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**Graduate Program in**

**Endocrinology and Animal Biosciences**

**Student Handbook**

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# WELCOME TO EAB

Welcome to the Graduate Program in Endocrinology and Animal Biosciences (EAB)! EAB is headquartered on the George H. Cook Campus at the School of Environmental and Biological Sciences (SEBS) and administered in conjunction with the School of Graduate Studies (SGS). Our program provides research-oriented training leading to MS and PhD degrees as well as a non-thesis 4+1 MS degree for Rutgers Animal Sciences undergraduate students.

## A Comprehensive Curriculum

Our curriculum is full and comprehensive, drawn in part from the diverse and extensive courses offered by the many other biological programs university wide. Major areas of interest include neuroendocrinology and endocrinology of growth, lactation, and reproduction; gastrointestinal health (the gut microbiome, glucose and amino acid metabolism) and obesity; neurobiology of reproduction, energy balance, stress, motivation, addiction, and mood; endocrine disruption and toxicology; and equine and ruminant nutrition and exercise physiology.

## An Interdisciplinary Faculty

[The members of our graduate faculty](https://animalsciences.rutgers.edu/graduate/faculty.html) come from many different departments across Rutgers, including:

* Animal Sciences
* Nutritional Sciences
* Food Science
* Genetics
* Pharmacology and Toxicology
* Pediatrics
* Psychology
* Neuroscience and Cell Biology
* And various divisions in the Medical School

## State-of-the-Art Research Facilities

Individual research laboratories in [Bartlett Hall](https://maps.rutgers.edu/#/?selected=6024), [Foran Hall](https://maps.rutgers.edu/#/?selected=6347), and the [Endocrine Research Facility](https://maps.rutgers.edu/#/?selected=6405) are well equipped for contemporary research in integrative animal physiology and endocrinology, at the whole animal, cellular, and molecular levels of organization. The core facility in Foran Hall provides instrumentation that supports bio-imaging, bio-sensing, flow cytometry, real-time PCR, and high throughput screening. Other university core facilities are available to meet research needs for genomics, proteomics, and specialized microscopy. Animal research is supported by Rutgers Comparative Medicine Resources and the NJAES Animal Care Program, which provide approximately 150,000 square feet of indoor space in 25 buildings ranging from an environmentally controlled laboratory animal facility (12,000 sq. ft.) to traditional barns that house large animals on the Cook Campus Research Farm. Animal facilities are fully accredited by the [Association for the Assessment and Accreditation of Laboratory Animal Care International (AAALAC)](http://www.aaalac.org/).

In addition to the aforementioned, the G. H. Cook Campus is home to the [Rutgers Equine Science Center](http://esc.rutgers.edu/), which provides state-of-the-art laboratory facilities and traditional equine facilities to support the research of several members of the Graduate Program in Endocrinology and Animal Biosciences. The Center's facilities include a fully equipped equine exercise physiology laboratory with a high-speed equine treadmill, open-flow indirect calorimeter, electronic equipment for the measurement of cardiovascular function, and attached laboratories equipped for analyses of blood chemistry and fuel homeostasis.

## Contacts

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Senior Program Coordinator

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[Bartlett Hall 105](https://maps.rutgers.edu/#/?selected=6024)

Graduate Program Director

Changes every 3-6 years, See current director on our website: <https://animalsciences.rutgers.edu/graduate/>

## Mission Statement

The program mission is to provide academic and research training for graduate students in the area of Endocrinology and Animal Biosciences. Students successfully completing program requirements will attain either a Master of Science (MS) or Doctor of Philosophy (PhD) degree.

## Diversity Statement

A diverse student body which fosters inclusivity and respects the backgrounds of all students is paramount to driving intellectual growth and open dialogue. Our goal is to encourage and create a safe, positive, and inclusive environment in which our graduate community members thrive by being given equal access to opportunities for advancement to reach their personal and career goals. We strongly believe that great science happens when each team member feels welcomed and encouraged to bring their true authentic selves to the lab. Innovation occurs when we maximize our creative potential; scientific discoveries occur when we think critically. These advances are catalyzed by collaboration between individuals with diverse experiences and ways of thinking. These diverse experiences include age, disability status, ethnicity, gender and gender identity, geographic region, language, race, religion, sexual orientation, socioeconomic status, and more. To this end, we ensure equal opportunity and access to our program for scientific scholars of all personal backgrounds. We are not only committed to our graduate program's continual improvement in diversity, equity, and inclusion, but also to humanity. As such, the Graduate Program in Endocrinology and Animal Biosciences program encourages both undergraduate and graduate scholars from communities underrepresented in STEM to apply, especially individuals from the Black/African American, Latinx, Native American/Indigenous, LGBTQIA+, and disabled communities.

# PHD DEGREE REQUIREMENTS

## Learning Goals

The doctoral program in Endocrinology and Animal Biosciences trains students at the highest level to assume leadership roles in areas of endocrinology and integrative physiology as they relate to improving animal and human health.

***Learning Goal 1 for Students: Attain marked ability, scholarship, research and leadership skills in areas of endocrinology and integrative physiology as they relate to improving animal and human health***

Assessment of student achievement in Goal 1:

* Grades in graduate courses
* Qualifying examination assessing depth and breadth of knowledge
* Review by faculty of student progress with close advising and mentoring
* Placement in positions and careers related to animal and human health that require ability and scholarship in aspects of endocrinology and integrative physiology

Role of the program in helping students to achieve Goal 1:

* Close advising to assure that students are being prepared in a coherent and academically rigorous fashion
* Effective monitoring of student progress
  + Includes annual reports on research progress from both the student and the student’s committee chair
* Evaluations of teaching effectiveness of instructors in graduate courses
  + If effectiveness is below expectations, work with instructors to improve effectiveness
* Periodic review of curricular offerings and assessment tools
  + By program faculty
  + In consultation with the office of the dean of the graduate school and/or the unit dean

***Learning Goal 2 for Students: Engage in and conduct original research in endocrinology and integrative physiology that relates to animal or human health.***

Assessment of graduate student achievement of Goal 2:

* Preparation and defense of PhD dissertation proposal
* Assessment of quality of PhD dissertation:
  + Public defense of dissertation
  + Critical reading of dissertation by committee of graduate faculty members and a committee member from outside of the Endocrinology and Animal Biosciences graduate program
  + Submission and acceptance of peer-reviewed articles and conference papers based on the dissertation
* Achievement of students as evidenced by professional placements, selection for conference presentations, peer-reviewed publications and individual grant attainment

Role of the graduate program in helping students achieve Goal 2:

* Provide early introduction to research methods and opportunities for research
* Provide opportunities to present research and receive feedback
* Maintain adequate funding levels through research phase
* Provide comprehensive advising and assist in the identification of mentors

***Learning Goal 3 for Students: Prepare to be professionals in careers that require training at the highest levels in endocrinology and integrative physiology as they relate to animal and human health***

Assessment of graduate student achievement of Goal 3:

* Review evidence of papers presented publications and professional networking
* Evaluations of teaching effectiveness of graduate student instructors
* Collection of placement data
* Review by external advisory committees, both inside of and external to the academy
* Survey alumni/ae

Role of the program in helping students achieve Goal 3:

* Develop discipline-specific programs in concert with the Teaching Assistant Project and/or Carnegie Academy for Scholarship on Teaching and Learning programs
* Encourage enrollment in Introduction to College Teaching I and II
* Encourage participation in professional development programs in such areas as human subjects research, library use, course management software, interview skills, presentation skills, development of CVs, use of research tools, training in the responsible conduct of research, and proposal writing.
* Host discipline-specific training when appropriate
* Teach students how to do assessments in their future professional capacities
* Provide flexible options for students with interdisciplinary interests related to endocrinology and integrated physiology as they relate to animal and human health
* Develop or enhance programs related to job and networking skills, including activity in professional societies
* Acquaint students with non-academic career opportunities

The leadership of the Endocrinology and Animal Biosciences graduate program will regularly review the structure and content of the program, and the feedback received from assessments and surveys. These reviews will be used to provide the best possible education to students in order to meet the needs for highly trained individuals in endocrinology and integrated physiology as they relate to animal and human health.

## PhD Course Credit Checklist

You can use this [PhD course credit checklist](https://animalsciences.rutgers.edu/graduate/docs/EABCourseCreditChecklist-PhD.pdf) to keep track of your course and research credits as you progress through the program. Seventy-two (72) credits of graduate work must be completed for the PhD degree, including a minimum of 24 credits of graduate course work in the following areas: Endocrinology; Physiology; Molecular Biology and Biochemistry; and Statistics and Experimental Design. The remaining credits should be graduate research (Research in Endocrinology and Animal Biosciences 16:340:701,702).

Students must maintain a grade point average of B or better. A maximum of two courses with grades of C can be counted toward the degree. Twelve undergraduate credits at the 300 and 400 level may be taken and applied toward the degree. Be sure to register with a G prefix if you want an undergraduate course to count toward degree credits.

**Credit Transfer:** Upon completion of 9 credits of graduate level course work with grades of B or better in the School of Graduate Studies as a matriculated student, you may transfer no more than the equivalent of one year of course work toward the PhD (i.e., 24 credits). Transfer of credit is allowed only for formal graduate level course work specifically related to the student’s program of study in which grades of B or better were received. No credit may be transferred for thesis research work, course work done as independent study, or work in courses which were not graded. (Please see the Transfer of Credit Application on the [SGS forms website](https://grad.rutgers.edu/academics/forms) for more details.)

**Forms:**

[EAB PhD Course Credit Checklist](https://animalsciences.rutgers.edu/graduate/docs/EABCourseCreditChecklist-PhD.pdf)

Transfer of Credit Application (if applicable)\*

\*Because SGS updates their forms frequently, please go to their [forms website](https://grad.rutgers.edu/academics/forms) to download the most up-to-date version.

## PhD Graduate Committee

Each graduate student will select the members of their committee in consultation with their graduate advisor and with the approval of the graduate program director. A PhD committee must have a minimum of 4 members:

* Dissertation advisor (serves as chair of the committee), if there are co-advisors, the two serve as one on a committee.
* At least two other members of the [EAB Graduate Faculty](https://animalsciences.rutgers.edu/graduate/faculty.html)
* One committee member from outside the EAB program. This can be either outside of Rutgers, or at Rutgers but outside of our graduate program. (Please submit a CV of any outside committee member.)

**Form:** [PhD Committee Form](https://animalsciences.rutgers.edu/graduate/docs/grad-committee-phd.pdf)

## Qualifying Exams

Satisfactory attainment of proficiency in each of the four core areas (Endocrinology; Physiology; Molecular Biology and Biochemistry; and Statistics and Experimental Design) will ultimately be determined in the advancement to candidacy examination (i.e., PhD qualifying exam). The PhD qualifying exam is comprised of three parts:

1. A written, take-home exam composed of open-ended essay questions designed to test the four core competency areas and evaluated by program faculty and the Academic Standards Committee;
2. An NIH-style research proposal that will form the basis of the dissertation work; and
3. An oral proposal presentation in our weekly seminar series and defense of the proposal before the student’s graduate committee followed by a committee meeting and oral Q & A.

Once all degree requirements, including a written dissertation, have been completed, a final research seminar that is open to the Rutgers community is given prior to the dissertation defense, which is conducted by the student’s committee as a ‘closed door’ meeting.

**Form:** Doctoral Qualifying Examination Form\*

\*Because SGS updates their forms frequently, please go to their [forms website](https://grad.rutgers.edu/academics/forms) to download the most up-to-date version.

## Guidelines for Research Proposal

**(Modified from NIH F31 predoctoral fellowship requirements)**

The research proposal should be developed with the student’s advisor but written entirely by the doctoral student. Each student should comply with the format/type requirements and page limits below.

