Jacobs School of Medicine and Biomedical Sciences
University at Buffalo

DEPARTMENT OF PHYSIOLOGY & BIOPHYSICS

GRADUATE HANDBOOK
PhD Program in Physiology
Updated July 2026

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I. PREAMBLE

These Guidelines provide graduate students, faculty, the Graduate Affairs Committee and the Directors of Graduate Studies with a description of the program and policies for graduate study in the Department of Physiology and Biophysics. These departmental Guidelines are nested within those put forth by the Faculty Council Policy on Graduate Education, located here:

https://medicine.buffalo.edu/faculty-council/policies/faculty-council-policy-graduate-education.html.

II. DIVERSITY STATEMENT

The Department values the diversity of all individuals regardless of race, ethnicity, sex, disability, religion, gender identification or sexual orientation. Diversity leads to excellence. We strive to create and foster an inclusive environment that is safe and gives voice to all members of the department: students, trainees, staff and faculty.

III. THE GRADUATE AFFAIRS COMMITTEE (GAC)

A Graduate Affairs Committee (GAC), chaired by the Directors of Graduate Studies and consisting of five other faculty members will be responsible for administering all facets of the graduate program, including admissions. The Director of Graduate Studies and the other members of the Committee are appointed by the Department Chair.

IV. THE PROGRAM

The Department of Physiology and Biophysics of the State University of New York at Buffalo is one of six basic Medical Science Departments in the School of Medicine and Biomedical Sciences. It is a Department with University-wide teaching responsibilities for approximately 180 medical, 90 dental, 50 graduate, and 2,000 undergraduate students per year. The Department's degree programs are exclusively at the graduate level. The Department currently offers Ph.D. and M.S. programs in Cellular and Molecular Physiology.

The program emphasizes both extensive training in molecular, cellular, and systems physiology and intensive training in current topics in physiological research. Students can pursue research in neurobiology, cardiovascular, cellular, gastrointestinal, and renal physiology. The program offers training in the laboratories of an exceptional departmental research faculty. Students also have the opportunity to pursue collaborative research in other related departments or areas of the university.

Program Learning Outcomes

- Enrolled students will plan and conduct research on a specific project under the guidance of an advisor while developing the intellectual independence that typifies true scholarship.

- Graduating students will demonstrate a broad base of established and evolving knowledge within a chosen discipline and detailed knowledge of a specific research area in their field of study.

- Graduating students will demonstrate skills and proficiency in oral and written communication as well as teaching skills sufficient to present their thesis work to scientific and lay audiences as well as to other students, and to navigate grant application and scientific publishing processes.

- Graduating students will be trained in responsible conduct of research to improve their ability to make ethical and legal choices. This includes practicing rigor, honesty, and integrity in experimental design and data analysis, reporting data with acceptable standards of reproducibility and understanding the rules for ownership and access to data and the criteria for authorship.

V. ADMISSION REQUIREMENTS

A Bachelor of Arts or Science is required. A background in biologic and/or chemical science, with some physical chemistry and mathematics, including calculus, is typically required for admission. Graduate students typically come directly from a four-year college program having majored in biology, chemistry, physics or engineering, although some matriculate after having worked in industry or had other non-academic experiences. Many enter the program to train for a career in research and teaching at a college, university, or professional school, but graduates also find employment in government or industrial laboratories.

The candidate for graduate work in physiology should have demonstrated above-average academic performance. Entry into the program is contingent upon award of the baccalaureate degree.

Applicants generally enter the Physiology PhD program after one year in the PhD Program in Biomedical Sciences (PPBS), but can be directly admitted.

Applicants to the PhD Program in Biomedical Sciences are required to submit the following:

- College transcripts
- Three (3) letters of recommendation
- A statement of interest
- an up-to-date resume or CV

An Interdisciplinary Admissions Committee evaluates these credentials, conducts interviews with promising candidates, and makes offers of admission. This offer normally includes financial support in the form of a graduate assistantship and tuition scholarship. During this interdisciplinary year, applicants to the Physiology PhD program choose a thesis advisor in the department and are evaluated by the GAC. On admission to the department, students normally receive financial support in the form of a research assistantship and tuition scholarship.

Online application, PPBS:

https://www.buffalo.edu/grad/programs/phd-programs-in-biomedical-sciences-phd.html

Applicants may also enter the program without first entering the PPBS, after evaluation by the GAC and with the approval of the Graduate Faculty.

Online application, Physiology:

https://www.buffalo.edu/grad/programs/physiology-phd.html

Special Note for International Students

If you are applying from outside the United States, apply as early as possible to ensure time for application and visa processing. After admission to the program, there may be additional materials requested by the university's International Admissions team in order to secure an I20.

