

STUDENT HANDBOOK
2026 - 2027

PHYSIOLOGICAL SCIENCES
GRADUATE INTERDISCIPLINARY PROGRAM

Table of Contents

Section / Subsection	Page
INTRODUCTION	**6**
SCHOLAR'S STATEMENT TO SERVE HUMANITY	**7**
1. THE DOCTORAL PROGRAM	**8**
1.a. Objective	8
1.b. Program Requirements	8
1.b.1. Required Coursework	8
1.b.2. Professional Development and Additional Required Coursework	9
1.b.3. Incomplete Policy	10
1.b.4. Minor Requirement	10
1.b.5. First Author Publishable Manuscript Requirement	10
1.b.6. Qualifying Coursework	10
1.c. PhD Program Timeline	11
1.d. Selection of Mentor	12
1.d.1. Rotation Requirements	12
1.d.2. Mentor Selection Timing	13
1.d.3. Rotation Placement Process	13
1.e. The Comprehensive Examination	13
1.e.1. Committee Composition	13
1.e.2. Overview of the Comprehensive Examination	14
1.e.3. Objectives of the Comprehensive Examination	14
1.e.4. Timing of the Comprehensive Examination	14
1.e.5. Comprehensive Exam Preparation	14
1.e.6. The Written Examination	15
1.e.7. The Oral Comprehensive Examination	16
1.f. Advancement to Candidacy	17
1.g. The Dissertation	17
1.g.1. The Dissertation Committee	17
1.g.2. The Dissertation Proposal	18
1.g.3. The Dissertation	18
1.g.4. The Final Examination	18
1.h. Terminal Master of Science Degree	19
1.i. Financial Structure of the Doctoral Program	19

Section / Subsection	Page
1.i.1. Stipends	20
1.i.2. Competitive Predoctoral Fellowships	20
1.i.3. Scientific Conferences: Attendance and Funding	20
2. THE MD-PhD DUAL DEGREE PROGRAM	**20**
2.a. Dual Degree Objectives	20
2.b. Dual Degree Program Requirements	21
2.b.1. Required Coursework	21
2.b.2. Incomplete Policy	22
2.c. Dual Degree Program Timeline	22
2.d. Financial Structure of the Dual Degree Program	24
2.e. Information that matches the PhD Program	24
3. THE MASTER'S PROGRAM (Two-year research-intensive option)	**24**
3.a. Degree Objectives	24
3.b. Master's Program Requirements	24
3.c. Physiological Sciences Coursework	25
3.c.1. Required Coursework	25
3.c.2. Elective Coursework	25
3.c.3. Exceptions to Required Physiological Sciences MS Coursework	26
3.c.4. Incomplete Policy	26
3.d. Timeline	26
3.e. Completion Options	26
3.f. Transfer from MS to PhD Program	27
3.g. Financial Support for Master's Students	27
3.g.1. Teaching Assistantship	27
3.g.2. Research Assistantship	27
3.g.3. Other Support	28
3.h. Master's Completion Requirements	28
3.h.1. Committee	28
4. THE MASTER'S PROGRAM (One year literature review based option)	**28**
4.a. Degree Objectives	28
4.b. Master's Program Requirements	28
4.c. Physiological Sciences Coursework	28
4.d. Timeline	29
4.e. Degree Completion	29

Section / Subsection	Page
4.f. Financial Support	29
5. MINOR IN PHYSIOLOGICAL SCIENCES	**29**
6. ADDITIONAL POLICIES AND PROCEDURES	**29**
6.a. Academic Appeals	30
7. GRIEVANCES	**30**
7.a. Non-Academic Grievances	30
8. ANNUAL PROGRESS REVIEW	**31**
8.a. Purpose	31
8.b. Timeline	31
8.c. Required Components	31
9. COMMUNICATION AND RESOURCES	**32**
9.a. Official Communication Channels	32
9.b. Program Website	32
9.c. GradPath	32
10. FORMS AND DOCUMENTS	**32**
11. LEAVE OF ABSENCE POLICY	**33**
11.a. Types Of Leave	33
11.b. Process	33
11.c. Impact on Funding	33
11.d. Unapproved Absence	33
12. MEMBERSHIP EXPECTATIONS	**34**
13. PROFESSIONAL DEVELOPMENT OPPORTUNITIES AND EXPECTATIONS	**34**
14. COMMITMENT TO EQUITY AND INCLUSION	**35**
15. TEACHING OPPORTUNITIES	**36**
16. FINANCIAL SUPPORT AND FUNDING	**37**
16.a. Graduate Assistantship Funding	37
16.b. Funding Sources	37
16.c. Funding Duration	38
16.d. Additional Funding Opportunities	38
16.e. Tax Information	38
16.f. Summer Funding	39
17. PROGRAM LEADERSHIP AND CONTACTS	**39**
17.a. Executive Committee	39
17.b. Program Committee	39