Once the proposal has been approved by the PhD advisor, the student should submit the proposal electronically as a Word file for review to all the graduate committee members and the Graduate Program Director. This submission should be **at least two weeks prior to the proposal defense.**

* Text should be single-spaced and single-sided.
* Each page must have 1/2" margins on all page borders.
* Arial or Helvetica Font style, 11-point font size.
  + Type density: Must be no more than 15 characters per linear inch (including characters and spaces).
  + Line spacing: Must be no more than six lines per vertical inch.
  + Text color: No restriction. Though not required, black or other high-contrast text colors are recommended.
* Spell out acronyms the first time they are used and note the appropriate abbreviation in parentheses. The abbreviation only may be used thereafter.
* Figures, tables, and figure legends may be smaller text, but should be clearly legible.
* Length of proposal is 8 pages total with 1 title page, 1 page of Specific Aims, and 6 pages of Research Strategy. Figures, tables, and figure legends must be included within the 6-page Research Strategy limit. References are not included in the page limitations.
* Referenced citations can conform to any desired peer-reviewed journal guidelines, but must include names of all authors, the article and journal title, volume number, inclusive page numbers, and year of publication.
* Citations should be referenced in the proposal text by author et al. and year (Smith et al., 2018).
* Limit references to primary (original) research articles. Review articles should be cited only sparingly.
* There is no page limitation for the references section, but please cite only relevant publications.
* Use of a reference management program (e.g., End Note, Reference Manager, Mendeley) is required. Contact Aaron Delarosa (delarosa@sebs.rutgers.edu) or Rutgers IT department for questions concerning available software.
* No appendices are allowed.

The research proposal should follow the outline below. There should be a strong emphasis on the *aims, significance,* and *experimental approach* (i.e., Why are you doing the experiments? How are you doing the experiments?). The suggested lengths (in parentheses) are guidelines only, but the entire proposal (including items 1-5) should not exceed the 8-page limit.

1. **Title, abstract, and integrity statement (1 page)**

The front page of the research proposal should include the title, student’s name, advisor’s name, and abstract (250-word limit). A statement of compliance with the [Rutgers University Policy on Academic Integrity](https://academicintegrity.rutgers.edu/sites/default/files/pdfs/current.pdf) should also be included on the front page of the proposal.

1. **Specific Aims (1 page)**

Provide a clear, concise summary of the aims of the work proposed. Clearly state the hypothesis to be tested and how the specific aims relate to the hypothesis.

1. **Background and Significance (1 to 1.5 pages)**

Sketch the background in support of the proposal. Summarize important results reported by others in the same field, critically evaluating existing knowledge. Identify gaps that this project is intended to fill. State concisely the importance and relevance of the research to the related fundamental problems.

1. **Preliminary Studies (0.5 to 1 pages)**

Present previous work related to the proposed research that will help to establish the feasibility and rationale. Preliminary data does not need to be extensive or entirely from the student’s own work and can include published data from the student’s lab.

1. **Research Design and Methods (3-4 pages)** – For each of the aims:
2. Clearly describe the hypothesis to be tested as well as the underlying rationale.
3. Describe the experimental design and methods in sufficient detail to allow adequate evaluation of the approach to the problem. Describe any new methodology and its advantage over existing methodologies. Clearly describe overall design of the study, with careful consideration to statistical aspects of the approach, the adequacy of controls, and number of observations as well as how results will be analyzed.
4. Present the expected results. Include potential pitfalls and limitations of the proposed research plan and alternative approaches to achieve the aims.
5. Provide a tentative sequence or timetable for the proposed research.

## PhD Timeline

**First Year**

You should try to complete your course credit requirements during your first two years so that you can concentrate on research in later years. If you are a TA or GA, plan to take two courses per semester. Your most productive research time will be during the summer months.

* Meet with the Graduate Program Director (GPD) to select courses and to plan your initial research activity. If you are rotating through different labs, the GPD will also help set this up with two to three different faculty.
* Determine who your dissertation advisor will be and finalize the designation of this faculty member as your graduate advisor and dissertation committee chair.
* Explore possibilities for external funding and fellowships.
* Each spring you will be asked to complete an electronic progress report. You may be asked to meet with your advisor, the Graduate Program Director and/or the Chair of the Academic Standards Committee to review progress and outline plans for the coming year depending on where you are in your program.

**Second Year**

* ***First semester:*** Start to focus on your dissertation research topic; designate your dissertation committee in consultation with your advisor. Meet with your dissertation committee to discuss research plans.
  + After your committee is established, complete the [PhD committee form](https://animalsciences.rutgers.edu/graduate/docs/grad-committee-phd.pdf) and obtain the Graduate Program Director’s signature. (see ‘Miscellaneous’ Section for Tips on Creating a Committee).
  + When the outside member of your committee has been decided upon, their name and professional address and affiliation must be submitted to the Graduate Program Director and School of Graduate Studies (SGS) for approval along with a copy of their CV.
* ***Second semester:*** Continue developing your research project and completing your course work. Hold your first committee meeting. You are required to submit minutes to your committee for approval with a final copy to the Graduate Program Director. By the end of the second year (usually summertime) you will be taking the written portion of your qualifying exam. Starting thinking and talking with your major advisor about when you will be preparing and presenting your proposal defense seminar (recommended at the start of your third year).

**TO RECAP:** By the end of the second year, you should have:

* Completed approximately 24 course credits.
* Established your dissertation committee and held a first committee meeting, or have a date planned.
* Formed a clear idea of your dissertation research topic and began collecting preliminary data.
* Planned a time frame for completing the qualifying exam.

**Third Year**

This is the year that you should complete all components of your qualifying exam. You should first complete the comprehensive written exam (summer prior to year 3). Next you should start working on your research proposal. Your goal should be to present your proposal to the department and your committee no later than the end of your third year. Remember, your proposal forms the framework of your thesis work, which is subject to modification as the research progresses. THIS IS NOT YOUR DISSERTATION DEFENSE: **you should not be defending your thesis proposal when most of the work has been completed!**  The earlier you defend your proposal the easier it will be to defend it! Knowing more and having more preliminary data is not always a good thing.

* You should be working on your written proposal in close consultation with your advisor.
* Determine the date that you will present your departmental seminar and defend your research proposal to your committee. It is desirable that these two events take place on the same day as the seminar preceding the defense, however, that is not necessary, but within the same week is preferable. To facilitate this, talk with the faculty coordinator of the Seminar in Endocrinology and Animal Biosciences series prior to the semester you anticipate presenting your proposal seminar so that it can be included on the schedule. If your proposal seminar cannot be part of the regular Friday Seminar series, ask the Program Coordinator’s help in scheduling a room for your proposal seminar and a room for your proposal defense with your committee.
* Prior to your proposal defense, get a Doctoral Qualifying Examination Form from the [SGS forms website](https://grad.rutgers.edu/academics/forms). Remember to obtain your committee members’ signatures in the appropriate section while all are assembled. Using DocuSign is acceptable if there are some committee members attending the defense virtually. Contact the Program Coordinator for assistance.

**Fourth and Subsequent Years**

At this point, you will be concentrating your efforts on your dissertation research, in close consultation with your advisor and, as needed, other members of your committee. Obtain a copy of the current [SGS Submission Instructions: Application for Doctorate of Philosophy (Ph.D.)](https://grad.rutgers.edu/academics/graduation/checklist-phd-degree).

It would be a good idea to have a committee meeting yearly after the proposal seminar to make sure they are all on the same page and things do not get left out of a protocol that might be necessary.

Complete your research, write your dissertation (according to [SGS style guidelines](https://grad.rutgers.edu/academics/graduation/electronic-thesis-and-dissertation-style-guide)), present a dissertation seminar, defend your dissertation to your committee, and submit your dissertation with any required revisions to the SGS.

* Talk with the faculty coordinator of the Seminar in Endocrinology and Animal Biosciences prior to the semester you anticipate presenting your defense seminar so that it can be included on the schedule. If your defense seminar cannot be part of the regular Friday Seminar series, ask the Program Coordinator’s help in scheduling a room for your defense seminar and a room for your actual committee defense.
* Make all required revisions to your dissertation. Submit your dissertation electronically.
* Submit your completed Doctoral Final Defense Form with signatures along with one original title page (with signatures in black ink or via DocuSign) to SGS before the degree deadline. (If using DocuSign, fill out the final defense form and send it along with your title page to the EAB Program Coordinator. The Program Coordinator will route the form and title page via DocuSign to your committee members for their signatures and then return the signed documents to you for submission to SGS.)
* Submit required “Graduate Diploma Application” online to the Graduate Registrar.
* Complete additional items listed in the submission instructions.

**In most cases, students admitted with a BA or BS will complete their PhD within 6 academic years. Students admitted with an MS degree may finish in a shorter period. SGS will allow 7 years after initial registration before they question your progress.**

**Forms:**

[PhD Committee Form](https://animalsciences.rutgers.edu/graduate/docs/grad-committee-phd.pdf)

Doctoral Qualifying Examination Form\*

Doctoral Final Defense Form\*

\*Because SGS updates their forms frequently, please go to their [forms website](https://grad.rutgers.edu/academics/forms) to download the most up-to-date version.

## PhD Guidelines for Graduation

PhD students planning to graduate must complete all items on the [Submission Instructions: Application for Doctorate of Philosophy (Ph.D.)](https://grad.rutgers.edu/academics/graduation/submission-instructions-application-doctorate-philosophy-phd) on the School of Graduate Studies website and submit them to SGS for approval before the graduation deadlines listed below.

1. Unofficial transcript

2. Diploma application confirmation page

3. Survey of earned doctorates

4. PhD exit survey

5. Degree candidate responsibility statement

6. Publishing agreement and dissertation submission

7. Application for doctorate of philosophy

8. Signed title page

**Deadlines**

***~October 1*** for an October degree.

***~January 1*** for a January degree.

***~April 1*** for a May degree.

Exact deadline dates are updated yearly and can be found on the [SGS website](https://grad.rutgers.edu/).

## PhD Forms

|  |  |
| --- | --- |
| **Form Name** | **Location** |
| PhD Course Credit Checklist | [Click here to download](https://animalsciences.rutgers.edu/graduate/docs/EABCourseCreditChecklist-PhD.pdf) |
| PhD Committee Form | [Click here to download](https://animalsciences.rutgers.edu/graduate/docs/grad-committee-phd.pdf) |
| Doctoral Qualifying Examination Form | [SGS forms website](https://grad.rutgers.edu/academics/forms) |
| Doctoral Final Defense Form | [SGS forms website](https://grad.rutgers.edu/academics/forms) |
| Degree Candidate Responsibility Statement | [SGS forms website](https://grad.rutgers.edu/academics/forms) |
| Transfer of Credit Application | [SGS forms website](https://grad.rutgers.edu/academics/forms) |

# MS DEGREE REQUIREMENTS

## Learning Goals

The MS program in Endocrinology and Animal Biosciences trains students at an advanced level in areas of endocrinology and integrative physiology as they relate to improving animal and human health.