Regardless of your program's deadline, it is recommended that you apply **at least** 6-9 months prior to the term start date (depending on your country of origin). Check with your program's application coordinator for specific guidelines.

English Proficiency Requirement

International applicants must present a valid English Language Proficiency test score. It is university policy that test dates are no older than two years when students enter a program. We recommend uploading scanned copies of your results at the time of application in order to expedite the review process. **Please review:** Accepted Tests and Minimum Scores General Admission Requirements

- Institution code: **R2925** (SUNY-University at Buffalo)

VI. TRAINING PROGRAM FOR THE Ph.D.

Students normally enter these programs after completing their first year in the Ph.D. Program in Biomedical Sciences (PPBS). The first-year curriculum follows the PPBS guidelines and requirements. This includes courses in Research Ethics and Fundamentals of Biomedical Research I and II. 4-6 credit hours of electives and Critiquing Scientific Literature are also required in the spring semester. Students undertake at least 4 lab rotations that foster proficiency in areas that are beyond formal courses and allow selection of a laboratory/home for thesis work.

During the second year, graduate students take courses in the Department, start their research, and develop a thesis proposal. In the summer of their second year, students are expected to take their Preliminary Exam: a written original research proposal, independently formulated by the student, reviewed by a Committee of three departmental faculty, and then orally defended by the student. Completion of the required coursework and successful completion of the preliminary exam entitles the student to advance to candidacy. The third and fourth years are devoted to completion of their thesis research. Students routinely complete their thesis before the completion of their fifth year.

A. Selection of Dissertation Mentor

During the first two semesters, students are normally advised on academic matters by the Director of the PPBS. Students are also encouraged to consult with other faculty. At the end of their second semester, students will choose their dissertation research advisor or mentor. Students are expected to start working in their mentor's laboratory in the summer following their first year.

Selection of the Mentor is one of the most important decisions a student will make. The decision should be a careful and deliberate one. A student must choose a lab in which they feel comfortable with the mentor and other lab personnel and where they find the proposed project to be exciting and worthy of study. Students should complete more than one rotation prior to determining which laboratory they are interested in for thesis research. Final selection of mentors for PPBS students will require agreement of both the student and the proposed mentor and will follow procedures established by the PPBS program. For non-PPBS students, an agreement between the student and faculty mentor and Departmental Chair approval will be required.

B. Course Requirements for the PhD

The Ph.D. degree requires:

- A minimum of three years (72 credit hours) of graduate study
- Continuous registration for a minimum of one credit hour each Fall and Spring term until all requirements for the degree are completed
- A PhD dissertation which is an original contribution, normally written in English.

The first year required courses follow the PPBS first year curriculum. Once matriculated into the Physiology doctoral program students must take courses as listed below.

1. PPBS FIRST YEAR CURRICULUM - FIRST SEMESTER

Course Number	Title	Credits
BMS 514	Research Ethics	2
BMS515	Fundamentals of Biomedical Research I	4
BMS516	Fundamentals of Biomedical Research II	3
BMS 509	Ph.D. Program Laboratory Rotation	3-5
BMS 510	Ph.D. Program Laboratory Rotation	3-5

2. PPBS FIRST YEAR CURRICULUM - SECOND SEMESTER

BMS 509	Ph.D. Program Laboratory Rotation	3-5
BMS 510	Ph.D. Program Laboratory Rotation	3-5
BMS 511	Critiquing Scientific Literature	1

4-6 credits hours of Electives - see PPBS curriculum for current selections:

https://medicine.buffalo.edu/phdprogram/departments_and_curriculum/required_and_elective_courses.html

3. CURRICULUM BEYOND FORMAL ADMISSION TO THE PhD PROGRAM IN PHYSIOLOGY

Physiology Year 2 - Fall

PGY505	Cellular and Molecular Physiology	4
PGY507	Laboratory Exercises in Physiology	5

3-4 credit hours of Electives -> see below

Physiology Year 2 - Spring

PGY 607	Cellular and Molecular Basis of Disease	3
PGY 507	Laboratory Exercises in Physiology	7

2-4 credit hours of Electives (see below)

Physiology Year 2 - Summer

- Preliminary Examination/Research (Complete exam before the beginning of the 3rd year)

Physiology Year 3 - Fall	Thesis research	1-9
PGY701		
PGY599	Supervised teaching	3

Physiology Year 3 - Spring

PGY701	Thesis research	1-9

Physiology Year 3 - Summer

PGY701	Thesis research	1-9

Physiology Year 4 - Fall

PGY701	Thesis research	1-9

Physiology Year 4 - Spring

PGY701	Thesis research	1-9

Physiology Year 4 - Summer

PGY701	Thesis research	1-9

Physiology Year 5 - Fall

PGY701	Thesis research	1-9

Physiology Year 5 - Spring

PGY701	Thesis research	1-9

4. Elective Courses

Elective courses provide opportunities for advanced education in specialized areas relevant to the student's thesis research and advanced general education. These are advanced courses in the 500 and 600 level in specialized areas of Physiology and Biophysics. The format of each depends on the subject and the instructor. Up-to-date descriptions can be obtained from the Director of Graduate Studies.

