) National Research Service Award (NRSA) applications (https://grants.nih.gov/grants/how-to-apply-application-guide.html#inst#), and, one or two weeks after submission of the written proposal to the doctoral committee, defends the proposal in an oral presentation. The topic of the proposal is related to the ongoing research project of the student in the laboratory of the faculty mentor. However, in the Departmental Written Qualifying Examination the project itself is not under evaluation, as it is expected to be in its early stages. The oral part of the examination consists of a discussion of the proposal and of any additional questions posed by the committee to probe the student's general knowledge and understanding of human genetics. Please see your SAO for necessary forms prior to meeting.

The University Oral Qualifying Examination (2nd Exam) should take place before the end of the fourth year in the graduate program, preferably one year earlier. The goal of this examination is to evaluate
the dissertation research project, i.e., whether it represents original, independent research and constitutes a distinct contribution to knowledge in the principal field of study, as well as whether it is feasible for the students to complete the project within the expected time-to-degree. To this end, the student submits a written proposal that clearly states the title and specific aims of the doctoral dissertation and explains the significance, progress to date, and the approach(es) and time line to bring the project to completion. One or two weeks after submission of the written component, the student defends the proposal in an oral presentation before the doctoral committee. Please see your SAO for necessary forms prior to meeting.

The doctoral committee determines whether the student passes each of the two exams, and determines whether a student who fails an exam is allowed to repeat it. Only one re-examination per exam is allowed.

**Written Proposal**
Copies should be distributed to the doctoral committee member’s two weeks before the oral exam and student should reference the NRSA format proposal guidelines. Each written proposal must include specific aims, the scientific rationale, experimental methods, anticipated results and interpretations, potential future directions, and bibliography. Students will be evaluated on their understanding of the proposed research, on their ability to devise appropriate and original experimental strategies, and on their ability to write clearly and concisely.

Students are encouraged to discuss the proposals with the thesis advisor and other members of the lab, but should write the proposals independently. Criticism of the written proposals may be sought from anyone except the thesis advisor.

**Advancement to Candidacy and Subsequent Committee Meetings**
Students are advanced to candidacy following satisfactory completion of course requirements and the written and oral qualifying examinations. Advancement occurs when a successful “Report on the Qualifying Oral Exam” is received by the Graduate Division, which is submitted by the department SAO. **Students are responsible for the $90.00 fee (subject to change) that is billed to your BAR Account.**

Once students pass the Oral Qualifying Exam, the student should schedule an annual meeting (Midstream) with the thesis committee so that the committee can assess the student’s progress and provide advice. At each meeting, the student should take 20-30 minutes to present the status of the thesis work, including both positive and negative results.

**Timely Progress to Degree**
As a policy of the department students are required to meet with their thesis committee at a minimum of once per year for one of the above mentioned exams or to discuss the progress of student’s degree requirements. It is the responsibility of the student to set up these meetings and report them to the SAO and Graduate Student Advisor after they have taken place.

Failure to comply with the time schedule may result in disqualification from the Ph.D. program. Decision to advance the student to candidacy, to allow a student to repeat the oral, or to disqualify a
student will be based on the quality of the written proposal, the adequacy of the oral presentation, the student’s overall academic record as reflected in coursework and examinations, and the student’s research ability and productivity.

**PREPARING FOR ORALS**

**Preparing for the First Exam:**
1. Obtain a “Nomination of Doctoral Committee” worksheet from your SAO, or complete this form online at: [http://www.gdnet.ucla.edu/gasaa/library/docnomin.pdf](http://www.gdnet.ucla.edu/gasaa/library/docnomin.pdf) to nominate your doctoral committee. Once completed bring to the SAO in Gonda 6506 to review. Once approved by SAO, take form to Murphy Hall, room 1255.

2. Select at least four committee members (see requirements on back of form).

3. Return completed worksheet to graduate affairs office **at least three weeks** before the date of the first oral exam.

4. Await approval of the committee from the Graduate Division. **The exam cannot take place until the committee has been approved by the Graduate Division.**

5. Schedule the exam. Coordinate a time with the committee members and reserve a room (see the Student Affairs Officer). As a reminder, your dissertation mentor is not allowed in the room while your exam is taking place.

6. It is **strongly suggested** that the student remind the committee members one or two days before the exam. **The exam cannot proceed if any members are not present at the exam.**

7. The SAO prepares the student’s academic file, including the “Report on the First Exam” form, to be signed by committee members after the exam and returned to the SAO.

**Preparing for the Second (Oral Qualifying) Exam:**
1. If changes to the committee membership are needed, a “Reconstitution of Doctoral Committee” form must be completed, signed by committee members and submitted to Graduate Division for approval. The Graduate Division requires at least three weeks to process these changes. See SAO for forms and assistance.

2. Coordinate a date/time with the committee members. Notify the SAO of the date/time of the exam has soon as one is proposed. The SAO will help you reserve a room. **It is strongly suggested** that the student remind the committee members one or two days before the exam. **The Oral Qualifying Exam is open to committee members and the student only.**

3. The SAO prepares the student’s academic file, including the “Report on the Oral Qualifying Exam” form, to be signed by committee members after the exam and returned to the SAO.

