DEPARTMENT OF HUMAN GENETICS AND GENETICS AND GENOMICS HOME AREA

GRADUATE STUDENT HANDBOOK

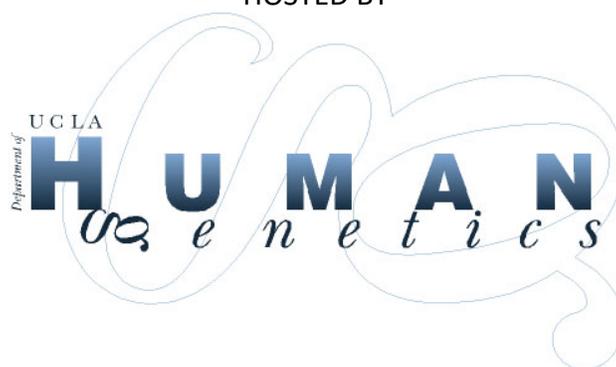**ACADEMIC YEAR**

2021-2022

THE

HOME AREA

HOSTED BY

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

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KEY CONTACT INFORMATION

Department of Human Genetics

Jerome Keh Student Affairs Officer 6506 Gonda (310) 206-0920 jkeh@mednet.ucla.edu	⇒ **When in doubt, see your Student Affairs Officer!** ⇒ Administrative actions in conjunction with the Graduate Division ⇒ Academic progress, including course enrollments, laboratory rotations, doctoral committees, written and oral examinations, advancement to candidacy, and dissertation defenses ⇒ Financial support, including fellowships, grants, TAships, and GSR appointments
Issa Lutfi Senior Academic Personnel and HR Coordinator 6309B Gonda (310) 206-0920 ilutfi@mednet.ucla.edu	⇒ Administrative support
Blanca Ramirez Administrative Specialist and Events Coordinator 6506 Gonda (310) 794-5423 blancaramirez@mednet.ucla.edu	⇒ Administrative support ⇒ Events coordinator
Dr. Paivi Pajukanta Director, Genetics and Genomics Home Area Vice Chair, Department of Human Genetics 6357B Gonda (310) 435-6422 ppajukanta@mednet.ucla.edu	⇒ Home Area and curriculum related questions ⇒ Rotation related questions
Dr. Esteban Dell'Angelica Faculty Graduate Adviser 5506B Gonda (310) 206-6749 edellangelica@mednet.ucla.edu	⇒ Academic advising ⇒ Conflict resolution
Dr. Leonid Kruglyak Chair, Department of Human Genetics 6506A Gonda (310) 825-5486 lkruglyak@mednet.ucla.edu	⇒ Academic guidance

Graduate Programs in Bioscience (GPB) Leadership
*Please contact Jerome Keh prior to contacting personnel below

Dr. Greg Payne Senior Associate Dean of Bioscience Graduate Education, School of Medicine Associate Dean of Graduate Education, Life Sciences Director, Graduate Programs in Bioscience gpayne@mednet.ucla.edu	⟹ General academic advising ⟹ Conflict resolution ⟹ Any sensitive issues that do not have another appropriate point of contact
Stacie McKinney Program Coordinator, Graduate Programs in Bioscience smckinney@mednet.ucla.edu	⟹ 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
Dr. Diana Azurdia Director of Recruitment and Inclusion for Bioscience Research Training, Graduate Programs in Bioscience dazurdia@mednet.ucla.edu	⟹ 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://it.uclahealth.org/about/dgit/dgit-support	⟹ Computing support ⟹ Troubleshooting ⟹ Bioinformatics labs
Room Reservations https://www.gonda.ucla.edu/rooms/humgen.php	

CURRICULUM

Please refer to the Program Requirements section (starting on page 10) for specific information about course requirements for the master's and doctoral degrees.

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 or 599 courses). While required courses and electives have fixed unit values, the unit value for courses numbered 596 or 599 will equal the number of units needed, in addition to required courses and electives, to reach the required 12 units per quarter.

To sign up for classes, visit https://my.ucla.edu/.

CORE COURSES

- **236A. Advanced Human Genetics A: Molecular Aspects**. Units: 4.0. 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)*

- **236B. Advanced Human Genetics B: Genetics and Genomics Aspects.** Units: 4.0. Seminar, four hours; discussion, four hours. Human genetics is fundamental scientific field that studies inheritance in humans and therefore also has immediate practical value for human health and disease. Identification of genes and genetic variation involved in human diseases, traits, and behavior is one of main goals of human genetic studies. Genomic technologies are rapidly advancing and allow for comprehensive and in-depth analysis of human genome. Covers different themes in field of human genetics, including genetics of monogenic disorders, genetic mapping of complex traits, transcriptome analysis, and epigenomic studies of human disease. Overview of human genetics through examination of selection of papers that highlight each of these themes. Letter grading. *(Winter)*

- **C234. Ethics and Accountability in Biomedical Research**. Units: 2.0. (Same as Microbiology and Immunology CM234.) Seminar, two hours. Designed for graduate students and undergraduates who have credit for 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)*

The following TAship course is a one-time course students take in conjunction with the quarter they decide to TA:

- **495. Preparation for Teaching**. Units: 2.0. Prepares students for college-level teaching and provides professional development. Discusses practical and theoretical issues about teaching in a specific discipline. Taken in conjunction the first time the student teaches as a teaching assistant. Each department may have a different course number.

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

- **596. Directed Individual Research**. Units: 2.0 to 12.0. Tutorial, to be arranged. Individual study or research for graduate students. May be repeated for credit. S/U grading. (For students prior to advancement to candidacy.)

- **599. Research for and Preparation of Ph.D. Dissertation**. Units: 2.0 to 12.0. Tutorial, to be arranged. Preparation of research data and writing of PhD dissertation. May be repeated for credit. S/U grading. (For students after advancement to candidacy.)