Section / Subsection	Page
17.c. Recruiting Committee	40
17.d. Finance/Resource Committee	40
17.e. Teaching Committee	40
17.f. Activities Committee	40
APPENDIX I: PHYSIOLOGICAL SCIENCES PROGRAM BY-LAWS	**41**
APPENDIX II: THE COMPREHENSIVE EXAMINATION COMMITTEE CHAIR CHECKLIST	**45**
APPENDIX III: THE WRITTEN COMPREHENSIVE EXAM APPROVAL FORM	**46**
APPENDIX IV: PHYSIOLOGICAL SCIENCES DOCTORAL STUDENT CHECKLIST	**47**
APPENDIX V: PHYSIOLOGICAL SCIENCES MASTER'S STUDENT CHECKLIST	**48**
APPENDIX VI: GRADPATH INSTRUCTIONS	**49**

INTRODUCTION

Welcome to the Interdisciplinary Graduate Program in Physiological Sciences. The purpose of this handbook is to introduce you to the various requirements that must be met before you are granted the Master of Science (MS), or Doctor of Philosophy (PhD) degree from the Graduate College of The University of Arizona. The strength of the Physiological Sciences program derives largely from the flexibility afforded by the interdisciplinary faculty who participate in the program. This allows each student the freedom to design a unique program of study to meet individual career goals.

However, the flexibility of this program necessitates careful coordination of your program of study with your mentor(s), the Program Committee, the Physiological Sciences faculty, and the Graduate College. This handbook should be read upon entering the program and used henceforth as a reference regarding the policies and procedures of the Physiological Sciences GIDP at The University of Arizona.

The program is intended to provide the foundation for a career in the physiological sciences. To achieve this, the student requires (a) an adequate base knowledge of physiology at the molecular, cellular, organ, and systems level, (b) experience and training in research, culminating in a major research project, c) experience and training in teaching, and d) experience and training in presenting research findings.

The program is designed for completion of the doctoral degree in approximately five years, or the master's degree in two years. Obtaining the degree within this time frame depends, in large part, on the motivation and self-discipline of the student. The program is designed to introduce students to research activities during their first year. By design, the coursework requirements are flexible so that the needs of students with diverse areas of specialization can be accommodated. The student, in conjunction with a mentor, designs the individualized program of study, which is approved by the director.

SCHOLAR'S STATEMENT TO SERVE HUMANITY

In the Pursuit of knowledge, I WILL STRIVE TO:

- MAINTAIN the integrity of the scholarly process and practice my profession with conscience and dignity;

- SHARE my knowledge in an ethical manner for the good of all humanity, and uphold my responsibility for the continued ethical use of this knowledge;

- RESPECT the integrity of my colleagues, while fostering that integrity through critical analysis of research findings;

- ACKNOWLEDGE the contributions of all those involved in the creation of this knowledge, and only take credit for my own contributions;

- RECOGNIZE my moral and ethical obligations to be fair and objective in judging the work of others, and to avoid bias that obstructs valid ideas that differ from my own;

- RECOGNIZE my role as a member of society and respect the questions posed by members of the society that sustains my work;

- KEEP the well-being of those affected by my work and the benefit to humanity foremost in my practice;

- GIVE respect and gratitude to my teachers and to those I teach;

- NOT PERMIT considerations of age, disease or disability, creed, ethnic origin, gender, nationality, political affiliation, race, sexual orientation, or social standing to alter my judgment as a professional;

- MAINTAIN the utmost respect for life.

(Statement adapted from an oath written by Brendan C. Brinkman)

1. THE DOCTORAL PROGRAM

1.a. Objective

At the University of Arizona, the Graduate College sets the overall framework for the completion of the doctoral degree. Within these guidelines, the Physiological Sciences GIDP establishes specific requirements and monitors student progress. The learning objectives for our doctoral students are:

- Demonstrate comprehensive knowledge of physiology at the cellular, organ, and systems level
- Critically analyze published research in their area of study to develop key investigative questions in physiology
- Conduct original in-depth research on a significant physiological problem, as evident in presentation of research findings
- Effectively communicate in written and oral form to defend research results in the scientific community

In addition, the guidelines and requirements that are described in this handbook have been established to ensure the protection of student interests and successful completion of the doctoral degree. The student is expected to comply with the regulations of the Graduate College with respect to credit hour requirements and the qualifying and comprehensive examinations (please refer to the University of Arizona Graduate Catalog). A high level of performance is expected of students who are enrolled in graduate programs at The University of Arizona. Students must maintain a grade point average of 3.00 (letter grade of B) or better to receive financial support and to be awarded a PhD degree.

