Master’s Degree Requirements

1) Admissions requirements:
Consideration for program admission requires a bachelor’s degree, three letters of recommendation, official transcripts, GRE scores, TOEFL or IELTS score (if applicable) and Office of Graduate Studies online application with fee by the stated admission deadline. A minimum GPA of 3.0 is required. Meeting some or all of these criteria does not guarantee admission, but merely eligibility. Admissions decisions are made on a case-by-case basis. The decision to recommend admission to the Dean of Graduate Studies will be made by the Program Admissions Committee on the basis of available space and the competitiveness of applicants compared to the eligible pool.

a) Prerequisites:
Demonstrated scholarly achievement and evidence of a strong aptitude for scientific research are important criteria in the decision to accept an applicant. For these reasons, the GGG does not have formal course requisites for entry into the group. However, previous coursework in chemistry, genetics, molecular biology, statistics, and biochemistry will expedite students’ completion of their degrees.

b) Deficiencies:
Coursework deficiencies are identified by the student’s guiding committee during the first quarter meeting and are reviewed for completion during the third and fifth quarter meetings.

2) M.S. Plan I and II

Plan I. This plan requires at least 30 units of graduate and upper division courses (the 100 and 200 series only) and, in addition, a thesis. At least 12 of the 30 units must be graduate level courses.

Plan II. This plan requires 36 units of graduate and upper division courses, of which at least 18 units must be graduate level courses. Not more than 9 units of research (299 or equivalent) may be used to satisfy the 18-unit requirement. A comprehensive final examination in the major subject is required of each candidate. In addition, students will submit a 10-page scientific paper for approval by the examining committee.

3) Course Requirements
Students are expected to receive a grade of B or better in all required courses.

A) Plan I: Course Requirements (30 units)
At least 30 quarter units in residence at UC Davis; at least 12 of the 30 units must be in graduate level courses.

i) Core Courses (19 units)
   - GGG201A - Advanced Genetic Analysis (5 units)
   - GGG201B - Comparative and Functional Genomics (5 units)
   - GGG201D - Population and Quantitative Genetics (5 units)
   - GGG296 - Scientific Professionalism & Integrity (2 units, S/U grading)
   - GGG290A, Student Seminar (1 unit, S/U grading)
   - Group seminar - GGG 290, 292, 293, 294, 295 or 297 (1 unit) - in one of the following:
     - Evolutionary, Developmental & Population Genetics
     - Genomics & Epigenetics
     - Animal Genetics
     - Human Genetics
ii) Electives
At least 18 of the 30 unit requirement must be fulfilled by regular courses (and not 299/research units); 15 units must be in genetics-related courses, as approved by the Graduate Advisor.

iii) Summary
For Plan I, there are 30 units required: 19 units of core coursework, and at least 11 units of elective coursework. At least 30 quarter units in residence at UC Davis; at least 12 of the 30 units must be in graduate level courses. Per UC regulations students cannot enroll in more than 12 units of graduate level courses (200) or more than 16 units of combined undergraduate and graduate level (100, 200, 300) courses per quarter.

B) Plan II: Course Requirements (36 units)
At least 36 quarter units in residence at UC Davis; at least 18 of the 36 units must be in graduate level courses.

i) Core Courses (18 units)
- GGG201A - Advanced Genetic Analysis (5 units)
- GGG201B - Comparative and Functional Genomics (5 units)
- GGG201D - Population and Quantitative Genetics (5 units)
- GGG296 - Scientific Professionalism & Integrity (2 units, S/U grading)
- GGG290A, Student Seminar (1 unit, S/U grading)
- Group seminar - GGG 290, 292, 293, 294, 295 or 297 (1 unit) - in one of the following:
  o Evolutionary, Developmental & Population Genetics
  o Genomics & Epigenetics
  o Animal Genetics
  o Human Genetics
  o Molecular Genetics
  o Plant Genetics

ii) Electives
At least 27 of the 36 unit requirement must be fulfilled by regular courses (and not 299/research units); 21 units must be in genetics-related courses, as approved by the Graduate Advisor.