Special Topics and Electives may be taken at any time but a minimum of 2 courses after entering the program are required before a student may graduate. The electives may be selected from courses taught outside of the department, subject to the approval of the mentor and committee members if the mentor deems necessary. The Special Topics requirement can be fulfilled by achieving a grade of B (not B minus) or better. A student cannot take a course addressing the same material more than once to fulfill the requirement. Courses may be selected by the student in consultation with the student's Thesis Advisor. Some suggested elective courses include (some of these are not available every year; other courses are also possible):

- PGY 551 Human Physiology I, 3 credits
- PGY 552 Human Physiology II, 3 credits
- PGY 555 Neuroimmunology, 3 credits
- NRS 520 Cellular and Molecular Neuroscience, 4 credits
- NRS 521 Systems Neuroscience, 4 credits
- NRS 524 Developmental Neurobiology, 3 credits
- BPH 505 Biophysical Basics: Processes, 3 credits
- MAE 578 Cardiovascular Biomechanics, 3 credits
- BIO 502 Advanced Cell Biology, 4 credits

- BIO 608 Advanced Topics in Macromolecular Structure, 3 credits
- BE 520 Biomaterials in Regenerative Medicine, 3 credits
- BE 570 Medical Nanotechnology, 3 credits
- BE 555 Biomechanics and Mechanobiology, 3 credits
- BCH 503 Biochemical Principles, 3 credits
- BCH 507 Protein Structure and Function, 2 credits
- BCH 508 Gene Expression, 2 credits

C. Departmental Seminars

Students are required to attend the departmental seminar series. Students will often be given the opportunity to discuss research findings or career opportunities with the seminar speakers.

D. Supervised Teaching – PGY 599

A minimum of three credit hours in supervised teaching (PGY 599) is required. Supervised teaching will help students develop communication and teaching skills. The format for this teaching can vary, depending on the needs and preferences of each student. Students may prepare and deliver lectures in undergraduate or graduate courses, or participate in the development and presentation of student laboratories. In addition, students will prepare appropriate examination questions and will assist in the evaluation and counseling of students. Teaching can occur at any appropriate time after completion of the Preliminary Examination, usually in the third or fourth year. The specific time and course will be determined in consultation between a student, the thesis advisor and the director of graduate studies.

E. Preliminary Examination

The purpose of the preliminary examination is to foster a student's ability to independently develop a research hypothesis and propose a project to test that hypothesis. Successful completion of the examination will show that the student is ready to move forward and undertake PhD thesis research.

Eligibility for the Preliminary Examination requires the successful completion of all courses included in the first two years of the Physiology Curriculum, a commitment from a member of the faculty to serve as Thesis Advisor, and approval by the Graduate Affairs Committee.

The Preliminary Examination is conducted by a Preliminary Examination Committee appointed by the Director of Graduate Studies and is comprised of at least three members of the Graduate Faculty, at least one of which will be from the Department. The chairperson of the Examination Committee is designated by the Director of Graduate Studies. The student's Thesis Advisor cannot serve on the Committee.

The first component of the Preliminary Examination consists of a written research proposal on a topic selected by the student in consultation with the Director of Graduate Studies. The written proposal will be evaluated by the Preliminary Examination Committee. If the proposal is found to be acceptable, in the second component of the examination the student will present an oral defense of the proposal to the Committee.

Upon successful completion of the written and oral portions of the examination, the student will advance to candidacy for the PhD in Physiology.

- **Timetable**: A PhD student will take the Preliminary Examination at the end of the fourth semester, after completion of all required courses in the Physiology Curriculum. It is expected that the student will complete all components of the Preliminary Examination before the start of the fifth semester.
- **Research topic**: The Preliminary Examination topic may be related to the thesis project of the student or another topic in physiology. The proposal must be independent work of the student and not the work of the Thesis Advisor. A draft of the Specific Aims page of the R01-style proposal (below) must receive approval from the Director of Graduate Studies to assure that the project is feasible.

