GRADUATE PROGRAM HANDBOOK

DEPARTMENT OF MOLECULAR GENETICS

2021

The Ohio State University
112 Biological Sciences Building
484 West 12th Avenue
Columbus, OH 43210-1292 USA

Telephone 614-292-8084
Facsimile 614-292-4466

www.molgen.osu.edu

Preface

This handbook contains guidelines and information for graduate students and faculty in the Molecular Genetics Graduate Program; it has been prepared by the Graduate Studies Committee (GSC). Key provisions have been discussed and approved by a vote of the graduate faculty of the Department.

Throughout the handbook, reference is made to the Graduate School Handbook, available at

https://gradsch.osu.edu/handbook

Departmental guidelines define or extend Graduate School polices, particularly with regard to rules for Candidacy and Dissertation Exams, as well as maintenance of good academic standing. In unusual circumstances not explicitly addressed in this handbook, students should turn to the GSC for advice. These guidelines may be modified and are subject to change.

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Program Overview

The Department resides within the Division Natural and Mathematical Sciences of the College of Arts and Sciences. The Graduate Program offers a course of study leading to the Ph.D. degree. Although students can not currently be admitted for the purpose of pursuing a terminal M.S. degree, they may earn one en route to the Ph.D., as described below.

Research in faculty laboratories addresses fundamental questions in molecular, cellular, and developmental biology, using genetic approaches. A wide range of model organisms is employed in ongoing research. The goal of the Program is to train scientists for careers in academia, government, or industry.

Graduate Studies Committee

The Graduate Studies Committee (GSC) oversees and administers the Program and is the liaison between the Graduate School and the Department. Actions of the Committee are subject to approval by the faculty of the Department. The GSC is responsible for formulating and administering rules of the Program concerning faculty membership, student admission, transfer and registration, as well as the requirements for the Ph.D. and M.S. degree programs.

The GSC consists of at least three members of the graduate faculty of the Department, one of whom serves as the Chair. GSC members are appointed annually by the Chair of the Department, in consultation with the faculty.

Committee members for the 2021-2022 academic year are:

Anita Hopper, Professor, Chair of the Committee
Susan Cole, Professor
Craig Burd, Assistant Professor

This handbook is available on the Departmental website:

https://molgen.osu.edu/graduate-studies-molecular-genetics

Ethics

Appropriate ethical standards are at the core of the training mission of the program, since transparent and honest presentation, evaluation, and criticism of experimental results constitute the foundation of scientific research. In the preparation of Candidacy Exams, research presentations, scientific manuscripts, and dissertations, students are required to acknowledge ideas, figures, and conclusions of others in the field. These and other issues are addressed in MG

7600, which is required of students in the first year. Finally, University guidelines and policies regarding academic and research misconduct can be found at:

https://gradsch.osu.edu/handbook/c-research-standards-and-misconduct

Overview of the typical graduate student experience

In year one, students focus on laboratory rotations and courses, both of which lay the foundations for independent research. In the Spring semester, students choose a thesis advisor and research topic for their dissertation. In year two, students finish course electives and serve as teaching assistants; teaching experience is useful in preparation for careers in academia and in oral presentations that are a critical aspect of research. Students are expected to complete the Doctoral Candidacy Exam by the end of the summer term of the second year. Students who fail to complete the exam by the end of the following term (fall of third year) will no longer be in good academic standing. The second year is particularly challenging, as students are required to balance the demands of coursework, teaching responsibilities, research, and preparation for the candidacy exam.

Beginning in the third year, each student presents his or her research annually in a formal talk to the Department. Throughout their entire course of study, students are expected to attend a variety of seminars. After completion of the Candidacy Exam, students focus on completing their thesis research project, ultimately preparing a doctoral dissertation. A successful dissertation depends on the generation of a significant body of original research; as such, there is no timeline for completion. Most students finish in approximately 6 years.