iii) Research (6 units)
At least 6 units of either Group study (GGG298) or research (GGG299) are required. A written report of 10 pages or longer following the style of either a review or research paper in a scientific journal in the field must be submitted to and approved by the comprehensive examination committee.

iv) Summary
For Plan II, there are 36 units required: 19 units of core coursework, at least 11 units of elective coursework, and 6 units of research (with a required paper). At least 36 quarter units in residence at UC Davis; at least 27 of the 36 units must be in regular courses (and not 299/research units). Per UC regulations students cannot enroll in more than 12 units of graduate level courses (200) or more than 16 units of combined undergraduate and graduate level (100, 200, 300) courses per quarter.
4) Special requirements
N/A

5) Committees:

a) Admission Committee
Once the online application, all supporting material, and the application fee have been received, the Admissions Committee will review the application. The Committee consists of four to six GGG faculty members appointed by the Chair and one student member appointed by the Student Executive Committee. The Committee shall develop and regularly update criteria for admission of students and screen applications accordingly.

Based on a review of the entire application, a recommendation is made to accept or decline an applicant’s request for admission. That recommendation is forwarded to the Dean of Graduate Studies for final approval of admission. Notification of admissions decisions will be sent by Graduate Studies. Applications are accepted through Dec 15 of the previous year for the next Fall entering class.

b) Course Guidance Committee
The academic curriculum and progress of each M.S. student will be followed by a Guiding Committee consisting of the major professor, the adviser, and a third member of the faculty. The Guidance Committee is appointed by the Master Adviser prior to the first quarter of enrollment. When a thesis committee is chosen for a Plan I student, the Guiding Committee will be discontinued.

c) Thesis Committee and Comprehensive Examination Committee
The thesis committee is appointed after the student submits an application for candidacy to the M.S. degree. It consists of a Chair, who is the major professor of the candidate, and two additional members, at least one of whom must be a member of the IGG. Suggestions for the membership of the committee may be made by the guiding committee, but the Advising Committee of the IGG will have final responsibility for nominating the committee for appointment by the Dean of Graduate Studies.

The comprehensive examination committee is appointed after the student submits an application for candidacy to the M.S. degree. It consists of a Chair (who must be a member of the IGG) and two additional members, one of whom must also be a member of the IGG. Suggestions for the membership of the examination committee may be made by the guiding committee, but the Advising Committee of the IGG will have final responsibility for selecting the committee.

6) Advising Structure and Mentoring:

The Major Professor is the faculty member who supervises the student’s research and thesis; this person serves as the Chair of the Thesis Committee. The Graduate (Academic) Advisor, who is appointed by the Master Adviser with the approval of Graduate Studies, is a resource for information on academic requirements, policies and procedures, and registration information. The Mentoring Guidelines can be found on the Integrative Genetics and Genomics website http://biosci3.ucdavis.edu/GradGroups/GGG under Advising Guidelines.

7) Advancement to Candidacy:
Every student must file an official application for Candidacy for the Degree of Master Science in Integrative Genetics and Genomics after completing one-half of their course requirements and at least one quarter before completing all degree requirements; this is typically the 4th quarter. The Candidacy for the Degree of Master form can be found online at: http://www.gradstudies.ucdavis.edu/forms/. A completed form includes a list of courses the student will take to complete degree requirements. If changes must be made to the student’s course plan after s/he has advanced to candidacy, the Graduate Adviser must recommend these changes to Graduate Studies. Students must have their Graduate Adviser and committee Chair sign the candidacy form before it can be submitted to Graduate Studies. If the candidacy is approved, the Office of Graduate Studies will send a copy to the appropriate graduate staff person and the student; the Thesis Committee Chair will also receive a copy, if applicable. If the Office of Graduate Studies determines that a student is not eligible for advancement, the department and the student will be told the reasons for the application’s deferral. Some reasons for deferring an application include: grade point average below 3.0, outstanding “I” grades in required courses, or insufficient units.

8) Comprehensive Examination and/or Thesis Requirements:

a) Thesis Requirements (Plan I):

Thesis committee meetings: The thesis committee will meet with the candidate at least once a year to follow the progress of the thesis research.