1.b Program Requirements

The Graduate College mandates PhD degree credit hour (unit). These requirements include:

- A minimum of 36 credit hours of graduate coursework (500 level or above).
  - At least half of these credits must be graded units (A/B/C or P) and must be completed with an overall GPA $\geq$ 3.0.
- A minimum of 18 dissertation units (PS 920). These credits do not fulfill the requirement of the graduate coursework above.
- A minimum of 9 units in a minor area of study.

1.b.1 Required Coursework

PSIO 503 — Cellular and Molecular Physiology; 6 units
Through examination of fundamental cellular processes, the integrated function of diverse cell types is discussed. Topics include mechanisms involved in protein expression, intracellular protein targeting and regulation of protein function; membrane transport phenomena; cell signaling mechanisms, excitability, ion channels and synaptic function; and muscle and vascular function.

PSIO 603A — Systems Physiology; 6 units
This course in human physiology contains an extended discussion of the nervous, cardiovascular, renal, respiratory, endocrine and gastrointestinal systems. Topics are presented at the systems level while building on cell and molecular physiology and leading to an integrated view of the function of the human organism. Lectures introduce individual elements and concepts that constitute physiology and integrate these basic principles into a comprehensive understanding of physiological systems. Weekly discussion sections complement the lecture series and focus on primary research articles and problem sets that augment lecture topics.

PSIO 696A — Physiology Seminar Series; 1 unit each semester
This course consists of a weekly seminar series featuring internal and external speakers. Students must enroll in PSIO 696A every semester they are enrolled in the program unless there is a documented class conflict.

PS 696C — PS Student forum; 1 unit each semester
This course consists of a seminar series featuring student research presentations. Students must enroll in PSIO 696C every semester they are enrolled in the program unless there is a documented class conflict.

PS 700 — Research Methods in Physiological Sciences; at least 6 units
At least three research rotations are required, with each rotation consisting of 2 units (6 units total). This laboratory course provides students with an understanding of the types of research available within the Physiological Sciences Graduate Interdisciplinary Program (GIDP). The purpose of the course varies according to the individual needs and interests of the student. In general, the investigator should not expect the student to complete a major research project. Rather, the course provides an opportunity for students to become acquainted with the ongoing research of the laboratory and to gain exposure to important technical aspects of the work under the tutelage of a regular faculty member with an active appointment in the Physiological Sciences Graduate Program. Laboratory placements with faculty outside of the PS GIDP are not allowed unless petitioned and approved by the Program Committee.

1.b.2. Professional Development and Additional Required Coursework

Ethics Course; 2–3 units
Students must complete one semester of an upper-division ethics course at the 500 level or above.
Suggested courses include:

PHCL 595B — Scientific Writing Strategies, Skills and Ethics; 2 units
Provides students with skills to write and communicate effectively for a variety of scientific audiences, including scientific journals, funding institutions, potential employers, and administrative audiences in academia and industry.

SHSD 649 — Survival Skills and Ethics; 3 units
Designed for graduate students and postdoctoral fellows, this course provides information and experiences to aid in successful navigation of graduate school and post-graduation careers. Topics include effective speaking and writing, grantsmanship, mentoring, teaching, and career options. Ethical issues and resources are integrated throughout the course.

Statistics Course; 3 units
Students must complete one semester of an upper-division statistics course at the 500 level or above.
Suggested courses include:

EPID 576A or BIO 576A — Biostatistics
MATH 509C — Statistics for Research
PSY 507A, 507B, 507C — Statistical Methods I, II, III

Other courses may be considered for approval by the Program Committee.

The remaining units must be in physiology or in closely related disciplines. The additional courses should be selected by the student in consultation with a mentor. The courses chosen should be based on the student's individual interests and area of specialization. The format of these additional courses could include colloquia, tutorials, or formal courses

offered by a variety of other departments. A program of study should be developed as soon as possible. If the student and mentor decide to alter their original goals, a modified "Plan of Study" form will need to be submitted through GradPath.