Lab rotations

These are a critical aspect of the first-year experience-- an opportunity to explore different lab environments, scientific problems, and experimental systems with the ultimate goal of choosing a research topic and thesis advisor. Students do three seven- to eight-week rotations commencing shortly after the start of the Fall semester. Rotations are chosen with the advice and consent of the GSC. At the end of the third rotation, students and advisors "match," making mutual choices. In the rare case that students do not identify a thesis lab, a fourth rotation is permitted. It is imperative that an advisor be identified by the end of the fourth rotation. Although waivers are rarely granted, students may petition the GSC to do fewer than three rotations.

Department faculty present short talks to incoming students during the week before classes start in August. Students use these talks to generate a short list of faculty with whom to meet and discuss rotation projects, informing the GSC of the four (or more) faculty on their short list. The first three rotations must be in

Department labs; one of these may be in the lab of an Adjunct Member. If desired, a fourth rotation outside the Department may be pursued with the consent of the GSC. Lab rotations are not directly tied to the academic calendar; thus, students are expected to pursue research during breaks in the calendar when classes are not held.

While the primary goal of the rotations is to mutually introduce students, labs and advisors, rotating students are expected to engage fully in a semi-independent research project, acquiring necessary background knowledge and participating in lab meetings. Students make short presentations on their projects to the Department at the end of each rotation.

Seminars and Research Presentations

During the transition from the classroom to the bench, another vital aspect of your scientific education is attendance at research seminars. During your first three years in the program, you are required to attend at least two seminars per week and to share the titles of the seminars you attended in carmen each Friday. When an MG seminar is scheduled, attendance is mandatory; priority for choosing a second talk should go to seminar series of generally broad interest that draw speakers from outside the University (e.g., the Tuesday MLS series). Attendance at more specialized talks you are advised or required to attend by your rotation or thesis mentor (e.g., RNA center, CAPS, MBI, Microbiology, Cancer Center, Grand Rounds) may serve as a second choice when no MG seminar is scheduled.

Participation in a number of other Departmental talks and seminars is also required for all students in the program. These include:

- Attendance at first year rotation talks
- Fourth-year talk preparation and presentations as assigned
- Falkenthal Colloquium and Waller Lectures
- MG thesis defense seminars.

In the weeks they take place, fourth-year talks, the Falkenthal Colloquium, or the Waller Lectures satisfy the requirement to attend an MG seminar.

As indicated by its name, in year four students present 50-minute research talks to the Department in the Spring semester; these are preceded by an open practice talk moderated by the course director for MG 7890. In years three and five, students give short 10- to 15-minute talks at the Falkenthal symposium that are similar in format to those given at national scientific meetings. Most students attend such meetings at least once in the course of their careers. To encourage the practice, post-candidacy students may apply once in their careers to the Chair of the GSC for a Berl Oakley Travel award, which provides up to $500 for travel to a national or international meeting, provided they will make either an oral or poster presentation.

Coursework

In the first two years of the program, students pursue coursework that is designed to lay foundations and provide exposure to a variety of experimental systems and approaches. The second year is transitional, with an increasing emphasis on research as well as teaching responsibilities. Thus, students have a reduced load of in-class coursework in year two, and typically none in following years.

Required courses are as follows.

Year 1 Autumn Semester
MG 5700 Systems of Genetic Analysis
MG 5701 Molecular Genetics: DNA Transactions
MG 7600 First Year Orientation
MG 7890 Seminar Program
MG 7780 Lab Rotations

Year 1 Spring Semester
MG 5705 Advances in Cell Biology
MG 5715 Eukaryotic Developmental Genetics
Elective #1 (Most common choice MG 7807)
MG 7890 Seminar Program
MG 7780 Lab Rotations

Year 1 Summer Semester
MG 8999 Dissertation Research

Year 2 Fall Semester
Elective #2 (Most common and highly encouraged choice BSGP 7070, Fundamentals of Grant Writing)
MG 7890 Seminar Program
MG 8999 Dissertation Research
BIO 5001 Topics in Biological Teaching (taken during semester of CLSE teaching)

Year 2 Spring Semester
Elective #3
MG 7890 Seminar Program
MG 8999 Dissertation Research

BIO 5001 is a co-requisite for teaching in a CLSE course, a program requirement that students usually satisfy in Year 2.