Thesis: Research for the Master’s thesis is to be carried out under the supervision of a faculty member of the program and must represent an original contribution to knowledge in the field. The thesis research must be conducted while the student is enrolled in the program. All committee members must approve the thesis and sign the title page before the thesis is submitted to Graduate Studies for final approval. Should the committee determine that the thesis is unacceptable, even with substantial revisions, the program may recommend the student for disqualification from the program to the Dean of Graduate Studies.

The thesis must be filed in a quarter in which the student is registered or on filing fee. Instructions on preparation of the thesis and a schedule of dates for filing the thesis in final form are available from Graduate Studies; the dates are also printed in the UC Davis General Catalog and in the Class Schedule and Registration Guide issued each quarter. A student must have a GPA of 3.0 for the M.S. degree to be awarded.

b) Comprehensive Examination (Plan II):

i) Timing:

The comprehensive examination committee is appointed after the student submits an application for candidacy to the M.S. degree, no later than the 5th quarter in residence.

ii) Outcome:

Fulfillment of the Comprehensive Examination is the last requirement of the M.S. Plan II. A student may take the comprehensive examination once they have advanced to candidacy. However, it is important that the capstone requirement be completed at or near the end of the coursework for the Master’s degree; for most students, the exam is taken at the end of the 5th quarter.

The comprehensive examination requirement will cover those areas of General Genetics included in the course work completed by the student. The Chair of the comprehensive examination committee for Plan II students shall report the results of the examination to the GGG office and to the Office of Graduate Studies. In addition to the oral comprehensive examination, Plan II students will submit a 10-page scientific paper for approval by the
examining committee. The subject of the paper will be by mutual agreement of the Chair of the examining committee and the student.

The Exam committee’s unanimous vote is required to pass a student on the exam. If a student does not pass the exam, the committee may recommend that the student be reexamined one more time, but only if the Graduate Adviser concurs with the committee. The second exam must take place within one quarter of the first exam. The format of the second exam is the same as that of the first exam and may include the submission of an amended version of the report. The examination may not be repeated more than once. A student who does not pass on the second attempt is subject to disqualification from further graduate work in the program.

Once passed, the Master’s Report Form is signed by the Program Graduate Adviser and then forwarded to the Office of Graduate Studies. The deadlines for completing this requirement are listed each quarter in the campus General Catalog (available online at the website of the Office of the Registrar or from the Bookstore). A candidate must be a registered student or in Filing Fee status at the time the program submits the form, with the exception of the summer period between the end of the Spring Quarter and the beginning of Fall Quarter. The program must file the report with Graduate Studies within one week of the end of the quarter in which the student’s degree will be conferred.

9) Normative Time to Degree:
   The normative time for a M.S. degree in Integrative Genetics and Genomics is two years. Students judged by the Advising Committee of the GGG to be making inadequate progress towards the degree will be recommended to the Office of Graduate Studies for disqualification from the program.

10) Typical Time Line and Sequence of Events:

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>GGG 201A Advanced Genetic Analysis</td>
<td>GGG 201B Comparative and Functional Genomics</td>
<td>GGG 201D Population and Quantitative Genetics</td>
</tr>
<tr>
<td></td>
<td>GGG 296 Professionalism &amp; Science Integrity</td>
<td>GGG seminar (294 or 297) or GGG student seminar (290A)</td>
<td>GGG seminar (290 or 293) or GGG student seminar (290A)</td>
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<tr>
<td></td>
<td>GGG seminar (292 or 295)</td>
<td>Elective</td>
<td>Elective</td>
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<td></td>
<td>GGG 299</td>
<td>GGG 299</td>
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</tbody>
</table>

<table>
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<tr>
<th>Year 2</th>
<th>Fall (advancement to candidacy)</th>
<th>Winter</th>
<th>Spring</th>
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<tbody>
<tr>
<td></td>
<td>Elective</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GGG seminar (292 or 295)</td>
<td>GGG student seminar</td>
<td></td>
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<tr>
<td></td>
<td>GGG 299</td>
<td>GGG 299</td>
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<table>
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<tr>
<th>Year 3</th>
<th>Comprehensive Exam Passed/Thesis Submitted</th>
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</thead>
</table>

11) Sources of funding Masters students in Integrative Genetics and Genomics cover their living expenses, tuition and fees by a variety of mechanisms. For many Masters students, this means using personal resources, while in other cases students obtain fellowships from external organizations or graduate research assistantships from their major professor.

