

NC STATE

PROGRAM
IN
GENETICS

PROGRAM IN GENETICS GRADUATE STUDENT HANDBOOK 2020-2021

This handbook details the Program in Genetics requirements for students entering graduate studies in or after the Fall 2020 semester.

2020-2021 Genetics Graduate Student Handbook

The Genetics Graduate Student Handbook is designed to introduce new graduate students to the Program in Genetics and our degree programs, and to provide a reference for Genetics Program and university procedures and regulations throughout a student's graduate program.

The handbook was developed with considerable input from Genetics graduate students and is formatted as a chronological guide through our graduate program. The current faculty and associate faculty are listed first, followed by the steps to graduation, program and university requirements, and then information on life in Raleigh. Any suggestions on ways to improve this handbook would be appreciated and should be directed to the Director of Graduate Programs for the Program in Genetics, Dr. Reade Roberts (rbrober2@ncsu.edu) or the Graduate Service Coordinator for the Program in Genetics, Jenni Wilson (jenni_wilson@ncsu.edu).

To see the most current list of faculty working with the Graduate Program in Genetics, please visit <https://genetics.sciences.ncsu.edu/our-people/faculty/>.

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I. STEPS TO GRADUATION

A. *Getting Started Your First Week*

Establishment of North Carolina Residency for US Citizens

You are a resident of the state once you arrive in the state with the intention to live here. This is distinctly different from establishing **NC Residency for Tuition Purposes**. *For tuition purposes, all students who are US citizens are expected to establish North Carolina residency within the first year of residence in the state.* Please see the information regarding establishing [Residency for Tuition Purposes](#) that is located on the Graduate School website (<https://grad.ncsu.edu>).

Required Forms and To Do List

Please refer to your individual MyPack Portal account in the Student Center regarding the completion of your To Do List and various required forms such as the Patent Agreement Form.

Getting Paid

If you are receiving financial support through the university, you will be contacted by the Graduate Services Coordinator and the university via email to electronically sign your appointment terms and conditions form using your new MyPack Portal login. You will be paid on a biweekly basis, with a two-week lag in the cycle. Therefore, your first bi-weekly pay may not arrive until the end of your first month at NC State University, so plan accordingly!

New Student Orientation

There are three required orientations for new graduate students that are held shortly before the start of the fall semester: 1) the Genetics Program Fall Retreat and Orientation, 2) a University-wide Graduate School orientation and 3) an orientation for international students sponsored by the Office of International Services (OIS, see “Special Considerations for International Students,” Section VI).

The full-day Genetics Program Fall Retreat and orientation is usually held the week before classes begin. The Genetics Program orientation is designed to familiarize you with our graduate program and program personnel and includes:

- A review of procedures and requirements for graduate students.
- Genetics Program and university procedures and requirements.

Program in Genetics Services

1. Building Access

Access permission for the building and student offices: The laboratory manager of the laboratory that you are rotating in should issue you appropriate access to the lab, and Wall Crumpler, the facilities/building liaison, will be able to issue you after-hours building access to Thomas Hall. If you are in a building other than Thomas Hall, you will need to contact the facilities/building liaison for building access after-hours.

2. Office and locker assignments

New students may assign themselves a space in the graduate student office located on the 2nd floor of Thomas Hall, room number 2530. You will need to provide your own lock for the locker space.

3. Printing

The Program in Genetics operates photocopying machines for the use of the faculty, students and administrative staff. Personal items (class notes, assignments, and personal business) may not be copied on these machines. There is a printer located in the graduate student office for graduate student use. Other printers that are available are located in the University libraries and at commercial facilities nearby for these purposes. If you need a specific item printed related to the Program in Genetics, you may also notify or send a request to the Genetics Graduate Services Coordinator, Jenni Wilson.

4. Faxing

The main office has a fax machine available for university business. If you need to use the fax machine, please visit the Biological Sciences business office located at 3510 Thomas Hall for assistance.

5. Telephones

The Biological Sciences Departmental and Genetics Program telephones are available for University business only. If you need to use a telephone to make a university business related call, please visit the Biological Sciences business office located at 3510 Thomas Hall for assistance.

6. Postage

Postage on letters directly related to your research should be handled through your advisor's laboratory.

7. Ordering

Any supplies needed for your research should be ordered through your major professor or laboratory manager.

8. *Office Supplies*

You or your advisor is responsible for all office supplies (notebooks, paper, pens, etc.).

Special Considerations for International Students

The Office of International Services (OIS) is responsible for preparing international students for their move to campus. At the beginning of each semester, there is an orientation that new international students are required to attend. Up-to-date information can be obtained from the OIS web site at <https://internationalservices.ncsu.edu/>. An orientation fee is assessed to every new international student in F-1 or J-1 visa status. The fee is only assessed once.

1. *Diploma*

The Graduate School does not look at the transcripts and diplomas from your previous education until you have been here three months (to allow time for dropouts). If the transcripts and diploma are not up to standards according to the Graduate School, you will probably receive a letter asking you to get the right papers. This can be inconvenient if your home country is far away. In order to avoid problems, make sure you bring an official English copy of your diploma, which you can show to the Graduate School. You should be able to get this from the University you attended in your home country.

2. *University Student Health Center*

Check as soon as possible after your arrival with the University Student Health Center whether your medical and immunization records have been cleared. Get any necessary immunizations if there is a problem; otherwise, your enrollment is in jeopardy.

3. *University Identification Number*

To protect against identity theft, the University uses a 9-digit unique identifier for each student. This number is assigned when you apply to NC State University.

4. *Income Taxes*

Whether you are required to pay income taxes depends on your home country and your financial support. The US has tax treaties with a number of countries. It is important to find out if there is such a treaty with your country; depending on your financial support you may be exempt from paying taxes.

Tax forms and publications on tax treaties are available from the IRS web site, <http://www.irs.gov> (Publications [519](#) and [901](#) are worth reading). Also the University Payroll Office can help you; you may have to sign some forms at that office soon after you arrive. The Office of International Services organizes a tax seminar in the spring (just before taxes are due) that may be helpful to you. The above applies to federal income taxes only. The amount of in-state taxes you are required to pay is based on your federal taxes. The state does not have special treaties or exemptions.

The Graduate School

The [Graduate School's website](#) is a useful resource for news and updates. At the beginning of each semester, always refer to the [Graduate School's Calendar](#) for important dates to remember. The Graduate School also provides [professional development opportunities](#) throughout the year that are available to graduate students.

Tuition and Fees

Please refer to the [Cashier's Office & Student Accounts website](#) for Fall 2020 - Spring 2021 rates per semester. Tuition for all first year students will be paid, however, first year students are required to pay all fees for the fall and spring semesters.

M.S. and Ph.D. Students

If you are not a first year student and you are on a [qualifying](#) fellowship or research and/or teaching assistantship, your tuition and health insurance may be covered (for a limited number of semesters) by the [Graduate Student Support Plan \(GSSP\)](#) given that you meet the eligibility requirements.

If you are not a first year student, and you are not on a qualifying account, your tuition may be paid for by your research advisor or if you have been awarded a fellowship that will cover tuition, the tuition may be paid by the fellowship. Your advisor may check to see if their account is considered a qualifying account using the [GSSP calculator](#) by entering a student's stipend source (project number) to determine "who pays" for GSSP benefits.

Please note that, if a student's stipend source is split (salary or stipend distributed across more than one funding source/project), so too will "who pays" for GSSP benefits. In other words, GSSP benefits are distributed according to the salary or stipend distribution. The term, "Slot" is charged to the GSSP and the term "College" (source of the student's stipend) is charged to the account that is funding the student's stipend.

Master of Genetics Degree Students

Since the Master of Genetics degree is non-thesis, no financial support will be provided from Genetics Program funds that are typically used to support graduate students on a research degree (M.S. or Ph.D.) track (i.e., Research or Teaching Assistantships).

Fee Payments

All students are required to pay their own fees, unless the advisor has stated that they will cover the cost of your fees. If your research advisor is covering your fees, please contact the Genetics Graduate Services Coordinator, Jenni Wilson, to have your fees paid in a timely manner. All tuition and fees not paid by the billing due date will result in a cancellation of classes by the Cashier's Office and by the Registration and Records Office. Payments can be made by check or money order, or online. Payments are not accepted at the Cashier's Office. Students may also choose to pay tuition expenses monthly by using the [Tuition Management Systems](#) website.

Tuition Remission

If you are an out-of-state student, you may be eligible for tuition remission. Tuition remission is the difference between in-state and out-of-state tuition per semester. The program or student is only charged in-state tuition, and the department/university pays the difference out of special funds. If you are a U.S. citizen and are awarded tuition remission, it will be in effect for the first year ONLY (fall and spring semesters). ***For U.S. citizens obtaining North Carolina residency this is important since you will not be eligible to receive tuition remission after the first year. [Guidelines for establishing residency are available on the Graduate School website.](#)***

Wolfpack One Card Services

Permanent photo identification cards are required for all personnel on campus. The Wolfpack One Card entitles students to the following: use of the library, intercollegiate athletic events, membership in the University Student Center, use of Student Health Services (infirmary), use of NCSU Bookstores and other University facilities, services and programs supported by required fees, and access to your residence hall, meal plan, laundry account, and snack machines on campus. The [Wolfpack One Card Services Office](#) is in charge of making the photo I.D. cards as well as maintaining student Wolfpack One Card accounts. The Wolfpack One Card Office is located on the main floor of the Talley Student Union and may be reached by phone during business hours by calling 919-515-3090 or toll free at (800) 701-4940. The hours of operation are Monday - Friday from 8:00 am - 6:00 pm. There are additional evening and weekend hours at the beginning of each academic period.

Registering for Classes

For the first fall and spring semesters in the Genetics program, you will be registered for the core courses by the Genetics Graduate Services Coordinator, Jenni Wilson. Faculty who teach the courses are also available to answer any questions you may have regarding the course. In your second and subsequent semesters, your major advisor, advisory committee and research project will determine subsequent coursework (see Sections III.C–D). Please see Section V for information on requirements for University registration requirements and Section IV for the Genetics Program course requirements.

Parking

University parking areas are zoned, meter controlled, reserved or restricted. All vehicles parked in zone areas on campus must have an appropriate permit displayed and must be parked in a space marked for parking. Student parking permits are allocated on the basis of availability of the parking zone requested, as well as priority date and time of request. Students who desire parking permits should apply online through the [NC State University Transportation Office website](#) using MyPack Portal. For more information, contact Parking Services at 919-515-3424.

Mail

The Genetics Program has mailboxes in the space located at 3513 Thomas Hall. In 3510 Thomas Hall, the Biological Sciences Department Administration Office, there is a box for outgoing mail

that is stamped or business mail that needs to be metered. Campus mail can also be deposited in this box for distribution to other campus addresses.

If you are participating in rotations or are a Master of Genetics student not working in a laboratory, then you will receive your mail and the Biological Sciences Department Administrative Support Associate, Kate Thompson, will notify you via email. In addition to U.S. Mail, there is campus mail, departmental memos and other correspondence that may be of importance to you. Mail is delivered between 1:00 and 3:30 p.m. daily. After you have chosen your Major Advisor, you will receive your mail and correspondence in their lab mailbox. Mail should be addressed to you as follows:

U.S. Postal Mailing Address

Your Name
NCSU Genetics Program
Department of Biological Sciences
112 Derieux Place
3510 Thomas Hall
Campus Box 7614
Raleigh, NC 27695-7614

Delivery Address

Your Name
NCSU Genetics Program
Department of Biological Sciences
112 Derieux Place
3510 Thomas Hall
Raleigh, NC 27606
FedEx/UPS use US Mail Zip Code 27606

E-mail

As soon as you are admitted by the Graduate School, a UNITY ID and e-mail account is automatically established. More information about your UNITY ID can be found on the Office of Information Technology web site at oit.ncsu.edu. All graduate students should check their email regularly, as this is a primary method of communication within the university.

Travel to Professional Meetings

Travel authorizations and reimbursements must be completed in order to receive reimbursement for your travel to professional meetings. In most cases travel authorizations and reimbursements are electronic.

Student attendance and presentations at professional meetings are an important part of career development. The graduate student must initiate and receive approval of a travel authorization prior to traveling for an overnight trip. Travel authorization for approval routes to the Biological Sciences business office and the student's supervisor for approval. **Travel authorizations must be completed before travel to a meeting.** The Travel Reimbursement Form should be completed within 30 days from your return date. Be sure to include original receipts (hotel, airline, parking, taxi, rental car, etc.).