Starting in the autumn of year 3 (usually) and continuing until graduation, post-candidacy students register for 1 credit hour of MG 7890 and 2 credit hours of MG 8999 in the autumn and spring semesters, and 3 credit hours of MG 8999 in the summer semester.

Elective Courses

Although not required, students are strongly encouraged to enroll in BSGP 7070 (Fundamentals of Grant Writing) for one elective in the fall semester of year 2, as a prelude to preparing the written portion of the candidacy exam. The next most commonly chosen electives (from the list below) are MG 7807 and MG 5623. Students must petition the GSC to register for any course not listed below.

BSGP 7070 Fundamentals of Grant Writing
MG 7807 Research Seminar: Post-Transcriptional Control
MG 5623 Genetics and Genomics

BMI 5730 Intro to Bioinformatics
BMI 8150 Rigorous and Reproducible Design and Data Analysis
CBG 5700 Intro to Personalized Therapeutics & Pharmacogenomics
Micro 8050 RNA World
MG 5300 Cancer Genetics
MG 5630 Plant Physiology
MG 5650 Analysis and Interpretation of Biological Data
MG 7741 Molecular Biology and Pathogenesis of Viruses
Pharm 8194 Introduction to Bioinformatics

Students must maintain full-time status to remain enrolled in the Program. Before passing the Candidacy Exam, students must enroll for a minimum of 8 credit hours in the Fall and Spring semesters and 4 hours in the Summer semester; students supported by a fellowship, are required to register for minimums of 12 (Fall and Spring) and 6 (Summer) credit hours. Students are responsible for registering for the appropriate courses in a timely fashion. For a detailed description of the enrollment requirements for maintenance of status and degree requirements, students are encouraged to consult the Graduate School Handbook.

The Program Administrative Assistant, Deborah Lipp, should be consulted for advice on enrollment prior to each semester.

A Special Note to International Students

Students educated abroad may have a significant, additional course burden, mandated by Graduate School requirements for mastery of English as a Second Language (ESL). Incoming students are placed into ESL classes as a result of their performance on a placement exam administered before the start of the Fall Semester. Separate classes address spoken and written English. Students are strongly encouraged to attain sufficient mastery of ESL such that they pass a test of spoken English by the end of the Summer semester of year 1; this exam ensures that students can be appointed as teaching assistants in year 2. Students are required to pass the exam by the end of the Fall semester of year 2; failure to do so results in a loss of Good Academic Standing.

Student Advisory and Exam Committees

Students typically choose an Advisory Committee, in consultation with their advisor, in the Fall semester of year two. The same Committee usually serves throughout the student's career for annual advisory meetings, as the Candidacy Exam Committee and the Dissertation Defense Committee (though if the student has taken the BSGP 7070 Grant Writing course, their faculty teacher in the course may not serve on the Candidacy committee, and should be replaced for the purposes of the candidacy exam). The Committee is chaired by the student's advisor and includes three other faculty. For the Candidacy Exam, at least three members must hold salaried appointments within the Department. For advisory meetings and the Dissertation Defense, at least two members of the Committee must hold salaried appointments within the Department. Composition of all Committees is subject to approval of the GSC.

A general timeline of committee meetings can be found in Appendix A. Students are required to hold annual committee meetings every year starting in their second year, and meetings must be completed by November 15th. Students are encouraged to hold their first committee meeting in the summer/early fall of their first year because input from the Committee is most valuable when a thesis research project is in its nascent stages. Debbie Lipp (lipp.60) and the GSC chair should be informed of committee meeting dates at least one week in advance. Students will submit a progress report and CV on CarmenCanvas after each committee meeting, and the GSC will collect and share feedback from the committee members. Meetings related to the candidacy exam do NOT replace annual committee meetings

Occasionally, students may wish to change membership of the Committee, when the direction of their research changes, for example. Changes to the

membership of the Committee are approved by the advisor and the GSC Chair. Composition of the Committee is recorded with the Graduate School for the Candidacy and Dissertation Exams.

