ORGANIZATION

The Program in Genetics and Molecular Biology (GMB) shall consist of a Program Director, a Director of Graduate Studies, an Executive Committee, the GMB faculty, and the GMB students.

The GMB shall be headed by a Program Director, elected by faculty vote and approved by the Director of the Graduate Division of Biological and Biomedical Sciences (GDBBS). The Director shall serve a three year term and be responsible for the overall administration of the program and shall assure student performance to the University in the conferring of degrees achieved within the program. The Director will serve with the assistance of an Executive Committee.

The Executive Committee shall consist of a minimum of seven members from the GMB faculty, one member being the Director, and other members to include the Director of Graduate Studies, the Director of the Training Grant, the Chair of the Curriculum Committee, the Chair of the Oral Exam Committee, the Chair of the Written Exam Committee, and the Chair of the Admissions Committee (described below). Additional members may include Faculty Representatives, which will be non-tenured faculty with a minimum of 2 consecutive years of active membership in the GMB program. Executive Committee members are elected by vote of the GMB faculty and communicated to the Director of the GDBBS. All elected positions are to be subject to nominations and elections every three years, with elections for three of the six positions staggered by one year. The Executive Committee shall serve to advise the Program Director in all matters. The Executive Committee shall, as a body and through its appointed committees, make recommendations to the Director on: a) admission of students to the program, b) the development of policy within the program, c) development of the curriculum of the program, including the development of new courses for the program, and d) the progress of students in the program.

In addition to the above faculty positions, and to provide feedback regarding GMB policy and activities from the students to the faculty and leadership of the program, a 3rd or 4th year student should be elected each year to serve on the GMB Executive Committee. To maintain confidentiality, the student representative will be excluded from any conversations involving disciplinary actions or other personal issues of faculty or students.

One member of the Executive Committee shall serve as the Director of Graduate Studies (DGS). The DGS should serve for at least three years. The DGS will: a) supervise and monitor the progress of enrolled students; b) coordinate new student laboratory rotations; c) aid new students in choice of laboratory; and d) coordinate the qualifying exams.

The Director and DGS will be available to discuss all issues with students and faculty in the program.

The Standing Committees and their responsibilities are as follows:

Admissions Committee: Responsible for enhancing and developing recruitment activities, reviewing applications and selecting applicants suitable for interviews, and organizing the interview process and admissions selection process.

Curriculum Committee: Responsible for setting coursework requirements, reviewing existing courses, and formulating proposals to modify courses and coursework requirements.

Oral Qualifying Exam Committee: Responsible for ensuring the integrity, consistency, and goals of the Oral exam component of the Qualifying Exams. Responsible for organizing and providing program members that comprise the faculty members of each student’s Examination Committee.

Written Qualifying Exam Committee: Responsible for ensuring the integrity, consistency, and goals of the Written exam component of the Qualifying Exams. The committee is composed of members of the Executive Committee and additional faculty members. Responsible for soliciting written exam questions from faculty, selecting, editing, and formatting questions for the exam, and assisting the DGS in organizing the grading of the exam.
Faculty

Members of the GMB faculty shall be appointed by the Program Director with the advice of the Faculty Review Committee and GMB faculty vote. The Director will appoint the Faculty Review Committee. Final approval for membership is by the Director of the GDBBS.

Faculty wishing to join the GMB Program will be required to submit an application and deliver a research seminar as described below.

Application. All applying faculty should meet with the GMB Program Director to discuss appropriateness and faculty responsibilities of membership in the GMB program. A written application should include a brief description of research interests (200 words for web site), a one-line description for web site, and a complete CV, including a list of grant support. New faculty should provide a letter of support from their chairman indicating their independence, space, and overall level of support. Also, there should be some indication of the type of teaching the applicant would like to do in the graduate program. Faculty not belonging to another GDBBS program will have to complete the necessary paperwork required of the GDBBS for appointment to the GDBBS and the Graduate School. Faculty applicants should have a tenured or tenure track appointment.

A seminar. All GMB faculty applicants will have to present a seminar to the GMB program at large.

An opportunity will be provided for current faculty to meet individually with faculty applicants. The Faculty Review Committee will solicit faculty opinions. Once approved for membership in the GMB program, the applicant must also apply for membership in the GDBBS and LGS. The instructions regarding this process can be found at https://secure.web.emory.edu/biomed/intranet/faculty/joining-a-program.html.

Review of Faculty

This should occur every year.