Funds for travel may be provided by the student's major professor, grants, fellowships, or other sources. In addition, the [Graduate Student Association \(GSA\)](#) travel fund may provide funds to subsidize students who are presenting papers at professional meetings. GSA funds are available for one meeting per degree. Contact the GSA for further information and application guidelines. The GGSA accepts applications for conferences and meetings that have either taken place or are

coming up. The applications are reviewed in the Fall and the Spring. Travel funding may be requested approximately 5 months in advance (<https://gsa.ncsu.edu/conference-award/>)

All receipts need to be saved for reimbursement purposes.

For general questions or assistance with travel authorizations or reimbursements, please visit the Biological Sciences Department Business Office located at 3510 Thomas Hall. For university regulations on travel, please visit the [University Controller's Office and The Travel Center](#). The Travel Center provides a handbook on [Travel Requirements for Employees](#) and [Travel Requirements for Non-Employees and Students](#).

Graduate Student Association

The [Graduate Student Association](#), formed on October 6, 1958, is a student-led group that represents and acts on behalf of Graduate Students at North Carolina State University to improve the satisfaction and scholarship of our members during their time here. The GSA serves Graduate Students by participating in student government, appointing students to university standing committees, and developing internal programs to assist graduate students with research and funding. We are here to help – if there's anything you need that you can't find on our website, please do not hesitate to reach out to us. (Adapted from <https://gsa.ncsu.edu/>.)

Genetics Graduate Student Association

The [Genetics Graduate Student Association \(GGSA\)](#) is the Genetics Chapter of the GSA. The purpose of the GGSA is (1) To disseminate information of interest or importance to the members; (2) To provide a forum for discussion of matters important to the members; and (3) To represent the graduate students of the Genetics Program in any and all matters which may affect the welfare of the students. The GGSA holds at least one meeting per semester and attendance is required by all Genetics graduate students.

All Genetics graduate students are members of the GGSA and serve in a variety of capacities within the organization. The executive offices are the Co-Presidents, Vice President, Secretary, Treasurer, and Webmaster, and the standing committees are the Student Symposium & Recruitment Committee, the Social Committee, T-Shirt Committee, Athletic Committee, and the Industry Relations Committee. Officers and committee members are elected by current GGSA members.

The GGSA has representatives that serve as liaisons to the Genetics Program Faculty meetings. If funds are available, the GGSA also oversees awarding travel funds that support graduate students to travel to conferences (Note: The GSA also has travel funds that are awarded, but these are not managed by the GGSA). The GGSA also identifies and invites three external Distinguished Lecturers each in the Fall and Spring semesters. The largest annual event for the GGSA is the Genetics Graduate Student Symposium. This is a day-long event where all of the graduate students in the department give a brief oral presentation of their research. Attendance and participation at the GGSA Symposium each year is required.

Genetics Seminar

Graduate students are required to attend the Genetics Program Seminar each week. These seminars are normally held on Monday's at 1:30 pm in the Stephens Room (3503 Thomas Hall). Students are given an opportunity to meet with speakers following each seminar and are strongly encouraged to participate in these meetings.

If a student is taking a course at a time which conflicts with the Genetics seminar in a particular semester, then the student should inform the Director of the Genetics Graduate Program, Dr. Reade Roberts and the Genetics Graduate Services Coordinator, Jenni Wilson, in writing via email.

Transcripts from Previous Institutions

The Graduate School must have an official copy of each student's final transcripts from previous institutions stating a degree and the date the degree was conferred. The Graduate School also needs official transcripts of all coursework completed after the degree was conferred but before acceptance into Graduate School (if there are any) in addition to any coursework mentioned on the application.

If you have just finished a degree program or have finished any coursework that would not have been sent with your application, order official transcripts and have them sent to Graduate Services Coordinator, Genetics Program, Box 7614, 3510 Thomas Hall, 112 Derieux Place, NCSU, Raleigh, NC 27695-7614. A copy will be kept in your Genetics Program file, and the original will be sent to the Graduate School. ***If the Graduate School does not have a copy of these final transcripts, they will not process any paperwork for your graduate degree program.***

B. Genetics Graduate Program Degrees Offered

The Genetics Program offers the Ph.D., M.S. and Master of Genetics degrees. The M.S. and Ph.D. degrees require an independent research project and a thesis and dissertation, respectively.

The Master of Genetics degree is a non-thesis degree alternative to the Master of Science degree in Genetics for students who wish to emphasize coursework rather than research. The Master of Genetics degree may be an appropriate degree for (1) individuals working as technicians in a research environment, or (2) teachers and others desiring a strong non-thesis graduate degree. It is intended as a terminal degree and would not be appropriate for students following a Ph.D. degree program. Applicants for the Master of Genetics degree program are reviewed using the same mechanisms and standards as for M.S. and Ph.D. applicants.

See the required courses appendices below for the Ph.D., M.S., and Master of Genetics degrees.

REQUIRED CORE COURSES FOR THE M.S. DEGREE

(All courses required)

<i>Number</i>	<i>Home Dept/Program</i>	<i>Course Title</i>	<i>Credit Hours</i>	<i>Semester Offered</i>
GN701	GN	Molecular Genetics	3	Fall
GN702	GN	Cellular & Developmental Genetics	3	Spring
GN703	GN	Population & Quantitative Genetics	3	Spring
GN810	GN	Special Topics in Genetics - Journal Club	1	Fall
GN850	GN	Professionalism & Ethics	1	Fall
ST511	ST	Experimental Statistics for Biologists	3	Fall, Spring

PRIMARY ELECTIVE COURSES FOR THE M.S. DEGREE

*(An additional 6 hours of elective courses are required)

*(3 hours must have substantial Genetics content, such as the examples below.)

<i>Number</i>	<i>Home Dept/Program</i>	<i>Course Title</i>	<i>Credit Hours</i>	<i>Semester Offered</i>
GN713	ANS	Quantitative Genetics and Breeding	3	Fall
GN721	ST	Genetic Data Analysis	3	Alt. Spring
GN725	FOR	Forest Genetics	3	Spring
GN735	GN	Functional Genomics	3	Fall
GN740	GN	Evolutionary Genetics	3	Alt. Fall
GN745	CS	Quantitative Genetics in Plant Breeding	3	Alt. Spring
GN750	GN	Developmental Genetics	3	Alt. Spring
GN755	GN	Population Genetics	3	Alt. Spring
GN756	GN	Computational Molecular Evolution	3	Alt. Fall
GN757	ST	Stats for Mol. Quantitative Genetics	3	Alt. Fall
GN758	MB	Prokaryotic Molecular Genetics	3	Spring
GN761	BCH	Advanced Molecular Biology of the Cell	3	Alt. Spring
GN768	BCH	Nucleic Acid: Structure and Function	3	Alt. Spring
GN 770	ST	Statistical Concepts in Genetics	3	Alt. Spring
GN810X	GN	Special Topics in Genetics	Var	Variable
GN820	GN	Special Problems, Professional Development	3	Alt. Spring
ST590X	ST	Bioinformatics I	3	Fall

ST590X	ST	Bioinformatics II	3	Spring
PB780	PB	Plant Molecular Biology	3	Fall
PB824N	PB	Topics in Plant Molecular Genetics	3	Alt. Spring
BCH701	BCH	Macromolecular Structure	3	Fall
<u>BIT510</u> †	BIT	Core Technologies	4	Fall, Spring
<u>BIT815XX</u> †	BIT	Advanced Modules (Several)	Var	Fall, Spring

†Only three hours of these courses may be counted toward the primary elective requirement.

****Other courses that do not appear on this list may be counted if they have substantial Genetics content. Please consult with the Director of Graduate Programs if you would like to count a course as an elective that is not on this list.**

REQUIRED CORE COURSES FOR THE PH.D. DEGREE

(All courses required)

<i>Number</i>	<i>Home Dept./Program</i>	<i>Course Title</i>	<i>Credit Hours</i>	<i>Semester Offered</i>
GN 701	GN	Molecular Genetics	3	Fall
GN 702	GN	Cellular & Developmental Genetics	3	Spring
GN 703	GN	Population & Quantitative Genetics	3	Spring
GN 810X (×2)*	GN	Special Topics in Genetics - Journal Club	1	Fall
GN820	GN	Special Problems, Professional Development	3	Alt. Spring
GN 850	GN	Professionalism & Ethics	1	Fall
ST 511	ST	Experimental Statistics for Biologists	3	Fall, Spring

*(Two credits of Evolutionary Genomics Journal Club (GN810) are required for the degree.)

PRIMARY ELECTIVE COURSES FOR THE PH.D. DEGREE

**(an additional 12 hours of elective courses are required, 9 hours must have substantial Genetics content such as the examples below)

<u>Number</u>	Home Dept/Program	Course Title	Credit Hours	Semester Offered
<u>GN713</u>	ANS	Quantitative Genetics and Breeding	3	Fall
<u>GN721</u>	ST	Genetic Data Analysis	3	Alt. Spring
<u>GN725</u>	FOR	Forest Genetics	3	Spring

<u>GN735</u>	GN	Functional Genomics	3	Fall
<u>GN740</u>	GN	Evolutionary Genetics	3	Alt. Fall
<u>GN745</u>	CS	Quantitative Genetics in Plant Breeding	3	Alt. Spring
<u>GN750</u>	GN	Developmental Genetics	3	Alt. Spring
<u>GN755</u>	GN	Population Genetics	3	Alt. Spring
<u>GN756</u>	GN	Computational Molecular Evolution	3	Alt. Fall
<u>GN757</u>	ST	Stats for Mol. Quantitative Genetics	3	Alt. Fall
<u>GN758</u>	MB	Prokaryotic Molecular Genetics	3	Spring
<u>GN761</u>	BCH	Advanced Molecular Biology of the Cell	3	Alt. Spring
<u>GN768</u>	BCH	Nucleic Acid: Structure and Function	3	Alt. Spring
<u>GN 770</u>	ST	Statistical Concepts in Genetics	3	Alt. Spring
<u>GN810X</u>	GN	Special Topics in Genetics	Var	Variable
<u>GN820</u>	GN	Special Problems, Professional Development	3	Alt. Spring
<u>ST590X</u>	ST	Bioinformatics I	3	Fall
<u>ST590X</u>	ST	Bioinformatics II	3	Spring
<u>PB780</u>	PB	Plant Molecular Biology	3	Fall
<u>PB824N</u>	PB	Topics in Plant Molecular Genetics	3	Alt. Spring
<u>BCH701</u>	BCH	Macromolecular Structure	3	Fall
<u>BIT510†</u>	BIT	Core Technologies	4	Fall, Spring
<u>BIT815XX†</u>	BIT	Advanced Modules (Several)	Var	Fall, Spring

†Only three hours of these courses may be counted toward the primary elective requirement.

