4. Advise the Executive Committee concerning the progress of all students
5. Designate members of Qualifying Examination Committees.

C. Graduate advisers oversee the Guiding Committees of their advisees. Other duties are stated in the most recent "Announcement of the Graduate Division".

IV. GRADUATE STUDENT RECRUITMENT, ADMISSIONS, AND COURSE REQUIREMENTS

A. Recruitment

Recruitment of students may be done at either the Group or affinity group level, and may include such activities as the mailing of advertising posters and brochures, and the transportation of applicants identified as particularly outstanding by the Admissions/Fellowships Committee to and from Davis. It shall be permissible to establish a recruitment fee of not greater than $50 per year to be levied against Group or affinity group members to provide funds for such recruitment activities.

B. Admissions

1. Application forms for admission and University fellowships shall be available on request from the Department of Genetics. Admissions will close March 15 for the following Fall Quarter; however, applicants shall be encouraged to submit completed forms as early as possible. To be considered for a University Fellowship, applications must be received by January 7. All applicants will be encouraged to apply for any extramural predoctoral fellowships for which they may be eligible, in addition to those administered by the University. Applications received after March 15 will only be considered on a space-available basis. Offers of admission may be made between January 1 and April 1. Those admitted must inform the Group of their decision to accept the offer by April 15.

2. The Admissions/Fellowships Committee shall each year determine an upper limit to the number of students who may be offered admission to the Group based on the following criteria:

   a. The number of positions for which there is financial support in the various affinity groups, based on information provided by those affinity groups to the committee.

   b. The number of positions allotted to the Group by the Graduate Division.

   c. A consideration of past rates of acceptance by applicants offered admission.

3. After determining the number of offers available, the committee will evaluate and rank the applicants according to the following criteria:

   a. Scores of the applicant on the GRE basic and advanced examinations, and in the case of foreign applicants, performance on the TOEFL examination.

   b. Grade point average of the applicant.
c. Letters of recommendation written on behalf of the applicant.

d. Previous research experience and accomplishments of the applicant.

e. Honors and awards received by the applicant.

The initial assessment of specific candidates shall not be influenced by prior identification of a faculty sponsor.

4. The Committee will then direct applications (the total number of which shall not exceed the upper limit determined as described in Section IV.B.2) to the appropriate affinity group or groups. The members of the affinity groups may then, according to mechanisms established in the Bylaws of that affinity group, communicate to the Admissions/Fellowships Committee the names of students to whom they wish to offer admission and financial support.

5. The Admissions/Fellowships Committee shall then communicate to applicants identified by the affinity groups an offer of admission, and an offer of four years of financial support, contingent on satisfactory progress. It shall be made clear that this financial support may in the form of fellowships, research assistantships or teaching assistantships (students must apply for teaching assistantships and departmental research assistantships in accordance with University regulations). This communication shall include information regarding the affinity group into which the applicant has been accepted and a description of the salient features of that affinity group. In the case that multiple affinity groups wish to offer admission to an applicant, the applicant shall be contacted by the Chair of the Admissions/Fellowships Committee. The differences between the affinity groups will be explained to the applicant, and a request made that the applicant determine a preference as soon as possible.

6. Affinity groups may differ in their expectations of prior commitment by students to a particular mentor. This difference should be made explicit in recruitment materials and in communications with students offered admission to the Group. Students in either the M.S. or the Ph.D. program may change major professors after entry into the Group. However, there are significant differences in the programs during the first year and in the required coursework after the core courses in the different affinity groups. For this reason, transfers resulting in a change of affinity group affiliation will require approval by the primary graduate adviser in each of the two affinity groups involved. Commitments of financial support may not be transferable to the new affinity group, which must agree to assume or arrange financial support of the student before the transfer can take place.

C. Requirements for the Doctor of Philosophy Degree in Genetics

Each of the following courses must be completed with a grade of B or better.