***Learning Goal 1 for Students: Attain mastery of the essential aspects of research in areas of endocrinology and integrative physiology as they relate to improving animal and human health***

Assessment of student achievement in Goal 1:

* Grades in graduate courses
* Review by faculty of student progress with close advising and mentoring
* Comprehensive examination assessing depth and breadth of knowledge and a research thesis
  + Assessment of student’s performance by committee of graduate faculty members
* Continuation of graduate studies or placement in a professional position that requires an understanding of endocrinology and integrated physiology, as well as competency in the technical aspects of performing work in these areas as they relate to animal and human health

Role of the program in helping students to achieve Goal 1:

* Close advising to assure that students are being prepared in a coherent and academically rigorous fashion
* Effective monitoring of student progress
  + Includes annual reports on research progress from both the student and the student’s committee chair
* Evaluations of teaching effectiveness of instructors in graduate courses
  + If effectiveness is below expectations, work with instructors to improve effectiveness
* Periodic review of curricular offerings and assessment tools
  + By program faculty
  + In consultation with the office of the dean of the graduate school and/or the unit dean

***Learning Goal 2 for Students: Engage in and conduct original research in endocrinology and integrative physiology that relates to animal or human health (for*** ***Master's degree with thesis).***

Assessment of student achievement of Goal 2:

* Preparation and defense of Master’s thesis
* Assessment of quality of Master’s thesis:
  + Public defense of thesis
  + Critical reading of thesis by committee of graduate faculty members
  + Submission and acceptance of peer-reviewed articles and conference papers
* Achievement of students as evidenced by continuation of graduate studies or professional placement

Role of the graduate program in helping students achieve Goal 2:

* Provide early introduction to research methods and opportunities for research
* Provide opportunities to present research and receive feedback
* Provide comprehensive advising and assist in the identification of mentors

***Learning Goal 3 for Students: Prepare to be professionals in careers that require training in endocrinology and integrative physiology as they relate to animal and human health***

Assessment of graduate student achievement of Goal 3:

* Participation in internships and other work tailored to career goals, assessed accordingly
* Collection of data on professional placement or continuation of graduate studies
* Review by external advisory committees, both inside of and external to the academy

Role of the program in helping students achieve Goal 3:

* Host professional development and career exploration activities
* Develop internship opportunities
* Host external advisory committees

The leadership of the Endocrinology and Animal Biosciences graduate program will regularly review the structure and content of the program, and the feedback received from assessments and surveys. These reviews will be used to provide the best possible education to students in order to meet the needs for professionals trained in endocrinology and integrative physiology as they relate to animal and human health.

## MS Course Credit Checklist

You can use this [MS course credit checklist](https://animalsciences.rutgers.edu/graduate/docs/EABCourseCreditChecklist-MS.pdf) to keep track of your course and research credits as you progress through the program. Thirty (30) credits of graduate work must be completed for the MS degree, including at least 6 credits of graduate research (Research in Endocrinology and Animal Biosciences 16:340:701,702) culminating in an MS research thesis. Courses should be taken in the core areas of Endocrinology, Physiology, Molecular Biology and Biochemistry, and Statistics and Experimental Design. A final research seminar that is open to the Rutgers community is given prior to the thesis defense, which is conducted by the student’s committee.

Students must maintain a grade point average of B or better. A maximum of two courses with grades of C can be counted toward the degree. Twelve undergraduate credits at the 300 and 400 level may be taken and applied toward the degree. Be sure to register with a G prefix if you want an undergraduate course to count toward degree credits.

**Credit Transfer:** Upon completion of 9 credits of graduate level course work with grades of B or better in the School of Graduate Studies as a matriculated student, you may transfer no more than 40% of the credits required for the Master’s degree (i.e. 12 credits). Transfer of credit is allowed only for formal graduate level course work specifically related to the student’s program of study in which grades of B or better were received. No credit may be transferred for thesis research work, course work done as independent study, or work in courses which were not graded. (Please see the Transfer of Credit Application on the [SGS forms website](https://grad.rutgers.edu/academics/forms) for more details.)

**Forms:**

[EAB MS Course Credit Checklist](https://animalsciences.rutgers.edu/graduate/docs/EABCourseCreditChecklist-MS.pdf)

Transfer of Credit Application (if applicable)\*

\*Because SGS updates their forms frequently, please go to their [forms website](https://grad.rutgers.edu/academics/forms) to download the most up-to-date version.

## MS Graduate Committee

Each graduate student will select the members of their committee in consultation with their graduate advisor and with the approval of the graduate program director. An MS committee must have a minimum of 3 members:

* + - Thesis advisor (serves as chair of the committee), if there are co-advisors, they both count at one
    - At least two other members of the EAB Graduate Faculty
    - One non-program member is permitted with the approval of the Graduate Program Director but is not required. Their name, professional address, and affiliation must be submitted to the Graduate Program Director and SGS for approval along with a copy of their CV.

**Form:** [MS Committee Form](https://animalsciences.rutgers.edu/graduate/docs/grad-committee-ms.pdf)

## MS Timeline

**First Year**

* Determine your advisor (committee chair) and lab you intend to work in.
* Meet the Graduate Program Director to plan a course of action.
* Determine courses needed. Take careful note of times/semesters the courses are offered and plan accordingly.
* Select a thesis topic and do preliminary research.
* Select your committee in the spring semester and begin holding committee meetings in your second year. See the ‘Miscellaneous’ Section for Tips on Selecting a Committee.

**Second/Third Years**

* Complete required coursework and research credits.
* Hold a committee meeting each year. (If there is an outside member who is not a member of the School of Graduate Studies (SGS) faculty, their name, professional address, and affiliation must be submitted to the Graduate Program Director and SGS for approval along with a copy of their CV.
* Complete your research and write your thesis (according to [SGS style guidelines](https://grad.rutgers.edu/academics/graduation/electronic-thesis-and-dissertation-style-guide)).
* Present a final research seminar to the department and defend your thesis to committee.
  + Talk with the faculty coordinator of the Seminar in Endocrinology and Animal Biosciences series prior to the semester you anticipate presenting your defense seminar so that it can be included on the schedule. If your defense seminar cannot be part of the regular Friday Seminar series, ask the Program Coordinator’s help in scheduling a room for your defense seminar and a room for your committee defense.
* Make any required revisions to the thesis.
* Submit your thesis electronically to SGS as per the [Submission Instructions: Application for Master’s Degree with Thesis](https://grad.rutgers.edu/academics/graduation/submission-instructions-application-masters-degree-thesis).
* Submit your completed Master’s Degree Application (on the [SGS forms website](https://grad.rutgers.edu/academics/forms)) with signatures along with one original title page (with signatures in black ink or via DocuSign) to SGS. (If using DocuSign, fill out the form and send it along with your title page to the EAB Program Coordinator. The Program Coordinator will route the form and title page via DocuSign to your committee members for their signatures and then return the signed documents to you for submission to SGS.)
* Complete additional items listed in the submission instructions.

**In most cases, students admitted with a BA or BS will complete their M.S. within 2 academic years. SGS will allow 3 years after initial registration before they question your progress.**

**Forms:**

[MS Committee Form](https://animalsciences.rutgers.edu/graduate/docs/grad-committee-ms.pdf)

Master’s Degree Application\*

\*Because SGS updates their forms frequently, please go to their [forms website](https://grad.rutgers.edu/academics/forms) to download the most up-to-date version.

## MS Guidelines for Graduation

MS students planning to graduate must complete all items on the [Submission Instructions: Application for Master’s Degree with Thesis](https://grad.rutgers.edu/academics/graduation/submission-instructions-application-masters-degree-thesis) on the School of Graduate Studies website and submit them to SGS for approval before the graduation deadlines listed below.

1. Unofficial transcript

2. Diploma application confirmation page

3. Degree candidate responsibility statement

4. Publishing agreement and thesis submission

5. Application for master's with thesis

6. Signed title page

**Deadlines**

**~October 1** for an October degree.

**~January 1** for a January degree.

**~April 1** for a May degree.

Exact deadline dates are updated yearly and can be found on the [SGS website](https://grad.rutgers.edu/).

## MS Forms

|  |  |
| --- | --- |
| **Form Name** | **Location** |
| MS Course Credit Checklist | [Click here to download](https://animalsciences.rutgers.edu/graduate/docs/EABCourseCreditChecklist-MS.pdf) |
| MS Committee Form | [Click here to download](https://animalsciences.rutgers.edu/graduate/docs/grad-committee-ms.pdf) |
| Master’s Degree Application | [SGS forms website](https://grad.rutgers.edu/academics/forms) |
| Degree Candidate Responsibility Statement | [SGS forms website](https://grad.rutgers.edu/academics/forms) |
| Transfer of Credit Application | [SGS forms website](https://grad.rutgers.edu/academics/forms) |

# 4+1 MS DEGREE REQUIREMENTS

## Learning Goals

***Learning Goal 1: Attain mastery of the essential aspects of research in areas of endocrinology and integrative physiology as they relate to improving animal and human health.***

***Learning Goal 2: Prepare students for advanced professional degrees and for careers that require training in endocrinology and integrative physiology as they relate to animal and human health.***

## 4+1 MS Course Credit Checklist

You can use this [4+1 MS course credit checklist](https://animalsciences.rutgers.edu/graduate/docs/EABCourseCreditChecklist-41MS.pdf) to keep track of your credits as you progress through the program. Thirty (30) credits of graduate work must be completed for the 4+1 non-thesis MS degree. Research is optional. You will need 22 core course credits without research credits or 16 core course credits with research credits. Complete at least ONE course from each of the four core areas: Endocrinology, Physiology, Molecular Biology and Biochemistry, and Statistics and Experimental Design.

Up to two 300-level and/or 400-level courses (6-8 credits) taken during the third or fourth year of undergraduate study (or in the +1 year with a 'G' prefix) can be counted toward the graduate-level requirements if those credits are not counted toward the undergraduate degree. You must complete the Transfer of Credit Application on the [SGS forms website](https://grad.rutgers.edu/academics/forms).

Students must maintain a grade point average of B or better. A maximum of two courses with grades of C can be counted toward the degree.

**Forms:**

[4+1 MS Course Credit Checklist](https://animalsciences.rutgers.edu/graduate/docs/EABCourseCreditChecklist-41MS.pdf)

Transfer of Credit Application (if applicable)\*

\*Because SGS updates their forms frequently, please go to their [forms website](https://grad.rutgers.edu/academics/forms) to download the most up-to-date version.

## Capstone Essay

The capstone essay is a detailed literature review of a student-selected topic or question in animal physiology, endocrinology, molecular biology, or biochemistry. Topics should be selected from courses taken during the 4+1 non-thesis MS program and will require pre-approval by the Graduate Program Director (GPD). Prior to final submission, intervening deadlines (outlined below) should be met to ensure appropriate progress.

Written communication is an important aspect of many professional positions. Further, reading, synthesizing, and summarizing basic research literature hones logic, independence, and interpretation skills not always emphasized in traditional coursework. This essay provides students an opportunity to gain in-depth knowledge of a topic or question of personal or professional interest.

Students completing the capstone essay successfully will be able to:

* Identify primary literature relevant to their topic/question and interpret it accurately.
* Synthesize information from multiple sources and use it to generate an overall model of the topic or question.
* Clearly communicate advanced concepts in animal physiology, endocrinology, molecular biology, or biochemistry in written form.

**Formatting and Document Requirements**

* ***Format:*** Literature review including introduction, topic-specific subsections, and conclusion.
* ***Length:*** 10-15 pages, 1.5 spaced, 1” margins. References and figures should not be included in total length.
* ***Sources:*** should include direct references to a minimum of 10 primary resources\*. All sources should be cited appropriately and fully described in “References Cited”.

\*Reviews may not be used as sources but may be used for preliminary information gathering.

* ***Graphical abstract:*** a summary of the findings should be included as a graphical abstract. The abstract will not count toward the total length.

**Deadlines**

* ***October 1:*** Identify the primary mentor and general topic area, submit to GPD.
* ***November 1:*** More focused topic proposal DUE to GPD and primary mentor.
* ***February 1:*** Essay outline DUE to review committee (Primary mentor, 1 curriculum committee member, & GPD)
  + Written content
* Standard outline format
* 2-3 pages, single spaced
* Should include a minimum of 5 cited primary sources
  + Graphical abstract DRAFT
* ***March 1:*** Initial essay draft DUE to review committee
  + This draft should be in as final form as possible with no additional sections left to be written or details yet to be added.
  + All formatting and page limits should be met
* ***Last week of March:*** Final draft incorporating recommended revisions DUE to review committee
* ***~April 1:*** Final draft DUE to School of Graduate Studies with accompanied MS Degree Application signed by GPD and review committee.