****Other courses that do not appear on this list may be counted if they have substantial Genetics content. Please consult with the Director of Graduate Programs if you would like to count a course as an elective that is not on this list.**

REQUIRED CORE COURSES FOR THE MASTER OF GENETICS DEGREE
(All courses required)

<i>Number</i>	<i>Home Dept.</i>	<i>Course Title</i>	<i>Credit Hours</i>	<i>Semester Offered</i>
GN 701	GN	Molecular Genetics	3	Fall
GN 702	GN	Cellular & Developmental Genetics	3	Spring
GN 703	GN	Population & Quantitative Genetics	3	Spring
GN 850	GN	Professionalism & Ethics	1	Fall
ST 511	ST	Experimental Statistics for Biologists	3	Fall, Spring
BCH 451	BCH	Principles of Biochemistry	4	Fall, Spring

**PRIMARY ELECTIVE COURSES FOR THE
MASTER OF GENETICS DEGREE**

(14 hrs. of elective courses are required, 6 hours must have substantial Genetics content such as the examples below.**)

<u>Number</u>	<u>Home Dept/Program</u>	<u>Course Title</u>	<u>Credit Hours</u>	<u>Semester Offered</u>
<u>GN713</u>	ANS	Quantitative Genetics and Breeding	3	Fall
<u>GN721</u>	ST	Genetic Data Analysis	3	Alt. Spring
<u>GN725</u>	FOR	Forest Genetics	3	Spring
<u>GN735</u>	GN	Functional Genomics	3	Fall
<u>GN740</u>	GN	Evolutionary Genetics	3	Alt. Fall
<u>GN745</u>	CS	Quantitative Genetics in Plant Breeding	3	Alt. Spring
<u>GN750</u>	GN	Developmental Genetics	3	Alt. Spring
<u>GN755</u>	GN	Population Genetics	3	Alt. Spring
<u>GN756</u>	GN	Computational Molecular Evolution	3	Alt. Fall
<u>GN757</u>	ST	Stats for Mol. Quantitative Genetics	3	Alt. Fall
<u>GN758</u>	MB	Prokaryotic Molecular Genetics	3	Spring
<u>GN761</u>	BCH	Advanced Molecular Biology of the Cell	3	Alt. Spring
<u>GN768</u>	BCH	Nucleic Acid: Structure and Function	3	Alt. Spring
<u>GN 770</u>	ST	Statistical Concepts in Genetics	3	Alt. Spring
<u>GN810X</u>	GN	Special Topics in Genetics	Var	Variable
<u>GN820</u>	GN	Special Problems, Professional Development	3	Alt. Spring
<u>ST590X</u>	ST	Bioinformatics I	3	Fall
<u>ST590X</u>	ST	Bioinformatics II	3	Spring
<u>PB780</u>	PB	Plant Molecular Biology	3	Fall
<u>PB824N</u>	PB	Topics in Plant Molecular Genetics	3	Alt. Spring
<u>BCH701</u>	BCH	Macromolecular Structure	3	Fall
<u>BIT510†</u>	BIT	Core Technologies	4	Fall, Spring
<u>BIT815X†</u>	BIT	Advanced Modules (Several)	Var	Fall, Spring

*Only three hours of these courses may be counted toward the primary elective requirement.

****Other courses that do not appear on this list may be counted if they have substantial genetics content. Please consult with the Director of Graduate Programs if you would like to count a course as an elective that is not on this list.**

C. First Semester (M.S. and Ph.D. Students)

Program requirements for the M.S. and Ph.D. degrees in Genetics are detailed on the next several pages. Please see the [Graduate School Handbook](#) for detailed requirements of the Ph.D. and M.S. degrees at NC State University.

Laboratory Rotations

All new graduate students who are supported by the Genetics Program or fellowship funds are required to rotate through at least three research programs before choosing a Major Advisor. The rotations allow the students to gain first-hand information on specific programs and allow the faculty and students to assess compatibility. The rotations also facilitate interactions between new students and Genetics Program personnel.

The rotations usually last about five weeks and involve a small project on which the student is expected to work full time with the exception of classes and seminars. Students usually rotate through three programs and select a Major Advisor by the end of the first semester. However, students have the option of participating in more than three rotations if they so desire.

New students are responsible for setting up their rotation schedules. The exact start time and length of each rotation is flexible, but students usually begin their first rotation by the second week of classes. The first step is to narrow down potential research programs based on faculty research descriptions and faculty interest in recruiting new students. In some rare cases, faculty may indicate during the orientation that they are not accepting new students if their laboratories are currently full or they are planning to retire. Students should visit the appropriate faculty member to indicate an interest in participating in a rotation in their research program and to discuss the feasibility and timing of the rotation. Setting up the rotation schedule sometimes requires a little juggling, as a faculty member may have several students who are interested in rotating during the same semester.

Once a rotation schedule is set, please give a copy to the Genetics Graduate Services Coordinator, Jenni Wilson, so that she knows where to contact you during the first semester.

Selection of a Major Graduate Advisor

All students in graduate programs must have a Major Graduate Advisor who is a member of the NCSU Graduate Faculty in the student's Major Program (See Section I).

Once laboratory rotations are completed, the student selects a Major Graduate Advisor. This important decision should be made with considerable thought and information. Toward the end of the third rotation, the student should meet with the Director of Graduate Programs to discuss the rotations and potential advisors. This meeting should be held before a final decision is made.

A number of tips for selecting advisors has been compiled by Genetics graduate students and is listed in Appendix A. Students often have a clear idea from their rotations of which faculty member they would like to have as an advisor, while in other cases, students are enthusiastic about more than one of their rotation advisors. In the latter situation, it is advisable to revisit the faculty to discuss potential graduate programs in more detail.

Once a student settles on an advisor, the student should set up a meeting with the faculty member and indicate an interest in working with that person. At that time the faculty member will accept or decline the student as an advisee. Although it is rare, a faculty member may decline a student because they are concerned about funding, have accepted other new students or feel that the student does not fit into their program. After the selected faculty member has agreed to take the student as an advisee, the student should speak with each of the other rotation advisors in person to thank them for the opportunity to rotate with them and to indicate that they have selected another advisor. Please be sure to extend this courtesy to the rotation advisors even though you may feel uncomfortable about informing them that you have selected another advisor.

D. First Year - Second Semester of Study (M.S. and Ph.D. Students)

Initiation of the Research Program

All candidates for the M.S. or Ph.D. degrees in Genetics are required to conduct a program of original research. Once the advisor is selected, the student and advisor select the research topic. The research program should initiate in the second semester and continue throughout the degree program. It is expected that this work should make an original contribution to scientific knowledge and should be suitable for publication in professional journals. The research constitutes a vital aspect of graduate student training, and successful completion of the graduate program will be measured largely by the quality of this research.

Selection of a Graduate Advisory Committee

Soon after selecting a Major Graduate Advisor, the student, in conjunction with the advisor, will select a Graduate Advisory Committee. The functions of this committee are to direct the student's coursework, provide advice and expertise with regard to their research program, give the preliminary and defense examinations and evaluate and critique the thesis or dissertation. Like Major Graduate Advisors, members of the Graduate Advisory Committee must be members of the NCSU Graduate Faculty. For a current list of members of the Graduate Faculty, visit the [Graduate School website for Graduate Faculty](#). It is the student's responsibility, with the assistance of the Graduate Services Coordinator and their graduate advisor, to select a graduate advisory committee. The graduate advisor serves as chair or co-chair of the committee, consisting of graduate faculty members. The Director of Graduate Programs (DGP) approves and electronically submits the advisory committee names to the Graduate School for final approval.

Advisory Committee Requirement and Composition

All students in graduate programs must have a graduate advisor who is a member of the graduate faculty in the student's major program. The graduate advisor is appointed by the Dean of the Graduate School upon recommendation of the DGP. In the case of doctoral programs and master's programs requiring theses and/or final oral examinations, the graduate advisor serves as chair or co-chair of the committee.

1. Committee Administrative Structure

- a. Every committee shall have a chair or two co-chairs or a chair and a vice-chair.
- b. A vice-chair is a full member of the graduate faculty and is required on doctoral committees in which the chair is an associate member of the graduate faculty. The vice-chair, who is subordinate to the chair, will be responsible for ensuring that appropriate procedures are followed and that adequate mentoring of the student is taking place. In no other situation will a vice-chair be allowed.
- c. Co-chair means equally shared responsibilities.

2. Master's Students

- a. For master's students in all programs except "[Option B](#) (Refer to d. of the Master's Students section below)," the committee consists of a minimum of three graduate faculty members, including the graduate major advisor or committee chair. If a minor has been declared, one member of the committee must be from the minor field. The Graduate School verifies the committee when the DGP submits the Request to Permit to Schedule the Master's Oral Examination.
- b. If a minor has not been declared, it is up to the individual program whether to require external representation on the committee. In a master's program of graduate study in which the minor is classified as interdisciplinary, one of the areas must be represented by a committee member from that area. [*Recommended by the Administrative Board of the Graduate School and approved by the Dean of the Graduate School on 12/12/91.*]
- c. Option B master's students do not require a committee. However, the Graduate School will verify the appropriate major advisor when the DGP submits the student's Request for Option B Graduation Checkout.
- d. [Changing Master's Programs to "Option B"](#) Master's degree programs that require final oral examinations may petition the Graduate School for permission to operate the program with a single advisor and to eliminate the final oral examination (Option B). Option B Master's degree programs may not carry an officially designated minor. Petitions need the approval of school/college-level Graduate Studies Committees and must be made for an entire degree program, rather than for individual students. The Administrative Board of the Graduate School will review each petition and make appropriate recommendations to the Dean of the Graduate School. The petition form is entitled Proposal for Changing Non-Thesis Graduate Degree Program Requirements to Option B.

3. Doctoral Students

- a. Doctoral programs require a minimum of four graduate faculty members, including the graduate advisor who serves as chair or co-chair of the committee. One of these faculty members must be from the minor field if the student has declared a minor.
- b. If a doctoral graduate committee has no representation outside of the student's graduate program, a Graduate School Representative is required.
- c. When a minor is not required and has not been declared, it is up to individual programs whether to require external representation on the four-person committee (excluding the Graduate School Representative). An associate member of the graduate faculty may co-chair the committee if the other co-chair is a full member, and may chair the committee as long as a full member serves as vice-chair (see A.1.b above). [*Recommended by the Administrative Board of the Graduate School and approved by the Dean of the Graduate School on 6/16/2010.*]
- d. The committee is indicated on the Plan of Graduate Work, which is submitted no later than when the student has completed 18 hours of graduate coursework. In this way, the committee is officially recommended by the DGP and must be approved by the Graduate School at the time of the approval of the Plan of Graduate Work. The Plan of Graduate Work is submitted online through *MyPack Portal*.
- e. At the time that the Plan of Graduate Work is approved, the Graduate School appoints the Graduate School Representative (see Section 1.6) to serve on the doctoral committee.

Functions and Requirements of the Advisory Committee

The primary function of the committee is to advise the student in all aspects of the educational program and to monitor and evaluate that student's progress toward the degree. The Graduate Advisory Committee must meet a minimum of twice (every 6 months) per academic year to evaluate student progress. Thus, the committee must be very active throughout the student's program of graduate training, beginning with helping the student prepare their Plan of Graduate Work. The committee should provide an intellectually stimulating foundation for the student's professional and scholarly development and should be sensitive to any difficulties in the student's progress, research performance or methodology requiring attention.

The committee certifies whether the student has met NC State's standards for a graduate degree. Advising and guiding the student on how best to qualify for the requirements of a degree is a key part of this responsibility. The committee and the student are encouraged to meet in formal

sessions at appropriate intervals to critically assess the student's progress; such meetings may be requested by the student or by any member of the committee. However, the necessity of frequent personal contact between the student and committee members cannot be overemphasized. Committee members have the obligation to express to the student any concerns they may have regarding the student's performance, to stipulate the level and quality of work expected, and to offer guidelines to aid in the fulfillment of those expectations.

Thesis and Dissertation Responsibilities

The chair/co-chair/vice-chair and, to a lesser extent, the other members of the advisory committee are responsible for the following aspects of the thesis or dissertation and the related or associated research experience:

1. Approval of the subject matter and methodology of the thesis or dissertation research;
2. Approval of the organization, content and format of the thesis or dissertation according to NC State required and optional formatting guidelines as provided in the Thesis and Dissertation Guide;
3. Review of and comment on drafts of various sections of the thesis or dissertation, including (a) the quality of data and evidence, (b) logical reasoning, and (c) the editorial, linguistic and bibliographic quality;
4. Evaluation of the thesis or dissertation as a basis for certification that the student has fulfilled the requirements of the degree for which they are a candidate; and
5. Encouragement of and advice to the student and review of manuscripts based on the thesis or dissertation research for publication in the scholarly literature of their field.

Process of Submitting Names of Committee Members to Graduate School

Graduate programs that submit students' Plans of Graduate Work to the Graduate School electronically (via SIS) necessarily list the committee members on one of the accompanying SIS screens. Any changes in committee members can likewise be submitted electronically.

In some special situations, it is necessary to submit Plans of Graduate Work in hard copy form. In so doing, the committee members must be designated on the form. Should the student, in consultation with their advisor, wish to change any members (see below), they must submit a revised Plan of Graduate Work with the new members, indicating that this change has been approved by the advisor and by the DGP. Original signatures of the student, the committee members, and the DGP must be included. The revised and signed Plan of Work must then be submitted to the Graduate School by the DGP.

Committee Members from Other Institutions

If the program recommends the appointment of a committee member who is not an NC State graduate faculty member, it should be made clear to that person that they will be expected to participate in the comprehensive oral examinations. The selection of committee members will

generally depend upon the student's major interest and research and also upon the availability of certain faculty members.

In addition to graduate faculty from NC State, there are three types of non-NC State faculty who may be appointed to a graduate committee: inter-institutional faculty, external (voting) members, and technical consultants.