Faculty members will be notified by the Director to submit a completed Annual Report that details their contributions to the GMB program in the preceding academic year. Failure to submit an Annual Report will be considered evidence of non-compliance.

As indicated in the Guidelines of the GDBBS, assurance from faculty members or their Departmental Chairs that funds are available to them for student support (including stipends) should be provided.

All faculty are expected to make a major contribution to teaching an advanced graduate course in the Program. Faculty who have major responsibilities for introductory courses should teach advanced courses at least once every five years; those with little or no introductory course responsibility should teach at least every three years. To ensure that courses proposed by the faculty are those desired by students, all new courses should be discussed with, and reviewed by the Curriculum Committee. Faculty should be aware that it takes six months to a year to get a new course approved and should therefore initiate the process early.

Compliance in teaching can include:

- Faculty teaching 13 or more contact hours in a single course once every three years.
- Faculty teaching 24 or more contact hours over the last three years combined. All graduate courses may be combined.
- Faculty holding the rank of chair, director, or teaching 13 or more contact hours in a single course once every five years or 24 contact hours in the last 5 years, combined as above.
- Individual Directed Study courses will not count towards this requirement.
- Faculty can earn 2 hours teaching credits if they teach 13 or more contact hours in non-graduate school courses. Such courses could include undergraduate courses, medical school/PA courses and etc. (Revised October, 2000).

Faculty must provide this teaching information in their annual reports in a clear and organized fashion.
All GMB course instructors will solicit and submit course evaluations each semester to the Curriculum Committee.

All faculty are expected to participate actively in the recruitment of graduate students for the Program in ways to be determined by the Executive Committee.

All faculty are expected to give a seminar on their research at least once every three years at a venue on campus that is open to attendance by GMB faculty and students.

Faculty are also expected to participate in GMB seminars, attend GMB functions, and the GMB retreat.

In the absence of mitigating circumstances, faculty members who are not in compliance with the policy will be considered to be on probation and cannot take new students into their laboratories for either thesis research or laboratory rotations until such time as they are again in compliance with the policy. Existing students will not be affected, and faculty will be able to participate in other Program activities.

In its implementation of the faculty review, the Faculty Review Committee defines non-compliance as either a lack of peer-reviewed grant support for three years or not making a major contribution to teaching as defined above. A faculty member will be considered to be again in compliance with the policy either upon receipt of a "Notice of Award" or equivalent document, or on the first day of a class to which the faculty member makes a "major contribution." Upon notification of non-compliance by the Faculty Committee, a faculty member will be able to present to the Committee any mitigating circumstances that might lead the Committee to decide that no penalty should be imposed. Faculty who are still determined to be non-compliant after one year on probation will be dismissed from the program, subject to appeal.

Faculty may choose to become an ADJUNCT member of the GMB faculty. Adjunct membership precludes faculty from taking GMB students, but allows the faculty to participate in all other GMB activities without the need to satisfy the requirements stated above. A faculty member in non-compliance for two years will be moved to Adjunct status. Faculty may move to Full status by meeting the requirements stated above. (Revised October, 2000).

ADMISSION OF STUDENTS

The Executive Committee or a separately appointed Recruiting Committee will serve as the admissions committee and will make admission recommendations to the Director.

Applicants must have a strong background in the biological and physical sciences. It is expected that applicants will have Graduate Record Examination (GRE) scores above the 75th percentile, a grade point average (GPA) equivalent to a "B" or better, and letters of recommendation that indicate a high level of motivation for scientific research. All other requirements of the Laney Graduate School and the Graduate Division of Biological and Biomedical Sciences must be met. Students are also expected to have some research experience.

RESPONSIBILITY OF FACULTY TO STUDENTS

Upon agreeing to take a student into their laboratory, faculty agree to mentor the student and provide the stipend for that student in the years that are not covered by the GDBBS. Taking a student into the laboratory requires approval by the Program Director and the Chair of the faculty’s department to ensure compliance with the GDBBS policy manual, including the GDBBS Stipend Reserve regulations.

Faculty admitted to the GMB program who have not demonstrated previous training of Ph.D. students will be limited in accepting no more than an average of one GMB student/year for the first two academic years of their appointment into the program. Exceptions to this rule must be approved by the Executive Committee.
**REQUIREMENTS OF STUDENTS**

- **Coursework**
  Effective Fall 2013, all students must be registered for a minimum of 9 hours in each semester in order to maintain full-time enrollment status.