Exceptions to Required Physiological Sciences PhD Coursework:
In some cases, certain program requirements may be waived if equivalent coursework has been completed previously. However, if a waiver is desired, the student must submit a written petition to the Physiological Sciences GIDP Program Committee, which will either grant or deny the waiver. Individual faculty are not authorized to waive any of the program requirements without prior approval of the Program Committee. Transfer credit from other institutions can be applied to an advanced degree if "approved by the head of the program, the grade earned is 'B' or above, and it was awarded graduate credit at the institution where the work was completed." (For additional information see the UA Graduate College website, http://grad.arizona.edu/new-and-current-students). If waivers are granted for coursework taken at other institutions, these courses are referred to as "transfer credit" by the Graduate College and must be listed as such on the Doctoral Plan of Study form (in UAccess Student > Advising > GradPath > GradPath forms, after completing the transfer credit form). The Doctoral Plan of Study must be filed during the third semester.

1.b.3. Incomplete Policy
Students earning a grade of Incomplete, "I" for a course should submit a completed Report of Incomplete Grade form to the Program Coordinator for inclusion in their academic record. http://registrar.arizona.edu/gradepolicy/incomplete.htm. Incomplete grades should be completed in a timely manner and are submitted at the discretion of the course Instructor.

1.b.4. Minor Requirement
The Graduate College requires all PhD students to complete a "minor" program of study. Successful completion of a minor field of study is determined by the department in which the minor is obtained, and credits and courses will vary depending on department regulations. The student who chooses to major and minor in Physiological Sciences must complete 9 units of additional formal graded course work in any area of Physiological Sciences (excluding seminars and lab rotations).

1.b.5. First Author Publishable Manuscript Requirement
The Physiological Sciences Graduate Program recognizes the importance of writing and submitting a manuscript, and in responding to reviewer criticisms, as essential parts of a doctoral student's scientific training. As a condition of graduation, it is expected that every doctoral student in the Physiological Sciences Graduate Program write a publishable manuscript in which s/he appears as first author and is the primary contributor. We understand that the publication process can be long. The dissertation defense committee will determine if the work presented is publishable.

1.b.6. Qualifying Coursework
The "Qualifying Coursework" involves obtaining a grade of B or better in both PSIO 503 and PSIO 603. If a student fails this task (i.e., receives a grade of C or lower in either course), the Program Committee and course faculty will decide whether or not the student will be allowed to retake the course. If the student is allowed to retake the course and fails to receive a grade of B or better the student will be dismissed from the Program.

1.c. PhD Program Timeline

The following is the general time frame in which most students progress through the PhD program in physiological sciences. A checklist is provided in Appendix III to help you keep track.

Year 1

- Complete core coursework (PSIO 503, PSIO 605, PSIO 696A, and PSIO 696C).
- Complete three 8-week research rotations (PS 700) in laboratories of your choice.
- Select a dissertation mentor by the end of the three 8-week rotations and formalize the selection by submitting the "Mentor Selection Form" on GradPath.
- Expectations for publications differ across mentors and research areas (e.g., field norms, impact factor, authorship roles, article types, and project complexity). Students must discuss and document publication expectations with their mentor during Year 1.
- Complete the first Annual Progress Review.
- Complete the GradPath form: Responsible Conduct of Research Statement.
- Complete two Research Methods Work Plan forms for the Fall and Spring terms, one at the beginning and one at the end of each term.

Year 2

- Complete remaining coursework (PS 696C, PSIO 696A, and electives/minor coursework).
- Form the Comprehensive Examination Committee by October.
- Pass the Comprehensive Examination by the end of the Spring semester.
- Advance to candidacy following successful completion of the Comprehensive Examination.
- Complete the Annual Progress Review.

Year 3

- Complete the dissertation proposal within 6 months of advancing to candidacy. (See section __)
- Begin dissertation research in earnest.
- Complete the Annual Progress Review.

Years 4–5

- Continue dissertation research.
- Present at least one national or international conference.
- Submit dissertation chapters to the dissertation committee for review.
- Schedule and complete the dissertation defense.
- Complete the Annual Progress Review.

Maximum Time Limits

- **Comprehensive Examination:** Must be completed by the end of Year 3.
- **Advancement to Candidacy:** Must occur within 5 years of enrollment.
- **Degree Completion:** Maximum of 6 years from enrollment. Extensions require a petition consistent with Graduate College policy.

It is the intent of the Physiological Sciences Graduate Program to provide financial support utilizing a combination of program funds and mentor contributions with the stipulation that adequate progress is being made towards the degree. The Program Committee will evaluate student progress each year using input from both the student and mentor (See below).