In the event of conflict between the student and his or her advisor, the student may turn either to the Advisory Committee or the Graduate Student Committee for council. In very rare circumstances, students may be best served by changing research projects and advisors.

Teaching

Students are required to teach for two semesters, one in an Introductory Biology course taught by CLSE; the other semester is usually in a Departmental course. This required teaching typically is done in the Fall and Spring semesters of the second year. As described by the Graduate School, serving as a Teaching Assistant is an apprenticeship that provides practical experience to complement formal classroom instruction and lab research; teaching should not interfere with reasonable progress toward the degree. In addition to preparing students who wish to pursue an academic career, teaching develops skills useful for oral research presentations. International students must pass the ESL exam before serving as teaching assistants.

Rules for Candidacy Exams, Ph.D. degrees, and M.S. degrees

Graduate School rules govern the administration of candidacy exams as well as written and oral exams required for the Ph.D. and M.S. degrees. These rules supersede any Departmental guidelines below, and students are strongly encouraged to consult the Graduate School Handbook for current regulations as they prepare for candidacy or to defend a degree.

Candidacy Exam

Purpose. The Candidacy Examination is not only a test of the students' comprehension of the field of Molecular Genetics and allied areas of study, but also of the capacity to undertake independent research, and of the ability to think and express ideas clearly and succinctly. This is a rigorous examination composed of both written and oral portions.

Timing. Students typically defend their Candidacy Exam in either the Spring or Summer term of the second year. To meet this timeline, it is critical to have an approved exam topic early in the Spring semester. Students who fail to complete the candidacy exam by the end of Fall semester of year three will no longer be in Good Academic Standing. Under extraordinary circumstances (e.g., change in advisor, serious illness), a petition to further delay the examination may be made to the GSC.

Role of the Advisory Committee. The Advisory Committee, chosen as described above, serves as the examination committees for both written and oral portions of the Candidacy Examination. If a member of the advisory committee is not able to participate in the candidacy exam, another MG faculty member, with the approval of the advisor and the GSC, may be recruited for the purpose of the candidacy exam.

Examination Procedure

a. Selection of the Topic The student should identify a topic for the development of an original research proposal in consultation with the advisor and the advisory committee. The student should write and present a single page (with at least half-inch margins and 11-point font) outlining the goal of the research and the specific aims of the proposal. The Advisory committee has one week to unanimously approve the topic and general aims. This may be done either by email, or in a meeting. If not approved, the student will be asked to identify another topic or to make major changes to the existing topic, and the process described above is repeated. Once the Specific Aims page is approved, the student consults the committee and tentatively schedules an oral exam to be held 8 to 9 weeks later. Formal scheduling of the oral exam via Gradforms is only done later, after approval of the written exam, and must be done at least two weeks in advance.

b. The Written Portion of the Examination Upon approval of the Specific Aims page, students have 4 weeks to prepare a written proposal. The proposal should follow the guidelines for a grant submitted to a national funding agency, such as the NIH, NSF, or DOE and should conform to the structure for the relevant agency. The proposal (excluding abstract, specific aims, and references) should be no more than 15 pages double-spaced, with 1-inch margins including all figures and tables in 12-point font. The abstract, specific aims page, any figure or

table legends, and the references may be single-spaced. Figures legends must be a minimum of 10-point font. Since additional material may not be included in an Appendix, the proposal must contain figures of sufficient size and quality to ensure legibility. All pages must be numbered.

c. Guidelines for Preparing the Proposal Sufficient information should be included in the proposal to facilitate an effective review by committee members without requiring reference to the literature. The proposal should be focused, informative, and avoid redundancies. Brevity and clarity convey knowledgeability of the author, and facilitate easy review. While the Background should be sufficient to convey the rationale for the proposal as well as a command of the relevant literature, this portion should not dominate the proposal: the primary focus should be on designing experiments to test hypotheses rather than reviewing the literature.