1. Inter-institutional Graduate Faculty

- a. **Graduate Faculty from UNC-CH, UNC-G, and Duke.** A member of the graduate faculty from the University of North Carolina at Chapel Hill, the University of North Carolina at Greensboro, or Duke University may serve as one of the required committee members when appropriate. These are courtesy appointments and the members serve at the pleasure of the DGP of the program, the Associate Dean of the College involved, and the Dean of the Graduate School.
- b. Members of professional programs at these institutions, such as faculty at the School of Law or Medical School at UNC or Duke, cannot serve as automatic graduate faculty unless their appointment at their respective institution explicitly states that they are on the graduate faculty. A Graduate Advisory Committee Appointment Form for Inter-institutional Member must be completed for faculty from these institutions. Should their appointment be for that professional school only, then they must follow the guidelines discussed for External Members and/or Technical Consultants (see below).
- c. **Cooperative Doctoral Program Graduate Faculty from UNC-system Institutions.** In addition to the non-degree-specific inter-institutional arrangement of NC State, UNC, UNC-G and Duke, NC State has established cooperative doctoral programs with other UNC-system institutions. Faculty from UNC-C, UNC-W, and NC A&T, participating in cooperative doctoral programs with NC State do not require a special form to be appointed to a student's advisory committee.

2. External Members

A faculty member from another university (who is not an inter-institutional graduate faculty member) or a professional from industry or government with credentials comparable to those required for membership on the graduate faculty, may serve as an external member, in addition to the number of committee members normally required (four for doctoral degrees and three for master's degrees).

- a. **Appointment.** To appoint an external member, the DGP must submit a Graduate Advisory Committee Appointment Form for External Member/Technical Consultant along with the proposed external member's curriculum vitae.

- b. **Responsibilities.** External members will have full voting privileges and are expected to participate in the student's preliminary and final examinations. They will also be consulted in the development of the student's Plan of Graduate Work and will sign the thesis or dissertation of students in thesis and dissertation programs. [*Recommended by the Administrative Board of the Graduate School and approved by the Dean of the Graduate School on 6/4/92.*]

3. Technical Consultants

A person from industry, a governmental agency, or a university may, upon recommendation of the committee and the DGP, serve as a technical consultant along with the required committee members.

- a. **Appointment.** To appoint a technical consultant, a Graduate Advisory Committee Appointment Form for External Member/Technical Consultant must be submitted to the Graduate School, along with a statement describing the Technical Consultant's potential contribution to the student's research or project.
- b. **Responsibilities.** Technical consultants serve in an advisory capacity to students in the conduct of research for their dissertation, thesis or master's project. Technical consultants are expected to participate in the student's preliminary and final examinations and may sign the thesis of students in thesis degree programs. However, they will not vote on the outcome of the examinations.

Representation for Minor Coursework at Another Institution

When all or most of the course work in the minor has been completed at another institution and the area involved is one in which NC State offers a graduate program, the Plan of Graduate Work must be approved by a faculty member of the appropriate NC State department who serves as a member of the student's advisory committee. In certain approved minors, all of the coursework may occur at UNC-CH, Duke or UNC-G. A graduate faculty member from the appropriate institution must represent the minor.

Substitution of Committee Members for Exams

Under extenuating circumstances, it may be necessary for a member of a graduate advisory committee to have a substitute at committee meetings or the exam. The substitution of a committee member on an oral examination must be requested in writing by the DGP and approved by the Graduate School in advance of the examination. It is extremely important to have clear communication between committee members and substitutes so that new expectations or concerns do not arise at the time of the final oral examination. [*Recommended by the Administrative Board of the Graduate School and approved by the Dean of the Graduate School on 10/5/89.*]

Permanent Changes in Committee Members

1. **Changes before Examinations.** Should the student, in consultation with their advisor, wish to change any of the committee members, they must submit a revised Plan of Graduate Work with the new members, indicating that this change has been approved by the advisor and by the DGP. Original signatures of the student, the committee members, and the DGP must be included. The DGP must submit the revised and signed Plan of Work to the Graduate School.
2. **Resolving Disagreements.** Disagreements within the committee or between the student and a committee member over the quality of a student's performance are not grounds for reconstituting the committee. If the student believes that they have been unjustly or unfairly treated in efforts to resolve committee conflicts, they have the right to grieve this issue, according to the current University Grievance Procedures for Graduate Students.
3. **Changes after Preliminary Examinations.** A change in doctoral committee membership after preliminary exams requires signatures of both outgoing and incoming committee members and the student, as well as justification for the committee change. Approval by the Graduate School is required before holding any examinations.

Graduate Faculty Members

Graduate Faculty members are listed in the beginning of the Graduate Catalog and any information may also be obtained from the Genetics Graduate Services Coordinator, Jenni Wilson. Professors must be nominated for Graduate Faculty (GF) status by their department or Program by sending a completed nomination form to the Graduate School. This must be completed by the Genetics Graduate Services Coordinator and Director of the Graduate Program.

Once the student and advisor have settled on a list of potential committee members, the student typically will set up a meeting with each faculty member. The student asks the faculty member if they are willing to serve on their Advisory Committee, and gives a general outline of the research program. Most faculty members who are asked willingly serve on student committees. In some cases, a faculty member may decline to serve on a committee if they feel they are over-committed or do not really have the expertise to provide helpful input to the student.

When the appropriate number of committee members (see below) has agreed to serve, the student should add the names of their committee members using MyPack Portal. You may find the link for adding committee members under the “Graduate Plan of Work” section. Once you access your Graduate Plan of Work, select the Committee tab as shown below. Use the drop down menu under “Type” to select the type of committee member, such as the chair, co-chair, and/or members. Next, use the person with the question mark symbol to find faculty by name and add them to your committee. Once you have selected all your committee members, click the save button at the bottom of the screen. Make sure to save it or you will lose all changes. If you have any questions in regards to using MyPack Portal, you may contact the Genetics Graduate Services Coordinator, Jenni Wilson.

Once a student’s committee is formed, the Advisor, Committee and student should develop a program of study leading to the appropriate degree for the student. Once the Advisor, Committee and student have developed the program, this information is submitted to the Graduate Services Coordinator via the “Plan of Work” that is found in MyPack Portal (See below under Filing a Plan of Work).

The Plan of Work must be completed and approved by the Director of Graduate Programs no later than the end of the first year of study.

Members of the Graduate Faculty from UNC-Chapel Hill, UNC-Greensboro and Duke University may serve as one of the required members of the graduate Advisory Committee when appropriate by submitting a [Graduate Advisory Committee Appointment Form for an Interinstitutional Member](#). (Remember, the professor must be a member of the Graduate Faculty of the University/College/School in question.) If the professor is a new member, you should contact the Graduate School and supply the same information as listed above for new graduate faculty members from NC State University.

A faculty member from another university (who is not an Interinstitutional Graduate Faculty member), or a professional from industry or government with credentials comparable to those required for membership on the Graduate Faculty, may serve as an External Member. In addition to the number of committee members normally required, External Members will have full voting

privileges and are expected to participate in the student's preliminary and final examinations. They will also be consulted in the development of the student's Plan of Graduate Work and will sign the thesis or dissertation. An [Appointment of External Member or Technical Consultant Form](#) must be submitted to the Graduate School for approval.

If there must be a change in the committee, the change must be requested in writing by completing the [Advisory Committee Modification Form](#) and be approved by the Director of Graduate Programs and the Graduate School.

M.S. Degree

The Advisory Committee for the Master's degree will consist of at least three (3) Graduate Faculty members, one designated as the Chair and one to represent the Minor. If the Chair is an associate faculty member in Genetics, the committee must be co-chaired by a primary Genetics faculty member. In addition to the Chair or Co-Chair, at least one other committee member must be chosen from the primary Genetics faculty.

Ph.D. Degree

The Advisory Committee for the Ph.D. degree will consist of at least four (4) Graduate Faculty members, one designated as the Chair, and one to represent the Minor. If the Chair is an associate faculty member in Genetics, then the committee must be co-chaired by a primary Genetics faculty member. In addition to the Chair or Co-Chair, at least one other committee member must be chosen from the primary Genetics faculty.

Master of Genetics Degree

The student working toward a Master of Genetics degree will be advised by a three-member committee during the degree program. The committee will consist of the Director of Graduate Programs and two additional faculty members in the Program in Genetics.

Initial Meeting with Graduate Advisory Committee and Plan of Work

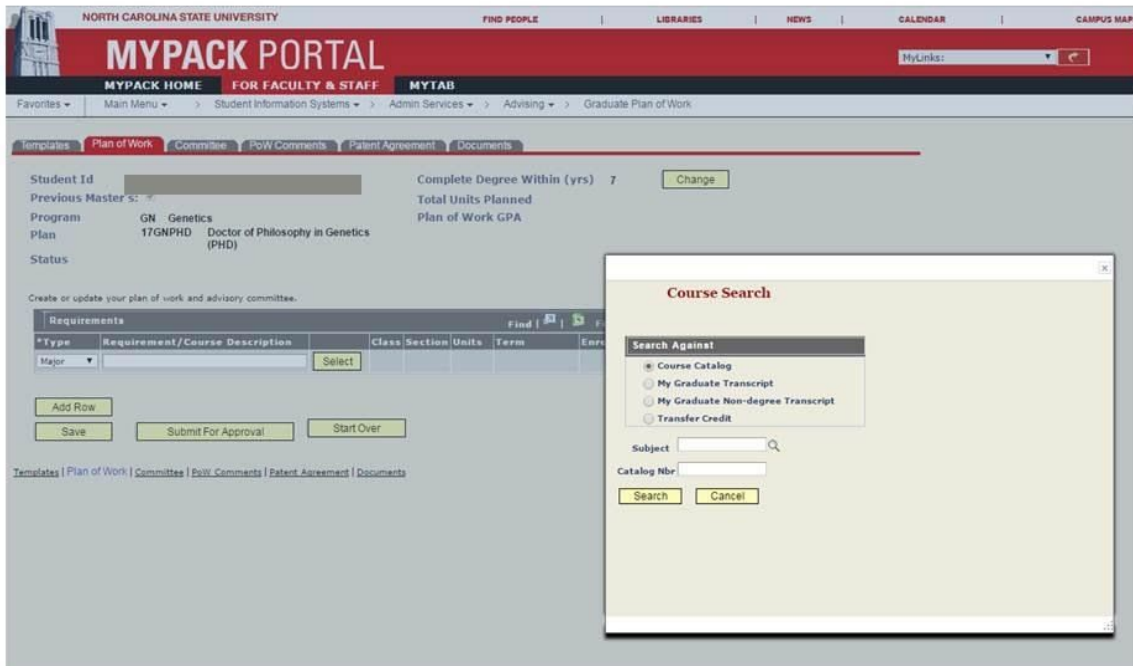
The first meeting between the Advisory Committee and student should occur by the end of the second semester of study. Students are required to submit a short research plan to their committee before this meeting. The plan should cover background information, rationale for the project and a brief outline of the initial experiments. The plan should then be presented orally at the first meeting and forms the basis of discussion on the research plan, as well as guides decisions on courses for the Plan of Work (POW).

The Plan of Work includes a list of the courses you plan to take during your degree program. Course requirements for the M.S. and Ph.D. degrees in Genetics are given in Section IV.A. The Plan of Work is designed with the help of the advisor and Advisory Committee. A training manual can be found in Appendix C.

Filing a Plan of Work

It is recommended that you consult with the Director of Graduate Programs and the Genetics Graduate Services Coordinator as you begin to work on your POW. A draft of your Plan of Work should be outlined and saved in MyPack Portal. You may add a Requirement/Course Description by clicking on the “Select” button. This will initiate a pop up screen that allows you to do a course search of classes that are from the Course Catalog, your Graduate Transcript, Graduate Non-degree Transcript, and Transfer Credit. Once you have added all courses to the Plan of Work, click the save button and then Submit for Approval. The Graduate Services Coordinator and the Director of the Graduate Program is notified of this submission. After the Committee and the Director of Graduate Programs approves the Plan of Work, it is submitted to the Graduate School electronically.