12) PELP, In Absentia and Filing Fee status.
Information about PELP (Planned Educational Leave), In Absentia (reduced fees when researching out of state), and Filing Fee status can be found in the Graduate Student Guide: 
http://www.gradstudies.ucdavis.edu/publications/

Format for Ph.D. Degree Requirements

1) Admissions Requirements:
Consideration for program admission requires a bachelor’s degree, three letters of recommendation, official transcripts, GRE scores, TOEFL or IELTS score (if applicable) and Office of Graduate Studies online application with fee by the stated admission deadline. A minimum GPA of 3.0 is required. Admissions decisions are made on a case-by case basis. Meeting some or all of these criteria does not guarantee admission, but merely eligibility. The decision to recommend admission to the Dean of Graduate Studies will be made by the Program Admissions Committee on the basis of available space and the competitiveness of applicants compared to the eligible pool.

a) Prerequisites:
Demonstrated scholarly achievement and evidence of a strong aptitude for scientific research are important criteria in the decision to accept an applicant. For these reasons, the GGG does not have formal course requisites for entry into the group. However, previous coursework in chemistry, genetics, molecular biology, statistics, and biochemistry will expedite students’ completion of their degrees.

b) Deficiencies:
Coursework deficiencies are identified by the student’s guiding committee during the first quarter meeting and are reviewed for completion during the third and fifth quarter meetings.

2) Dissertation Plan:

Plan B. IGG requires a three-member (minimum) dissertation committee, and optional final oral examination (made on an individual student basis by the dissertation committee), and an exit seminar.

C.Phil. – The Candidate in Philosophy Degree

Integrative Genetics and Genomics offer the Candidate in Philosophy (C. Phil.) degree option for students who are advanced to candidacy for the Doctor of Philosophy degree.

3) Course Requirements - Core and Electives (29 units)

a) Core Courses (19 units)

• GGG 201A, Advanced Genetic Analysis (5 units)
• GGG 201B, Comparative and Functional Genomics (5 units)
• GGG 201D, Quantitative and Population Genetics (5 units)
• GGG 291, History of Genetics (2 units)
• GGG 296, Science Professionalism and Integrity (2 units)
b) Additional requirements to be approved by the graduate academic adviser:

- GGG290A, Student Seminar (1 unit, S/U grading)
  Students will be required to enroll in this course for one quarter during each of the first four years of their degree program.

- An additional one-unit seminar:
  GGG 290, Evolutionary, Developmental & Population Genetics
  GGG 292, Genomics & Epigenetics
  GGG 293, Animal Genetics
  GGG 294, Human Genetics
  GGG 295, Molecular Genetics
  GGG 296, Plant Genetics
  or other seminar as approved by the academic adviser during their first two years for S/U or letter grading.

- Two courses, at least one at the graduate level, to provide depth in the general area of proposed dissertation research. These courses must be taken for a letter grade.

- At least one additional graduate level course to encourage diversity in educational experience.

c) Summary:

Nineteen (19) units of core coursework, at least one graduate seminar (1 unit) and four units of participatory seminars are required for a total of 24 units. Ten (10) units of lab rotations are recommended for students receiving UC Davis Graduate Program Fellowships. Three additional elective courses are required depending on the research area of the student. Full-time students must enroll for 12 units per quarter including research, academic and seminar units. Courses that fulfill any of the program course requirements may not be taken S/U unless the course is normally graded S/U. Once course requirements are completed, students can take additional classes as needed, although the 12 units per quarter are generally fulfilled with a research class (299) and perhaps seminars. Per UC regulations students cannot enroll in more than 12 units of graduate level courses (200) or more than 16 units of combined undergraduate and graduate level (100, 200, 300) courses per quarter.