**Coursework Schedule**

<table>
<thead>
<tr>
<th>Fall 1 Required:</th>
<th>Spring 1 Required:</th>
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<tbody>
<tr>
<td>IBS 555 (Princ Basic Biol &amp; Biomed Sci I)*</td>
<td>IBS 561 (Euk Chromosome Funct)*</td>
</tr>
<tr>
<td>IBS 597r (Lab Rotations)*</td>
<td>IBS 597r (Lab Rotations)*</td>
</tr>
<tr>
<td>IBS 546r (Presenting Genetics)*</td>
<td>IBS 546r (Presenting Genetics)*</td>
</tr>
<tr>
<td>PSI 600 (LGS Ethics Core Course)*</td>
<td>IBS 570r (Intro Grad Seminar)*</td>
</tr>
<tr>
<td>GMB 706 (Ethical Conduct in Research)*</td>
<td>GMB 706 (Ethical Conduct in Research)*</td>
</tr>
</tbody>
</table>

**Electives (select one):**

- IBS 504 (Prokaryot Mol Biol)*
- IBS 746 (Grad Human Genet)*

**Summer 1 Required:**

- TATT 600 (Teaching Assist Training and Teaching Opportunity)*

<table>
<thead>
<tr>
<th>Fall 2 Required:</th>
<th>Spring 2 Required:</th>
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<tbody>
<tr>
<td>IBS 515 (Curr Topics Mol Genet)*</td>
<td>IBS 522r (Grant Writing &amp; Prof Develop)*</td>
</tr>
<tr>
<td>IBS 546r (Presenting Genetics)*</td>
<td>IBS 546r (Presenting Genetics)*</td>
</tr>
<tr>
<td>IBS 699r (Dissertation Research)*</td>
<td>IBS 699r (Dissertation Research)*</td>
</tr>
</tbody>
</table>

**Electives:**

- IBS 560 (Model Gen Systems)*
- IBS 504 (Prokaryot Mol Biol)*
- IBS 746 (Grad Human Genet)*

<table>
<thead>
<tr>
<th>Fall 3+ Required:</th>
<th>Spring 3+ Required:</th>
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<tbody>
<tr>
<td>IBS 546r (Presenting Genetics)*</td>
<td>IBS 546r (Presenting Genetics)*</td>
</tr>
<tr>
<td>GMB 799r (Dissertation Research)*</td>
<td>GMB 799r (Dissertation Research)*</td>
</tr>
</tbody>
</table>

*Required courses

♦ Strongly recommended

All other electives are chosen on the basis of the student’s research interests

Students who entered in Fall 2012 and later must also take at least four PSI 610 workshops before graduation

**GMB T32 Trainees**

During their graduate career (preferably in the second year) all T32 trainees must take one course from the courses listed below. This requirement ensures that trainees receive additional breadth in their foundation training, specifically in an area of quantitative biology and/or bioinformatics.

- IBS 574 – Introduction to Computational Biology and Bioinformatics (Spring); credit 4 hrs.
- BIOS 505 – Statistics for Experimental Biology (Spring); credit 4 hrs.
- IBS 593 – Molecular Evolution (Spring); credit 4 hrs.
IBS 736 – Genetic Epidemiology (Fall); credit 3 hrs.

Additional courses that can fulfill the requirement include:
IBS 591 – Population Biology and Evolution of Disease (Spring); credit 4 hrs.
IBS 592 – Quant. Methods in Population Genetics, Ecology, and Evolution (Spring); credit 4 hrs.
IBS 594 – Evolutionary Biology (Fall); credit 4 hrs.
Other courses may be supplemented with the permission of the T32 Director.

Grade Requirements
All GDBBS students must maintain a minimum GPA of 3.0 in each semester of graduate work. If a student's GPA is below 3.0 in any one semester of work, that student will be placed on academic probation and the student cannot receive a grade of less than B in any subsequent course. If a student's GPA falls below 3.0 in any two semesters of work, or if he/she receives one F or U grade in any course, that student will be dismissed from the Division. If a student who is dismissed believes there were extenuating circumstances that adversely affected his/her performance, he/she may submit to the Division Director a written appeal for consideration of reinstatement. The appeal should clearly outline the extenuating circumstances and must be submitted within one month of grades being recorded by the Office of the Registrar. The Program shall also submit a recommendation as part of the appeal. All appeals will be reviewed by the GDBBS Executive Committee. Students who receive a grade of less than a B in a core GMB course may need to repeat the course at the discretion of the Executive Committee. Students receiving a grade of less than B in their dissertation research will be put on academic probation and subject to dismissal if their performance does not show substantial improvement in the following semester.