The screenshot shows the MyPack Portal interface for filing a Plan of Work. The header includes the North Carolina State University logo and navigation links for 'FIND PEOPLE', 'LIBRARIES', and 'NEWS'. The main navigation bar features 'MYPACK PORTAL' and tabs for 'MYPACK HOME', 'FOR FACULTY & STAFF', and 'MYTAB'. A breadcrumb trail indicates the current location: 'Main Menu > Student Information Systems > Admin Services > Advising > Graduate Plan of Work'. The interface includes a navigation menu with 'Templates', 'Plan of Work', 'Committee', 'PoW Comments', 'Patent Agreement', and 'Documents'. The 'Plan of Work' section displays student information: 'Student Id' (redacted), 'Previous Master's' (checked), 'Program' (GN Genetics), 'Plan' (17GNPHD Doctor of Philosophy in Genetics (PHD)), and 'Status'. It also shows 'Complete Degree Within (yrs)' set to 7 and a 'Change' button. Below this, there are fields for 'Total Units Planned' and 'Plan of Work GPA'. A section titled 'Create or update your plan of work and advisory committee.' contains a 'Requirements' table with columns for *Type, Requirement/Course Description, Class, Section, Units, Term, Enrolled, and Grade. A 'Major' dropdown is visible in the first row, followed by a 'Select' button. At the bottom of the table area are buttons for 'Add Row', 'Save', 'Submit For Approval', and 'Start Over'. A footer navigation bar repeats the main navigation items.



Ph.D. and M.S. Requirements for Filing Plan of Work

- a. The [Graduate School Minimum Requirements](#) must be met when filing your plan of work.
- b. Minors are not required for Genetics Majors. However, you may choose to minor in a particular department or program. Minor requirements are determined by each department or program and should be available from the department/program of interest. The Plan of Work must be approved by the Minor Department or Program, as well as the Genetics Program.
- c. The Subject of Thesis must be listed as a comment. The actual title can be updated at any time.
- d. Courses you will take to satisfy the Major requirements and courses you will take to satisfy the Minor requirements for your degree (if appropriate) must be listed on your Plan of Work. M.S. and Ph.D. degrees require a minimum of 30 and 72 graduate credit hours, respectively, beyond the bachelor's degree. No more than six hours of 400-level courses may be counted toward the minimal 30-hour requirement for the M.S., and they may not come from the major field. The courses used to satisfy the credit hour requirements must be shown on the Plan of Work. **Note: You can take courses in addition to those listed on the Plan of Work with no additional action. However, if you later choose NOT to take a course on the Plan of Work, you must make revisions and have your Plan of Work approved by your advisor, the Director of Graduate Program and submitted to the Graduate School for approval.**
- e. Please be specific as to course prefix as you list the courses. Some courses are cross-listed with the Genetics Program and one or more other departments/programs. If

you wish to take the course for Genetics credit, you must register for it with the Genetics Program and the GN prefix. If you wish to take the course for credit with another department/program, you must register for it under that department/program and use the relevant prefix. Be sure to put the right prefix on your Plan of Work and be sure you have the right number, the term you have taken or will take the course (fall, spring, and first or second summer session), and the credit hours for each course.

- f. Note for Ph.D. students with M.S. degrees: For a student who has a Master's degree, a maximum of 18 hours of relevant graduate credit may be applied toward the credit hour requirements upon recommendation of the Graduate Advisory Committee. If a student completes a Master's degree at NCSU and continues for a doctoral degree without a break in time, up to 36 credit hours taken while in master's status may be used to meet minimum requirements for the doctoral degree.
- g. While you are completing lab rotations you will need to sign up for GN 693-001 Research for MS students and GN 893-001 Research for Ph.D. students. After you choose your advisor, you will always register for GN 695 or GN 895 under your advisor's section. This will be so until you satisfy all the credit hours in your Plan of Work, MS = 30 credit hours, and Ph.D. = 72 credit hours; after which you may register for 3 credit hours of GN 699 or GN 899, respectively.
- h. There are several courses that are not allowed to be used on your Plan of Work. The GN 696 (Master's Summer Thesis Research) and 896 (Doctoral Summer Dissertation Research) ten-week courses are not allowed. The GN 690 (Master's Examination) and GN 890 (Doctoral Preliminary Examination), GN 699 (Master's Thesis Preparation) and GN 899 (Doctoral Dissertation Preparation) courses are not allowed on the Plan of Work.
- i. No more than 3 credits of Master's Supervised Teaching or 6 credits of Doctoral Supervised Teaching can be listed on the Plan of Work.

Master of Genetics Requirements for Filing Plan of Work

- a. The [Graduate School Minimum Requirements](#) must be met when filing your plan of work.
- b. Minors are not required for Genetics Majors. However, you may choose to minor in a particular department or program. Minor requirements are determined by each department or program and should be available from the department/program of interest. The Plan of Work must be approved by the Minor Department or Program, as well as the Genetics Program.
- c. The Master of Genetics degree is a 36-credit hour program.
- d. Twenty-two of the thirty-six hours are from the list of eight, required core courses. The remaining fourteen credit hours will be electives, of which six hours must come from the list of Primary Elective Courses. ***Note: You can take courses in addition to those listed on the Plan of Work with no additional action. However, if you later choose NOT to take a course on the Plan of Work, you must make revisions and have your Plan of Work approved by your advisor, the Director of Graduate Program and submitted to the Graduate School for approval.***
- e. Courses elected as part of the degree program will be outlined on a Plan of Work approved by the Advisory Committee. Course substitutions are intended only to reduce or eliminate redundancy with previous coursework and must be approved by the committee.
- f. Please be specific as to course prefix as you list the courses. Some courses are cross-listed with the Genetics Program and one or more other departments/programs. If you wish to take the course for Genetics credit, you must register for it with the Genetics Program and the GN prefix. If you wish to take the course for credit with another department/program, you must register for it under that department/program and use the relevant prefix. Be sure to put the right prefix on your Plan of Work and be sure you have the right number, the term you have taken or will take the course (fall, spring, and first or second summer session), and the credit hours for each course.
- g. There is no supervised teaching requirement for the Master of Genetics degree; however, the student can elect three credit hours of Master's Supervised Teaching (GN 685) obligating them to teach one semester of either GN 311P or GN 312.
- h. A graduate course that was completed while the student was enrolled in PBS status at NC State University may be considered for transfer to a master's program provided that it is at the 500-level or higher and that the grade is "B" (3.00 on a 4.00 scale) or better. All PBS credits used to satisfy requirements of a specific master's degree must be earned *before* the student is admitted to that degree program.

Select a Graduate Student Representative

To complete your Plan of Work, you will need to select a Graduate Student Representative to serve for your preliminary and final oral examinations. If you are not able to select a Graduate Student Representative, then the Graduate Services Coordinator will send a request to the Graduate School to appoint a Graduate Representative for your committee. Once the Graduate

School has found a representative, you will be notified of this appointment by email. The Graduate Representative must be contacted to attend your preliminary and final exams. As you are contacting your committee members to schedule an exam, you must also contact your Graduate Representative and include them in your scheduling. The Graduate Representative serves on the committee to ensure that examinations are properly executed. Although they may be extended the courtesy of asking a question during examinations, they are not present to ask questions that will affect your examinations or graduation. In order to schedule your exam, you must also contact the Graduate Services Coordinator, Jenni Wilson. The Graduate Services Coordinator will complete the appropriate preliminary or final oral examination form and submit it to the Graduate School on behalf of the student.

Consult with Director of the Genetics Graduate Program

After consultation with your advisor and before your advisory committee meets, consult with the Director of the Genetics Graduate Program, Dr. Reade Roberts to verify that course requirements have been met and that the Plan of Work format is correct. Your committee must both agree to serve on the committee, and approve your Plan of Work by using their MyPack Portal.

After the Director of Graduate Programs approves the Plan of Work, it will then be submitted to the Graduate School for approval. ***The Plan of Work must be submitted and approved by the Director of Graduate Programs by the end of the first year of study.***

Changes in Advisory Committee or Plan of Work

If one or more of your committee members retires or leaves the university, you may request a change in your committee. If one or more committee members are on sabbatical leave, you may request a substitute for the missing members for a particular examination, but remember that this should be done in a timely manner. The [Advisory Committee Modification](#) form required to make these changes are available on the [Graduate School forms page](#). You will be required to collect the appropriate signatures and submit the form to the Director of the Graduate Program for approval. You will need to monitor your committee and Plan of Work and as soon as you detect a problem, make arrangements to correct it immediately.

Since the Graduate School operates online, the Genetics Program is responsible for entering information into the graduate program system. All information entered must be submitted to the Graduate School to be checked and approved by the Graduate School. If there are any discrepancies in your program or any information changes, such as dropping or substituting courses or committee members, be aware that this may cause a delay in scheduling examinations. All of the previous information must be changed and resubmitted for Graduate School approval and this will take time. Keep ahead of the program by requesting any changes as soon as you know changes need to be made.

E. Second and Third Years of Study (M.S. and Ph.D. students)

Graduate Advisory Committee Meetings

The Graduate Advisory Committee must meet a minimum of once per academic year to evaluate student progress. The Graduate Advisory Committee and the graduate student should keep in continuous contact during each academic year.

Teaching Requirement

Genetics graduate students pursuing the M.S. or Ph.D. degree must fulfill a teaching requirement as a part of their degree program. This requirement is typically fulfilled after the second year of study when courses have been completed. Graduate students who want their teaching credit to appear on their transcript may enroll in 3 credits of either Master's Supervised Teaching (GN 685) or Doctoral Supervised Teaching (GN 885).

For the academic requirement, M.S. students are required to teach one semester (two sections) of GN 311P, a one credit-hour problem and recitation session that accompany GN 311 (Principles of Genetics). Ph.D. students are required to teach two semesters (two sections each semester) of GN 311P. Ph.D. students may substitute teaching one section of GN 312 (Elementary Genetics Laboratory) for one semester of teaching in GN 311P. If the GN312 option is chosen, it is recommended that this be taught after GN311P.

Students who are paid as full-time teaching assistants teach two sections of GN311P or two sections of GN 312. For students pursuing research degrees, this fulfills the academic teaching requirement.

A student working toward the Ph.D. degree with an M.S. from another institution may waive one semester of the two-semester requirement if it is determined that student has had teaching experience approximating one semester (28 lecture hours) of GN 311P during their M.S. program. A request for this waiver must be made in writing to the Director of the Genetics Graduate Program prior to approval of the student's Plan of Work and will require a supporting letter from the student's M.S. teaching supervisor or proof of credit for teaching on the student's transcript.

Ph.D. Co-Majors required to satisfy a teaching requirement in another department may gain a waiver of one semester of the two-semester requirement if the teaching experience in the other department approximates or exceeds one semester (28 lecture hours) of GN 311P. A request for this waiver must be made in writing to the Director of the Genetics Graduate Program prior to approval of the student's Plan of Work and will require a supporting letter from the student's teaching supervisor or proof of credit for teaching on the student's transcript.

Preliminary Examinations (Ph.D. students)

Ph.D. students are required to take both written and oral preliminary examinations. Doctoral students who enter the program without a Master's degree take the preliminary oral examination

by the fall semester of their third year of study. Doctoral students who enter the program with a Master's degree may choose to take the preliminary examination earlier. If extenuating circumstances will prevent a doctoral student from taking their preliminary exam during the fall semester of their third year of study, they should submit an extension request to the Graduate Services Coordinator at least 2 weeks prior to the first deadline. Appropriate circumstances for extensions may include major life events, or significant unexpected events in the student's lab that create hurdles to progress. However, slow progress in projects or lack of preparedness are not generally acceptable justifications for an extension. Written and oral preliminary examinations for the Ph.D. candidates must be completed no later than the end of the third year of study.

Deadlines for the Fall 2020 Preliminary Examination

September 11th, 2020 – final version of written examination to advisor

September 25th, 2020 – comments back to student

October 9th, 2020 – written examination to committee

October 23rd, 2020 – advisory committee decision on written examination

By December 11th, 2020 – oral examination

By May 21st, 2021 – repeat of oral examination (if necessary)

- a. Students will register for three credit hours of GN 890, Doctoral Examination. Note that GN 890 cannot be used in a student's Plan of Work. The written examination consists of a proposal written on the student's planned dissertation research. The standard preliminary format is completed as an NIH R01 grant proposal, including sections on budget and personnel, with the intention of preparing the proposal for submission to NIH. Students whose research is not a good fit for the NIH R01 format may propose an alternate grant proposal for their written examination. Any alternate format should be discussed with the advisor, officially approved by the DGP, and also include all sections of the grant proposal in order to prepare for submission. The student may discuss their proposal and ideas with their advisor and other colleagues at any time; however, the advisor may review a maximum of two drafts of the proposal and will return comments on each draft to the student within one week. The last draft must be submitted to the advisor on or before **September 11**. The committee must return their comments on the last draft back to the student no later than **September 25**.
- b. Once the student completes the suggested edits given by the committee, then all members of the advisory committees must receive the final written proposal examination by **October 9**. Minor revisions and clarifications may be requested by the committee members at this time, but the committee must give a pass or fail decision on the final written proposal examination by **October 23**. A unanimous favorable vote of the committee is necessary for the student to pass the written examination. Students who fail the final written examination will not be admitted to candidacy.