Students must cite literature they have used in the writing process. Each citation should include the names of all authors; title of the paper, name of the book or journal; volume number; page numbers; and year of publication. The proposal must be written entirely in the student's own words; quoting of published works (even if properly cited) is not acceptable. Students are strongly encouraged to read successful proposals before writing their own.

d. Faculty input. During preparation of the proposal, faculty input should be minimal. The work must largely represent the student's own thinking, and the student should be prepared to defend and justify the proposal. However, students are encouraged to solicit advice and criticism from student peers or post-doctoral fellows. With the permission of the candidacy committee, students may use either a proposal developed in BSGP 7070 or a fellowship application as the basis of their candidacy exam, although the committee is free to require addition or substitution of a novel aim, absent from prior work.

e. Evaluation of the Written Proposal. Upon completion, a draft proposal is submitted to the Advisory Committee, who are given two weeks to formulate evaluations. Each Committee member submits a written evaluation via e-mail to the advisor, who copies all such evaluations to other members of the Committee. After consultation among Committee members, the proposal is graded: "Pass," "Pass with revisions," or "Fail," as follows.

Pass Presentation of a strong proposal, combining a well-designed, well-chosen, realistic project with a well-designed and well-reasoned experimental approach. The proposal is appropriate for oral defense as written.

Pass with revisions Presentation of a fundamentally sound proposal containing flaws that, in the judgement of the committee, can be remedied during a two-week period of revisions. The proposal contains scientific errors in experimental design, poor organization or format, or confusing prose. After meeting with specific committee members to discuss criticisms (as necessary), a revised

proposal should be submitted within two weeks. The revised proposal will form the basis for evaluation of the written component of the candidacy exam; no further faculty approval or input is required at this stage.

Only one round of revisions is allowed. Students who receive evaluations of either "Pass" or "Pass with revisions" should schedule the oral exam with the Graduate School within three weeks, allowing two weeks for revision and an additional week for faculty to read and evaluate the revised document. Students **must** file the appropriate form with the Graduate School **at least two weeks prior to the scheduled oral defense date, and will inform Debbie Lipp (lipp.60) and the Chair of the GSC of their exam date at that time**.

Fail A grade of fail will result if, for example, the proposal contains serious misconceptions or is fatally flawed; the basic premise or experimental approach is faulty; the experiments proposed are unreasonable or implausible; the proposal cannot be salvaged without major revisions. If one or more members of the Committee determine the proposal is unacceptable (Fail), the Committee meets with the student as soon as possible to discuss the evaluations. If, after further consideration, any member of the Committee continues to believe that an overall satisfactory performance on the Exam is unlikely, the student may be advised to forgo the oral portion. As stated in the Graduate School Handbook, should the student accept this advice they must present a written request to waive the oral portion of the exam, in which case the committee registers a grade of U on the Report on the Candidacy Exam and submits a copy of the waiver request to the Graduate School. The student may choose to disregard such a recommendation, and proceed to the oral defense of the proposal, where the Committee will evaluate the written and oral portions of the exam in toto. In such cases, the Committee and student are strongly encouraged to consult rules of the University, which are described in detail in the Graduate School Handbook.

f. The Oral Examination The student should be prepared to begin the exam with a brief presentation (~ 10 minutes) that introduces the core ideas and approaches of the proposal. Questioning by the Committee may begin during this presentation, or be delayed until its' conclusion, as decided by the committee. The Oral examination will last for approximately two hours.

The written proposal serves as a backdrop for questioning of the student, but the oral examination must be sufficiently wide-ranging to permit an assessment of the student's overall knowledge of Molecular Genetics and allied fields. The oral examination should also test the student's ability to think and express ideas clearly. At the end of the examination, the committee will decide whether the student has passed the Candidacy Examination. The oral and written portions are considered one exam. It is possible that one portion could be unsatisfactory but other portions of the exam of sufficiently high quality to merit an overall satisfactory grade. Committee approval must be unanimous. If the Committee decides that the student has failed the Examination, the Candidacy Examination

Committee "must decide whether the student will be permitted to take a second Candidacy examination and must record that decision on the Candidacy Examination Report form." If permitted, the student must then prepare an entirely new proposal and repeat the procedure outlined above. The Candidacy Examination Committee for a second examination must be the same as in the first examination unless the Dean of the Graduate School approves a substitution. No student may take the Candidacy Examination more than twice; students who are judged unsatisfactory after two examinations are dismissed from the Program.