**After the Second (Oral Qualifying) Exam:**
1. The Report on the Qualifying Examination will be forwarded to Graduate Division by the SAO.
2. The student “advances to candidacy” when a successful “Report on the Oral Qualifying Exam” is received and processed by the Graduate Division. **A $90.00 fee will be billed to your BAR Account (in two charges of $45.00). Students are responsible for this fee.**

**Oral Defense** – Required. See Graduate Student Advisor for details.

**Minimum Standards for Doctoral Committee Constitution, Effective Fall 2016**

1. All doctoral committees require a minimum of four members among whom a minimum of three members must hold current UCLA Academic Senate faculty appointments limited to Professor (any rank), Professor or Associate Professor Emeritus, Professor in Residence (any rank), or Acting Professor or Acting Associate Professor. Two of the three doctoral committee members from UCLA must hold the rank of professor or associate professor (regular or in-residence series).

2. One of the three UCLA members may be an Adjunct Professor (any rank) or Professor of Clinical X (any rank) who is certified and approved by the Committee on Degree Programs (CDP).

3. The Chair always must hold a current Academic Senate faculty appointment at UCLA in the same department or interdepartmental program as the student.

4. Each program or department may set additional requirements above the UCLA minimum standards in their Program Requirements regarding:
   - UCLA members (e.g., all three must hail from the home department, two out of three from the same discipline as the student, etc.)
   - Parameters for service as a Co-Chair
   - Minimum academic credentials of an additional member

5. Only one committee member may hold an Academic Senate faculty appointment or its academic equivalent at another accredited university or college (UC or non-UC) without need of an exception from the Graduate Division.

6. All committee members read, approve, and certify the dissertation. Under unusual circumstances, a department or interdepartmental program may petition the Committee on Degree Programs via the Graduate Division for an exception that would allow three committee members (including the Chair and at least one other UCLA member) to serve as certifying members in lieu of the full committee. An approved exception would apply to all doctoral committees of graduate students in that department or interdepartmental program for a period of up to ten years.

7. All committee members must certify that the fairness, equity, and academic integrity of the oral qualifying examination and the final oral examination (dissertation defense) have been preserved by the doctoral committee.

8. Only one committee member (never the Chair or Co-Chair) may participate remotely in an oral qualifying examination or final oral examination (defense of the dissertation). Remote participation must be a matter of necessity rather than convenience. The student must petition the committee chair in advance of the examination to allow one member to participate remotely; the committee Chair must provide written approval to the student ahead of the examination. The technology required for remote participation must allow for the participant to see/be seen by and hear/be heard by all committee members and have access to visual materials simultaneously. Although no exception petition will be required for
one committee member participating remotely, the department/program must notify the Graduate Division of the remote participation within 14 business days of the examination. Under rare circumstances, the department or inter-departmental program Chair may petition the Graduate Division for an exception to allow a second member (not the Chair or Co-Chairs) to participate remotely in a doctoral oral qualifying examination or a final oral examination (defense of the dissertation). [Effective 2015 Fall]
Pertinent Information

Rotations
The laboratory rotations consist of 10 week rotations in the Fall, Winter, and Spring quarters. Three rotations are allowed for the academic year. All rotations must be approved by the Home Area Director or Faculty Graduate Adviser. These rotations are intended to serve as a tool for finding a suitable thesis lab.

On this website https://genomics.genetics.ucla.edu/people, click on Core Faculty or Affiliate Faculty. When you click on the envelope icon, it will go to your default email account with the PI’s email address. You could then start emailing them. For more information about the PI, just click on their photo and it will lead you to their website.

Domestic, Non-resident (Out of State)
Non-resident tuition will be provided for all out-of-state U.S. citizens and permanent residents for the first year of graduate study ONLY. Any U.S. citizen or permanent resident who has not qualified for California residency by the beginning of the Fall quarter of the second year will be personally responsible for payment of any non-resident tuition charges incurred in years two and beyond. Information on procedures required for establishing California residency, distributed by the Graduate Division to all entering students at the time of acceptance, appears in the General Catalog. All non-resident students (International students excluded) should familiarize themselves with these requirements and begin the necessary steps to qualify immediately. All inquiries concerning residency requirements should be directed to the Residence Deputy (1113 Murphy Hall).

myIDP (Individual Development Plan)
Beginning with a GPB training workshop in the first year of graduate study, students are required to generate an Individual Development Plan via myIDP website: http://myidp.sciencecareers.org/ in order to map out their academic and professional development goals throughout graduate school. The myIDP must be updated annually with specific new goals that will be accomplished within that academic year and the printed goals summary discussed with the dissertation research adviser (in years 2-5).

eRA Commons Account
Email erahelp@research.ucla.edu to request for an eRA Commons ID. They will need the following:
- First and last name
- UID
- Email
- Role (here is the list of eRA commons user roles: https://era.nih.gov/files/eRA_Commons_Roles.pdf)

Funding
Your SAO will send you a funding summary however since some students have Principal Investigators outside of the Department of Human Genetics. Please make sure to discuss your funding with your PI or his or her Home Area administrator.
Fellowship disbursements generally occur in advance and employment-based salary payments generally occur at the end of the month in which the amount is listed below. It is important that you review disbursement/pay dates to understand your monthly cash flow and budget your living allowance. We aim to provide even monthly cash flow, but occasionally the restrictions on available sources of support may lead to significant monthly variability.