1. All students

   a. Core Courses

      i. GGG 221, Transmission Genetics
      ii. GGG 222, Cytogenetics
      iii. GGG 223, Molecular Genetics
      iv. GGG 224, Population and Quantitative Genetics
b. Seminar Courses
   i. GGG 291, History of Genetics

2. Affinity group requirements
   a. AGAG
      i. GGG 29 , Seminar in Animal Genetics (to be developed)
      ii. One additional GGG seminar course other than GGG 291
      iii. Two courses from AGAG Course list (see Appendix I)
      iv. One additional graduate level course
   b. MGAG
      i. GGG 292, Seminar in Molecular Genetics
      ii. One additional GGG seminar course other than GGG 291
      iii. Two courses from MGAG Course list (Appendix I)
      iv. One additional graduate level course
   c. PGAG
      i. GGG 297, Seminar in Plant Genetics
      ii. One additional GGG seminar course other than GGG 291
      iii. Three courses from PGAG Course list (Appendix I), each from a different specialization area (6 areas)

3. Laboratory Rotation Programs
   a. AGAG - No formal rotation program is required.
   b. MGAG - Two quarters of mandatory laboratory rotation is required, including four five-week sessions (20 hrs/week) in at least three laboratories.
   c. PGAG - A one quarter course is required, which will include at least two five-week sessions in two labs (6 hrs/week) and lectures on various aspects of research such as grant writing.

D. Requirements for the Masters of Science Degree in Genetics

1. The M.S. Program in Genetics is supervised by the Graduate Group in Genetics. Masters degrees are awarded under either Plan I or Plan II, as described in the "Announcement of the Graduate Division." Masters students are required to complete three of the four Core Courses (GGG 221, GGG 222, GGG 223, or GGG224. The program is available to students whose work is directed by any member of the Graduate Group in Genetics. A comprehensive examination or a thesis based on original research is a requirement for the degree.

V. GUIDANCE AND EXAMINATION OF Ph.D. STUDENTS

A. Major Professor

1. After admission to the Graduate Group in Genetics, the initial assignment of students to a major professor will depend on the affinity group with which they are affiliated. In some affinity groups, students will arrive committed to a particular
major professor. In other affinity groups, students will participate in a rotation program during the initial part of the first year, and will have no major professor during this time. By the completion of the rotations the student, in consultation with their guiding committee, should have identified a faculty member willing to serve as the major professor for the student.

2. The major professor is responsible for the educational direction of the student. These responsibilities include advising on courses to be taken to provide a broad education in genetics (as Chairperson of the Guiding Committee), ensuring the student is adequately prepared for the oral examination, and guiding the student through a research project.

3. Following advancement to candidacy for the Ph.D. degree, the major professor provides advice on research to assist the student in completing the dissertation.

B. Guiding Committees

1. Appointment

Guiding committees shall be appointed by the Advisors according to the Bylaws and operating procedures of each affinity group. There shall be three members, one of whom must be an Adviser, and one of whom, if they have been identified, is the major professor.

The major professor, if identified, will serve as chair of the committee. Guiding Committee members should represent diverse subject areas and together be capable of advising on and then evaluating the student's knowledge of general genetics and the area of their research. The Guiding Committee shall be appointed at the earliest possible time, in no case later than the end of the quarter in which the student first enrolls, and should be reported on an "Assignment of Guiding Committee" form obtained from the Group Secretary. The original of this form should be returned to the Group Secretary, who will distribute copies as appropriate.

A graduate adviser will serve as the pro tem chairman of Guiding Committees for students with no major professor. It is the advisers responsibility to aid such students in finding a major professor.

The Guiding Committee may be changed on request of the student, the major professor, or the Executive Committee. Such changes shall be reported to the adviser and the Group Secretary by filing with the Group Secretary an amended "Assignment of Guiding Committee" form.