**Assessment Rubric**

The final essay should include the following elements. Their relative weights are indicated in parenthesis as percentages of the total:

* ***Graphical abstract (20%)***
* ***Written content (65%)***
* Topic introduction: including importance to current animal science, endocrinology, or other fields
* Relevant subsections / overall essay organization
* Review breadth/depth
* Conclusion: including potential future directions/outcomes of the topic
* ***Sources and citation (10%)***
* Appropriate selection of primary literature
* Appropriate interpretation of cited sources
* Number of references
* Correct attribution / citation / references cited
* ***Formatting (5%)***

**Form:** Master's Degree Application\*

\*Because SGS updates their forms frequently, please go to their [forms website](https://grad.rutgers.edu/academics/forms) to download the most up-to-date version.

## Non-thesis MS Guidelines for Graduation

4+1 MS students planning to graduate must complete all items in the [Submission Instructions: Application for Master’s Degree without Thesis](https://grad.rutgers.edu/academics/graduation/submission-instructions-application-masters-degree-without-thesis) on the School of Graduate Studies website and submit them to SGS for approval before the graduation deadlines listed below.

1. Unofficial transcript

2. Diploma application confirmation page

3. Application for master’s without thesis

**Deadlines**

***~October 1*** for an October degree.

***~January 1*** for a January degree.

***~April 1*** for a May degree.

Exact deadline dates are updated yearly and can be found on the [SGS website](https://grad.rutgers.edu/).

## Non-Thesis MS Forms

|  |  |
| --- | --- |
| **Form Name** | **Location** |
| 4+1 MS Course Credit Checklist | [Click here to download](https://animalsciences.rutgers.edu/graduate/docs/EABCourseCreditChecklist-41MS.pdf) |
| Master’s Degree Application | [SGS forms website](https://grad.rutgers.edu/academics/forms) |
| Transfer of Credit Application | [SGS forms website](https://grad.rutgers.edu/academics/forms) |

# REGISTRATION INFORMATION

## General Information

* Electronic registration is available for all students via the [Web Registration System](https://sims.rutgers.edu/webreg/pacLogin.htm).
* Full-time status is considered between 9 and 16 credits. Students supported on TAs or a first-year SEBS Excellence Fellowship should register for 16 credits/semester.
* **For PhD students**, once you have completed all of your coursework, are post-qualifying, and have close to the 72 total credits needed to graduate, you can register for fewer credits, with a minimum of 1 research credit/semester required. See the Graduate Program Director (GPD) when you reach this point as specific forms may be required.
  + This is especially important for students supported on grants or fellowships, as the tuition costs have to be paid by the grant and the fellowship may be a set amount that can be used for other purposes such as supplies and travel if tuition is not needed.
* **For MS students**, once you are close to 30 credits you can register for one credit/semester. See the GPD when you reach this point as specific forms may be required.
* **International students**, you are required to pursue a full course of study every fall and spring semester, unless you have earned close to the 30 credits required for the MS degree or close to the 72 credits required for the PhD degree, or meet one of the other circumstances explained on the [Rutgers Global website](https://global.rutgers.edu/academic-status-and-changes/full-course-studyreduced-credit-load) that would allow you register for as few as 1 credit per semester. You must be approved by your International Student Adviser (DSO) for a reduced course/credit load authorization. You submit the Reduced Credit/Course Load e-form through your [RGlobal Portal,](https://sunapsis.rutgers.edu/istart/controllers/start/StartEngine.cfm) each semester that you require a decrease in credit load.
* Continuous registration is required of all students up until graduation.

## Summer Registration

* As a TA, you are entitled to six “free” course or research credits (meaning your advisor does not have to pay for them) for the summer following your TA assignment. Be sure to register for these if you are on campus working on your research over the summer.
* GAs and Graduate Fellows are not entitled to “free” course or research credits over the summer. If you register, you or your advisor will have to pay the tuition.

## Sample Registration for Years 1-3

1. Teaching Assistant, Graduate Assistant, or Graduate Fellow status:
   * *Full TA Appointment* 16:340:877 section 01; 6 credits with an “E” prefix (meaning excluded from degree credits), these credits will count towards ‘full time status’ but are not included in the total count towards graduation (30 for MS; 72 for PhD).
   * *Full GA Appointment* 16:340:866 section 01; 6 credits with an “E” prefix (same as above for TA Appointments).
   * *Graduate Fellowship* 16:340:811 section 01; 0 credits (no prefix required)
2. List all courses you are taking. Usually one or two courses (three at the most, if a fellow).
   * Up to 12 undergraduate credits at the 300 and 400 level may be taken and applied toward the degree. Be sure to register with a G prefix if you want an undergraduate course to count toward degree credits.
3. Remaining credits to total 16 should be in *Research in Endocrinology and Animal Biosciences*

16:340:701/702 (fall/spring) under your advisor’s section.

* + Research credits can be reduced as you near graduation (see above).
  + Research grades are satisfactory (S) or unsatisfactory (U) only. Unsatisfactory research grades are very serious and most likely will lead to probationary conditions.

## Continuous Registration

* + You must remain registered every semester, either with course and research credits or as

*Matriculation Continued* 16:340:800 if the situation warrants.

* + - *Matriculation Continued* is to be used only if you are on leave from your studies and have not yet taken the PhD qualifying exam.
  + International students must have completed all course work and research credits before registering for 1 research credit.
  + Any lapse will require a Readmission Application (on the [SGS forms website](https://grad.rutgers.edu/academics/forms)) and approval of the Graduate Program Director and the Dean of the School of Graduate Studies.

Contact the GPD if you have any questions.

**Forms:**

Reduced Credit/Course Load e-Form (via your [RGlobal Portal](https://sunapsis.rutgers.edu/istart/controllers/start/StartEngine.cfm))

Readmission Application\*

\*Because SGS updates their forms frequently, please go to their [forms website](https://grad.rutgers.edu/academics/forms) to download the most up-to-date version.

# LABORATORY ROTATIONS

## Purpose

Laboratory rotations offer new graduate students an opportunity to fully explore research options available in the program firsthand prior to deciding on a research mentor and specific area of research. Students learn a range of laboratory techniques and receive hands-on training in areas that may be useful to them in the future. They also meet other graduate students and faculty members in the program, thus facilitating networking. The rotations also enable students to get to know faculty members who would be appropriate committee members.

The end goal of the laboratory rotations is to help students identify an advisor for their graduate research toward their MS or PhD degree and learn about the research ongoing in each rotation lab.

Students typically choose two rotation labs. Research credits can be earned for these rotations by registering in the Graduate Program Director’s (GPD) section of EAB Research 16:340:701/702. Contact the GPD about enrolling.

## Schedule

Graduate students are expected to be in the lab daily each weekday of the rotation, except for when they are in class or teaching. The daily schedule should be discussed/arranged for each rotation with the faculty supervisor.

For **each** rotation during the Fall or Spring semester:

7 weeks x ~ 16-20 h per week = 112-140 h total rotation time

* Since new students are taking classes and performing TA duties (if not on a fellowship), we estimate they will have ~ 16-20 h/week for the rotation.
* The first rotation begins at the start of the Fall semester (first full week); the second rotation will end the week prior to Christmas (this rotation will skip the week of Thanksgiving).

Note: These rotation schedules are flexible depending on the hours the student can work, holidays during the rotation, and the lab’s schedule.

## Reporting

At the completion of each rotation, students will submit a short report to the GPD listing the faculty name and begin/end dates and **describing what they have done during this rotation and what they have learned in the lab.** Faculty will also be asked to evaluate the efforts of each rotation student and whether they would or could support them in their lab.

# PROGRESS REPORTS

The EAB Academic Standards Committee and Graduate Program Director require PhD and MS students (excluding the 4+1 students) to submit an updated student progress report form, copies of all committee meeting minutes, and a spreadsheet of required credits by the end of January annually.Students who were in the program the year before can simply update the progress report form (Word doc) they used the previous year. (If you misplaced last year’s report, contact the Program Coordinator.) For new students, please download a [blank progress report form](https://animalsciences.rutgers.edu/graduate/docs/EABGraduateStudentProgressReportForm.pdf) and [PhD course checklist](https://animalsciences.rutgers.edu/graduate/docs/EABCourseCreditChecklist-PhD.pdf) or [MS course checklist](https://animalsciences.rutgers.edu/graduate/docs/EABCourseCreditChecklist-MS.pdf) to keep track of required credits.**Please complete the course checklist and submit it along with your progress report.**

***Note to the new students:*** The idea behind the progress report form is that once you have completed it, you can save it on your computer. Then, each year when it comes time to update it, you can simply add the new information. The GPD will work with you on your reports.

**We request a signed, electronic file (pdf) emailed by your advisor.** Hard copies are not required. See the following directions:

* + 1. Please complete the progress report form (or update last year’s), discuss it with your advisor, and make any necessary revisions.
    2. **Ask your advisor to email a pdf of the final document (along with the minutes of all committee meetings that you have had plus the completed course checklist summarizing your credits)** by the deadline(determined yearly)to the following individuals: (1) Graduate Program Director, (2) Academic Standards Committee Chair, and (3) Graduate Program Coordinator.

This form will be reviewed by the Graduate Program Director as well as the Academic Standards Committee Chair. Their goal is to assess each student's progress to be sure that you are on track for finishing your degree in a timely fashion. Also, they are looking at funding needs for next year, so they must learn where everyone is in terms of possible completion date to determine who will need funding and in what capacity.

The Academic Standards Committee will meet with students after reviewing the forms. The Committee will be in touch regarding scheduling these progress meetings (sometime in February/March).

**Forms:**

[Progress Report Form](https://animalsciences.rutgers.edu/graduate/docs/EABGraduateStudentProgressReportForm.pdf)

[PhD Course Credit Checklist](https://animalsciences.rutgers.edu/graduate/docs/EABCourseCreditChecklist-PhD.pdf)

[MS Course Credit Checklist](https://animalsciences.rutgers.edu/graduate/docs/EABCourseCreditChecklist-MS.pdf)

# INDIVIDUAL DEVELOPMENT PLANS

Individual development plans (IDPs) are living documents that are designed to be useful tools for students – in collaboration with their faculty mentors and advisors – to:

* Assess skills, strengths, and interests;
* Facilitate professional planning and long- and short-term goal setting;
* Develop a basis for communication about their academic and professional trajectory;
* Acknowledge achievements over the course of study;
* And identify resources, training, or support they may need to meet their academic and professional goals.

For more details, SGS policy on IDPs, and FAQs, go to the [SGS Online Individual Development Plans page](https://grad.rutgers.edu/academics/individual-development-plans/online-individual-development-plans).

Students in years 2, 4 and above must submit IDPs by the end of May annually through the [SGS IDP Portal](https://sgs-studentidp.rutgers.edu/). EAB requires everyone to fill out IDPs once they have started in a lab, including MS students. Year 1 students who have not joined a lab do NOT need to fill out an IDP. **Please review the Student User Guide on the** [**portal website**](https://sgs-studentidp.rutgers.edu/) **before starting your IDP.**

# SEMINAR AND SEMINAR LUNCHES

Seminar in Endocrinology and Animal Biosciences (16:340:693,694; 1 credit; pass/fail) has scientists from inside and outside Rutgers present on their research; graduate students present research updates, research proposals, and thesis/dissertation defense seminars as well. The seminar is held on Fridays at 9:00 AM in Foran 138A. Students should register once for fall (693) and once for spring (694) during the first few years of their program.

## Attendance

All graduate students in EAB are expected to attend weekly departmental seminar, even if they are not registered for the course, unless they have class, TA duties, or experiments they’re working on during that time. If you are unable to attend, you should send an e-mail to the Graduate Program Director and Program Coordinator stating the reason for the absence. If you are registered for the seminar, you must attend unless you have a medical reason or other excused absence. To get credit for this seminar for graduation, you cannot miss more than 2 seminars with unexcused absences.