1.d. Selection of Mentor (Also see Mentor Expectations Section 12)

Each student must select a mentor from the PS GIDP faculty with training member status by the completion of their second semester in the program. A mentor is a faculty member who will serve as an advisor, supporter, tutor, supervisor, sponsor and role model. A mentor is expected to interact with the student on a regular basis (**i.e., weekly**) providing guidance, advice, and the intellectual challenge necessary for the student to complete the degree program. There are two broad areas that come into play when choosing a mentor. The first area has a professional basis and the second a personal basis. The choice of a mentor may be the single most important decision during graduate training. The following suggestions may be of assistance to graduate students in choosing a mentor.

When considering the professional aspects of your selection of a mentor, the following questions may prove helpful:

- Does your prospective mentor have the funding available to support you and your research for at least three years? This area is probably the most problematic for graduate students.
- How does your prospective mentor's lab operate? You should critically evaluate the day-to-day operations of the lab and understand the goals of the lab and where you will "fit in". You should also understand the role of your mentor in those operations. Some principal investigators have lab managers or research assistants who run the laboratory. You should know almost as much about these individuals as about your prospective mentor.
- Expectations for publications differ across mentors and research areas (e.g., field norms, impact factor, authorship roles, article types, project complexity). Students should discuss and record publication expectations with their mentor. This discussion should also include issues as work habits, ethics, sharing of ideas, lab meetings, journal clubs, and authorship on papers.
- Does your mentor attend student forum on a regular basis? This is where you receive input and mentoring on giving talks and answering questions on your research. Faculty give feedback to all students in the program. Your mentor should be committed to attending student forum on a regular basis.

The following questions may be extremely helpful:

- Is the personality of my prospective mentor compatible with my own?
- Is this individual going to be responsive to my needs and, just as important, am I going to be responsive to his or her needs? When you join a lab, your mentor will have certain expectations of you, and these should be identified when evaluating a prospective mentor. By the same token, what are your expectations of a mentor?

Once you have identified a mentor, the please notify the PS GIDP program coordinator and director by email.

1.d.1. Rotation Requirements

Number of Required Rotations:

- PhD students must complete a 3 8-week laboratory rotations
- Each rotation is enrolled as PS 700 (Research Methods) for 2 units each
- Total: 6 units of rotation credit
- Rotations are completed during Year 1 (Fall, Spring, and Summer)

Rotation Duration and Expectations:

- Each rotation lasts 8 weeks
- Students should spend a minimum of 20 hours/week in the laboratory

- Rotations provide exposure to research techniques, lab culture, and mentoring styles
- Students are NOT expected to complete a major project during rotations

1.d.2. Mentor Selection Timing: Students will not officially select a mentor and join a laboratory until all required rotations have been completed.

- Students must complete all three rotations before making a final mentor selection
- Mentor selection occurs at the END of the third rotation
- This policy ensures students have adequate exposure to different research areas
- Early commitments to specific laboratories are strongly discouraged

1.d.3. Rotation Placement Process:

1. Student identifies 5-6 potential rotation laboratories
2. Student meets with potential rotation mentors to discuss expectations
3. Student asks to perform the first rotation with one faculty member and discusses their intent to rotate with other faculty in whom they are interested. The second and third rotations should be set at least 4 weeks prior to the initiation of those rotations.
4. Students should notify the PS GIDP program coordinator and director of rotations once set.
5. After all rotations are complete the student should meet with their preferred mentor and ask if they can join the lab. We encourage students to discuss their interest with PIs after each rotation so that both the PI and the student know how that rotation was viewed by the other party.
6. Final mentor selection is formalized via Mentor Selection Form in GradPath

1.e The Comprehensive Examination

1.e.1 Committee Composition

The student, in consultation with the mentor, should select the comprehensive examination committee during the 3rd semester in the program (Fall of Year 2).

COMPOSITION REQUIREMENTS:

- At least four (4) tenure-track faculty members, consistent with current Graduate College doctoral committee requirements.
- At least two (2) PS GIDP members
- A minor representative is REQUIRED for all students with a declared minor
- The dissertation mentor cannot serve as committee chair

MINOR REPRESENTATIVE CLARIFICATION:

- Must be a tenure-track faculty member from the minor department
- Should be identified early in the student's program
- Contact the minor department's graduate coordinator if unsure who to select

COMMITTEE CHAIR RESPONSIBILITIES:

- Facilitates the examination process
- Submits final paperwork to the Graduate College
- Must be a tenure-track PS GIDP faculty member

Special Members: Outstanding scholars from within or outside the University whose participation on the comprehensive exam committee will strengthen the academic quality of the student's program, and who are not faculty in Physiological Sciences GIDP, may be appointed, by exception, with the approval of the Graduate College. A request for "special committee member" can be made by the Physiological Sciences GIDP. This person is then a voting member of the student's committee. For tenure track faculty in other programs, there is no special approval needed. For non-tenure track faculty, or for faculty from other universities, a "Request to Approve a Special Committee Member" form along with an updated curriculum vitae are submitted to the Graduate College by the Program Coordinator. Contact the Program Office in this circumstance.