4) Special Requirements: Students are required to serve as a teaching assistant for at least one genetics-related lecture or laboratory course prior to advancing to candidacy in order to gain experience in teaching genetics. A list of appropriate courses that fulfill this requirement will be provided by the Guidance Committee which will have the discretion to approve particular courses for individual students on an ad hoc basis.

5) Committees:
   a) Admissions Committee:
      Once the online application, all supporting material, and the application fee have been received, the Admissions Committee will review the application. The Committee consists of four to six IGG faculty members appointed by the Chair and one student member appointed by the Student Executive Committee. The Committee shall develop and regularly update criteria for admission of students and screen applications accordingly.

      Based on a review of the entire application, a recommendation is made to accept or decline an applicant’s request for admission. That recommendation is forwarded to the Dean of Graduate Studies for final approval of admission. Notification of admissions decisions will be sent by
Graduate Studies. Applications are accepted through Dec 15 of the previous year for the next Fall entering class.

b) **Course Guidance or Advising Committee**
The IGG Executive Committee will recommend a Chair of Graduate Advisers (Master Adviser) and other advisers as needed to Graduate Studies. The Master Adviser will appoint an Academic Adviser from the Advising Committee for each new student. Guiding Committees, consisting of the Academic Adviser and two other faculty members (including the Major Professor when identified) will meet regularly with students during their first two years. The Advising Committee will meet twice a year and will assign qualifying examination committees in the Spring.

c) **Qualifying Examination Committee:**
Each student, in consultation with the major professor and guiding committee, nominates two to four faculty to serve in each of the four examination areas and as chair of the examination committee. These choices are submitted in the student’s Fifth Quarter Advising Report. After receipt of all reports, the IGG Advising Committee will meet in the Spring Quarter and recommend appointment of the examination committees such that each committee is capable of examining the student’s specific research area as well as the breadth of genetics covered in the core courses. The major professor is specifically excluded from membership.

Service on Qualifying Exam Committees will be distributed equitably among IGG faculty. The student has the opportunity to request a change in the composition of the committee in consultation with the major professor and/or guiding committee; such requests stating the reason for the suggested changes must be submitted in writing to the Master Advisor within two weeks of the student receiving notification of the nominated committee.

These nominations are submitted to the Office of Graduate Studies for formal appointment in accordance with Graduate Council policy. The QE Committee conducts the exam and submits results to the Office of Graduate Studies.

d) **Dissertation Reading Committee:**
The major professor will serve as the chair of the committee. There will be two additional members of the Dissertation Committee. The committee shall be appointed as soon as possible after the student has passed the qualifying examination. The Dissertation Committee shall normally include at least two members of the Graduate Group in Integrative Genetics and Genomics. The third member may have specialist knowledge pertinent to the research area and does not necessarily have to be a member of the IGG.

The Dissertation Committee will provide the student with intellectual and technical advice on the research project so as to allow the student to complete the research for the Ph.D. in a timely manner. It should be comprised of faculty that are capable of providing such specialized advice.

7) **Advancement to Candidacy:**
Before advancing to candidacy for a doctoral degree, a student must have satisfied all requirements set by the graduate program, must have maintained a minimum GPA of 3.0 in all course work undertaken (except those courses graded S or U), and must have passed a Qualifying Examination before a committee appointed to administer that examination. The Qualifying Examination Committee will administer the oral examination sometime after April 30 in the Spring Quarter of the second year of enrollment and before March 31 in the Winter
Quarter of the third year of enrollment to determine if the student is qualified for advancement to candidacy for the Ph.D. degree based on the criteria above. If circumstances are such that the qualifying examination cannot be taken before March 31 in the third year, the student must submit a written request with justification for a delay and proposed examination date to the Advising Committee. It is the responsibility of the student and major professor to ensure that the qualifying exam is taken in a timely fashion.

The student must file the appropriate paperwork with the Office of Graduate Studies and pay the candidacy fee in order to be officially promoted to Ph.D. Candidacy. Refer to the Graduate Council website for additional details regarding the Doctoral Qualifying Examination at http://gradstudies.ucdavis.edu/gradcouncil/policiesall.html.