- **Format of the written proposal**: The written component of the Preliminary Examination is the presentation of an original research proposal in the format of an NIH R01 grant application. The student should use NIH grant proposal guidelines to develop the proposal (https://www.niaid.nih.gov/grants-contracts/write-research-plan#A1). The purpose of this format is to give the student experience in developing a research hypothesis, specific aims, experimental design and rationale, and to provide critical feedback in an area related to their thesis project.

  The student is expected to develop and independently write the proposal. The student may consult with other students and faculty regarding format, presentation and style, but the experimental content and interpretation must be an independent effort of the student. Since the student may not have extensive preliminary data, properly referenced data from others can be used as preliminary data to show feasibility of proposed experiments.

- **Submission of the written proposal**: On completion of the written proposal, the student will submit the proposal to the Examination Committee. The Committee will have 2 weeks to study the proposal. The Committee will then convene to discuss the proposal to decide whether the oral component of the examination should proceed. Approval by the majority of the Committee constitutes a pass. If the proposal is found to be acceptable, it is the students' responsibility to schedule the oral examination at a convenient time for both the student and the members of the Committee.

  If the written proposal is not found to be acceptable by the Committee, the student will

be permitted to attempt to correct the deficiencies and resubmit the proposal. The Committee will provide the student with written or oral evaluations and suggestions for improving the proposal. Final revisions must be completed within four weeks of being notified of deficiencies. The written exam may be attempted three times. Failure on the third attempt (i.e., second resubmission) will be grounds for dismissal from the PhD program in Physiology.

- **Oral Examination**: The oral examination should be attempted within 2-4 weeks after approval of the written examination. The purpose of the oral examination is to hone the student's ability to present ideas orally, to evaluate the student's thought processes in answering questions concerning the written proposal, and to explore the student's knowledge and understanding of the physiology related to their proposal. The oral examination will consist of a short presentation (30-45 minutes) by the student of the main components of the proposal followed by questions from the Examination Committee. Approval by the majority of the Committee constitutes a pass. The Thesis Advisor can be present during the oral examination; however, the Thesis Advisor will not participate in the oral defense. The advisor may participate in subsequent deliberations of the Examination Committee. **The examination will be closed to the public**.
    - If the student does not pass the first attempt at the oral examination, the student will be permitted to attempt the oral examination one more time. Failure on the second attempt will be grounds for dismissal from the PhD program.
- **Application to Candidacy**: Passing both the written and oral components of the Preliminary Examination is required before a student is formally admitted to candidacy for the PhD. Upon successful completion of the examination the student will apply to the Graduate School for Advancement to Candidacy.

F. Application to Candidacy

According to the procedures in the Graduate School of the University, once a student has been successful in this "Preliminary Examination" and completed all required coursework, they can file the "Application for Candidacy" for the Doctoral Degree. This filing will be done after completion of the student's fourth semester, Filing and approval of this Application is important for two reasons. First, it establishes that the student has or will shortly complete all of the academic requirements for the degree (courses and exams). Second, the student is now considered "full-time" even if they are registered for only one credit hour/semester. Thus, completing the Research Proposal sets the student on their way to the final Doctoral degree.

It is recommended that when choosing the expected conferral date on the ATC that students select the date that coincides with 5 years of study; 1year in; PPBS; 4 years in Physiology.

G. Thesis Research & Annual Committee Reviews

The PhD thesis reports the results of original research done by a graduate student. Research leading to a PhD thesis usually begins at the time that a student enters the department. It is expected that thesis research will be a full-time activity after the student successfully passes the preliminary examination.

After a student successfully passes the preliminary examination, the student and his/her thesis advisor recommend three members of the Graduate Faculty (two from inside and one from outside the department) to serve on the Thesis Advisory Committee. The Thesis Advisory Committee is appointed by the director of graduate studies and chaired by the mentor. Two core members of the Thesis Advisor Committee, two of whom must have a primary appointment in the Department of Physiology and Biophysics. The mentor must have a primary appointment in the department. In addition, a fourth committee member must have his/her primary appointment outside of the Department of Physiology and Biophysics and must hold an appointment equivalent to a tenure-track Assistant Professor or higher at the University at Buffalo or Roswell Park. Additional Physiology and Biophysics graduate faculty members may be appointed upon agreement between the student and his/her mentor, usually with the goal of bringing some special expertise into the committee.