- c. After the satisfactory completion of the written comprehensive examination, the student should schedule the oral examination. This is scheduled through the Graduate School by contacting the Genetics Graduate Services Coordinator, Jenni Wilson, after notification from the Advisory Committee that the student has passed the written examination. The oral examination cannot be scheduled until the student receives notification that they have passed the written examination. Forms for scheduling the oral examination must be received in the Graduate School no later than two weeks prior to the date of the scheduled oral examination.
- d. The oral examination consists of an oral defense of the research proposal. Though the examination focuses on the proposal, all facets of Genetics knowledge may be examined. The purpose of the oral examination is to demonstrate a thorough working knowledge of Genetics, the ability to apply this knowledge, and the ability to use the scientific method in solving problems.
- e. The oral examination must be completed by **December 11**. A unanimous favorable vote from the Advisory Committee is required to pass the oral examination. If the student does not pass the oral examination, the Advisory Committee may recommend a re-examination to be completed by **May 21, 2021**. A unanimous favorable vote from the Advisory Committee is required to pass this re-examination. Students who fail the oral examination will not be admitted to candidacy.

The following deadlines are provided for doctoral students taking their preliminary examination in the spring semester. This applies to students who wish to take the preliminary exam early or who have requested and been approved for an extension.

Deadlines for the Spring 2021 Preliminary Oral Examination

February 12th, 2021 – final version of written examination to advisor

February 26th, 2021 – comments back to student

March 12th, 2021 – written examination to committee

March 26th, 2021 – advisory committee decision on written examination

By April 23rd, 2021 – oral examination

By August 20th, 2021 – repeat of oral examination (if necessary)

F. Last Year of Study (M.S. and Ph.D. Students)

Final Advisory Meeting with Graduate Advisory Committee

The student must meet with the Advisory Committee six to nine months before the expected graduation date to allow the committee to evaluate the research and to approve the final research plan and tentative graduation date.

Final Oral Examination

a. Master of Genetics Candidates

The student must pass an oral examination administered by the Advisory Committee at the end of the degree program. The emphasis of the examination would be course work rather than research. As with M.S. and Ph.D. students, an exit interview with the Director of the Graduate Program is required at the end of the degree program.

b. M.S. Candidates

M.S. candidates are required to pass an oral comprehensive examination and thesis defense. This examination is taken during the final semester of graduate study after completion of the thesis. In this exam, the student will be required to defend the scientific methodology, merit and conclusions of the thesis research. The unanimous approval of the Advisory Committee is required to pass the examination. After any revisions in the thesis specified by the committee have been made, the thesis is submitted to the Graduate School online through the ETD Submission System.

The Master's student's request to schedule the final oral examination must be received by the Graduate School at least 14 business days or two weeks prior to the proposed examination date. The Genetics Graduate Services Coordinator, Jenni Wilson will prepare and send the final oral examination request form to the Graduate School. The student is responsible for arranging the date and time with their committee and reserving the examination room with the Genetics Graduate Coordinator.

c. Ph.D. Candidates

The oral defense of the dissertation is the third and final examination for Ph.D. students. This occurs in the final semester of graduate study after completion of the dissertation. In this examination, the student will be required to defend the scientific methodology, merit and conclusions of the dissertation research. The unanimous approval of the Advisory Committee is required to pass the examination. After any revisions in the dissertation specified by the committee have been made, the dissertation is submitted to the Graduate School.

The Ph.D. student's request to schedule the final oral examination must be received by the Graduate School at least two weeks prior to the date requested. The request may be made no earlier than four months after successful completion of the Preliminary Examination. Once again, it is the student's responsibility for setting the date and time of the examination with the committee members and the Graduate School representative and then providing the information to the Genetics Graduate Services Coordinator, Jenni Wilson so that the final oral exam form can be submitted to the Graduate School in a timely manner. (The Graduate School representative will be the same as first appointed to your committee.) The student must also reserve the oral examination room and the room to hold their seminar.

Thesis/Dissertation Seminar

All students are required to present a formal departmental seminar for each degree describing their graduate research project (rationale, methods, data, and conclusions). This seminar is presented during the final semester of candidacy in conjunction with the Final Oral Examination. The student is also responsible for submitting the title for their seminar to Jenni Wilson in time for their defense seminar notice to be announced to the Genetics Program.

Preparation of the Thesis or Dissertation

Upon completion of the research program, the results of this research are presented to the student's Major Professor and Advisory Committee in the form of a thesis (M.S.) or dissertation (Ph.D.). The thesis or dissertation must be approved by the Major Professor before it is submitted to the Advisory Committee for review. It is the responsibility of the student and Major Professor to ensure that the material is in final form and of high quality before review by the committee. ***The Advisory Committee is responsible for reviewing the scientific merit of the work and should be given at least two weeks (preferably more) before the final oral examination date to accomplish this.***

All theses and dissertations must be submitted to the Graduate School electronically using the [ETD Submission System](#). You must submit your draft thesis immediately after the final examination is successfully completed (within 24 hours of receiving an unconditional pass). This must be completed by the graduation deadline for the semester as noted in the [Graduate School ETD Deadline webpage](#). Students must electronically submit the draft PDF file of their thesis or dissertation to the Thesis Editor via the ETD submission system for the thesis review.

This cannot be done until after the final examination is completed and your final examination report form is signed. This must be completed by the graduation deadline. The Thesis Editor will check the thesis/dissertation to make sure that there are no errors and that it conforms to the guidelines for thesis preparation. If any changes are necessary, the Thesis Editor will contact you. You will have a specified length of time to make corrections and return the thesis. If you do not return the thesis on time, you will not have met the graduation deadline date and will not be allowed to graduate. Therefore, you will need to register for the next semester to fulfill the continuous registration policy. If you return the thesis on time, you will be cleared for graduation. Please refer to the [Graduate School ETD web site](#) for further information regarding the ETD process.

It is strongly recommended that you attend an Electronic Thesis and Dissertation (ETD) Workshop in preparation for your submission. Students may also reference the [ProQuest Dissertation Publishing Author Guide: Preparing Your Manuscript for Submission](#) as guide for preparing their thesis or dissertation for the online ETD submission. The Graduate School also has [MS Word ETD Templates](#) that are available for use online. The Genetics Program requests that an electronic copy of the thesis or dissertation manuscript is given to the Genetics Graduate Services Coordinator, Jenni Wilson, to be placed in the student's file.

ETD Deadlines

Every Master Thesis and Doctoral student has 3 ETD deadlines to meet in sequential order:

Three ETD Deadlines:

1. ETD Review Deadline

(A choice of 2 review deadlines to pick from: 1. No Registration Required or 2. Registration Required. See below.)

2. Final* Error-Free ETD Deadline

*The final deadline is ONLY for students who met the semester's ETD Review deadline. The review must take place before a final can be submitted. This is for students who met either the No Registration Required or Registration Required review deadlines)

3. Final Committee Approval Deadline

Deadlines	Fall 2020	Spring 2021	Summer 2021
No Registration Required	8/18/2020	1/10/2021	5/18/2021
1st Day of Classes	8/10/2020	1/11/2021	5/19/2021
Registration Required	11/02/2020	4/02/2021	7/05/2021
Apply to Graduate and Doctoral Graduation Attendance Notification Deadline	11/02/2020	4/02/2021	7/05/2021
Final Error Free ETD Deadline	11/13/2020	4/16/2021	7/19/2021
Final Committee Approval Deadline	11/18/2020	4/30/2021	8/02/2021
Graduation Date	12/04/2020	5/15/2021	8/03/2021

Choice of Two Thesis Review Deadlines:

There are 2 ETD Review Deadlines to choose from. The student is to choose ONE ETD Review Deadline for the ETD review.

1. No Registration Required ETD Review Deadline

2. Registration Required ETD Review Deadline

Deadline Definitions:

- 1. No registration required ETD review deadline:** Date by which a thesis or dissertation student must unconditionally pass the final exam and submit for the ETD Review in order to avoid registering for the semester in which they are graduating. Students meeting this deadline will not be allowed to register in the

same academic program for any subsequent semester. The final ETD file is to be submitted before the Final ETD Approval Deadline and committee approval must be completed by the Final ETD Committee Approval Deadline.

2. **Registration required ETD review deadline:** Date by which a thesis or dissertation student must unconditionally pass the final exam and submit for the ETD Review while being registered for the semester in which they are graduating. Students meeting this deadline will not be allowed to register in the same academic program for any subsequent semester. The final ETD file is to be submitted before the Final ETD Approval Deadline and committee approval must be completed by the Final ETD Committee Approval Deadline.
3. **Apply to graduate deadline:** Date by which all graduate students must apply to graduate in a given semester. A student must apply to graduate in order to participate in the graduation exercises, have their transcript posted, and receive a diploma. Thesis and dissertation students must have also completed an ETD Review by this deadline; however, their graduation will still be contingent upon approval of the final ETD by the ETD Reviewer and Committee Approval by the respective deadlines.

Students may apply to graduate in MyPack Portal. Students are advised to apply to graduate before the defense is scheduled, but the application to graduate can be submitted at any time up until 5:00 p.m. on the Apply to Graduate deadline.

4. **Final error-free ETD deadline (for both registration required and no registration required final ETDs):** Date by which a thesis or dissertation student who met that semester's review deadline (either the No Registration or Registration Required), must submit the final error-free ETD to the ETD Reviewer in order to graduate at the end of the semester. Graduation will still be contingent upon approval of the final ETD by the student's advisory committee before the expiration of the Final ETD Committee Approval Deadline.
5. **Final committee approval deadline (for both registration required and no registration required final ETDs):** Date by which a thesis or dissertation student must submit and have the final ETD approved by all members of their advisory committee in order to graduate at the end of the semester.
6. **Graduation date:** The date degrees are conferred. For fall and spring graduations, this is also the date of the graduation ceremony (There is not a specific summer graduation ceremony— summer grads may participate in the fall ceremony).

Application for Graduation

The Graduate School requires that each student must apply to Graduate in MyPack Portal for the term in which they plan to graduate. Students should apply to graduate before the defense is scheduled, but it can be done at any time in the semester up until 5:00 p.m. on the Registration Required ETD Review Deadline. Students must apply to graduate in order to finalize their degree. If a student has a minor, they must also apply to graduate for the minor. Be sure to check the listing of your name and the address that you want your diploma mailed to. The Biological Sciences Department, Genetics Program, The College of Sciences, and Graduate School must clear you for graduation before the University will confer your degree

To Apply to Graduate:

Log into MyPack Portal.

Select Student Self Service.

Select Degree Progress/Graduation.

Select Apply to Graduate.

Follow the directions as provided to submit your Application to Graduate.

Doctoral Graduation Attendance Notification (DGAN)

This is required from ALL doctoral students before the respective semester Registration Required ETD Review Deadline. This is an electronic submission system. The electronic system collects verbal name pronunciations. This notification officially notifies the Graduate School –YES or NO–if the student/potential graduate will attend the University Commencement Ceremony at the PNC Arena. It also provides the pronunciation of the graduate’s name and faculty sponsor name. Doctoral graduates are the only ones who walk across the stage at the main university ceremony and they are the only ones who receive their diploma on graduation day. To complete the Doctoral Graduation Attendance Notification, the doctoral student must have first applied to graduate for the semester.

To complete the Doctoral Graduation Attendance Notification:

Log into MyPack Portal.

Select Student Self Service.

Select Degree Progress/Graduation.

Select Doctoral Graduation Attendance.

Follow the directions as provided to submit your notification.

You will receive a confirmation screen when the process is complete.

You can also access it directly here: go.ncsu.edu/dgan.