GMB Seminars
All GMB students are required to attend the weekly GMB seminar during their entire tenure in the program. Students receive one credit hour each semester as IBS546r, and this course is graded as satisfactory (S) or unsatisfactory (U). Attendance is recorded by submitting two written questions for the seminar speaker on a form and submitting this to the DGS. If a student cannot attend a seminar, then the student is obligated to email the DGS before or soon after the seminar, explaining the reason for the absence. Legitimate (excused) absences include illness, death in the immediate family, or attendance at national or international scientific meetings. Each semester, a student is allowed only two unexcused absences. If a student has more than two unexcused absences, the grade will be U. A U in any course is a failing grade and can be grounds for dismissal from the program.

Ethics Requirement
Students in Years 1 and 2 will enroll in GMB 706 (Ethical Conduct of Research) in the Spring semester. Additionally, students who entered in Fall 2012 and later must fulfill the Laney Graduate School’s Program for Scholarly Integrity (PSI) requirement. Refer to the PSI website for the current policies: http://www.gs.emory.edu/professional_development/scholarly_integrity/index.html.

Professional Development
GMB students are expected to be planning for their career options from the time they enroll until they complete their PhD dissertation. As an initial component of this planning, all students are required to have completed the web-based career planning tool that is available at myIDP.sciencecareers.org. In addition, all students are required to complete and present the short- and long-term planning “Meeting IDP Slides” templates available on the GMB website. The students are further strongly encouraged to attend any of the multiple workshops and presentations focusing on career options that are organized by the GDBBS and LGS throughout the year.

Directed Study
The purpose of Directed Study (GMB 797r) is to allow students the opportunity of specialized training in areas not represented by the current courses offered by either our program or other programs. According to Laney Graduate School policy, a student in advanced standing (second year and above) may apply only 5 hours of this course to their 36 hours of coursework needed in advanced standing to graduate.
- GMB students will normally be allowed only 5 hours of Directed Study.
- An outline of the directed study must be submitted to the DGS or the curriculum committee for approval prior to registration.
- To receive credit, a brief summary of the course must be submitted with the grade at the end of the semester (e.g., list of papers, experimental approaches, etc.).
• **Lab Rotations**

As per GDBBS policy, GMB students may perform their rotations and dissertation research in the lab of any faculty member who is a member of the GDBBS in good standing. Three rotations are required and the choice of each rotation must be approved by the DGS.

No GMB faculty member may accept more than a total of three (3) GMB rotation students per academic year, and have no more than two (2) doctoral students from any graduate program rotating in their lab within any rotation period. Students may elect to rotate in additional labs but must select a laboratory for their dissertation research before the start of their second year. Exceptions must be approved by the Executive Committee and Program Director.

Within one week of ending each rotation, the student will submit a 3-6 page Rotation Report (not counting references). The format should be like a small paper with the usual sections of Abstract, Introduction, Materials and Methods, Results, Discussion, and Figures. The Results and Discussion sections can be combined. The head of the rotation lab should help in editing this document before it is submitted to the DGS. The Rotation Report will be evaluated by other faculty who served as advisors for other rotation students within the rotation period. At the end of each rotation, the head of the rotation lab will recommend a grade for the rotation to the DGS, partly based on the quality of this report. Rotation advisors must provide a justification when assigning rotation grades and provide feedback about the student’s performance (i.e. strengths and weaknesses) to the student and DGS.

• **Dissertation Advisors**

At the end of the third rotation period, or no later than the end of the summer of the first year, a student should choose a dissertation advisor and submit that choice to the Program Director for approval.

Approval by the GMB Director requires that the faculty member sign the “GDBBS Dissertation Advisor Assignment Agreement” form, which includes a pledge for financial support from the faculty member’s department chair. Final approval is made by the Director of the GDBBS. No GMB faculty member may take more than two GMB students per year into their lab.

Students entering labs of GDBBS but non-GMB faculty must request specific permission from the Director to do so. For approval, the faculty must be a tenured or tenure-track, a member of the GDBBS, and must agree in writing to abide by the training policies for GMB students. Note that the student’s requirements for the degree remain governed by the GMB program, and not the program with which the dissertation advisor is affiliated.

• **Comprehensive Qualifying Exam**

The GMB qualifying examination shall consist of two components: a Written Exam will cover basic concepts in genetics and molecular biology in a problem solving setting; and an Oral Exam will cover basic concepts in genetics, as well as concepts related to the student’s program.