Associate members of the UB Graduate Faculty may not serve on the Thesis Advisory Committee as core members but may serve as additional committee members. Individuals who are neither members nor associate members of the UB Graduate Faculty may serve as additional committee members if their expertise would be of significant value to the student and the core members of the committee. The Physiology and Biophysics Department Chair is an ex officio member of all committees, including Dissertation Committees. Students are expected to meet with the Committee at least once per year. Students are required to submit a Thesis Committee Report forms following each meeting. [see Addendums A and B]

Thesis preparation is critically monitored and supervised by the thesis advisor and the Thesis Advisory Committee. The student's Thesis Advisory Committee will meet at least once yearly (or more often at the discretion of the student/mentor and/or committee). Meetings should continue up to the time the Mentor and Committee determine the student can be encouraged to prepare the Doctoral Thesis for written evaluation and oral defense. The Thesis Advisory Committee under the leadership of the thesis advisor will formally review student progress at least once per year. The review should include a formal presentation by the graduate student and critical and supportive discussion by the faculty of research results, progress toward publications, and specific plans for completion of the research. An Annual Review Report for Graduate Students will be prepared for the student by the director of graduate studies and will be submitted to the Graduate School, usually following the annual meeting between the student and Thesis Advisory Committee. The review form is at: https://www.buffalo.edu/content/dam/grad/internal/phd-review.pdfDownload pdf

The oral defense of thesis is scheduled after the candidate's Thesis Committee and the department

have approved the thesis. The thesis is presented to the Graduate Faculty in a seminar followed by an oral defense.

H. Responsible Conduct of Research (RCR) Requirement

All students admitted to a PhD program are required to document successful completion of "Responsible Conduct of Research" (RCR) training when they submit their PhD Application to Candidacy Form for their PhD degree. This training requirement may be fulfilled by either (1.) enrolling in and passing with a grade of B (3.00) or better in LAI 648 *Research Ethics* or RPG 504 *Responsible Conduct of Research* or BMS 514 *Intro to Scientific Investigation and Responsible Conduct* or RSC 602 *Research Ethics for the Health Science*s or (2.) completing a Collaborative Institutional Training Initiative (CITI) online program in Responsible Conduct of Research (RCR) course with an average score of 80 percent or higher, or (3.) successfully completing UB's Responsible Research Micro-Credential. Students opting to complete the CITI online course, or the Responsible Research Micro-Credential must supply proof of completion with their PhD Application to Candidacy.

The University at Buffalo has an institutional membership in the CITI online RCR program. That online program can be accessed through the CITI Program website.

There are four versions of the basic CITI online RCR course from which students should choose the most appropriate version for their area of doctoral study: biomedical sciences, social and behavioral sciences, physical sciences or humanities. The RCR program is comprised of a series of modules, each of which consists of readings and case studies and ends with a quiz covering the material. The program allows the student to enter and exit at any point and to re-take the quiz associated with each section. A minimum total score of 80 percent is required to pass the online course. Assistance is available online at the CITI website if any technical difficulties are encountered.

Once the student has successfully completed the appropriate version of the CITI RCR program, they must print the "Completion Report" from within the CITI program and submit it with the PhD degree Application to Candidacy.

I. Academic Standards

1. Grading in Courses

The department requires a grade of at least 'B' in all required course work in Physiology. Failure to meet this requirement in a single course results in a probationary period; multiple failures may lead to dismissal from the program. A grade of 'C' in courses outside the department is acceptable provided that it represents passing performance in the view of the department concerned. The Graduate School also requires that the student's overall average be maintained at least at the 'B' level.

2. Academic Standing

The following are grounds for probation, dismissal, and/or non-acceptance into the Physiology Department based on PPBS grades or other graduate level grades prior to consideration by our department: (i) Overall GPA below 3.0 in graduate courses. (ii) A grade lower than a B in any required course applied towards the degree. (iii) Failure to achieve a B grade in all lab rotations. (iv) Failure to receive an S grade in the Research Proposal within 12 weeks of public oral presentation. (vi) an Unsatisfactory/U grade in the Research Proposal process results in mandatory re-take or dismissal. In addition, a second U grade in the Research Proposal results in automatic dismissal from the program.

3. Academic dismissal

Graduate students who do not meet the written terms of their academic probation may be academically dismissed from the program by the director of graduate studies or chair of the department. Such dismissals shall be done in a timely fashion but no later than three weeks after the completion of the term. The Graduate School will be notified in writing of all such academic dismissals.

Graduate students who are dismissed for academic reasons from a graduate program will have a "GRD" (Graduate School) service indicator placed on their academic record to prevent future registration.

VII. FINANCIAL AID

A. As a Doctoral Candidate you will receive a $35,000 stipend derived from State, research grant funds, or fellowships.

B. **University Fellowships**: Presidential and Graduate School

Fellowships are awarded by the Graduate School. It is the responsibility of the Director of Graduate Studies, in conjunction with the Graduate Affairs Committee in the case of new students, to submit applications for these fellowships to the Graduate School according to a timetable established by the Graduate School, normally late February for the following year.