DGAN Deadlines: (same as Registration Required ETD Review Deadline)

Fall 2020 – November 2nd, 2020

Spring 2021 - April 2nd, 2021

Summer 2021 - July 5th, 2021

List of Doctoral Required Forms and Microfilm fee:

All required forms and fee are due before the final error free file is submitted and must be received in order to be cleared for graduation. The forms/fee should be completed in the same semester as the defense and EVERYTHING can be submitted electronically to the ETD Reviewer via email (etd-reviewer@ncsu.edu). If a student chooses to write a check or turn in any paper forms, then campus mail them to the ETD Reviewer at NCSU CB# 7102, Raleigh, NC 27695-7102. Mail is uncommon as most submissions are electronic.

All of the forms and microfilm fee are due BEFORE the final file is submitted/accepted; BEFORE the Final Editorial Approval Deadline for the semester in which the student is graduating. The only items that have specific earlier due dates are: Doctoral Graduation Attendance Notification (DGAN). This submission is always due BEFORE the ETD Review Deadline for the semester the student is graduating in. You must also apply to graduate by the Apply to Graduate Deadline for the semester in which you are graduating.

1. Survey of Earned Doctorate (SED) (PhD only)

The SED is completed online using the link below. The system will automatically email the ETD Reviewer when the SED has been completed and the ETD Reviewer will mark the respective check box in the ETD System Dashboard when the required Certificate of Completion is received. Please note that the commencement date is one of three Choices: 05/YEAR, 08/YEAR or 12/YEAR. For your information: Purpose and Use Brochure and Confidentiality Brochure. Online SED: Survey of Earned Doctorates (SED)

2. Doctoral Dissertation Agreement Forms

Complete the two required pages (4&5) at the link provided. The forms require a handwritten signature and date the first page. Both pages should be scanned and emailed to the ETD Reviewer. The university will not keep a copy, so please retain a copy for your records. ([Dissertation Agreement Form and Publishing Options](#)) Optional items require a money order (no checks) made payable to ProQuest and are to be sent or brought to the ETD Reviewer. You are not required to copyright your dissertation through ProQuest. The Traditional Publishing option fee is the same as your microfilm fee, so you are not required to send extra money for this option.

Guides: (use to answer the questions on the Required and Optional forms)

Guide 1: [Preparing your Manuscript for Submission](#)

Provides guidance on how to embed fonts, including supplemental files, and other issues important to preparing your manuscript for submission.

Guide 2: [Subject Categories](#)

A complete list of the available UMI subject categories.

Guide 3: [Open Access Compared to Traditional Publishing](#)

More information on the publishing options available to you, and why you might choose one over the other.

Guide 4: [Embargoes & Restrictions](#)

Guide 5: [Copyright Guide and Sample Permission Letter](#)

3. Microfilm Fee

Either electronically submit the required payment with a credit card (no extra charge) or submit a check or money order, made Payable to NCSU, for microfilming.

To make an electronic credit card payment:

Log into MyPack Portal.

Select Student Self Service.

Select Degree Progress/Graduation.

Select Doctoral Microfilm Fee.

Follow the directions provided to submit a credit card payment. You will receive a confirmation screen and an automatic confirmation email when the process is complete.

Keep your receipt.

Exit Interview

All graduate students are required to have an exit interview with the Director of the Genetics Graduate Program before leaving the program. The purpose of the interview is for the Director to obtain information directly from the student regarding the graduate training program.

Graduation

Formal commencement exercises are held at the end of spring and fall semesters, but any student who graduated the preceding second summer session is eligible to participate in the December commencement if they notify the Graduate School in writing by the Graduation Application deadline in advance of the actual commencement date. Conversely, any student scheduled to graduate in the spring or fall semesters but not planning to attend commencement exercises should notify the Graduate School in writing of the desire to have the degree conferred *in absentia*.

[Departure from the University before completion of the degree requirements](#)

A. Terminating an Active Program

A student who wishes to terminate their graduate program must first notify their department or program in writing. The Director of Graduate Programs (DGP) then forwards the request to the Graduate School for approval.

If the student is not in good standing, the student will receive a 'Termination' notation on their transcripts. If the student is in good standing, the student receives a 'Termination without

prejudice' notation on their transcripts.

If the student has preregistered, notification to withdraw must be approved before the last day of the drop period. The student is responsible for dropping all classes for the upcoming semester.

B. Withdrawal Prior to the End of the Official Drop Period (of the semester in which currently enrolled)

Withdrawal prior to the end of the drop period is a release from the University for the remainder of the semester. Students considering withdrawal should consult their major advisor and DGP. A student who wishes to drop all courses and who has preregistered and prepaid must go through the official withdrawal process through the Counseling Center unless notification has been given to the University by the DGP prior to the beginning of the academic period (Fall, Spring, or Summer) for which the registration cancellation is desired.

NC State students carrying coursework at another campus under the Interinstitutional Registration Program must also contact the Department of Registration and Records to initiate the paperwork necessary for removal from the class roll at the other institution.

C. Late Withdrawals

Graduate students may receive withdrawals after the last day of the official drop period but before the end of the semester. Students considering withdrawal should consult their major advisor and DGP. A student who wishes to pursue a withdrawal must go through the official withdrawal process through the Counseling Center. Withdrawals will be considered if a student has one or more of the following conditions:

1. Certification by a physician of inability to continue for medical reasons. Such medical petitions are subject to review by a University physician if a request for consultation is made by the Counseling Center.
Certification by the Counseling Center or by an independent psychiatrist or psychologist of inability to continue for psychiatric/psychological reasons. In this case, the Counseling Center reserves the right to review pertinent records and to reexamine the student if necessary before recommending withdrawal. This is to certify that:
 - a. There has been a significant decrease in the student's usual level of psychological functioning, and
 - b. That regaining the previous level of functioning will involve a process of sufficient academic disruption to make continuing as a student unreasonable. In this situation a "hold" may be placed on the student's readmission pending certification by the Counseling Center or independent

psychologist/psychiatrist that the student has regained an appropriate level of function and can be expected to maintain that usual level of psychological competence.

2. Documentation of a personal or family hardship that adversely affected the student's academic performance in a significant way.

The Counseling Center will communicate their recommendation to the Dean of the College in which the student is enrolled. The Dean of the College will review the student's request and the Counseling Center's recommendation, consulting with the student's DGP if appropriate, and make a recommendation to the Graduate School. The Dean of the Graduate School will approve or deny the student's request accordingly.

D. Retroactive Withdrawals

Requests for retroactive withdrawals may be made if the semester in which the student was registered has passed. Such withdrawals will normally be for an entire semester rather than for individual courses. Students considering such withdrawals should consult their major advisor and DGP. A student who wishes to pursue a retroactive withdrawal must go through the official withdrawal process through the Counseling Center. Withdrawals will be considered under one or more of the following conditions:

1. Certification by a physician of inability to perform during the semester in question. Such medical petitions are subject to review by a University physician if a request for consultation is made by the Counseling Center.
2. Certification by the Counseling Center, by an independent psychiatrist, or a psychologist of inability to perform during the semester in question for psychiatric/psychological reasons. In this case, the Counseling Center reserves the right to review pertinent records and to reexamine the student if necessary before recommending withdrawal. The certification must show a significant decrease in the student's usual level of psychological functioning resulting in severely diminished performance.
3. Documentation of a personal or family hardship that adversely affected the student's academic performance significantly during the semester in question. The Counseling Center will communicate their recommendation to the Dean of the College in which the student was enrolled. The Dean of the College will review the student's request and the Counseling Center's recommendation, consulting with the student's DGP if appropriate, and make a recommendation to the Graduate School. The Dean of the Graduate School will approve or deny the student's request accordingly.

E. Effect of Withdrawal on Meeting Continuous Registration Requirement

Any student enrolled in a graduate program who is registered for a given semester or summer session and withdraws during the official registration period (typically the first 10 or 5 working days of a semester or summer session, respectively) must obtain a leave of absence to meet the requirement for continuous registration. However, those students withdrawing after the official registration period ends DO NOT need to obtain a leave of absence and will be considered by the Graduate School as having met their continuous registration requirement.

F. Effect of Withdrawal on Permanent Record

Neither courses nor grades are recorded on the permanent record for students who withdraw during the regular drop period. After the last day of the official drop period withdrawals without academic penalty are granted by the Counseling Center only under exceptional circumstances. In such cases, neither courses nor grades are recorded on the permanent record.

G. *The Paper Trail*

REQUIRED FORMS/ACTIONS*	WHEN REQUIRED	WHO INITIATES
Complete, official transcripts from universities and colleges attended, including degrees and dates awarded	Before the beginning of the first semester of enrollment	Student is responsible for providing official transcripts to the Graduate School.
Signed Patent Agreement	Before the end of the first semester of enrollment	Initiated by student and submitted to the Graduate School by the DGP
Appointment of Advisory Committee and submission of Plan of Work	During second semester or earlier	Initiated by student with Advisor and Committee. Approved and submitted to the Graduate School by the DGP
Assignment of Graduate School Representative, if required (doctoral students only)	After Plan of Graduate Work has been approved by Graduate School	Appointed by the Graduate School
Request to Schedule the Preliminary Oral Examination (doctoral students only)	After written preliminary exams have been passed, but no later than one semester prior to final oral exam. Request must be received in Graduate School at least 14 working days prior to proposed exam date.	Initiated by student to the Genetics Graduate Coordinator and submitted to the Graduate School by the Genetics Program Graduate Coordinator

Report on Outcome of Preliminary Oral Examination (doctoral students only)	Immediately after oral examination is completed.	Must be submitted to the Graduate School by the Genetics Graduate Services Coordinator.
Application to Graduate	Thesis Students - when Final Oral Exam is scheduled, but no later than the Apply to Graduate Deadline Non-Thesis Students - due by the Apply to Graduate Deadline	Initiated by student online via MyPack Portal, by navigating to Student Self Services, Degree Progress/Graduation, Apply for Graduation
Request to Schedule the Final Oral Examination (doctoral students only)	Must be received in Graduate School at least 2 weeks prior to proposed exam date (see right), and no earlier than 4 calendar months after successful completion of preliminary exam	Initiated by student and submitted to the Graduate School by the DGP. Student must also apply to graduate at the same time via MyPack Portal.
Request for a Permit to Schedule the Master's Oral Examination (master's students only)	Must be received in the Graduate School at least 10 working days before the examination is scheduled	Initiated by student and submitted to the Graduate School by DGP. Student must also apply to graduate at the same time via MyPack Portal.
Report on Outcome of Final Oral Examination (master's or doctoral)	Immediately after final oral exam	Submitted to the Graduate School by the DGP
Draft submission of thesis or dissertation to Graduate School for thesis review	Immediately after final examination is successfully completed (within 24 hours of receiving an unconditional pass). This must be completed by the graduation deadline for the semester as noted in the Graduate School Calendar.	Student must electronically submit the draft PDF file to the Thesis Editor via the ETD submission system for the thesis review.
Final submission of thesis or Dissertation to Graduate School for Graduate School acceptance	Final error free file must be submitted before the deadline for the semester as noted in the Graduate School Calendar.	Student must electronically submit the final error free file to the Thesis Editor via the ETD submission system for acceptance by the Graduate School.
Final committee approval of thesis or dissertation	Online approval by the student's advisory committee, through MyPack Portal before the deadline for the semester as noted on the ETD webpage.	Student unconditionally passes the final exam and the ETD is accepted by the Thesis Editor.

II. Genetics Program Registration and Residency Regulations and Requirements

Waivers for core courses and transfer credits

Students who have previously taken graduate level courses may request a waiver for similar core requirements in our graduate programs. The process for a waiver is as follows. The student should contact the NC State University course instructor and discuss the content of the previous course with the instructor, preferably using the course syllabus to show the course topics and requirements. If the previous course is sufficiently similar to the core requirement, the instructor should indicate to the Director of the Graduate Program and the Genetics Graduate Services Coordinator by email that the required course should be waived. This waiver must be approved by the Director of the Graduate Program. *A waiver is different from transfer credit.* Students who obtain a waiver must still fulfill the entire credit requirement for their degree program, by substituting additional classes or research credit for the waived classes. The choice of classes or research credit should be made by the Major Advisor and the Graduate Advisory Committee in consultation with the student. *Only students who have completed an M.S. degree and are pursuing a Ph.D. degree can transfer credits into their graduate program.* Those who completed an M.S. at another institution may transfer a maximum of 18 credits, while those who have completed an M.S. at NC State University may transfer a maximum of 36 credits.