## Expectations for Speaking at Seminar

**All graduate students who are in their second year or higher must present a 20-minute research update at one of the seminars each year.** This seminar is designed to give students more experience speaking about their research as well as may bring up some protocol pitfalls or limitations that might not have come up in committee meetings. It also exposes students to questions from the audience that they might encounter when at society conferences. Prior to each fall semester, the GPD or Program Coordinator will reach out to the GSO president to poll the students in years 2+ to schedule half of the students to speak in the fall and the other half to speak in the spring. Then the students will work with the Program Coordinator to schedule which Friday works for them. Ideally two graduate students will present during the seminar time slot (20 minutes of presentation with 10 minutes of questions).

## Protocol for Hosting Lunches with Outside Seminar Speakers

We give our students, postdocs, and research associates the opportunity to meet over lunch, typically in Bartlett Perry Library (room 208), with the seminar speakers who come from outside of Rutgers. This is an opportunity to network with established scientists and to get different perspectives on scientific career paths. To help ensure that the lunches run smoothly, we have a student host for each lunch. The responsibilities of the host are outlined below.

1. The primary responsibility of the student host will be to get commitments from graduate students for lunch so that we have a good showing. The right size group is between about 5 students (counting the host) at each lunch. To ensure this runs smoothly the following rules are in place:

* **Graduate students should plan to host one lunch per year** (depending on the number of students in the program). If your PI is hosting a speaker, that is a great time to host.
  + **Student hosts much attend the lunch or find a replacement.** Students not hosting but those who signed up for lunches must also show up for the lunch or find a replacement to take their place. If a student is not signed up, they are not allowed to attend without the permission of the student host, who will know the expected attendance beforehand and can determine if the additional person(s) can be accommodated.
  + **Each graduate student in the program is required to attend a minimum of 2 lunches per semester.** (This also depends on the size of the graduate program at the time and the number of outside speaker lunches). We have graduate students from other programs, plus postdocs and research associates who work in EAB labs, who often attend seminars. These people are welcome but not required to attend lunch. They should also let the student host know if they will attend in advance.

2. Students attending lunch should:

1. **Pay special attention** during the seminar to identify points of interest (potential research overlap, technical points of interest, or others) to discuss during the lunch. This should facilitate a lively discussion.
2. Prepare a SHORT (30 sec to 1 min) **elevator speech** about their research and career goals.
3. Remember lunch is a wonderful time to **interact** with a scientist outside our program. Prepare 3-4 questions for the speaker. They don’t have to be just about science! Career paths, other programs and research environments, even field-specific ethics considerations are all fair game.
4. On the Tuesday before seminar, the Program Coordinator will reach out to the student host about the lunch order. This will be done for each week there is a lunch. Options will include sandwiches, salads, or pizza from a local establishment. The student host should check with the attendees about dietary restrictions and select the menu.
5. Lunches will be scheduled for approximately 12:00–1:00 PM but could vary depending on other meetings with the faculty. Food will be delivered at 11:30 AM.
6. The faculty host will let the student host know in advance if they need their help in transporting the speaker to different locations during the visit.

6. **Follow-up:** The student host should send an e-mail to the Program Coordinator and the GPD after lunch to let us know who attended and how things went (enough food, any issues, etc.).

# CHANGING DEGREES WITHIN EAB (MS to PhD or PhD to MS)

If a student wishes to change from an MS to a PhD or from a PhD to an MS, the student must take a full year of coursework and credits before applying for the transfer via the Change of Degree Status Application on the [SGS forms website](https://grad.rutgers.edu/academics/forms). They also need the approval of their mentor and the GPD**. International students must also obtain approval from Rutgers Global.**

**Form:** Change of Degree Status Application\*

\*Because SGS updates their forms frequently, please go to their [forms website](https://grad.rutgers.edu/academics/forms) to download the most up-to-date version.

# MISCELLANEOUS

## Tips on Forming a Committee

As mentioned above, each graduate student will select the members of their committee in consultation with their graduate advisor and with the approval of the graduate program director. A committee must have 3 to 4 members (see previous sections for specifics on MS or PhD committees):

1. Dissertation advisor (serves as chair of the committee), if there are co-advisors, the two serve as one on a committee.
2. At least two other members of the EAB Graduate Faculty can be selected from the current list of faculty on the EAB website.
3. One committee member from outside the EAB program. This can be either outside of Rutgers, or at Rutgers but outside of our graduate program. A CV needs to be submitted with the committee form of any outside committee member. (For an MS committee, one non-program member is permitted with the approval of the GPD but is not required.)

Some mentors like to do the initial ask for committee members on behalf of their students, then usually a meeting or conversation is had with the student and the potential committee member. Students should plan to have a brief outline of their research project, or at least topic area, with a few aims. If the meeting is a Zoom meeting, having a few PowerPoint slides to outline the justification for the project is advisable. This can also serve as a start for a presentation during the first committee meeting. Other mentors would rather have the graduate student do the initial contact with the potential committee member. Same suggestions apply here: a personal introduction as well as a research introduction is advisable.

A good guideline to consider when forming a committee is to diversify the expertise on the committee. This allows you, as the student, to get varying prospectives on the topic you are studying. If too many on your committee are like-minded, you might miss some important details or shortfalls within your research.

Outside committee members could be someone who you plan on spending some time in their lab with analyzing different aspects of your samples or data. They could also bring in another perspective to your research and topic of study. If you as the student do not know this person, consider having your mentor invite them in for an EAB seminar. That way you will get to know more about them and their research and visa versa (by serving as student host at lunch).

## Preparing for Your First Committee Meeting

It is helpful to work with your advisor to prepare a document that also serves as an agenda that you can use throughout the meeting. This document can be sent to all committee members ahead of the meeting and serves as a preview of what to expect.

See example provided in the Appendix for what to include in this document from Introduction through Research Overview to proposed Timeline.

## Guidelines for Running Committee Meetings

A record of what happened at your committee meeting is important. Since you will be busy running the meeting, it is helpful to have your advisor or someone else to take notes for you. If this is a Zoom meeting, then the recording the meeting can be transcribed into minutes or a summary of what was discussed. Send them to your mentor and committee and keep these on file to be submitted with your progress report each year. About a week prior to your scheduled meeting, it is wise to send the committee a reminder of the meeting and a current CV (if you had not done so prior to organizing your committee) and an agenda. Any other documents you plan on reviewing would also be a good idea to send.

If this is your first committee meeting, remember the committee meetings are for you; they should be run by you and not your mentor or your committee. Start with an introduction of yourself and others on the committee (chances are that not everyone knows each other). This should be followed by a brief justification as to the overall research you are planning. If you have a few specific aims ironed out, this is a good time to talk about them. It is advisable to organize a short power point presentation focused on your research plans. Lay out the background and maybe previous research or preliminary studies you or your lab has completed.

Take questions and comments during your mini-presentation and remember the committee is there to help you do the best research possible. If you don’t know the answers to their questions, it is okay. Write them down and look them up as soon as you can. It will only help you going forward.

It is a good practice to plan on having about one committee meeting a year after the committee is formed. Particularly important times for meetings include a few months prior to your qualifying examination written and oral proposal defense. This is to make sure you are ready and won’t be surprised by anything during that proposal. And then yearly after that, and then again, a few months prior to your final defense, again to avoid any surprises.

## Tips on Preparing for Your Proposal Defense

As part of the advancement to doctoral candidacy in the Endocrinology and Animal Biosciences Graduate Program, students must complete a written comprehensive exam, submit a research proposal, and deliver an oral defense seminar. The seminar is a formal presentation of the NIH-style research proposal and serves as a critical evaluation point for your readiness to undertake independent dissertation research. It should clearly articulate the research aims, significance, and experimental approach. Time your talk to fit within the expected 30–45 minute window, allowing for at least 10–15 minutes of questions post-seminar.

While the proposal must be written independently, you are strongly encouraged to work closely with your faculty advisor throughout the development of both the written document and the oral seminar. The advisor plays a key role in helping you refine the research question, structure the presentation, and anticipate committee feedback. This collaboration ensures that the seminar is scientifically rigorous, well-organized, and aligned with the expectations of the graduate committee.

The seminar should be clear, concise, and visually engaging, with a strong narrative that explains the rationale behind the research, the methods to be used, and the expected outcomes. Students should be prepared to defend their choices, discuss alternative approaches, and demonstrate a deep understanding of the field. Practicing the seminar with your advisor and lab group is highly recommended to build confidence and receive constructive feedback before the formal defense.

Use this [checklist](https://animalsciences.rutgers.edu/graduate/docs/Proposal_Seminar_Checklist.pdf) to help prepare yourself for your proposal defense seminar.

## Tips on Preparing for Your Dissertation/Thesis Defense

Preparing for your dissertation or thesis defense is a critical step in completing your graduate degree, and success begins with early planning and consistent communication with your faculty advisor. Once your dissertation/thesis is nearing completion, coordinate with the Seminar Coordinator to schedule your defense seminar—ideally as part of the regular Friday Seminar Series. If that’s not possible, work with the Program Coordinator to reserve appropriate rooms for both your public seminar and private committee defense. Be sure to distribute your dissertation/thesis to all committee members **at least two weeks in advance** to allow ample time for review.

As you prepare, practice your presentation multiple times—ideally with peers or your advisor—to refine your delivery and anticipate questions. Your seminar should clearly communicate your research rationale, methods, findings, and significance, using well-designed visuals like graphs and tables. Time your talk to fit within the expected 30–45 minute window and prepare a brief, accessible summary for any non-specialist attendees. This will allow for at least a 10–15 minute window for questions post-seminar. On the day of your defense, arrive early to test equipment, bring all necessary materials, and dress professionally. During the Q&A, stay calm, listen carefully, and respond thoughtfully—remember, the faculty in attendance and your committee are there to support your academic growth.

After the defense, promptly complete any required revisions and submit your final dissertation/thesis electronically. Throughout this process, staying organized, maintaining regular advisor meetings, and taking care of your well-being (i.e. sleep and eat well!) will help ensure a smooth and successful defense experience.

Use this [checklist](https://animalsciences.rutgers.edu/graduate/docs/Defense_Preparation_Checklist.pdf) to help prepare yourself for your dissertation/thesis defense seminar.

**Forms:**

[Proposal Seminar Checklist](https://animalsciences.rutgers.edu/graduate/docs/Proposal_Seminar_Checklist.pdf)

[Defense Preparation Checklist](https://animalsciences.rutgers.edu/graduate/docs/Defense_Preparation_Checklist.pdf)

# BYLAWS OF THE GRADUATE PROGRAM IN ENDOCRINOLOGY AND ANIMAL BIOSCIENCES

***(referred to as the Graduate Program in Animal Sciences until July 2007)***

**Reviewed and Approved by the Endocrinology and Animal Biosciences Graduate Faculty:**

Amended by vote February 11, 2020

## Article I. Mission and Organization of the EAB Program

Section 1. The Graduate Program in Endocrinology and Animal Biosciences (16:340) at Rutgers, The State University of New Jersey is headquartered on the George H. Cook Campus at the School of Environmental and Biological Sciences (SEBS) and administered in conjunction with the [School of Graduate Studies](http://gsnb.rutgers.edu/) (SGS) in accordance with the SGS bylaws. The program mission is to provide academic and research training for graduate students in the area of Endocrinology and Animal Biosciences. Students successfully completing program requirements will attain either a Master of Science (MS) or Doctor of Philosophy (PhD) degree.