POSSIBLE ELECTIVE COURSES

Note: Some of these courses have prerequisites or are not consistently offered every year. Please contact the course instructor/director to inquire on requirements and availability.

Please visit https://sa.ucla.edu/ro/public/soc/ to view these courses in the schedule of classes.

- **Statistics C236. Introduction to Bayesian Statistics.** Units: 4.0. 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: 4.0. 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.

- **Biostatistics 200B. Methods in Biostatistics B.** Units: 4.0. Lecture, three hours; discussion, one hour; laboratory, one hour. Preparation: linear algebra. Requisite: course 200A. Designed for students pursuing graduate degrees in biostatistics. Theory and practice of linear regression analysis and analysis of variance (ANOVA). S/U or letter grading.

- **Biomathematics M207A. Theoretical Genetic Modeling.** Units: 4.0. (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: 4.0. (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: 4.0. (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: 4.0. (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.

- **EE Biol C235. Population Genetics.** Units: 4.0. (Formerly numbered 235.) Lecture, three hours; discussion, one hour. Basic principles of genetics of population, dealing with genetic structure of natural populations and mechanisms of evolution. Equilibrium conditions and forces altering gene frequencies, polygenic inheritance, molecular evolution, and methods of quantitative genetics. Concurrently scheduled with course C135. S/U or letter grading.

- **Hum Gen CM224. Computational Genetics.** Units: 4.0. (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**. (4.0. 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: 4.0. (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: 4.0. (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: 2.0. 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: 2.0. 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: 2.0. 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.

RECOMMENDED TIMELINE

Year/Quarter		Fall	Winter	Spring
1st Year		• 1st rotation • Hum Gen 236A • Hum Gen 596	• 2nd rotation • Hum Gen 236B • Hum Gen 596	• 3rd rotation • Hum Gen 596 • MIMG C234 • Choose dissertation lab
2nd Year	• Begin dissertation research in lab • TA (1 quarter) • Constitute doctoral committee and annual committee meeting	• Dissertation research • Hum Gen 596	• Dissertation research • Hum Gen 596	• Dissertation research • Hum Gen 596 • First examination • Update myIDP
3rd Year	• Dissertation research • TA (1 quarter) • Annual committee meeting	• Dissertation research • Hum Gen 596 (or 599 if ATC)	• Dissertation research • Hum Gen 596 (or 599 if ATC)	• Dissertation research • Hum Gen 596 (or 599 if ATC) • Second examination • Update myIDP
4th Year	• Dissertation research • Hum Gen 599 • Annual committee meeting	• Dissertation research • Hum Gen 599	• Dissertation research • Hum Gen 599	• Dissertation research • Hum Gen 599 • Update myIDP
5th Year	• Dissertation research • Hum Gen 599 • Annual committee meeting	• Dissertation research • Hum Gen 599	• Dissertation research • Hum Gen 599	• Dissertation research • Hum Gen 599 • Dissertation defense • File dissertation

PROGRAM REQUIREMENTS

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.

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 the Human Genetics courses 236A and 236B or, under exceptional circumstances, equivalent graduate-level courses approved by the Faculty Graduate Adviser. Students must also complete the C234 course on Ethics and Accountability in Biomedical Research. Elective courses must be taken to complete the nine courses (36 units) required for the master's degree, with at least five of them (20 units) being at graduate level. All courses should be taken for a letter grade with the exception of the ethics course C234, which may be taken for Satisfactory/Unsatisfactory. 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.

Capstone 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 doctoral 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

DEGREE	NORMATIVE TIME TO ATC (QUARTERS)	NORMATIVE TTD	MAXIMUM TTD
M.S.	9	9	24

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 doctoral 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

Students are required to take the Human Genetics courses 236A and 236B or, under exceptional circumstances, equivalent graduate-level courses approved by the Faculty Graduate Adviser. Students must also complete the C234 course on Ethics and Accountability in Biomedical Research. All courses should be taken for a letter grade with the exception of the ethics course C234, which may be taken for Satisfactory/Unsatisfactory.

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 7B (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

DEGREE	NORMATIVE TIME TO ATC (QUARTERS)	NORMATIVE TTD	MAXIMUM TTD
Ph.D.	10	16	24

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. Please contact the UCLA Career Center to set up your IDP.

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 doctoral committee so that the committee can assess the student's progress and provide advice. At each meeting, the student should take 20 to 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 doctoral 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 https://grad.ucla.edu/gasaa/library/docnomin.pdf to nominate your doctoral committee. Once completed bring to the SAO in 6506 Gonda to review. Once approved by SAO, take form to 1255 Murphy Hall.

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. <u>The exam cannot proceed if any members are not present at the exam</u>.

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

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).

ADDITIONAL 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.

Information on faculty affiliated with the Genetics and Genomics Home Area can be found at https://medschool.ucla.edu/human-genetics/core-faculty.

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 at https://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 primary departmental administrator/fund manager.

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.

1. **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/ .

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 meetings 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: https://ucnet.universityofcalifornia.edu/forms/pdf/retirement-savings-program-information-for-safe-harbor-participants.pdf.

Behavioral Wellness

Please also see the GPB Wellness page at https://bioscience.ucla.edu/student-wellness-reporting-resources/.

All GPB students are eligible for Behavioral Wellness Center (BWC) services. BWC offers twice the number of follow-up therapy sessions as Counseling and Psychological Services (CAPS). Appointments can be made by phone or through the website. Walk-ins are available for crisis situations. Calling ahead helps.

If you contact Karen Miotto or Anna Miller, let them know you are part of GPB.

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BWC@mednet.ucla.edu
https://medschool.ucla.edu/bwc

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Email: kmiotto@mednet.ucla.edu

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