**Timing of the Qualifying Exams**

- **Early January, Year 2:** Written Exam
- **March 1, Year 2:** Deadline for Written Exam retakes
- **April 1, Year 2:** Deadline for students to submit their approved list of four committee member names to the GMB Oral Exam Chairperson
- **Second Half of May, Year 2:** Oral Exam
- **Before Start of Academic Year 3:** Deadline for completion of any Oral Exam retakes (recommended 4-6 weeks after original exam)

**Qualifying Written Exam**

**Goal:** The goal of the GMB Written Qualifying Exam is to ensure broad knowledge in Genetics and Molecular Biology. The exam will cover the basic mechanisms of molecular biology, prokaryotic and eukaryotic genetics, human genetics, developmental and population genetics at the level that these subjects were discussed and analyzed in the required courses.
**Exam Format:** Closed book setting, FIVE paired questions; students are required to answer one question from each pair. Students will have 5 hours to complete the exam. Exam questions will be solicited from the faculty membership; selection of questions and assembly of the Exam will be performed by the Written Exam committee.

**Timing:** The exam will be administered in early January before the start of Spring classes and will be graded within 1-2 weeks.

**Grading:** Each question will be graded by two GMB faculty members who will meet to discuss their grades if the scores they assign to any student differ by more than 3 points (out of 20 total).

**Pass/Fail:** A score of $\geq 70\%$ is required to pass the written exam; grades will be Pass or Fail.

**Re-take:** Students who do not pass the written exam on their first try but score $\geq 60\%$ will be offered the opportunity to "retake" the written exam. Students receiving a score of less than 60% must appeal to the GMB Executive Committee for approval to retake the Written Qualifying Exam. The “Retake Written Qualifying Exam” will be closed book, like the initial written exam, and will consist of 7 new questions, of which the student will be required to answer 5. A score of $\geq 70\%$ is required to pass. The re-take exam must be administered within 6 weeks after the original exam date.

**Terminal Masters Degree:** Students who do not pass the Qualifying Exams may petition the Executive Committee to be allowed to redirect their studies towards the completion of a terminal Masters Degree. Consideration for a Masters Degree will require a brief proposal from the student and a letter from the student’s advisor. The advisor’s letter will:

- provide a recommendation addressing the student’s laboratory skills and expected progress;
- state the he/she believes the experimental plan will lead to a Masters Thesis;
- indicate the time to completion and a schedule of benchmarks that needs to be met; and,
- provide a source of support for the student if completion of the project will extend beyond the Spring semester.

The length of GDBBS funding for support of the student will be decided by the Executive Committee, but in no case shall GDBBS funding extend beyond the end of August of that year.

Students who pass the written exams and fail the oral exam, may also be eligible for a Masters Degree following the same conditions as described in 3.

All terminal Masters Degrees will follow the established GMB guidelines.

**Qualifying Oral Exam**

**Goal:** The purpose of the oral exam is to determine if a student has acquired an acceptable level of basic knowledge and is able to apply that knowledge in oral discussion to address scientific questions so that he/she may pursue a doctoral dissertation.

**Examiners:** Once a student has passed the Written Qualifying Exam the student will, in consultation with their advisor and subject to approval of the program DGS, select FOUR faculty members familiar with their field of research to serve on their dissertation committee. **The deadline for formation of the dissertation committee is February 15.**

- In keeping with the GMB Guidelines at least THREE of these FIVE faculty members (advisor + FOUR committee members) must be GMB faculty members in full standing.
- The student will submit the approved list of FOUR committee member names to the GMB Oral Exam Chairperson by April 1st of their second year.
- The GMB Oral Exam Chairperson will assemble a team of FOUR faculty members to constitute an Oral Exam Committee for the student. Two of the faculty will be derived from the standing GMB Oral Exam Committee, and the remaining two faculty will be selected from the list of the Dissertation Committee members provided by the student to the Oral Exam Chairperson.
Before the Oral Exam: At least one full week before the scheduled oral exam the student will distribute copies of the following documents to all members of their Oral Exam Committee:

- a list of the Emory courses they have taken,
- their grade from the GMB Written Qualifying Exam, and
- a copy of their dissertation proposal (in the form of a grant written for the “grants class” during the spring semester).