## Article II. Membership

Section 1. Categories of EAB Membership.The EAB Graduate Program faculty includes Members, Associate Members, and Affiliate Members – all approved by the SGS Dean or Dean’s designate and appointed to 5-year terms with the expectation that they will contribute to the EAB program in a variety of ways. Renewal of membership to subsequent 5-year terms will be dependent on meeting sufficient criteria *(see Article II, Section 2).*

Nominations for Membership, Associate Membership, or Affiliate Membership in the SGS and EAB program can be initiated by any Member of the EAB faculty. Nominees will present a seminar and their CV will be circulated to all faculty prior to voting. Approval of Full Membership will be by majority vote of Members. Associate Membership approval will be by majority vote of Members and Associate Members of the program.

MEMBERS: Rutgers faculty with appointments at or above the rank of Assistant Professor or Assistant Research Professor who conduct research and teaching with a focus in Endocrinology and Animal Biosciences (as indicated by research projects and scholarly accomplishments) may be invited to join the program as Members. In accordance with SGS Bylaws, Rutgers faculty with appointments at or above the rank of Assistant Teaching Professor who are active in research or creative activity are also eligible to become Graduate Program Members. Any Member of the EAB Graduate Program is eligible to chair MS and PhD committees, vote at EAB meetings, and serve on EAB committees.

*Other Rutgers faculty and persons outside of Rutgers who have established a record of EAB-related scholarship are eligible to become Associate Members or Affiliate Members. They have voice, but not vote, in the affairs of the EAB Graduate Program.*

ASSOCIATE MEMBERS: Associate Members may serve on MS and PhD committees and other program committees and teach graduate courses. They may chair MS committees but not PhD committees.

AFFILIATE MEMBERS: Affiliate Members may serve on MS, but not PhD, committees and may serve on other program committees and teach graduate courses. In accordance with SGS bylaws, they may not chair MS or PhD committees.

Section 2. Criteria for EAB membership renewal. To qualify for membership renewal, of the 10 criteria listed here, Members should meet at least 5 criteria and Associate Members, 4 criteria.

CRITERIA for Renewal of EAB Program Membership for Members and Associate Members:

1. Maintain an active research program evident by research projects and scholarly accomplishments.
2. Contribute to the education of EAB graduate students by teaching formal coursework.
3. Serve as thesis/dissertation advisor for EAB graduate students.
4. Host EAB students for laboratory rotations.
5. Serve as a member of the graduate committee for EAB students.
6. Participate in PhD qualifying exam preparation and grading.
7. Serve on EAB graduate program committees (e.g., Admissions, Academic Standards)
8. Serve on SGS committees (e.g., Biological, Biomedical and Health Sciences Academic Cluster Committee, Executive Council).
9. Attend 25% of EAB graduate program faculty meetings.
10. Participate in the EAB seminar series (e.g., serve as seminar series coordinator, host and/or meet with speakers, regularly attend seminars)

Criteria for renewal of Affiliate Membership includes willingness to (1) serve on MS student committees; (2) present guest lectures or seminars; and (3) provide career mentoring/advice for graduate students. To qualify for membership renewal, Affiliate Members should meet one of these three criteria.

Section 3. Process for EAB Program Membership review at least every 5 years.

Prior to the 5-year review, the GPD will notify members of the EAB faculty about the review and that if they no longer have substantial involvement with the Program, based on the criteria listed above, they should inform the GPD, in writing, that they wish to terminate their membership. It is the intent of these Bylaws that only persons who are actively involved in the Program’s activities be members of the Program’s faculty.

1. Process for notification and review: The EAB Executive Committee will review graduate faculty membership at least every 5 years based on program-established criteria to determine whether or not they have met the criteria for their level of membership. All faculty will be asked to submit a report indicating which program-established criteria they meet to qualify for membership. The EAB Executive Committee will either recommend renewal at the same level, upgrade or downgrade their membership level, or if the criteria have not been met, they will recommend withdrawal from the program.

*According to SGS Bylaws Article II.7 individual members who do not meet the criteria established by the program may, by vote of the program faculty, be withdrawn.*

The GPD will communicate the recommendations to the Graduate Program faculty for vote at the next faculty meeting. Any individual withdrawn from the program will have 30 days to respond. If a faculty member fails to respond to the notice of withdrawal that will be considered acceptance of the decision.

1. Right of rebuttal and Right of appeal: The faculty member in question has the right to rebut the decision and appeal to the Dean of SGS before they are removed from the graduate program. The EAB Program Director will submit documents to the SGS Dean in support of removal of the faculty member (i.e., a narrative explaining the basis for the withdrawal decision including the process for notification and review). The Dean of SGS will review the appeal and make the final decision on withdrawal from the program.

Section 4. Process for continuation of EAB Program Membership following termination of Rutgers appointment.Faculty who leave Rutgers University for another academic position may retain their EAB membership for a period of up to 4 years after the official termination of their appointment at the University. These Members may be appointed as Associate Members upon request of the EAB GPD.

## Article III. Officers

Section 1. Director. The members of the Program will nominate to the SEBS Dean one of its members to be Director of the Program for a three-year term in office. The recommendation will be determined by secret ballot of the members of the Program at a regular meeting or an electronic ballot. A majority vote of a quorum of members is required for nomination. The Dean of SEBS will make the appointment and inform the SGS Dean. A Director may succeed him/herself in office.

(a) Duties. To act as liaison between the Program and the Office of the Dean of the School of Graduate Studies, the Graduate Admissions Office, and SEBS. To chair all meetings of the Program’s Executive Committee and to keep the Program Members aware of all pertinent matters. To reply to communications addressed to the Program. To assure that the Program operates in conformity with its own rules and bylaws and those of the SGS. To determine that each student recommended for a degree has satisfied Program requirements for that degree.

Section 2. Secretary. The Graduate Director will appoint a person to serve as secretary for the program annually. This will either be a member of the program or an administrative staff member who works closely with program matters.

(a) Duties. To record proceedings of the Program meetings and to maintain a file of such records. To make available to all members minutes of the previous meeting.

## Article IV. Committees of the Program

Section 1. Executive Committee. This committee shall consist of the Program Director, who will act as Chair of this committee, and the Chairs of all standing committees defined in the Program bylaws.

(a) Duties. The Executive Committee shall appoint all *ad hoc* committees. It shall set the date and prepare the agenda of all program meetings. It shall act for the Program when time and circumstances do not permit a meeting. All standing committees shall report to the Executive Committee.

Section 2. Admissions Committee. This Committee shall consist of three members of the Program, one of whom acts as Chair of the Committee. The Committee shall be appointed by the Director subject to nullification by majority vote of the members of the Program and will serve for a period of three years. The Director will serve as an *ex officio* member. Students will be admitted to the Program only by action of the Admissions Committee.

To accomplish this task the Committee will:

(a) Determine the approximate number of new students who can be admitted by the Program each year.

(b) Evaluate applications as they are received according to established standards.

(c) The Committee in conjunction with the Graduate Director will handle formal correspondence related to applicants. However, faculty members may undertake preliminary correspondence with prospective students before submitting the formal application to the Committee.

(d) Committee actions will be reported to the Executive Committee and then to Graduate Program Faculty.

(e) Committee actions are subject to review by the Faculty of the Graduate Program.

Section 3. Academic Standards Committee (ASC). This Committee shall consist of three members of the Program, one of whom acts as Chair of the Committee. The Committee shall be appointed by the Director subject to nullification by majority vote of the members of the Program and will serve for a period of three years. The Director will serve as an *ex officio* member. The functions of this Committee are as follows:

(a) To review the progress of each graduate student at least once yearly, under procedures detailed in Article V. To annually review the status of non-matriculated students with a view to their matriculation.

(b) To determine that each student recommended for a degree has satisfied Program requirements for that degree.

(c) To determine if students who have completed MS studies in the Program should be permitted to undertake PhD studies in the Program. Such students should be recommended to the ASC by their MS degree committee on the basis of previous academic and research accomplishments, including, but not limited to, formal course grades, publications in refereed scientific journals and presentations at national meetings.

(d) The ASC will report and make recommendations to the Executive Committee.

(e) To administer the written portion of the Admission to Candidacy Examination to PhD students. The ASC in consultation with the student's committee will determine the format and content of the written exam for each student and ensure that it addresses competency in the core areas designated by the Graduate Program Faculty. Examination questions will be graded by the faculty whose question(s) were used in the examination. Graded exam questions will be given to the ASC Committee for compilation of results. The ASC Committee Chair will report the exam results in writing to the student, the student's Committee Chair, and the Program Director within two weeks of the examination date. An overall score of 85 percent or greater is passing with the caveat that areas of deficiency identified by the grader of each individual question must be addressed as described below prior to final admission to candidacy. An overall score of less than 85 percent is considered failing, in which case retaking of the entire examination will be permitted one time only. The time lapse between the first and second examination will be no longer than six (6) months.

In the event that the student has achieved an overall exam grade of passing but exhibits deficiencies in specific core competency areas (i.e., less than 85% score), the ASC in conjunction with the Graduate Program Member who wrote and graded the specific question will decide on a remedial course of action. This may include but is not limited to rewriting the question, completing additional tasks assigned by the Graduate Program Member, or taking additional classroom courses.

(f) To complete Admission to Candidacy requirements in EAB, students will also (1) submit a written research proposal based on program guidelines and (2) complete the oral defense of that proposal in a public seminar for approval by their graduate committee by the end of the third year in the program. If a student fails to meet these requirements by the end of their third year, they will be given an Academic Warning by the ASC. Further, students who have not successfully defended their research proposal by the end of their fourth year will be subject to Academic Probation and may be considered for Academic Dismissal (see Article V and the SGS catalog webpage re Policy on Academic Standards.

Section 4. Curriculum Committee. This committee shall consist of three members of the Program, one of whom acts as Chair of the Committee. The Committee shall be appointed by the Director subject to nullification by majority vote of the members of the Program and will serve for a period of three years. The Director will serve as an *ex officio* member. The functions of this committee are as follows:

(a) To review all course offerings in the Endocrinology and Animal Biosciences subject area (16:340) biannually and to recommend additions, deletions, or changes in them.

(b) To review the Program description in the Catalog of the School of Graduate Studies and on Rutgers University and Program websites on a regular basis to insure appropriateness.

Section 5. Graduate Appointments Advisory Committee. This Committee is advisory to the Chair of Animal Sciences who makes TA appointments from departmental resources. The Committee shall consist of the Program Director, the Admissions Committee Chair, and the Animal Sciences Undergraduate Program Director. The Animal Sciences Chair will serve as an *ex officio* member of this committee. The Committee shall elect one of its members to be its Chair. The function of this committee is as follows:

(a) To review the TA/GA appointments of continuing graduate students and to make recommendations concerning the re-appointment of continuing students and the appointment of incoming new students. Committee recommendations will be guided by (1) admissions decisions, (2) the assignment of students to individual laboratories, and (3) staffing of our undergraduate courses. Activities of this committee will be timed around the annual schedules of the units that administer TA and GA lines to which our students are appointed.

Section 6. Graduate Student Committees. A Committee will be formed for each student in accordance with the rules of SGS. Such Committee will be formed before the end of the third semester in which the student is matriculated for a degree program and will be approved by the Graduate Director. The Committee is expected to meet no less frequently than once yearly throughout the student's program. The student’s dissertation/thesis advisor will serve as the Chair of the Committee. The Committee for a Master's degree candidate will consist of the Chair plus two additional members, while the Committee for a PhD degree candidate will consist of the Chair plus three additional members, one of which must come from outside the EAB Graduate Program. The Graduate Student Committee shall be responsible for:

(a) Approving a student's program of study.

(b) For doctoral candidates, approving completion of all requirements for advancement to candidacy. As described in Section 3, parts e and f, these requirements are: (1) Passage of the written qualifying exam; (2) Submission and approval of a dissertation research proposal; and (3) Successful oral defense of that research proposal including a public proposal seminar. The qualifying exam proposal will be submitted to the doctoral committee at least ten working days prior to the scheduled defense. The student will give an oral presentation summarizing the proposal. In a closed meeting, the committee members will question the student to verify that the student understands the research problem and the experimental approaches needed to address it. As a result of the meeting, the student may be required to revise the proposal and/or to take additional course work.