2. Function

The purpose of the Guiding Committee is to advise students on their program of study and research and to assess progress towards meeting the requirements for the graduate degree prior to the Qualifying Examination. The committee should meet with students at the intervals listed below. Additional meetings may be scheduled at the request of the student, committee members, or the adviser. A summary of all meetings should be submitted to the graduate adviser through the Group Secretary.

a. First quarter of enrollment. The committee will meet to assess the background, research interests, and goals of the student. The committee and student should agree to a program of courses for the first year. At this time,
a "First Quarter Interview" form should be completed (available from the Group Secretary), and the original returned to the Group Secretary for distribution of copies.

b. Third quarter. The committee will assess the progress of the student in research and in fulfilling the course requirements, and advise the student on their state of preparation for the qualifying examination. Course-work for the second year and preparation for the qualifying exam should be discussed. The committee also advises the student on their research prior to the appointment of a Dissertation Committee.

c. Fifth quarter. The Committee shall meet no later than the end of the fifth quarter of enrollment to assist the student in setting a date for the Qualifying Examination, which shall be scheduled at some time after April 30 in the Spring Quarter of the second year of enrollment and before November 1 in the Fall Quarter of the third year of enrollment. The committee determines whether the student will have fulfilled course-work requirements by the time the Qualifying Examination is scheduled. The committee shall submit its evaluation on an "Evaluating Interview" form (available from the Group Secretary) and return the original, with signatures of all members of the Guiding Committee, to the Group Secretary who will distribute copies as appropriate. One copy will be sent to the Chair of Advisers. When completing the form the committee should explicitly state whether or not the student will be prepared to take the qualifying examination. In case of disagreement, separate, signed, dissenting opinions shall be submitted.

If it is determined that the student should proceed to the Qualifying Examination, the committee should include on the Evaluating Interview form the approximate date of the examination. The committee may also recommend up to ten faculty members to serve on the Qualifying Examination Committee. If, on the basis of reports from the Guiding Committee, the Chair of Advisers determines that the student should be disqualified from the Ph.D. program, it shall so inform the Graduate Division, the Guiding Committee, and the student. Such students have the right to appeal their case to the Executive Committee.

C. Qualifying Examination Committee

1. Appointment

   a. "The department or group of departments primarily concerned with any examination will be asked to suggest to the Administrative Committee of the Graduate Council the names of persons to be included in such examining committees, but appointment will be made by the Dean of the Graduate Division, who will advise all parties concerned." (Regulations of the Graduate Division).

   b. When requested by and in consultation with the Guiding Committee, the Chair of Graduate Advisers will recommend to the Graduate Division a Qualifying Committee of five members, designating one member as chair. A form is provided for this purpose.

   c. The major professor is specifically excluded from membership.
d. The committee will be selected to provide an examination in both breadth and depth in genetics.

2. Functions

a. The chair of the committee, in consultation with the student, will set the date and location of the examination and provide the other members of the committee with this information. It is the responsibility of the chair to ensure that the Graduate Division's regulations regarding qualifying examinations are followed.

b. The Qualifying Examination Committee will evaluate the student's knowledge of general genetics, including the development of major concepts in genetics, and their command of the specialized fields listed in the letter appointing the committee.

c. The chair will report the decision of the committee to the Graduate Dean, and notify the student's graduate adviser of the outcome of the examination through the Group Secretary. A form is available from the Group Secretary.

3. Format of Qualifying Examination

The Qualifying Examination Committee administers an oral examination to determine if the student is qualified for advancement to candidacy for the Ph.D. degree. The examination shall include the following:

a. Oral examination in the area of general genetics.

b. Submission of a written research proposal to committee members not less than one week prior to the date of the examination, covering the proposed dissertation research. This proposal shall be presented and defended in the oral examination.

c. Affinity groups may require an additional research proposal, written on a subject area distinct from the dissertation proposal, to be submitted one week prior to the examination and defended at the oral examination.