Structure of the Oral Exam: The oral exam will begin with a 10-minute uninterrupted chalk-talk presentation by the student during which they are to introduce the essential background and rationale for their proposed research project, explain the aims and hypotheses to be tested, and outline the approaches to be applied and present any key preliminary data. After the 10-minute presentation the examiners will take turns around the table asking questions using a format of 10 minutes for each examiner to ask one-on-one questions followed by 5 min during which the other examiners may also ask questions related to that topic. Two full rounds of questioning with a brief break between the rounds will be conducted. Questions may address the proposed research topic or may be general in nature. The total time for the exam will be approximately 2 hrs 10 min, or with breaks, about 2 hrs 20 min. The advisor’s role during the exam is solely as a witness. The advisor may not initiate or participate in discussions about the student’s performance before, during, or after the exam.

Grading: At the conclusion of the exam the student and advisor will leave the room and the committee chair will ask each examiner for their initial vote of either Pass or Fail, to be submitted by secret ballot (slips of paper). If there is any disagreement the committee members will discuss the student’s performance and, as needed, verbally recast their votes. A minimum of THREE of the FOUR committee members must vote “Pass” for the student to pass the Oral Exam.

Retakes: Any student who fails the Oral Qualifying Exam on the first attempt but passed their Written Qualifying Exam on the first attempt may appeal to the GMB Executive Committee for a second attempt to pass the Oral Qualifying Exam. Any student who needed two attempts to pass the Written Qualifying Exam will be allowed only one attempt to pass the Oral Qualifying Exam, unless granted an exception by the GMB Executive Committee. Unless otherwise determined by the GMB Executive Committee the retake Oral Exam Committee for any given student will be the same committee that administered the initial Oral Qualifying Exam, and the format of the retake will be the same as for the initial Oral Qualifying Exam. A minimum of THREE of the FOUR committee members must vote “Pass” for the student to pass their Oral Exam retake. A student must have passed both the Written and Oral Qualifying Exams in order to begin academic year 3 in the GMB program.

Dissertation Proposal

GMB students shall compose a proposal that outlines the aims, background, and experimental design of their dissertation research. The proposal may be produced as a requirement of the IBS 522r Grant Writing and Professional Development course. The proposal will be submitted to the student’s dissertation committee, which will be formed by April 1 or immediately after a student has passed their written qualifying exam. A copy of the dissertation proposal will also be submitted to all members of the student's oral qualifying exam committee at least one full week before their scheduled oral exam. Students may receive advice on the contents of their proposal from any source, including their Dissertation Advisor. Dissertation committee members will provide critiques of the proposal and its content, with respect to organization, writing style, and the feasibility and value of the proposed science. The proposal format should conform to that used for the NIH Ruth L. Kirschstein Individual Predoctoral National Research Service Award (NRSA) award mechanism, or F31, application (http://grants1.nih.gov/grants/guide/pa-files/PA-11-112.html). Students are encouraged to use these proposals as the basis of an application for extramural funding. In this regard, if the target agency requires an application that differs from the format described above, the student can petition their Dissertation committee to allow their proposal to conform to the agency-specific format, so long as that format retains the general information (hypothesis, project goals/research aims, research strategy) included in the format outlined above.

Candidacy

Students should apply for candidacy after passing their Comprehensive Qualifying Exam and completing 36 hours of advanced course credit hours (typically at the end of the third year).
• **Dissertation Committee Meetings**
  The dissertation committee must consist of 5 members of which 3 are members of the GMB program.

  The purpose of these meetings is to evaluate the progress of the student towards obtaining a Ph.D. This includes progress in coursework and research.

  The first dissertation committee meeting must occur before December 15 of the student’s third year. Dissertation committee meetings must occur at least twice every academic year. It is suggested that students have a less formal meeting (shorter) following their yearly oral progress seminar to the GMB program. A more formal meeting should occur 5-7 months following the GMB seminar. Students in Year 6 and beyond must have dissertation committee meetings in August, December and April/May. Satisfactory progress is required for stipend continuance. An “It is expected that the following will be completed at the next meeting,” series of statements should be planned at these meetings and entered into the Dissertation Committee form. Completion of these objectives will be deemed satisfactory progress.

  M.D./Ph.D. students should have their first committee meeting at the beginning of their second year. Committee meetings must occur in both the Fall and Spring semesters.

  Dissertation Proposals should be updated yearly with a progress report section and distributed to their dissertation committees prior to each committee meeting, along with any manuscripts or papers published that the student has completed. The progress report should include two PowerPoint slides that outline the student’s short-term and long-term goals, as part of the student’s Individual Development Plan (IDP). Comments of the committee should be placed on the GMB Dissertation Committee Form and sent along with the proposal and/or progress reports to the DGS.