Additionally for the M.S. student, a graduate course that was completed while the student was enrolled in PBS status at NC State University may be considered for transfer to a master's program provided that it is at the 500-level or higher and that the grade is "B" (3.00 on a 4.00 scale) or better. All PBS credits that are used to satisfy requirements of a specific master's degree must be earned *before* the student is admitted to that degree program. See Section 2.3 of the university Graduate Handbook for information on PBS classification.

Overlap with Minor requirements

Students who elect to pursue a Minor in another discipline may use appropriate Genetics elective courses for both the Minor and Genetics requirements. For example, students who minor in Biotechnology may count BIT510 for both Major and Minor requirements.

Minimum Registration and Residency Requirements

Permission to Register

The Department of Registration and Records must have authorization from the Dean of the Graduate School before a graduate student in any classification will be permitted to register for classes. This authorization will be sent to the Department of Registration and Records at the time the student is notified of acceptance for graduate study. The Department of Registration and Records provides grade records to students at the end of each scheduled school term.

Requirement of Continuous Enrollment

After a student is admitted to the Graduate School and enrolls for the first time, they are required to maintain continuous registration. Continuous registration refers to a student's enrollment each semester, excluding summer sessions, until they have either graduated or their graduate program has been terminated. All students attending classes must be registered for either credit or audit.

1. Exceptions

a. Leave of absence

A student in good academic standing who must interrupt their graduate program for good reasons may request a leave of absence from graduate study for a definite period of time, not to exceed one year within a given graduate degree program. The student should initiate the request with the chair of their advisory committee and have it approved by their Director of Graduate Programs (DGP) before the DGP submits it to the Graduate School. The Graduate School should receive the request at least one month prior to the first day of the term involved. The time that the student spends on an approved leave of absence will be included in the time allowed to complete the degree, i.e., six (6) years for the master's and ten (10) for the doctoral. Time limits are not extended.

b. Withdrawal

- i. Withdrawal during the registration period.** Any student enrolled in a graduate program who is registered for a given semester and withdraws during the official registration period (typically the first 10 working days of a semester) must obtain a leave of absence to meet the requirement for continuous registration.
- ii. Withdrawing after the registration period ends.** Any student withdrawing after the official registration period ends DOES NOT need to obtain a leave of absence and will be considered by the Graduate School as having met their continuous registration requirements.

c. Registration in a summer session - submission of thesis/dissertation and oral examinations

All students who take their final oral examination or submit their thesis/dissertation to the Graduate School during either summer session must be registered for either the first or second summer session. Those who wish to submit their thesis/dissertation or have their final oral examination after the last day of a semester or summer session, but before the next semester or summer session, must have been registered in the semester or summer session that immediately preceded the date of submission or the date when the exam was held.

d. Graduation

Students who complete all requirements for the degree prior to the first day of the fall or spring semester or the first summer session may graduate during the next semester or summer session without being registered provided that they were registered in the

immediately preceding semester or summer session and that they applied to graduate during that preceding term. Students may not graduate, or apply to graduate, during any term in which they are on a Leave of Absence.

e. Incomplete Grades

Students whose only remaining requirement for graduation is removal of an "IN" (Incomplete) grade are not required to be registered in the following semester or term in order to complete the work and graduate; however, only one registration free semester or term is allowed.

Students who anticipate not being able to remove a fall "IN" grade by the end of the spring semester should register for that spring, and any subsequent semesters needed to complete the work, to stay in compliance with the continuous registration policy. Students who fail to remove a spring "IN" grade by the end of the summer will not be terminated (because summer registration is not required for continuous registration), but they will have to register for the following fall and any subsequent semesters until the "IN" has been removed.

If a person needs to be classified as a student during the time the "IN" is being removed, registration for XXX 688 or XXX 689 is appropriate. If a student needs to be full time, registration must conform to the full-time rules outlined in sub-section C.

2. Failure to maintain continuous registration

Graduate students whose programs have been terminated because of failure to maintain continuous registration and who have not been granted a leave of absence during a fall or spring semester will be required to reapply for admission and pay the admission fee, if they wish to resume their graduate studies at NC State (see Readmission, Section 2.3).

3. Requirements for Full-Time/Part-Time Registration

Full-time/Part-time Status of Graduate Students (updated on July 15, 2014)

NC State uses a uniform Academic Load Schedule of Full-Time Status of Graduate Students for Loan Deferment, Financial Aid, Visa Status, Payroll Tax Withholding, Graduate Student Support Plan Eligibility and Veteran's Benefits Purposes. This schedule will be the only resource used to determine a student's status for these purposes. These definitions apply to all graduate students, U.S. and international, participants and non-participants in the Graduate Student Support Plan.

a. Fall and Spring Semesters: Graduate students enrolled in degree plans requiring a thesis or dissertation

i. Full Time

These students will be full time if they take at least 9 hours per semester until the semester in which a course load of at least 3 credit hours will reach an accumulated total equal to the minimum number of hours required by their program. They will continue to be considered full time until they complete their thesis or dissertation, as long as they enroll for at least 3 credit hours.

ii. Half Time

Should a graduate student in a plan requiring a thesis or dissertation fail to maintain full-time status in any given term, as here defined, they are subject to the requirements governing students in non-thesis or dissertation plans (as outlined below) in order to be certified as “Half Time”.

b. Graduate students enrolled in degree plans not requiring a thesis or dissertation

i. Full Time

These students will be full time if they take at least 9 hours in a given semester.

ii. Half Time

These students will be half time if they take at least 4.5 hours per semester. *Master’s students enrolled in plans allowing both a thesis and a non-thesis option will be classified as “non-thesis” students and subject to these rules until such time as a graduate plan of work designating the thesis-option, is approved by the Graduate School.*

c. Co-op Students

Co-op students registered for COP 500 will be considered full time. Students registered for only COP 501 will be considered half time.

4. Summer Sessions

- a. Graduate students are not required by the University to be registered during the summer. However, students who receive a stipend but who are not enrolled in the University during a period of five weeks or more are subject to Social Security tax withholding. In particular, this means that Social Security taxes will be withheld from the paychecks of Graduate Research Assistants (RAs) who do not register in the summer. Specifically, Social Security taxes will be withheld in June for RAs who are not registered in Summer Session I and in July for RAs who are not registered in Summer Session II. The source of funds that pays the stipend must pay the same amount of Social Security tax as is withheld from the student’s paycheck during these months.
- b. Two special registration categories are available for Graduate Research Assistants who would not otherwise take courses in the summer: XYZ 696 (Summer Thesis

Research) and XYZ 896 (Summer Dissertation Research), where XYZ represents the course prefix of a specific department or program. Each of these courses is for 1 hour of credit, with registration for 10 weeks, beginning the first day of Summer Session I. Social Security taxes will not be withheld from the June or July paychecks of RAs who register for either 696 or 896. Full time in the summer is a minimum of 1 hour.

- c. Please note that student who are not registered during the summer do not have access to financial aid during that period, nor do they have access to the Student Health Service unless they pay the student health fee for each of the two summer sessions.

5. Waiver of Hours

Graduate students, who meet certain prescribed special conditions, may be certified as either a full-time or half-time in cases where they do not meet the requirements for such as outlined above. A waiver of the uniform academic load rules requires attestation on behalf of the student by their committee chair, academic advisor or the Director of their graduate program and approval by the University.

Requirements for Residence Credit in Doctoral Programs

A student working toward a doctoral degree is expected to be registered for graduate work at NC State for at least six (6) semesters beyond the bachelor's degree. The University has minimum residence requirements, as defined below, but the academic schools/colleges have the prerogative of establishing more restrictive requirements within the respective schools/colleges.

1. Hours of Graduate Work

Doctoral residence credit is determined by the number of semester hours of graduate work carried during a regular semester.

Semester Credits (Hours)	Residence Credits
9 or more	1
6-8	2/3
less than 6 (including registration in 590, 690 series)	1/3

At least two residence credits are necessary in continuous residence (registration in consecutive semesters) as a graduate student at NC State University, but failure to take courses in the summer does not break continuity.

2. Summer Residency

Summer course work can only be used in partial fulfillment of the residency requirement. A single summer session is equal to one-half of the corresponding amount for a regular semester (e.g. six semester hours carried during a summer session will earn one-third of a residence credit; less than six credit hours will earn one-sixth of a residence credit).

Minimum Course Load for International Students

1. Enrollment

International students in F-1 or J-1 status are required to maintain full-time enrollment throughout their program, uphold good academic standing and make normal academic progress toward their degree objective. Full-time enrollment at NC State University is normally defined as a minimum of 9 hours per semester (fall and spring) for graduate students. One (3 credit) online or distance education course may be used each semester to help satisfy full-time enrollment requirements. Students who will take only one course in a semester are not permitted to take that course through online or distance education. Please note: Requirements for full-time enrollment may vary each semester based on remaining program requirements, pending completion of the academic program, and/or thesis research. Upon arrival to campus, international students must contact the Office of International Services, 208 Daniels Hall, 515-2961, for more information and/or policies concerning their entire course of study in the United States.

2. Enrollment and Distance Education

Foreign nationals will not be granted F-1 and J-1 visa documentation (the I-20 and DS-2019 respectively) based on admission to a Distance Education (DE) or On-line program. Additionally, it is a violation of status for an F-1 or J-1 student to change curriculum or major from a traditional course of study to a DE or On-line program after arrival to NC State University.

Sponsored F-1 and J-1 students are prohibited from enrolling in DE courses with or attending courses at NC State alternate sites of instruction, including but not limited to sites related to programs with the College of Education and the MBA program at Research Triangle Park. Any questions about international students and enrollment at alternate sites of instruction should be directed to the Office of International Services.

3. Audit Courses

Audit courses do not carry any credit and therefore do not count towards full-time enrollment. Any students who audit courses should not include such courses when calculating full-time enrollment. Courses taken as “Pass/Fail” do carry credit and therefore do count towards full-time enrollment for immigration purposes. Students should always consult with their academic advisors concerning enrollment and changes to enrollment prior to taking any action. Students may also refer to the NC State University Policies, Regulations and Rules Handbook for further information.

4. Summer Enrollment

Students are not required by immigration regulations to enroll in the summer session if they were full-time students in the spring and will continue their enrollment in the fall. Students may choose to study, return home, or work on campus (or off-campus if eligible and if authorized in advance) in the summer. Students authorized for full-time CPT may also be exempted from enrolling in classes without jeopardizing their nonimmigrant status, but should check with their DGP or advisor first.

*In order to be exempt from Social Security and Medicare (FICA) tax withholding during the summer sessions, IRS regulations require that students be enrolled at least half time in each session. For students with North Carolina residency, the amount of FICA withholding is more than the cost of tuition. The courses, GN 696 and GN 896, Summer Research, will cover both summer sessions. In addition, **unregistered students covered by health insurance must pay a fee per summer session to Student Health Services in order to use the Student Health Services Center.** Students who are registered for classes in summer are automatically eligible to use the Center.

5. Exceptions to Full Time Enrollment

International students who complete all academic program requirements and/or meet Graduate School no-registration deadlines are considered to have completed their program for visa purposes and are neither required, nor permitted, to enroll for an additional semester.

Appendices

Appendix A

Tips for Selecting a Major Advisor (Provided by Graduate Students)

The selection of a Major Graduate Advisor is one of the most important decisions that will be made in your graduate program. Each advisor and student is unique and has their own particular strengths and weaknesses as well as style of operation and interaction. The goal of the laboratory rotations is to identify advisors who will provide the training environment that the student desires and needs to reach their degree goals. These rotations are an excellent opportunity to gain first-hand information on specific programs. Some tips for gaining the information you need to make your decision are listed below:

- Ask questions of current technicians, postdoctoral researchers and senior graduate students in the laboratory. They are extremely valuable sources of information and often are instrumental in getting a project started. However, do not choose a laboratory based solely on these individuals, since most will move on before you finish your degree.
- Ask to see copies of recent publications and current grant proposals and read them.
- Ask for specific information on current projects in the laboratory and possible projects for new students.
- Find out about the advisor's management style. Some faculty members like to have weekly progress reports and planning sessions, while some meet much less frequently with their students. You should be aware of how much direct contact you can expect.
- Find out about graduate students that have been in the laboratory before you, and what types of positions they are in now. Inquire about current students, when they expect to graduate and how many new students may enter the laboratory.
- Ask about long planned absences such as sabbatical leaves. This should not affect your decision to join the laboratory, but be aware that it will affect the planning of projects and committee meetings.

If you are not satisfied with your three rotations, inquire about doing more. A few extra months spent in the beginning are much better than ending up somewhere where you are unhappy.