C. **Grant support**: After the end of the first year, a student's stipend normally will be provided from the grant funds of the student's Mentor.

D. **Time limit for support and tuition waivers**: Students are expected to complete their Ph.D. requirements in 5-6 years. This will normally be the maximum time financial support and tuition waivers (if available) will be provided. Under extenuating circumstances, a student and/or the Mentor may petition the Graduate Affairs

Committee for relaxation of this requirement.

E. **Funding for Conferences/Travel:** Students may apply for department travel funding using the Travel Funding Application. Departmental funding up to $1,500 in the form of the Travel Funding Award may be made available for Ph.D. students who present a poster or oral presentation at scientific conferences or who wish to visit a laboratory at another institute to learn new scientific techniques. Requests should be submitted in writing to the director of graduate studies for review.

F. Information about additional types of financial aid for graduate students can be found here: https://financialaid.buffalo.edu/graduate-students/

VIII. STUDENT LEAVE POLICIES

A. Vacation Leave

Departmental policy is that doctoral student stipend and tuition support be provided by the student's thesis advisor. These funds typically are administered by the Research Foundation of the University at Buffalo. Therefore, doctoral students are considered Research Foundation employees. The fringe benefits offered through the Research Foundation (*e.g.* health insurance, Student Health visits) are detailed in literature made available to all new students.

As Research Foundation employees, doctoral students also are entitled to annual leave appropriate to their time-in-service. As students, they do fill out electronic time sheets, but do not receive actual leave accruals. However, Department policy is that students will have 2 weeks of leave available to them per year to use for vacation. Those students who need a longer vacation period because of extended travel times may pool two years allowance into a single trip; otherwise, the annual leave time shall be non-accumulating.

In regard to vacation leave, the period chosen should result from discussion between the student and mentor and should be consistent with the educational and research commitments associated with the student's academic and research objectives and responsibilities. Students shall also be allowed reasonable medical absences for sickness or treatment. In such circumstances, the student and their mentor may agree on a virtual working period (*e.g.*, writing toward a manuscript or the thesis) that will not be considered vacation or leave time. These policies also apply to Department of Physiology and Biophysics doctoral students paid from State funds.

Two principles shall be followed by the student and mentor in discussing leave time:

1) The student and mentor have made a mutual commitment to training and research objectives
2) Achieving these mutually reinforcing objectives requires flexibility in effort and time-of-effort.

Although the mentor cannot forcibly deny a leave request, she or he can certainly view such a request as inconsistent with the student's commitment to these training and/or research objectives.

If disagreements arise which the student and mentor are unable to resolve: the Department Chair and Director of Graduate Studies should be informed by either the student or mentor or both and an effort will be made to mediate the dispute.

B. Family Medical Leave

Students requesting Family Medical leave due to birth of a child, assumption of guardianship of a child, or care for an immediate family member should contact Human Resources determination of benefits and additional information: https://www.buffalo.edu/administrative-services/forms-catalog/hr/fmla-request-for-leave.html

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IX. PETITIONS

Petitions must be submitted to the Director of Graduate Studies and/or the Graduate School (and approved by the Divisional Committee in the latter case) for the following purposes:

A. **Extension of time limit for completion of degree**: Students must submit the Petition for an Extension of the Time Limit to Complete a Graduate Degree Program justifying reasons for an extension beyond seven years for completion of the Ph.D. A written summary of the following must be attached to this petition:

- The cause of delay in completion
- Detailed description of work completed thus far
- Detailed month-to-month plan of work to be completed from now until the new anticipated completion date
- A written endorsement from the major advisor regarding work completed thus far and feasibility of a student's completion plan

B. **Leave of absence:** If a student wishes to take a leave of absence a petition must be submitted detailing the reasons for the leave. The petition must be filed prior to the semester that is requested for leave. Students on a Leave of Absence cannot be paid because they are not in a "current" student status.

C. **Change of status:** A petition to change status from Ph.D. candidate to M.S. or vice versa must be submitted in the form of a letter to the Director of Graduate Studies. A copy of this letter and the approval must accompany the student's program form when it is submitted to the Graduate School. A petition for a switch from the M.S. to the Ph.D. program must be subject to the admissions process.