(c) Approval of a student's proposed dissertation research. For PhD students, this may evolve with time from the research proposal that was submitted as a requirement for the qualifying exam. Therefore, the committee is responsible for ensuring that the student has the proper training to complete the dissertation research and that the actual project is feasible and adequate for a graduate dissertation.

(d) Review of a student's dissertation/thesis research.

(e) Conducting the Final Examination (dissertation/thesis defense). For both PhD and MS students the defense will follow the same format as the PhD proposal defense (*Article IV, Section 3, part f)*

(f) Recommending the student to the School of Graduate Studies for his/her degree upon successful completion of the program.

Section 7. Special Committees. Special Committees may be formed by the Executive Committee to carry out specific tasks.

## Article V. Academic Warning, Probation, Suspension or Dismissal

All students admitted to the EAB Graduate Program are expected to maintain the highest levels of academic achievement. Those students who fail to maintain the minimum academic standards described by the SGS Catalog/website and the Program Bylaws may be subject to academic warning, probation, suspension, or dismissal according to the procedures described herein. Each student in the Program is responsible for being familiar with these procedures as well as with all SGS and Program policies and procedures governing degree requirements.

**PROCEDURES**

I. Academic Difficulty

I-1. The academic record of all students in the EAB Graduate Program shall be thoroughly reviewed annually by the Academic Standards Committee. In cases of unusual academic difficulty, the Graduate Student Committee may be convened to review the case at the request of the Program Director, the student's major advisor, or by the student.

I-2. The academic record shall consist of earned course grades and for PhD students, satisfactory completion of the Admission to Candidacy Examination (as described in *Article IV, Section 3, parts e, f).*

I-3. The student shall have the right to examine all evidence that has led to the assessment of unsatisfactory progress by the Academic Standards Committee and shall be given the opportunity to discuss that evidence with the Committee. All evidence used in evaluating the student shall become a part of the student's file to reside in the Director's Office.

I-4. The Academic Standards Committee shall, after carefully weighing all evidence, formulate a sanction recommendation consistent with its judgment of the weight of the student's unsatisfactory progress. Sanctions shall include academic warning, probation, suspension, or recommended dismissal and shall be based upon definitions presented in I-8. The student, the student's advisor, and the Program Director shall be informed in writing of the Committee's decision including the sanction recommendations. Copies of all correspondence concerning the matter shall be placed in the student's file.

I-5. The student shall have up to thirty (30) days to formally acknowledge receipt of the written decision, and shall have the right to file with the Program Secretary his/her intent to appeal the decision within the same thirty-day period.

I-6. The student may appeal the decision to the Executive Committee or may request formation of an *ad hoc* Appeals Committee to consist of three Members of the Program Graduate Faculty appointed by the Program Director. The student's major advisor shall not serve on either Committee.

I-7. Upon review of the appeal and any additional evidence or information submitted by the student, the Committee hearing the appeal shall report its findings to the Academic Standards Committee in the form of a recommendation to (a) sustain the sanction, (b) repeal the sanction, or (c) modify that sanction to a higher or lower level.

I-8. Sanctions imposed shall be the following:

(a) Academic Warning – Ordinarily warnings shall be issued to students whose academic performance is marginal and/or indicates that more serious academic difficulty and more severe sanctions may result if the unsatisfactory performance continues.

(b) Academic Probation – Specific conditions of academic performance will be assigned for one or two semesters to those students whose unsatisfactory performance indicates failure to maintain SGS and Program standards, and if the conditions are not satisfied at the end of the period either suspension or dismissal may result.

(c) Academic Dismissal – Students can be recommended for dismissal from the Program if the terms of probation or the terms of admission are not satisfied; or if a student fails a graduate course or courses, as defined in the Program Bylaws (see *Article VIII, Section 2*).

(d) Suspension from the Program – This may be recommended under unusual circumstances of unsatisfactory performance mitigated by personal circumstances outside the student's control; or may be elected by the student to allow time for resolution of special circumstances through ordinary means.

I-9. If, after the Program process of appeal has been completed, the student judges the Program decision unfair, the student may request review by the SGS under procedures outlined in the SGS online Catalog in the section "Student Academic Appeals".

I-10. Final dismissal of a student from the program may be done only by the Dean of SGS in accordance with established procedures.

II. Academic Dishonesty

II-1. In cases of student academic dishonesty all levels of the review process outlined in Sections I-1 through I-4 shall be followed. Once charges have been formulated by the Program Faculty, the disciplinary procedure outlined in the Rutgers University Academic Integrity Policy shall be followed.

## Article VI. Meetings

Section 1. Frequency of Meetings. The Program shall hold at least one business meeting each semester. Special meetings may be called by the Director or on the request of two members of the Program. Election of officers will take place at the spring semester meeting.

Section 2. Notice of Meetings. The Director shall send each Member of the Faculty a written notice of each meeting at least a week prior to the meeting, stating time, place, and agenda for the meeting.

Section 3. Quorum. A quorum for the transaction of Program business shall be 50% of the voting Members of the Program and electronic voting is permitted.

Section 4. Student Request for a Meeting of the Faculty. A meeting of the Faculty of the Program will be called on the written request of any student to the Director.

Section 5. Two delegates of the graduate students enrolled in the program may attend meetings, with the privilege of voice but not vote. Other graduate students may attend a meeting with the permission of the Graduate Program Director. However, the Program Faculty may by voice or previous announcement close the meeting to all except the Faculty of the Graduate Program. Instances of closed meetings would include, but not be limited to, discussions of ASCC recommendations pertaining to student progress.

## Article VII. Bylaws

Section 1. These bylaws may be amended following discussion at a meeting of the EAB Program and electronic voting. Proposed amendments are to be submitted in writing to the Director of the Program who is required to submit them to the Members as part of the call of the meeting. In accordance with SGS bylaws, voting on proposed amendments will be by electronic polling of the EAB faculty and must be approved by two-thirds of the members voting. Amendments to the bylaws will be submitted by the Program Director to the Dean of the SGS for final approval within 30 days of the time they are established by vote of the Program Membership.

Section 2. In all respects not specifically covered by these bylaws, the EAB Graduate Program will conform to the SGS bylaws of Rutgers, The State University of New Jersey, New Brunswick.

## Article VIII. Students

Section 1. Admission. All applicants should apply to the program through the SGS Admissions Office. In addition to completing established application forms, applicants should submit official college transcripts, and three letters of recommendation. Submission of GRE® General Test scores (Verbal Reasoning, Quantitative Reasoning, and Analytic Writing) is preferred but not required. All foreign student applicants must have a minimum total TOEFL score of 83 (Internet-based test), 550 (paper-based test), or 213 (computer-based test). It is expected that the applicant's previous academic record should exhibit a B average with distinction in the area of specializations. Background subjects for applicants should include mathematics through calculus, chemistry through organic chemistry, one year of laboratory physics, and background studies in biology and physiology. Undergraduate research experience is preferred. The Admissions Committee will evaluate the applications and either accept (matriculated or nonmatriculated basis) or reject the application.

Section 2. Performance. All candidates must meet the degree requirements recommended by the SGS and the EAB Program. A maximum of two courses (up to 8 cr) with grades of C or C+ can be counted toward the degree. In addition, all candidates must maintain a B (3.0) average in their coursework at all times. Grades of incomplete are viewed as signs of unsatisfactory progress except in extraordinary circumstances. Those students registered for research credits must demonstrate satisfactory progress.

Section 3. Assistantships. When funding permits, assistantships (Teaching or Graduate Research) will be awarded on a competitive basis to qualified graduate students. Normally PhD students will be given first consideration for financial support. General criteria for the appointment/reappointment of Teaching Assistants and Graduate Research Assistants include: academic merit, teaching and/or research effectiveness, length of service, departmental need, and grade point average. A Teaching Assistant or Graduate Research Assistant with a standard appointment is required to work an average of fifteen hours per week over the period of the appointment, or a prorated portion thereof if the appointment is less than standard.

**Reviewed and Approved:** By the Animal Sciences Graduate Faculty: Amended April 1988, Amended January 1990, Amended April 1996, Amended April 1999, Amended May 2000, Amended June 2003, Amended August 2003. Amended by EAB graduate faculty: February 2010, March 26, 2019, February 11, 2020.

# FORMS

|  |  |
| --- | --- |
| **Form Name** | **Location** |
| PhD Course Credit Checklist | [Click here to download](https://animalsciences.rutgers.edu/graduate/docs/EABCourseCreditChecklist-PhD.pdf) |
| MS Course Credit Checklist | [Click here to download](https://animalsciences.rutgers.edu/graduate/docs/EABCourseCreditChecklist-MS.pdf) |
| 4+1 MS Course Credit Checklist | [Click here to download](https://animalsciences.rutgers.edu/graduate/docs/EABCourseCreditChecklist-41MS.pdf) |
| PhD Committee Form | [Click here to download](https://animalsciences.rutgers.edu/graduate/docs/grad-committee-phd.pdf) |
| MS Committee Form | [Click here to download](https://animalsciences.rutgers.edu/graduate/docs/grad-committee-ms.pdf) |
| Progress Report Form | [Click here to download](https://animalsciences.rutgers.edu/graduate/docs/EABGraduateStudentProgressReportForm.pdf) |
| Research Proposal & Seminar Preparation Checklist | [Click here to download](https://animalsciences.rutgers.edu/graduate/docs/Proposal_Seminar_Checklist.pdf) |
| Dissertation/Thesis Defense Preparation Checklist | [Click here to download](https://animalsciences.rutgers.edu/graduate/docs/Defense_Preparation_Checklist.pdf) |
| Individual Development Plan | [SGS IDP Portal](https://sgs-studentidp.rutgers.edu/) |
| Diploma Application | [SGS degree checklist](https://grad.rutgers.edu/academics/graduation) |
| Survey of Earned Doctorates | [SGS degree checklist](https://grad.rutgers.edu/academics/graduation) |
| PhD Exit Survey | [SGS degree checklist](https://grad.rutgers.edu/academics/graduation) |
| Publishing Agreement and Dissertation/Thesis Submission | [SGS degree checklist](https://grad.rutgers.edu/academics/graduation) |
| Doctoral Qualifying Examination Form | [SGS forms website](https://grad.rutgers.edu/academics/forms) |
| Doctoral Final Defense Form | [SGS forms website](https://grad.rutgers.edu/academics/forms) |
| Master’s Degree Application | [SGS forms website](https://grad.rutgers.edu/academics/forms) |
| Degree Candidate Responsibility Statement | [SGS forms website](https://grad.rutgers.edu/academics/forms) |
| Transfer of Credit Application | [SGS forms website](https://grad.rutgers.edu/academics/forms) |
| Readmission Application | [SGS forms website](https://grad.rutgers.edu/academics/forms) |
| Change of Degree Status Application | [SGS forms website](https://grad.rutgers.edu/academics/forms) |
| Reduced Credit/Course Load e-Form | [RGlobal Portal](https://sunapsis.rutgers.edu/istart/controllers/start/StartEngine.cfm) |

# APPENDIX

## PhD Course Credit Checklist ([download](https://animalsciences.rutgers.edu/graduate/docs/EABCourseCreditChecklist-PhD.pdf))

Ph.D. Course Credit Checklist

## MS Course Credit Checklist ([download](https://animalsciences.rutgers.edu/graduate/docs/EABCourseCreditChecklist-MS.pdf))

M.S. Course Credit Checklist

## 4+1 MS Course Credit Checklist ([download](https://animalsciences.rutgers.edu/graduate/docs/EABCourseCreditChecklist-41MS.pdf))