D. Dissertation Committee

1. Appointment

a. The Dissertation Committee shall be appointed by the Dean of the Graduate Division on recommendation of the adviser, after consultation with the major professor and the student. Changes in membership of Dissertation Committees are made by the appointment of a new committee.

b. The major professor will serve as the chair of the committee.

c. The committee shall be appointed as soon as possible after the student has passed the qualifying examination.

d. The Dissertation Committee shall normally include at least two members of the Graduate Group in Genetics.
2. Function

a. 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.

b. 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.

c. Students are encouraged to consult with all members of the committee with respect to his/her research.

d. The major professor, if absent for more than two months, should so inform the adviser, and recommend a substitute to serve in his/her absence. If absent beyond the completion of the student's research, the major professor, in consultation with the adviser, the other members of the committee, and the student, should make all necessary arrangements for completion of the research and review of the dissertation.

e. The committee shall pass on the merits of the dissertation.

3. Format and presentation of Dissertation

Students will submit a dissertation based upon original research completed as a graduate student to their Dissertation Committee for approval. Before the dissertation can be signed, students must present their dissertation research in a public seminar which shall be advertised to the membership of the Group. Once the dissertation is approved, a copy should be submitted to the Genetics Graduate Group Secretary.

V. GUIDANCE AND EXAMINATION OF M.S. STUDENTS

A. Guidance

1. A Masters adviser will be appointed from among the advisers of the Group by the Chair of Advisers. The specific duty of the Masters adviser is to advise candidates for the M.S. degree in Genetics.

2. A Guiding Committee will be appointed by the Masters adviser for each Masters student. The committee will recommend courses for the student, advise the student on research, and assess the student's progress. The Guiding Committee shall recommend Thesis or Comprehensive Examination Committees for each candidate to the Chair of Advisers. The Chair of Advisers shall appoint such committees as provided for by the regulations of the Graduate Division. When a Thesis Committee is formed for a Plan I student, the Guiding Committee will be discontinued. If a thesis is filed, a signed copy should be sent to the Group Secretary.

B. Examination

1. The Chair of Advisers will report the results of the Comprehensive Examination of Plan II students to the Dean of the Graduate Division.
APPENDIX I
Affinity Group Course Lists

AGAG Course List

AGR 224  Chromosome Evolution
ANG 204  Theory Quantitative Genetics
ANG 206  Domestic Animal Breeding
ANG 207  Quantitative Genetics and Animal Breeding
ANG 208  Estimation of Genetic Parameters
ANG 250  Animal Improvement in International Context

AVS 202L  Lab in Avian Experimental Embryology and Teratology
AVS 220  Cellular Proliferation and Oncogenes

BCM 222  Mechanisms of Translational Control

BCP 201C  Molecular Biology

ENT 298  Molecular Biology of Insects and Viruses (under development)

GEN 203  Advanced Evolution
GEN 205  Theoretical Population Genetics
GEN 209  Molecular Evolution

MIC 215 &  Recombinant DNA
MIC 215L  Recombinant DNA Laboratory

VCR 220 &  Biotechnology and Genetics of Crop Improvement
VCR 220L  Biotechnology and Genetics of Crop Improvement Lab