8) Qualifying Examination and Dissertation requirements:

a) Qualifying Examination

1. General Information

All students will complete all course requirements before taking their Qualifying Examination. Passing this exam makes the student eligible for advancement to candidacy. The qualifying exam should be taken by the end of the 8th quarter after admission to the Ph.D. program.

The primary purpose of the Qualifying Examination (QE) is to validate that the student is academically qualified to conceptualize a research topic, undertake scholarly research and successfully produce the dissertation required for a doctoral degree. The QE must evaluate the student’s command of the field, ensuring that the student has both breadth and depth of knowledge, and must not focus solely on the proposed dissertation research. In addition, the QE provides an opportunity for the committee to provide important guidance to the student regarding his or her chosen research topic.

The Qualifying Examination will consist of written and oral examinations.

2. Written Portion of the Exam – Dissertation Prospectus

Presentation and defense of a written research proposal covering the proposed dissertation research. This will be submitted to committee members not less than two weeks prior to the date of the examination. The proposal should reflect the goal of dissertation projects to provide a substantial and original contribution to the field of genetics. The format should be that of a Federal grant proposal and should be no more than five pages long.

3. Oral Portion of the Exam

The oral portion of the qualifying exam will be 2-3 hours in length and is intended to demonstrate the student’s critical thinking ability, powers of imagination and synthesis, and broad knowledge of the field of study, covering the breadth of genetics as reflected by the subject matter of the core courses. The committee will evaluate the student’s general qualifications for a respected position as an educator or leader as well as the student’s preparation in a special area of study based upon relevant portions of the student’s previous academic record, performance on specific parts of the examination, and the student’s potential for scholarly research as indicated during the examination.

4. Outcome of the Exam
The committee will reach a decision on the student’s performance immediately after the oral exam. The committee, having reached a unanimous decision, shall inform the student of its decision to:

- “Pass” (no conditions may be appended to this decision),
- “Not Pass” (the Chair’s report should specify whether the student is required to retake all or part of the examination, list any additional requirements, and state the exact timeline for completion of requirements to achieve a “Pass”), or
- “Fail”.

If a unanimous decision takes the form of “Not Pass” or “Fail”, the Chair of the QE committee must include in its report a specific statement, agreed to by all members of the committee, explaining its decision and must inform the student of its decision. Having received a “Not Pass” the student may attempt the QE one additional time; the QE report must list the specific conditions and timing for the second exam. After a second examination, a vote of “Not Pass” is unacceptable; only “Pass” or “Fail” is recognized. Only one retake of the qualifying examination is allowed. Should the student receive a “Fail” on the first or second attempt at the exam, the student will be recommended for disqualification from the program to the Dean of Graduate Studies.

b) The Dissertation

1. Exit Seminar
   The dissertation follows Plan B with a required exit seminar. Satisfaction of this requirement must be verified by the Dissertation Committee Chair. The Exit Seminar is a formal public presentation of the student’s research before the program faculty and students. Adequate scheduling of the exit seminar is the responsibility of the student.

2. Dissertation: General Requirements
   Filing of a Ph.D. dissertation with the Office of Graduate Studies is normally the last requirement satisfied by the candidate. The deadlines for completing this requirement are listed each quarter in the campus General Catalog (available online at the website of the Office of the Registrar or from the Bookstore). A candidate must be a registered student or in Filing Fee status at the time of filing a dissertation, with the exception of the summer period between the end of the Spring Quarter and the beginning of Fall Quarter. The PhD. Dissertation will be prepared, submitted and filed according to regulations instituted by the Office of Graduate Studies http://gradstudies.ucdavis.edu/students/filing.html. Satisfaction of this requirement must be verified by the Dissertation Committee Chair.

3. Dissertation
   The research conducted by the student must be of such character as to show ability to pursue independent research. The dissertation reports a scholarly piece of work of publishable quality that solves a significant scientific problem in the field and is carried out under the supervision of a member of program while the student is enrolled in the program. The chair of the dissertation committee must be a member of the program and must be immediately involved with the planning and execution of the experimental work done to formulate the dissertation. The major professor’s laboratory is the setting for most of the student’s research activities, unless an alternative site and immediate supervisor are approved in advance by the Executive Committee.