Following the exam, the Committee reports the outcome to the Chair of the GSC, and in the event of failure, to the Chair of the Department as well.

Dissertation

The Graduate School maintains a complete description of requirements for the Dissertation here. The descriptions provided here are advisory and are superseded by changes at the Graduate School level

As described in the Graduate School Handbook, the Ph.D. dissertation is "a scholarly contribution to knowledge in the student's area of specialization." In the field of Molecular Genetics, contributions to the field are directly reflected in research publications. Published papers are the most important indicator of productivity and original thinking; thus, students should strive to publish first-author papers in well-regarded journals. A dissertation should contain, at a minimum, work in one major first-author paper that has been published, submitted, or is on the verge of submission.

Before proceeding with preparation of the dissertation, the student calls a meeting of the thesis Committee, which determines whether the student is ready to write and defend. Many factors ultimately contribute to the length of time a student pursues experimentation before they have completed a significant body of research. Readiness to defend is determined by research accomplishments, not following a pre-determined timetable.

A timeline for the general process is included in Appendix A

Thesis Document
The nature of current research is that most students participate in collaborative research projects. However, the dissertation contains only the student's individual contributions to such projects, such that the document reflects the original thoughts and work of the Ph.D. candidate.

The Committee must be given a finished version of the thesis (typically as a PDF sent via e-mail) sufficiently in advance of the oral defense to allow time for reading and thoughtful consideration. This period is set by the Committee, but

typically is about three to four weeks in advance of the intended defense date, allowing the Committee time to approve the written document for defense at least two weeks before the defense date, allowing the Graduate School to schedule the oral defense via GradForms (https://gradforms.osu.edu/).

The final oral exam consists of two parts. The first is a public seminar attended by faculty and graduate students of the Department as well as other guests. The entire public portion of the exam (introduction, presentation, and questions) can not exceed one hour. Immediately following the seminar, the Committee meets with the candidate for approximately an hour to discuss the originality of the research, the independence of the candidate, and the ability of the candidate to interpret their work and place it in the broader context of the field. The timeslot filed with the Graduate school should include both the public seminar and the oral exam. Debbie Lipp (Lipp.60) and the GSC Chair must be informed when the oral exam time is scheduled to allow for publication of the presentation.

As for the Candidacy Exam, a successful outcome requires unanimity. In the event of an unsatisfactory outcome, the Committee determines whether a second final exam will be permitted. In such circumstances, the Committee is encouraged to consult relevant portions of the Graduate School Handbook.

Maintenance of Good Academic Standing

Students must remain in good academic standing or face dismissal from the Program. Academic standing is assessed by performance in graduate classes, timely preparation of the Candidacy Exam, and demonstration of reasonable progress toward the Ph.D. Poor academic standing results from:

- failure to maintain a GPA of 3.0
- for international students, failure to pass the ESL requirements by the end of the fall semester in the second year
- failure to hold the Candidacy exam before the end of the fall semester in year 3
- failure to hold a Committee meeting prior to November 15 of year 2, and annually thereafter
- failure to participate as a member of the audience or, commencing in year three, speaker in the various Departmental seminars
- poor research performance, resulting in receipt of an unsatisfactory (U) grade from the advisor in MolGen 8999
- excessive, unexcused absences

Students who fail to maintain an adequate GPA are placed on probation by the Graduate School. The consequences of probation are described at length in the Graduate School Handbook. Given the other requirements of the Program,

students on academic probation at the end of the Spring semester in year 1 will have great difficulty working simultaneously to raise their GPA and carrying out their other responsibilities. As a consequence, such students will likely be dismissed from the Program. Students on probation are monitored closely by the GSC.

Maintenance of a GPA ≥ 3.0 is monitored by the Graduate School, which acts administratively to place students on probation when appropriate. It is the joint responsibility of the student and the advisor to inform the GSC of other events that can lead a student into poor standing. Once informed of poor standing, the GSC meets to gather information, issue an official warning, develop a plan for remediation, and inform the Graduate School.