D. **Change of Dissertation Advisor:** The same procedure for a letter is followed as in **C**.

E. **Course requirements:** If a student requests that an exception be made to the normal course requirements, the same procedure is followed as in **C.**

X. GRIEVANCE PROCEDURE

The Department of Physiology and Biophysics follow and adhere to the Graduate School grievance procedures found here: https://www.buffalo.edu/grad/succeed/current-students/policy-library.html#grievance

Students should feel free to contact the Director of Graduate Studies or the Chair of the Department on personal and academic matters or with grievances. On matters under departmental jurisdiction in which a student believes they have been aggrieved, a formal grievance review may be requested. The request must be in writing from the student concerned to the Chair of the Department and must be filed within one month of the alleged grievance. It must clearly state the charge of grievance, its effects, and summarize the particulars concerning it.

The Chair of the Department, in consultation with the parties concerned, will appoint an *ad hoc* committee with student representation to investigate the grievance within 20 academic days of receipt of the student's appeal. The *ad hoc* committee's action is restricted to procedures or administrative matters, as opposed to judgments of academic performance. All hearings of the Grievance Committee will be closed. No formal minutes will be taken. The committee will report its recommendation for resolution of the grievance within one week after filing. Grievance reviews for graduate students are also available through the Graduate School.

XI. AI Policy

Use of Generative AI in Dissertations, Theses and Scholarly Projects

Dissertations, theses, and other culminating scholarly projects must reflect the student's original intellectual work, including the development of ideas, analysis, interpretation, and written expression. Generative artificial intelligence (GenAI) tools may be used in a limited and controlled manner as described below; however, such tools must not replace the student's independent thinking, scholarly judgment, or authorship.

Non-Substantive Use (Permitted without prior approval)

Use of GenAI that does not alter meaning, reasoning, or intellectual contribution. These include grammar correction, minor stylistic edits, formatting, and transcription. Use of AI-based literature curation tools is permitted provided that students perform synthesis and written literature reviews without GenAI assistance. Only clearly non-substantive functions are allowed. When in doubt, treat use as substantive

Substantive Use (Restricted; requires approval)

Any use of GenAI that influences or contributes to intellectual content, including generating arguments, literature synthesis, writing sections, coding for analysis, or data interpretation.

Prohibited Uses of GenAI

- Submitting GenAI-generated text, figures, tables, code, or other materials as original work without proper authorization and disclosure;
- Using GenAI to generate or substantially contribute to core scholarly components, including research questions, hypotheses, literature reviews, analytical arguments, or interpretations of data, without prior approval;
- Fabricating, manipulating, or altering research data or results using GenAI tools;
- Using GenAI systems to generate citations or references without verification of their accuracy and existence in the scholarly record;
- Uploading or entering confidential, proprietary, unpublished, or sensitive research data—including human subjects data—into publicly accessible GenAI systems or tools that do not meet institutional data security requirements.

Violations will be treated as academic misconduct and may result in disciplinary action, up to and including degree revocation. Students should review the UB Academic Integrity Policy: (https://catalogs.buffalo.edu/content.php?catoid=17&navoid=863#academic-integrity)

Advisor/Mentor Responsibilities

The dissertation or thesis advisor, in consultation with the student's thesis/dissertation advisory committee, is responsible for establishing expectations regarding the permissible use of generative GenAI for each student's project, consistent with this policy and applicable program standards. Students must consult with their advisor prior to using GenAI tools for any purpose beyond basic editorial support.

Advisors may:

- Prohibit the use of GenAI entirely for a given project;
- Permit limited uses of GenAI aligned with this policy; or
- Approve specific, clearly defined uses of GenAI, provided such uses are documented and disclosed.

All approvals must be communicated clearly to the student and documented in writing. In cases of ambiguity, the default expectation is that GenAI-generated substantive content is not permitted.

Student Responsibility

The use of generative GenAI does not diminish the student's responsibility for the accuracy, originality, and integrity of their scholarly work. Students remain fully accountable for all content submitted, including any material developed with the assistance of GenAI tools. Students are responsible for complying with both program-level requirements and advisor-specific guidance. In the event of conflicting guidance, the more restrictive standard will apply.

Students are required to obtain approval for any substantive GenAI use related to the generation of their dissertation, thesis or scholarly project report. Permission should be obtained in writing prior to use of the tool. Students should maintain a written record of tool use, including identification of the tool, as well as prompts and outputs. When the student submits their thesis, dissertation or scholarly project report to their advisory committee, it must be accompanied by a one-page attestation documenting GenAI use and should be signed by both the student and the major advisor/mentor.

The attestation should include a clear and accurate disclosure of any use of generative GenAI tools in the preparation of the dissertation, thesis, or scholarly project.

The disclosure must:

- Identify the GenAI tool(s) used;
- Describe the specific purpose(s) for which the tool was used;
- Clarify the extent of use, including whether the tool contributed to editing, organization, coding, or other functions; and
- Affirm that all intellectual content, analysis, and conclusions are the student's own.