1.e.2. Overview of the Comprehensive Examination

The Comprehensive Examination consists of written and oral components as required by the Graduate College of the University of Arizona. As discussed in detail below, students in Physiological Sciences will ordinarily complete the written and oral components of the Comprehensive Examination by the end of the 4th semester in the Program.

The examination must evaluate the student's breadth of knowledge in Physiological Sciences but should also reflect the specialized interests that each student has developed by this stage. To ensure that all levels of understanding in Physiological Sciences are addressed, the field has been divided into I. Systems Physiology, and II. Cellular/Molecular Physiology.

1.e.3. Objectives of the Comprehensive Examination

The objectives of the Comprehensive Examination are:

- To determine if the student has attained adequate breadth of knowledge in physiological sciences. An adequate breadth of knowledge reflects the material covered in the required courses (503 and 603), as well as in the courses that satisfy the minor degree.
- To determine whether the student has attained a sufficient depth of knowledge in selected sub-disciplines of physiological sciences, including knowledge of the literature, concepts and experimental design and approaches in the area of specialization.
- To assess the student's ability to think clearly and independently about topics in the physiological sciences and to express these thoughts orally and in writing.
- To satisfy Graduate College requirements.

1.e.4. Timing of the Comprehensive Examination

The Comprehensive Examination will ordinarily take place during the student's fourth semester or early in the summer before the fifth semester in the Program. To remain eligible for funding from the Program, students must complete the written and oral portions of the Comprehensive Examination by the end of the 5th semester. In exceptional circumstances, such as illness or a family crisis, students may petition the Program Committee for extension of the deadline.

1.e.5. Comprehensive Exam Preparation

The student will arrange a meeting of the comprehensive examination committee at least 6 weeks prior to the anticipated date of the written comprehensive examination, to allow introductions and to discuss the timing, format and content of the written and oral portions of the examination. At this meeting the general research interests and background (rotations, courses) of the student will be discussed, and a short presentation of their current research progress is encouraged. The student and committee will discuss a timetable for the comprehensive examination. During this time, it is common for the student to leave the room while the committee decides on what question(s) each faculty member will prepare. The committee will inform the student of its general expectations and help the student to prepare for the examination. There is no substitute for helpful communication between the student and comprehensive examination committee as the questions are being planned and the student is preparing for them.

1.e.6. The Written Examination

The Written Comprehensive Examination will be in a take-home, essay format. The members of the students' Comprehensive Examination Committee discuss the areas to be covered by the exam with a focus on what was learned in PSIO503/603 and minor coursework. All 4 members of the committee will write a cell/molecular focused question and a systems focused question.

1. The student and mentor select the comprehensive exam committee members; Chair of comprehensive exam committee is chosen at the initial meeting.
2. Prior to taking the comprehensive exams, the student must:
    a. Submit the "Responsible Conduct of Research form" and "Plan of Study" in GradPath.
    b. Submit the "Comprehensive Examination Committee Appointment Form" and the "Announcement of Doctoral Comprehensive Exam Form".
        i. The announcement form will schedule your oral comprehensive exam with the Graduate College. Once your oral exam is completed, the chair of your committee will post the results in GradPath.
3. The Student will schedule an initial meeting with comprehensive exam committee. At that meeting:
    a. The student presents the plan of study and completed course work and a brief outline of research focus.
    b. A Chair is chosen. This cannot be the student's primary mentor.
    c. Student is told in broad terms the content and asked to schedule individual meetings with each comprehensive exam committee before the exam to set expectations for student's answer.
    d. A date is chosen. Questions are provided to the chair 3 weeks before the anticipated exam date. The Chair is responsible for gathering the questions, providing them to the program committee for review, and administering the exam.

Content of Written Examination:

Students will be provided with 4 cellular/molecular and 4 systems physiology focused questions. The student must select two questions from each category and will have two weeks to complete the four answers. The questions should focus on testing for a broad understanding of physiology and should not be tailored to the student's research focus. These essay questions should be designed for the students to answer over a two-week period using information from textbooks, journals and class notes.