Graduate Associate Appointments, vacation, and leave

Students without Fellowships (either internal or external) generally receive financial aid in the form of Graduate Associate appointments, which consist of a stipend and waiver of University fees and tuition. Students are typically appointed as Teaching (GTA) or Research (GRA) Associates, and occasionally as Administrative Associates. Appointments are made each semester, beginning in the Fall semester. No student in the Department is permitted to hold employment outside the University. Students who fail to maintain Good Academic Standing lose eligibility for appointment as a Graduate Associate.

Students holding appointments as Teaching Assistants should expect to be continuously present throughout the semester. Some courses require significant advance preparation; Teaching Assistants for such courses should also be available before the start of the semester and are encouraged to consult with instructors in advance.

Students are trainees and thus do not earn annual vacation time or sick leave. Students are excused for illness and personal emergencies at the discretion of the advisor or, in the first year, the Chair of the GSC. Students are granted two weeks of excused absence per year in addition to University holidays, by prior arrangement with the advisor. Planned vacation time can not be scheduled during times students are appointed as GTAs – cases of personal/family emergencies during GTA appointments are handled on a case-by case basis with the student's advisor, the instructor of the assigned course, and the GSC. In cases where students have difficulty scheduling leave/vacation, they should communicate with the GSC.

Admissions

International applicants must apply by November 30 and domestic applicants by December 15. Only applications received by November 30 can be considered for the University fellowships. Applications are considered only for admission in

the Fall semester, except in extraordinary circumstances. Most components of the application can be submitted electronically to the Graduate School at

http://gpadmissions.osu.edu/programs/.

Official GRE scores, TOEFL (or MELAB or IELTS) scores (if applicable), and transcripts may be submitted to the graduate school.

To expedite evaluation of the application, unofficial transcripts and standardized test scores can be submitted directly to the Program via e-mail to

mailto:molgen-gc@osu.edu

Letters of recommendation can be submitted electronically via the Graduate Admission portal (above). If referees wish to submit hard copy letters of recommendation, these should NOT be sent to the Graduate School, but rather mailed directly to the Department:

Graduate Admissions Committee
Department of Molecular Genetics
The Ohio State University
112 Biological Sciences Building
484 West 12th Avenue
Columbus, OH 43210-1292 USA .

In general, admitted students are offered financial aid that includes payment of tuition and fees as well as an annual stipend of $29,856 (as of September, 2020). Students awarded a University Fellowship receive a stipend supplement from the Department.

Master's Degree

The Department currently offers three paths to an M.S. degree.

First, upon successfully passing candidacy, Ph.D. students may choose to acquire an M.S. on that basis, while continuing to pursue their Doctorate, as outlined in the Graduate School Handbook.

Second, the M.S. degree may be offered to students unable to finish the Ph.D. program for a variety of reasons. Ph.D. students should consult with their advisory Committee and the GSC Chair before changing degree program status and applying to graduate with a M.S. In addition, then current rules of the Graduate School should be carefully considered. The Master's degree must be completed within six years of entering the Ph.D. Program.

The most common route to this terminal M.S. is on the basis of having passed the Ph.D. candidacy exam, as described above for students continuing with their Ph.D. studies.

Less commonly, pre-candidacy students may pursue either non-thesis or thesis-based Master's degrees.

For the non-thesis based Master's degree, the Exam Committee is composed of the advisor and either one or two other members of the faculty. The Exam format is set by the rules of the Graduate School.

For the thesis-based Master's degree, students prepare a thesis as described in the Graduate School Handbook. The final examination is similar in format to that of the Ph.D. exam, except that the private meeting with the Committee following the student's seminar presentation to the Department typically lasts for approximately one hour. The Master's Exam Committee is composed of the advisor and two other members of the faculty.

Third, the M.S. degree can be earned as part of a joint B.S./M.S program by students who begin as undergraduates. Consultation with the Graduate Studies Committee is strongly encouraged to develop a course of studies that simultaneously satisfies Undergraduate, Graduate, and Departmental requirements.