4+1 M.S. Course Credit Checklist

## PhD Committee Form ([download](https://animalsciences.rutgers.edu/graduate/docs/grad-committee-phd.pdf))

Committee Information

**PhD Candidate:**

**Graduate Committee**

**Chair:**

**Member:**

**Member:**

**Member:** **(optional)**

**Outside Member\*:**

**Outside member’s departmental address:**

**Approved by Advisor:**   **Date:**

**Approved by Graduate Program Director:**  **Date:**  \_\_\_\_\_\_\_

*\*Please submit a CV of any outside committee member.*

2024.03.04 rev

## MS Committee Form ([download](https://animalsciences.rutgers.edu/graduate/docs/grad-committee-ms.pdf))

Committee Information

**M.S. Candidate:**

**Thesis Committee\***

**Chair:**

**Member:**

**Member:**

**Member:** (optional)

**Approved by Advisor:**  **Date:** \_\_\_\_\_\_\_\_\_

**Approved by Graduate Program Director:**   **Date:** \_\_\_\_\_\_\_\_\_\_

*\*In addition to the committee chairperson (M.S. advisor), two members from the EAB graduate program are required. An outside member is not required but is optional. (Please submit a CV of any outside committee member along with a complete mailing address.)*

2024.03.04 rev

## Graduate Student Progress Report ([download](https://animalsciences.rutgers.edu/graduate/docs/EABGraduateStudentProgressReportForm.pdf))

Graduate Program in Endocrinology and Animal Biosciences (EAB)

Rutgers, The State University of New Jersey

Dear EAB Graduate Student:

Please complete this form (or update last year’s), discuss it with your advisor, and make any necessary revisions. Then **ask your advisor to email** the final document (along with the minutes of **all** committee meetings that you have had) to the GPD, Admissions Committee Chair, and Program Coordinator by **January XX, 20XX. *(Note: Your advisor’s electronic signatures will be needed.)***

If the Academic Standards Committee feels that a progress meeting is needed, it will be scheduled for some time in February and you will be notified. Thank you!

**Name: Email address:**

**1. General Information**

Date entered graduate program (Sem/Yr): PhD **or** MS Full-time **or** Part-time

Lab rotations completed (List faculty name, dates)

1.

2.

3.

Major Professor (Advisor):

Graduate Committee Members:

1.

2.

3.

4.

Anticipated Graduation Date:

Date of Proposal Seminar:

Completion date of PhD Written Qualifying Exam:

Dates of Graduate Committee Meetings: \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

*(****Please attach meeting minutes****)* \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

Dissertation Title or Topic:

Short Description of Research Area:

**2. Funding History**

*Please list your funding source (TA/GA/Fellowship) for each semester and TA responsibilities, if applicable.*

**3. Coursework**

**A. Completed Coursework and Grades.** List semester/yr taken, full course number and title, credits, and grade.

* Cumulative GPA: \_\_\_\_\_

**PhD Students:**

* Total course credits completed of minimum 24 required credits: \_\_\_\_\_
* Total research credits [16:340:701,702] completed: \_\_\_\_\_
* Total course + research credits completed toward 72 credits: \_\_\_\_\_

**MS Students:**

* Total course credits completed: \_\_\_\_\_
* Total research credits (16:340:701,702) completed of minimum 6 required credits: \_\_\_\_\_
* Total course + research credits completed toward 30 credits: \_\_\_\_\_

**B. Projected Coursework for remainder of time in program.** List semester/year, full course number and title, and credits.

**4. Research**

**A. Summary of progress made each year since start of program (including rotations and research):**

**B. Publications/Presentations:** *Provide full citation of all manuscripts (published, in press, submitted, or in preparation), abstracts, and meeting presentations, including month and year. List citations in reverse chronological order (i.e., most recent first).*

**5. Awards/Honors/Other**

1. **Service**

**7. Plans for Summer 20XX and the 20XX-20XX Academic Year (Also include your anticipated timeline to graduation):**

***Please insert names & date(s):***

**Student Date**

***(Type name)***

**Advisor** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Date** \_\_\_\_\_\_\_\_\_\_\_\_\_

***(Type name) (e-Signature)***

## Example Committee Meeting Document

**Name:** **Date of Mtg:**

**Endocrinology and Animal Biosciences**

1. **Introduction**

I entered the Endocrinology and Animal Biosciences PhD program in semester, Year. I completed rotations in the following labs: xxxxxxxxxx. I am conducting research under the supervision of my graduate advisor, Dr. xxxxx whose lab I joined in semester, year. I earned my BS in …….

1. **Completed/in progress Coursework**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Class** | **Class Code** | **Credits** | **Semester Taken** | **Core-Area Fulfilled** | **Grade Earned** |
| **Molecular Biology and Biochemistry (I)** | 16:115:511 | 3 | Fall 2008 | Molecular Biology and Biochemistry |  |
| **Physiology of Reproduction** | 16:340:502 | 3 | Fall 2008 | Physiology |  |
| **Molecular Biology and Biochemistry (II)** | 16:511:512 | 3 | Spring 2009 | Molecular Biology and Biochemistry |  |
| **Neuroendocrinology** | 16:340:510 | 3 | Spring 2009 | Physiology |  |
| **Molecular Biology of Cells** | 16:148:514 | 3 | Fall 2009 | Molecular Biology and Biochemistry |  |
| **Advanced Prob Toxicology** | 16:963:603 | 1 | Fall 2009 | Animal Science |  |
| **Basic Stat for Research** | 01:960:401 | 3 | Fall 2009 | Statistics |  |
| **Design of Experiments** | 16:960:590 | 3 | Summer 2010 | Statistics | TBD |
| **Animal Pharmaceuticals** | 16:067:616 | 3 | Spring 2011 | Animal Science | TBD |

1. **Completed/in progress Research**

INSERT TABLE

GPA through Spring 20xx: xxxx

Coursework credits earned through Spring 20xx: xx

Research credits earned through Spring 20xx: xxx

Total credits earned through Spring 20xx:

1. **Degree Requirements**

The program requires all students to demonstrate proficiency in four core-areas including Animal Science and Biotechnology, Molecular Biology and Biochemistry, Physiology, and Statistics. A minimum of 24 credits is needed for selected coursework that is applicable to fulfilling the core-areas as well as relevant to each student’s research project. A total of 72 credits, including coursework, is required of all PhD students in order to graduate from the program. Additionally, each student’s program must be approved by an advising committee. A demonstration of proficiency is declared once the student has passed the Advancement to Candidacy examination.

1. **Overview: Possible PhD Project**

Include a one paragraph description of the research planned. This should include background information, including any preliminary data from you or your laboratory, in support of these studies. Define the goal of your research, hypotheses to be tested and end with specific aims/objectives.

1. **Timeline**

Jun

Jul

Aug

Sep

Oct

Nov

Dec

Jan

1st Com.

Mtg.

Proposal Defense

Complete Proposal

Qualifying

Exam

2010

2011

## Research Proposal & Seminar Preparation Checklist ([download](https://animalsciences.rutgers.edu/graduate/docs/Proposal_Seminar_Checklist.pdf))

**Planning & Collaboration**

☐ Meet with your advisor to outline the research proposal and seminar timeline.

☐ Discuss the scope, aims, and feasibility of your proposed research.

☐ Schedule regular check-ins with your advisor for feedback on both the written proposal and seminar content.

**Writing the Proposal**

☐ Draft the NIH-style proposal following the program’s formatting and content guidelines.

☐ Ensure the proposal includes: Title/Abstract/Integrity Statement, Specific Aims, Background & Significance, Preliminary Studies, and Research Design & Methods.

☐ Use a reference management tool (e.g., EndNote, Mendeley) for citations.

☐ Submit the final proposal to your committee and Graduate Program Director **at least 2 weeks before the seminar.**

**Preparing the Seminar**

☐ Develop a clear, engaging presentation that mirrors the structure of your proposal.

☐ Emphasize the hypothesis, rationale, significance, and experimental design.

☐ Include visuals (figures & tables) that are legible from a distance in the audience and well-integrated.

☐ Prepare to explain your methods, expected results, potential pitfalls, and alternative strategies.

**Practice & Feedback**

☐ Rehearse your seminar with your advisor, lab group and even those outside your field of expertise.

☐ Ask for feedback on clarity, pacing, and scientific depth.

☐ Prepare for questions from the committee, especially on rationale, feasibility, and broader impact.

**Day of the Seminar**

☐ Dress professionally.

☐ Arrive early to test your presentation setup.

☐ Bring backup copies of your slides (USB, email, cloud).

☐ Stay calm, confident, and open to feedback during the Q&A.

## Dissertation/Thesis Defense Preparation Checklist ([download](https://animalsciences.rutgers.edu/graduate/docs/Defense_Preparation_Checklist.pdf))

**Research and Writing**

☐ Complete all research and data analysis.

☐ Write your dissertation/thesis following SGS style guidelines.

☐ **Meet regularly with your faculty advisor** to review progress and receive feedback.

☐ Share drafts with your committee early to allow time for feedback and revisions.

☐ Use citation management tools (e.g., Zotero, EndNote, Mendeley) to organize references.

☐ Proofread carefully or consider using a professional editing service.

**Scheduling Your Defense**

☐ Coordinate with your committee to confirm a defense date and time.

☐ Speak with the Seminar Coordinator at least one semester in advance to schedule your dissertation/thesis seminar if during the regular graduate seminar.

☐ If not part of the Friday Seminar Series:

☐ Contact the Program Coordinator to reserve a room for your seminar presentation.

☐ Ask to have a separate room reserved for your private committee defense.

☐ Distribute your dissertation/thesis to all committee members **at least two weeks before the defense.**

☐ Confirm any technology needs (e.g., projector, Zoom link, laptop adapters).

**Defense Preparation**

☐ Prepare and practice your seminar presentation multiple times, utilize labmates, roommates, friends, **and your faculty advisor** to assist in critique of your seminar.

☐ Review your dissertation/thesis thoroughly—be ready to explain your research rationale, methods, and findings.

☐ Anticipate and prepare for potential questions from your committee.

☐ Create clear, professional slides with visuals (graphs, tables, images) that are easy to read from the back of the room.

☐ Time your presentation to fit within the expected duration (typically 30–45 minutes).

☐ Bring required materials:

☐ Printed dissertation/thesis copies (if requested)

☐ Notepad for feedback

☐ Dress professionally and arrive early to test equipment.

☐ Prepare a brief summary of your research for non-specialist attendees.

☐ Practice answering questions calmly and concisely.

☐ Bring water and take a few deep breaths before starting.

**Post-Defense Requirements**

☐ Make all required revisions to your dissertation/thesis.

☐ Email a PDF of your revised dissertation/thesis to SGS for formatting review.

☐ Submit your final dissertation/thesis electronically via the SGS portal.

☐ Confirm that your advisor and committee have approved the final version.

**Documentation and Forms**

☐ Submit to SGS:

☐ Completed candidacy form with all signatures (now on DocuSign)

☐ One original title page with signatures (now on DocuSign)

☐ Provide the final copy of your signed forms to the EAB Program Coordinator.

**Graduation and Final Steps**

☐ Submit the Graduate Diploma Application online via the Graduate Registrar.

☐ Review and complete all items in the SGS Graduation Submission Instructions.

☐ Confirm all deadlines and submission dates are met.

☐ Check your transcript to ensure all coursework and grades are posted.

**Additional Tips**

☐ Begin planning your defense **at least one semester in advance.**

☐ Attend other dissertation/thesis defenses to understand the format and expectations.

☐ Stay in **close communication with your advisor** throughout the process.

☐ Use a calendar or project management tool to track deadlines and tasks.

☐ Back up your dissertation/thesis and presentation files in multiple locations.

☐ **Take care of your well-being**—rest, eat well, and manage stress.

☐ **Celebrate** your progress—you’re almost there!