The Committee Chair should submit the committee's questions to the Program Committee at least 2 weeks in advance of the Examination. The Program Committee will review the questions to ensure that there is a reasonable degree of uniformity among the examinations given to all students. Questions from former examinations will be kept on file for the use of students and faculty. The program coordinator should be included on all communication regarding the students' comprehensive exams to keep records for the PS GIDP. If the student's minor area of study is in a department outside of Physiological Sciences, the graduate college gives the Minor Department the option of waiving participation in the written portion of the comprehensive examination. However, the Minor Department must participate in the oral portion of the comprehensive examination.

The answer to each question should be no more than 10 single-spaced pages using 12-point font (including graphs and figures but not references). Students are expected to use textbooks, journal articles, class notes and similar sources of information to prepare essays in answer to the questions. The essays should include graphs or other figures necessary to illustrate answers. All

direct quotes or figures drawn from other sources must include proper citations. Students may not consult other people in preparing their answers. All figures and legends must be legible. Any alteration of these limits by faculty must be stated in writing on the comprehensive exam. Page limits and font size requirements will be strictly enforced.

Evaluation of the Written Comprehensive Exam:

Results of the written comprehensive exam should be supplied to the student and program coordinator one week after answers have been submitted. The answers will be graded by the committee member who wrote the question. Members will send the grade (Pass/Fail) to the Chair of the comprehensive exam committee (not the mentor). Students are encouraged to discuss strengths and weaknesses in their answers with the committee members. A passing grade for each of the answers is necessary for successful completion of the examination. Failure to achieve this will constitute failure of the written comprehensive examination. The entire examination may be retaken once. The second exam cannot be initiated until at least 1 month has passed. If both questions in one category are passed, the retake exam may focus only on the failed category, if agreed upon by the entire Committee. These two retake questions will be answered over a one-week period. Failure in the second attempt will constitute failure of the written comprehensive examination and dismissal from the program.

1.e.7. The Oral Comprehensive Examination

Upon successful completion of the written comprehensive examination, the student and committee may schedule the oral portion. The oral comprehensive examination must be completed not less than 3 weeks and not more than 6 months after the written portion.

The Graduate College describes the oral comprehensive exam as follows: “Upon successful completion of the written examinations in the major and minor(s), the oral comprehensive examination is conducted before the examining committee of the faculty. This is the occasion when faculty committee members have both the opportunity and obligation to require the student to display a broad knowledge of the chosen field of study and sufficient depth of understanding in areas of specialization. Although a discussion of proposed dissertation research may be of importance, such a discussion cannot be used to satisfy the requirements of the Oral Comprehensive Examination. The examining committee must attest that the student has demonstrated the professional level of knowledge expected of a junior academic colleague.”

Students should be aware that during the oral examination committee members often pursue answers from the written examination in more depth or may ask the questions that the student chose not to answer.

The exam commences at the first question directed at the student and will be for a minimum of 2 but not more than 3 hours. The examination will consist of 50-70 % of questions in physiological sciences with emphasis on the student's area of specialization, and 30-50 % of questions in the minor (which may overlap). The student should be prepared to answer questions not only related to topics previously discussed with the committee but also related to material covered in the required core courses. Students have found that an excellent way to prepare for the oral exam is to hold mock exams in their laboratory. The student’s mentor can organize these mock exams and other students can serve as questioners. The questions will not be the same as the student will get in the oral examination but will help the student prepare for thinking on his or her feet. Students may not bring notes into the examination. Once completed, the student’s committee chair (not the mentor) reports the results of both the written and oral examination by submitting the “Results of Comprehensive Exam” GradPath form immediately following completion of the oral exam. Students who fail are permitted to retake the Oral Comprehensive Examination once. The Graduate College stipulates a 4-month waiting period in this situation. Students who fail a second attempt at the Oral Comprehensive Exam are dismissed from the program.

1.f. Advancement to Candidacy

After successful completion of the comprehensive written and oral examinations, the student will advances to doctoral candidacy. This means that the student may focus on the dissertation for graduation.

1.g. The Dissertation

1.g.1. The Dissertation Committee

Students should select a Dissertation Committee by the end of the 5th semester. The Dissertation Committee must meet with the student at least once each year. There is no obligation for the student to convene the same faculty members on their Comprehensive Examination and Dissertation Committees. The Dissertation Committee must have at least three faculty members that are active and tenured (or tenure eligible/equivalent), but students may add additional members to the committee. The additional members may be voting members as long as they are either current tenured faculty (or tenure eligible/equivalent) or approved Special Members. Per the Graduate College, if a committee has only three members, all must approve the dissertation. It is important to select faculty members that will be able to provide valuable insight into your dissertation, and it is encouraged to discuss this with your mentor.