Graduate Faculty Membership

Faculty with 50% or greater salaried appointment in the Department are eligible for appointment as Category M or P Graduate Faculty in the Department (as appropriate), provided they meet the qualifications described in the Graduate School Handbook. Faculty with less than 50% salaried appointment in the Department are eligible for Graduate Faculty appointment commensurate with the appointment in their home department of the University.

Regular, salaried faculty in other departments of the University or affiliated institutions (e.g., Nationwide Children's Hospital) may request a non-salaried appointment to the Department for the purpose of mentoring a graduate student member of the Program. Such individuals nominate themselves by submitting a CV to the Chair of the GSC for consideration at a meeting of the entire faculty, which votes on the nomination. The appointment of such individuals as Graduate Faculty ends when the mentored student leaves the Program.

APPENDIX A Approximate timeline for the Molecular Genetics PhD program

This timeline approximates the expectations for candidacy and thesis committee meetings during the Molgen PhD program. Deadlines can almost always be met early. Special circumstances can be handled on a case by case basis via discussions among the GSC, the student, and the student's PI

YEAR 1:

- Thesis lab identified by the end of Spring.

YEAR 2:

- Thesis committee identified and approved by GSC by early Autumn semester
- Short thesis committee meeting for project overview and to set expectations for candidacy exam required by November 15th
- Specific Aims page approval strongly encouraged some time in spring
- Candidacy exam strongly encouraged by end of Summer (**required** by end of autumn in year 3)
- File for Masters degree after completion of candidacy

YEAR 3 and beyond:

- Annual thesis committee meeting completed by November 15th each year. Note this meeting should still occur in Year 3 even if the candidacy happened in the Summer of Year 2!
- Committee and student will file documentation of meeting in CarmenCanvas

Planned graduation semester: (https://gradsch.osu.edu/final-semester-procedures-and-timelines) NOTE this document is NOT intended to replace the items listed at the linked site. It is your responsibility to look at the checklist and complete all items in a timely fashion. We are just trying to highlight the areas that most frequently cause issues.

- File application to graduate in GRADFORMS by third Friday of term (go ahead and do this even if you aren't completely sure -- it's not a problem not to graduate if you filed it, but it IS a problem to graduate if you don't file it.)
- To graduate in a given semester, ALL requirements (https://gradsch.osu.edu/handbook/7-13-doctoral-summary-phd-degree-graduation-requirements) (oral exam and final document approval by the grad school) must be completed by the published deadline here https://gradsch.osu.edu/calendar/graduation
- Discuss your timeline with your committee, keeping in mind that:
    - Your committee needs time to read the document before they approve it for your defense
    - Your committee must approve your document for defense AT LEAST two weeks before your planned oral defense (you complete

the "Application for Final Examination" in GRADFORMS and the committee asnd GSC sign it)
    - Your thesis must pass a dissertation format check AT LEAST two weeks before your planned oral defense.
    - You will likely need some time after your oral defense to make final edits prior to getting final document approval from your committee and submitting the document to ohiolink
- Realistically, you probably want to schedule your oral defense at least a week before the final grad school deadline, and to make this all work you need a draft of your thesis that will pass the formatting review at the grad school to go to your committee 3 to 4 weeks before your defense date to give them time (1-2 weeks) to read it.
- When you send your thesis to your committee for review, let Debbie Lipp know your defense date so we can put it on the Department calendar.

If it is impossible to meet the published deadline, some students choose to use the "end of semester deadline". Basically, this means completing all the steps above by a slightly later date -- specifically before the last business day before the start of the next semester. Usually it gives you an extra two to four weeks to complete things.

If you meet the end of semester deadline, your degree will formally be conferred at the end of the NEXT semester (ie if you meet the end of semester deadline for the Autumn semester your degree will be conferred at the SPRING graduation) but you will not register for spring classes, and can move on to your next position. Be aware that if your next position requires you to have a degree in hand this might cause an issue, but most places seem to be ok with a letter confirming that all degree requirements have been met.