**Fellowship-based support** is a form of merit-based financial assistance to support your education. **Timing.** Please note that disbursement dates are approximate. Delays in disbursement may occur due to administrative processing time. Contact your SAO if you experience a disbursement delay of more than two business days. **Taxability.** Stipends are typically taxable and the rules of taxation differ between international and domestic students. International taxation depends on the country of residence. Generally, taxes are withheld from stipends for international students. Domestic students do not have taxes withheld from stipends; therefore, domestic students may need to pay taxes in quarterly estimates. For more information, visit the Graduate Division Fellowship and Taxation page: [https://grad.ucla.edu/funding/financial-aid/tax-information-forms-for-ucla-fellowship-recipients/](https://grad.ucla.edu/funding/financial-aid/tax-information-forms-for-ucla-fellowship-recipients/).

2. **Employment-based support** comes from jobs in roles such as Teaching Assistant (TA) and Graduate Student Researcher (GSR) that provide experience in research and teaching. At some point during your training you will probably be supported as a GSR or TA. If so, the living allowance will be paid to you as salary. **Timing.** Salary is paid at the end the month you worked or the beginning of the following month (unlike stipend, which is paid in advance). Please note, if/when you switch from stipend support to salary support, your payment schedule changes from being paid in advance to being paid after the work is performed. This can happen at any point during your training and is especially common when transitioning to your second year in your program. In this case, your last quarterly stipend will be paid around March 22 (for April-June) and your first salary-based payment for July will be paid on or around August 1. Therefore, you should anticipate that your April stipend must last until the beginning of August, about 4 months. **Taxability.** Your earnings from employment-based support are generally taxable, and taxes are withheld according to information you provide on your W-4 form when you are hired. **UC Defined Contribution Plan.** Non-exempt student employees (i.e. not enrolled or not meeting the required minimum course load), such as GSR appointed in the summer, participate in the Defined Contribution Plan (the “DC Plan”) as Safe Harbor participants. You are automatically enrolled in the DC Plan as long as you are employed by the University of California. Safe Harbor participants automatically contribute, on a pretax basis, 7.5% of their wages beginning the first day of an eligible appointment. You may also make voluntary after-tax contributions to the DC Plan. Additional information is available at: [http://ucnet.universityofcalifornia.edu/forms/pdf/retirement-savings-program-information-for-safe-harbor-participants.pdf](http://ucnet.universityofcalifornia.edu/forms/pdf/retirement-savings-program-information-for-safe-harbor-participants.pdf).
**Behavioral Wellness**

Please also see the GPB Wellness page: [http://bioscience.ucla.edu/wellness](http://bioscience.ucla.edu/wellness)

Compared to CAPS, BWC offers twice the number (12/yr) of short term psychotherapy sessions covered by student health and with no copay. Similarly, if needed, BWC offers 12 medication management sessions with a psychiatrist. For students to schedule, they can call the center or use the website. Currently there is no backlog and a first visit can be scheduled within a week. For crisis situations or other consultations, Home Area directors can call or page Anna Miller or the BWC Director, Karen Miotto (contact information sent in a separate email).

All GPB students are eligible for BWC services. BWC offers twice the number of follow-up therapy sessions as CAPS. Appointments can be made by phone or through the website. Walk-in available for crisis situation, calling ahead helps.

Anna Miller is available for consults about students by HA directors, staff, and faculty.

If you contact Karen Miotto or Anna Miller let them know you are part of the Bioscience graduate program.

Location: CHS 18-212, 2318
Phone: (310) 825-9605
[BWC@mednet.ucla.edu](mailto:BWC@mednet.ucla.edu)
[http://medschool.ucla.edu/bwc](http://medschool.ucla.edu/bwc)

Contact Info:

Dr. Karen Miotto, Director
Cell: (310) 658-0081
Pager: 12372
Email: [KMIotto@mednet.ucla.edu](mailto:KMIotto@mednet.ucla.edu)

Anna Miller, LCSW and clinical coordinator
Phone: (310) 825-9270
Ext 59270
Email: [almiller@mednet.ucla.edu](mailto:almiller@mednet.ucla.edu)
Pager: 94921
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GC = Gonda Center  
MRL = MacDonald Research Laboratories  
NPI = Neuropsychiatric Institute  
MS = Math Science (Boelter Hall)  
MBI = Molecular Biology Institute (Boyer Hall)  
NRB = Neuroscience Research Building