• **Dissertation**
  Each student will be expected to submit a written dissertation in compliance with the requirement of the Laney Graduate School. The dissertation is based on research proposed and done by the student. A draft of the dissertation that has been approved by the advisor must be submitted to the student's Dissertation Committee *two weeks prior to the public defense*. After approval of the written document by the committee, the student shall orally present his/her results at an open seminar. After a period of open discussion, the Dissertation Committee may continue a closed examination of the student and his/her work.

  At least two weeks prior to the defense date, students must announce the title, time and location of the defense by sending the GDBBS Defense Flyer to the GMB Program Administrator for university-wide distribution. At least one week prior to the defense date, students must distribute the defense program, which includes the abstract, publications, presentations, dissertation committee, etc. by sending the GDBBS Defense Program to the GMB Program Administrator for program-wide distribution. The time of the defense should be between 9 AM and 4 PM and should not conflict with a GMB scheduled event. (Revised November, 1999).

• **Publication Requirements**
  The GMB program recognizes that each individual dissertation represents individual challenges, yet publications are a clear and measurable record of a student’s productivity that impacts the student’s future goals. It is the *expectation* that all students will have accomplished an original, significant, and scholarly body of work before the defense of the dissertation. The dissertation work should thus result in multiple publications with the students as the first author. It is therefore unlikely that the dissertation defense will be approved in the absence of at least one significant original research paper accepted for publication by a credible professional journal.

• **Terminal Master’s Degree**
  In the event that a student cannot complete the requirements to complete a Ph.D., they may apply for a Master’s Degree. Award of the Master’s Degree will require that 1) the student passes the written qualifying exam; 2) the student is in good academic standing; and 3) the student completes a written thesis and thesis oral exam.

  Consideration for a Master’s Degree will require a brief proposal from the student and a letter from the student’s advisor regarding the suitability of the student to complete a Master’s thesis. The Executive Committee will evaluate the feasibility of the Master’s proposal, and it is at the discretion of the Executive committee to approve or deny the Master’s proposal. If the proposal is approved, completion and defense of the Master’s thesis has to occur within 1
year of the date of approval. It is assumed that the scope and depth of the Master’s thesis is significantly less than that of the Ph.D. dissertation.

• **Grievance Policy**
  A student who has a grievance related to some aspect of his/her progress in the GMB program should report it to the DGS. The student should describe the grievance and relevant details in a letter addressed to the DGS, who will try, if possible, to resolve the grievance in conversation with the student and relevant parties. If this is not successful, the Director will appoint a committee of three GMB faculty members (or faculty members outside the GMB program if the situation warrants) or use the existing Executive Committee if appropriate, who will review the grievance and propose an appropriate response. If it is impossible to resolve the grievance within this committee or within the framework of the GMB program’s administrative structure, the GMB Program Director will forward the grievance to the Director of the GDBBS. From this point forward, the grievance will be handled according to the Grievance Procedure outlined in the Laney Graduate School Handbook. If the issue is with the GMB Program Director, the student should go directly to the GDBBS Director, or the Senior Associate Dean of the Laney Graduate School if there is a conflict with the GDBBS Director.

• **Laney Graduate School & Graduate Division of Biological and Biomedical Sciences Policies**
  Refer to the current Laney Graduate School Handbook ([http://www.gs.emory.edu/academics/policies/index.html](http://www.gs.emory.edu/academics/policies/index.html)) & Graduate Division of Biological and Biomedical Sciences Handbook ([https://secure.web.emory.edu/biomed/intranet/handbooks/index.html](https://secure.web.emory.edu/biomed/intranet/handbooks/index.html)) for additional policies such as:
  - Minimum Degree Requirements
  - Teaching Assistant Training and Teaching Opportunity (TATTO) Program
  - Program for Scholarly Integrity (PSI) Program
  - Professional Development Support Funds
  - Withdrawals and Leaves of Absence
  - Parental Accommodation Policy
  - Degree Completion & Graduation
A. Participation in GMB Program
Medical Scientist Training Program (MSTP) students choose a dissertation research advisor and a graduate Program under the guidelines of the MSTP Program. Unless otherwise specified, the MSTP student is expected to fulfill all the requirements for the degree and participate fully in the GMB Program. MSTP students are subject to the rules outlined by the GMB Guidelines (see above).

Because MSTP students enter the GMB program in the middle of the M2 academic year, the core course of study differs from that of PhD-only students. Participation in IBS546r (Presenting Genetics- every semester), GMB 706 (Ethical Conduct in Research- 2 spring semesters), TATTO (August prior to G1) and IBS699r (Dissertation Research- all semesters) is the same for MSTP and PhD-track GMB students. The curriculum is described below but it is important that new students meet with the DGS to avoid any possible confusion.