   The Dissertation Committee will provide the student with intellectual and technical advice on the research project so as to allow the student to complete the research for the Ph.D. in a timely manner. It should be comprised of faculty that are capable of providing such specialized advice.
The major professor will call for a meeting of the Dissertation Committee no more than six months after its appointment to review the status of the student's research. Additional meetings should be held once each year and may be held more frequently at the request of the major professor, other members of the committee, or the student. A dissertation committee report signed by all members of the dissertation committee must be completed annually for the student to be considered as making adequate progress towards completion of their degree. Students are encouraged to consult with all members of the committee with respect to his/her research.

The committee shall evaluate the merits of the dissertation. The dissertation will be judged as satisfactory on three criteria: 1) The demonstration of an in depth understanding of the specific area of research. 2) The demonstration of the application of the scientific method in a genetic context. 3) The generation and interpretation of data that represent significant and novel contributions to knowledge.

Students will submit a dissertation based upon original research completed as a graduate student to their Dissertation Committee for approval at least four weeks before the student wishes to submit the approved dissertation to the Graduate Division. The committee should review the dissertation within four weeks of receipt and provide the students with written comments. Prior to final approval the Dissertation Committee should meet with the student and reach a consensus regarding the dissertation based on the criteria listed above.

9) **Normative Time to Degree**
Normative time to advancement to candidacy is two to three years. Normative time in candidacy is two to three years. Students who have not filed their dissertations by the end of their sixth year since entering the program will receive marginal or unsatisfactory progress reports.

10) **Typical Time Line and Sequence of Events**

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<thead>
<tr>
<th>Year One</th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
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<tbody>
<tr>
<td></td>
<td>GGG 201A</td>
<td>GGG 201B</td>
<td>GGG 201D</td>
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<td></td>
<td>GGG 205</td>
<td>GGG 205</td>
<td>Elective</td>
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<tr>
<td></td>
<td>GGG 291</td>
<td>GGG seminar (290 series) and/or student seminar</td>
<td>GGG seminar (290 series) and/or student seminar</td>
</tr>
<tr>
<td>Year Two</td>
<td>Fall</td>
<td>Winter</td>
<td>Spring</td>
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<td></td>
<td>Elective</td>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>GGG 296</td>
<td>GGG seminar (290 series) and/or student seminar</td>
<td>GGG seminar (290 series) and/or student seminar</td>
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<tr>
<td></td>
<td>GGG 299</td>
<td>GGG 299</td>
<td>GGG 299</td>
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<tr>
<td>Year Three</td>
<td>Fall (Qualifying Examination)</td>
<td>Winter (Qualifying Examination)</td>
<td>Spring (advancement to PhD candidacy)</td>
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<td></td>
<td>GGG 299</td>
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11) Sources of funding.

The IGG offers a five-year financial support package to PhD students consisting of an annual stipend and all university fees and tuition, contingent on the student’s satisfactory progress. The nature of support varies according to each student, but generally includes one or more of the following: research assistantship, fellowship, training grant, and/or teaching assistantship. The form of this support will be determined in consultation with the major professor and may vary from year to year or during the course of a year. Unless doctoral students enter with a commitment of support from a major professor, they are supported for two quarters by the IGG while they do laboratory rotations.

12) PELP, In Absentia and Filing Fee status.

Information about PELP (Planned Educational Leave), In Absentia (reduced fees when researching out of state), and Filing Fee status can be found in the Graduate Student Guide: http://www.gradstudies.ucdavis.edu/publications/

13) Leaving the Program Prior to Completion of the PhD Requirements.

Should a student leave the program prior to completing the requirements for the PhD, they may still be eligible to receive the Masters if they have fulfilled all the requirements (see Masters section). Students can use the Change of Degree Objective form available from the Registrar’s Office: http://registrar.ucdavis.edu/PDFFiles/D065PetitionForChangeOfGraduateMajor.pdf