VCR 221 &  Genetics and Cytogenetics of Vegetable Crops
VCR 221L  Genetics and Cytogenetics of Vegetable Crops Lab
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVS 220</td>
<td>Cellular Proliferation and Oncogenes</td>
</tr>
<tr>
<td>BCM 222</td>
<td>Mechanisms of Translational Control</td>
</tr>
<tr>
<td>BCP 201C</td>
<td>Molecular Biology</td>
</tr>
<tr>
<td>BOT 227</td>
<td>Plant Molecular Biology</td>
</tr>
<tr>
<td>GEN 202</td>
<td>Plasmids, Recombinant DNA and Genetics Engineering</td>
</tr>
<tr>
<td>GEN 209</td>
<td>Molecular Evolution</td>
</tr>
<tr>
<td>MIC 215</td>
<td>Recombinant DNA</td>
</tr>
<tr>
<td>MIC 260</td>
<td>Bacterial Regulatory Mechanisms</td>
</tr>
<tr>
<td>MIC 270</td>
<td>Advanced Animal Virology</td>
</tr>
<tr>
<td>PP 215X</td>
<td>Genetics and Molecular Biology of Plant Pathogens</td>
</tr>
<tr>
<td>PP 217</td>
<td>Molecular Genetics of Fungi</td>
</tr>
<tr>
<td>VCR 220</td>
<td>Biotechnology and Genetics of Crop Improvement</td>
</tr>
<tr>
<td>VM 228</td>
<td>Molecular Biology of Animal Viruses</td>
</tr>
<tr>
<td>ZOO 298</td>
<td>Molecular Mechanisms in Developmental Genetics</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>AGR 207</td>
<td>Plant Population Biology</td>
</tr>
<tr>
<td>GEN 203</td>
<td>Advanced Evolution</td>
</tr>
<tr>
<td>GEN 209</td>
<td>Molecular Evolution</td>
</tr>
<tr>
<td>PS 103</td>
<td>Evolution of Crop Plants</td>
</tr>
<tr>
<td>PS 270</td>
<td>Reproductive Biology of Flowering Plants</td>
</tr>
<tr>
<td>BOT 125</td>
<td>Molecular Biology of Plant Development</td>
</tr>
<tr>
<td>BOT 227</td>
<td>Plant Molecular Biology</td>
</tr>
<tr>
<td>BOT 228</td>
<td>Plant Molecular Biology Lab</td>
</tr>
<tr>
<td>PS 122</td>
<td>Physiological Genetics of Crop Plants</td>
</tr>
<tr>
<td>VCR 220 &amp;</td>
<td>Biotechnology and Genetics of Crop Improvement</td>
</tr>
<tr>
<td>VCR 220L</td>
<td>Biotechnology and Genetics of Crop Improvement Lab</td>
</tr>
<tr>
<td>AGR 224</td>
<td>Chromosome Evolution</td>
</tr>
<tr>
<td>BOT 256A,B</td>
<td>Experimental Plant Taxonomy</td>
</tr>
<tr>
<td>VCR 221 &amp;</td>
<td>Genetics and Cytogenetics of Vegetable Crops</td>
</tr>
<tr>
<td>VCR 221L</td>
<td>Genetics and Cytogenetics of Vegetable Crops Lab</td>
</tr>
<tr>
<td>VCR 225</td>
<td>Transposable Elements in Higher Plants</td>
</tr>
<tr>
<td>ANG 204</td>
<td>Theory Quantitative Genetics</td>
</tr>
<tr>
<td>ANG 206</td>
<td>Domestic Animal Breeding</td>
</tr>
<tr>
<td>ANG 208</td>
<td>Estimation of Genetic Parameters</td>
</tr>
<tr>
<td>GEN 105</td>
<td>Population Genetics</td>
</tr>
<tr>
<td>GEN 106</td>
<td>Evolutionary Quantitative Genetics</td>
</tr>
<tr>
<td>GEN 205</td>
<td>Theoretical Population Genetics</td>
</tr>
<tr>
<td>AGR 221</td>
<td>Advanced Plant Breeding</td>
</tr>
<tr>
<td>POM 220</td>
<td>Quantitative Genetics and Fruit Crop Improvement</td>
</tr>
<tr>
<td>POM 298</td>
<td>Principles and Practice of Line Cultivar Breeding</td>
</tr>
<tr>
<td>PS 113</td>
<td>Plant Breeding</td>
</tr>
<tr>
<td>BOT 202</td>
<td>Plant Ecophysiology</td>
</tr>
<tr>
<td>ENT 120</td>
<td>Insect-Host Plant Interactions</td>
</tr>
<tr>
<td>PP 215X</td>
<td>Genetics and Molecular Biology of Plant Pathogens</td>
</tr>
<tr>
<td>PP 217</td>
<td>Molecular Genetics of Fungi</td>
</tr>
</tbody>
</table>