B. Coursework
MSTP students are admitted to the Graduate Program in Advanced Standing and are required to complete 16 additional hours of coursework, which include the required participation in IBS546r (Presenting Genetics), GMB 706 (Ethical Conduct in Research) and TATTO. The minimum course requirements consist of two core courses (from list below) and Grant Writing and Professional Development (IBS 522r). Additional courses (optional electives) may be taken, but are not required. MSTP students are expected to start coursework as close to the beginning of the Spring semester of M2 as possible but no later than one week following completion of their board exams, around the end of January.

Core courses:
Spring M2, at least one of the following courses:
IBS 561 (Eukaryotic Chromosome Function)
IBS 574 (Computational Biology and Bioinformatics)
IBS 714r (Genomics and Human Genetics, even years)
IBS 593 (Molecular Evolution, odd years).

Fall G1, at least one of the following courses:
IBS 504 (Prokaryotic Genetics)
IBS 746 (Graduate Human Genetics)
IBS 522r (Grant Writing and Professional Development), must be taken prior to taking Oral Qualifying exam. MSTP students may choose to take IBS 522r in either the Fall (Option B) or Spring (Option A) of G1 (see below for how this affects timing of Oral exam).

Optional Electives:
In addition to the required coursework, MSTP students may, but are not required to, take any course under the IBS code or BIOS 506 and 507. Any of the core courses would be eligible as would the following common choices:
BIOS 506 (Biostatistical Methods I)
BIOS 507 (Applied Linear Models)
IBS 555 (Biol/Biomed Sci I)
IBS 560 (Model Systems)
IBS 515 (Current Topics)
IBS556 (Biol/Biomed Sci II)

Requests for exceptions to these course requirements and requests to enroll in courses outside the IBS series (with the exception of BIOS 506 and 507) must be approved by the Program Director and DGS of the GMB Program.

C. Qualifying Exams
MSTP students must pass a two-part Oral Qualifying exam and may choose to take the exam either at the end of Fall (Option B) or Spring (Option A) of G1 (provided they have completed IBS522r). Part 1 (one hour) of the exam will focus on general knowledge and will substitute for the written general knowledge exam taken by PhD-track GMB students. Examiners will take turns asking questions using a format of 10 minutes for each examiner to ask one-on-one questions followed by 5 min
during which the other examiners may also ask questions related to that topic. Part 2 will use the same structure as the PhD-track GMB student’s Oral exam—using the student’s research proposal from IBS522r as a starting point. Part 2 will begin with a 10-minute *uninterrupted* chalk-talk presentation by the student during which they are to introduce the essential background and rationale for their proposed research project, explain the aims and hypotheses to be tested, and outline the approaches to be applied and present any key preliminary data. After the 10-minute presentation the examiners will take turns around the table asking questions using a format of 10 minutes for each examiner to ask one-on-one questions followed by 5 min during which the other examiners may also ask questions related to that topic. Students must pass both Part 1 and Part 2. The Exam committee will cast independent votes for the two parts. A minimum of three of the four committee members must vote “Pass” for the student to pass each part. The exam committee will be comprised by at least two members of the student’s thesis committee and two members of the GMB Oral Exam committee. Any modifications of the above policies may be granted on a case by case basis by the GMB Director.

Retakes: MSTP students may be required to retake Part 1, Part 2 or both parts of the Qualifying Exam. Unless otherwise determined by the GMB Executive Committee, the retake Exam Committee for any given student will be the same committee that administered the initial Exam, and the format of the retake will be the same as for the initial Qualifying Exam. A minimum of three of the four committee members must vote “Pass” for the student to pass their Exam retake. MSTP students taking the Exam at the end of the G1 Fall semester, do so without bias meaning they may retake the relevant part of the exam up to two additional times. The Exam committee should recommend either a retake within 8-12 weeks or that the student enroll in a specified course for the Spring and retake at the end of the semester. MSTP students taking the Qualifying exam at the end of the G1 Spring semester, along with the PhD track GMB students, may retake the relevant part of the Exam one time. All MSTP students must pass both components of the Qualifying Exam by the beginning of the G2 year.

D. Teaching Requirement
The teaching requirement of the Graduate School is to be fulfilled by the end of the MSTP student’s G2 year. Exceptions to meet the teaching requirement beyond the G2 year will be granted on a case by case basis.