In cases where GenAI use extends beyond basic editorial assistance and has been approved by the advisor or committee, students may be required to provide additional documentation beyond the attestation, such as summaries of interactions, prompts, or draft outputs, upon request.

Program Director / Graduate Affairs Committee Responsibility

This policy establishes baseline standards governing the acceptable use of generative GenAI in dissertations, theses, and scholarly projects. These standards define the minimum expectations for permissible use, prohibited activities, and disclosure requirements. Although the major advisor serves as the primary authority in approving any substantive use of generative GenAI, the academic program (e.g., Program Director or Graduate Affairs Committee) will maintain formal records of all such approvals. This oversight ensures that permissions are applied consistently and fairly across students, helping to prevent disparities in access to or use of GenAI tools within the program

XII. ADDITIONAL RESOURCES

Additional Resources for current graduate students provided by UB and the Jacobs School of Medicine and Biomedical Sciences can be found here.

https://medicine.buffalo.edu/education/graduate/current-students.html

Addendum A

University at Buffalo
Office of Student Services
The Graduate School

Annual Review Report for PhD Students

To Be Completed by Academic Advisor/Director of Graduate Study

Student Name _____ UB Person Number _____

Last Date Conferred With Student _____

Academic Performance

☐ The student's performance is well above adequate and they should be commended.

☐ The student's performance is adequate and they should be retained.

☐ The student's general academic performance is not adequate, it is the considered opinion of the major professor that they should not continue in the present program.

☐ The student's current academic performance is below standard and a probationary letter should be issued.

Please comment on the student's overall academic performance, including teaching experiences, strategies for improving performance, specific timeframes for completing expected milestones, etc.

Student: Your signature below indicates that you have discussed the contents of this review report with your major advisor.

Student _____
Name Signature Date

Major Advisor: Your signature below indicates that you have discussed the contents of this review report with the student.

Major Advisor _____
Name Signature Date

Chair/Director of Grad. Studies _____
Name Signature Date

The original review report should be placed in the students file and copies should be provided to the student and the major advisor.

408 Capen Hall, Buffalo, NY 14260-1608
Tel: 716-645-2939 Fax: 716-645-6142

University at Buffalo
Office of Student Services
The Graduate School

Annual Review Report for PhD Students

To Be Completed by Student

Student Name _____ UB Person Number _____

Academic Progress

☐ Attach a copy of current unofficial transcript.

Date of Admission to the Current Program _____ Expected Completion Date _____

Date or Expected Date of Qualifying Exams _____ Passed Exam? Yes ◯ No ◯ N/A ◯

Date or Expected Date of Dissertation Proposal Defense _____

Date or Expected Date of Dissertation Defense _____ Current GPA _____

Number of Incomplete Grades _____ Number of Resigned Courses _____

Remaining Coursework

Professional Performance and Potential

1. Briefly comment on your academic/research progress during the past year. Note areas in which you are experiencing any difficulty.

2. Briefly comment on your progress toward your career goals during the past year.

3. What are your academic goals for the coming year?

Attach the Following Information Where Applicable

1. Published or submitted papers.
2. Abstracts accepted and/or presentations at professional conferences.
3. Honors/award/grant or fellowship applications.
4. Participation in teaching.
5. Participation in an internship.
6. Service to the department, school, university or a professional organization.
7. Financial support received (TA, RA, internal fellowships, etc.).

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Addendum B

Jacobs School of Medicine and Biomedical Sciences
Department of Physiology and Biophysics
University at Buffalo

Thesis Committee Meeting

Instructions: Please complete this form for each thesis committee meeting you hold (every 6-12 months). Submit a copy to agiordan@buffalo.edu within a week of the meeting.

Version 12/5/25

Student Name:	**Meeting Date:**

Faculty Members Present:

Materials Provided (PowerPoint presentation, Word documents, handouts, etc.):

Summary of progress in past year (papers, presentations at meetings, etc.):

Topics Discussed:

1.

2.

3

PhD student/Committee should meet in next: **6 months** ☐ **12 months** ☐

Is this the last meeting before the defense? **Yes** ☐ **No** ☐

Program in Physiology
955 Main Street, Suite 3102, Buffalo, NY 14203-1121

Committee Recommendations:

Student Signature: _____

Thesis Advisor Signature: _____

Committee Member Signature: _____

Committee Member Signature: _____

Committee Member Signature: _____

Director of Graduate Studies Signature: _____

Program in Physiology
955 Main Street, Suite 3102, Buffalo, NY 14203-1121