COMPOSITION REQUIREMENTS:

- At least three (3) tenure-track faculty members
- The dissertation mentor serves as committee chair
- At least two (2) members must be from PS GIDP (may include the mentor)

TRANSITION FROM COMPREHENSIVE COMMITTEE:

- The dissertation committee is not dependent on the comprehensive exam committee.
- Students may choose to retain all or some members from their comprehensive committee
- The Committee Appointment Form must be submitted in GradPath at least 4 weeks before defense. Changes to the dissertation committee after approval through GradPath require Program Committee approval

EXTERNAL MEMBERS:

- Non-tenure-track or external experts may serve as additional members
- Must have special member approval
- Contact the program coordinator for application process

Special Members

Outstanding scholars from within or outside the University whose participation on the dissertation committee will strengthen the quality of the student's research, and who are not faculty in Physiological Sciences GIDP, may be appointed, by exception, with the approval of the Graduate College. A request for "special committee member" can be made by the Physiological Sciences GIDP. This person is then a voting member of the student's committee. For tenure track faculty in other programs, there is no special approval needed. For non-tenure track faculty, or for faculty from other universities, a “Request to Approve a Special Committee Member” form along with an updated curriculum vitae are submitted to the Graduate College by the Program Coordinator. Contact the Program Office in this circumstance.

External Reviewer
Occasionally an external reviewer may participate on the dissertation committee without graduate college approval. This external reviewer is not a voting member of the student's committee (unless the student petitions the graduate college for Special Membership, as noted above).

1.g.2. The Dissertation Proposal

During the 3rd year, students MUST complete and present their proposal to their Dissertation Committee. The proposal should provide a compelling rationale and a research plan for the dissertation topic. The Dissertation Proposal is a key requirement of the Physiological Sciences training program providing a valuable opportunity for students to develop grant writing skills and to receive feedback from their committees at a relatively early stage of the experiments. The goal is to develop a rigorous and feasible experimental plan that will serve as a guide for the dissertation research, although the experiments may be modified, if necessary, as the work proceeds. Dissertation Proposals should be written in a style consistent with a grant application to the National Institutes of Health (NIH) or equivalent National/International funding mechanism. Dissertation Proposals should not exceed 7 pages (Aims page + 6 Research Strategy Pages; Arial 11 point font), single-spaced. This page limit does not including the bibliography.

The completed draft of the proposal should be provided to the Dissertation Committee members at least 2 weeks prior to a scheduled meeting to allow time for review. At the meeting to defend the research proposal the student will field questions about the rationale, design, and interpretation of the proposed experiments. This meeting should include a discussion of revision required for approval. Once the diissertation proposal has been revised to the satisfaction of all members of the dissertation committee, the members of this committee will sign the "Dissertation Proposal Approval" form (https://physiological-sciences.arizona.edu/current-students/program-forms). A copy of this form is then submitted to the PS GIDP program coordinator and approval is documented in GradPath.

At any point, the dissertation committee can require a performance improvement plan with detailed expectations and a timeline. If such requirements remain unmet, the committee may require transition into a terminal Master of Science. Specific examples that trigger a performance improvement plan include (but are not limited to) a student that is unable to provide the committee with a rational, well-designed, and scientifically justifiable dissertation proposal; or a student that is not able to provide a written dissertation that meets the standards required for graduation. Any appeal of this decision will be handled by the Program Committee.

1.g.3. The Dissertation

The student will use the dissertation proposal as a template/draft in developing a full dissertation. The student is expected to submit copies of the draft of the dissertation to the committee at least two weeks prior to the defense date. This will assure adequate time for the committee to review the dissertation and provide detailed comments and recommendations. These comments and recommendations may be provided to the student before or after the final examination. The Doctoral Dissertation Formatting Guide may be found on the Graduate College's website: http://grad.arizona.edu/gsas/dissertations-theses/dissertation-and-thesis-formatting-guides.

1.g.4. The Final Examination

The final examination is your oral dissertation defense. The date, time, and location must be determined with your Dissertation Committee, and the "Announcement of Final Oral Defense" GradPath from must be submitted at least 10 days prior to the date of your examination. A student may receive a "pass", "pass with revisions", or "not pass" on the final examination.

If the student receives a "pass" the student must submit the official dissertation via the electronic submission site (http://grad.arizona.edu/gsas/dissertaions-theses/submitting-your-dissertation) before the Graduate College Deadline. The deadlines change every term and may be found on the Graduate College website: http://grad.arizona.edu/gsas/degree-requirements/important-degree-dates-and-deadlines. It is also expected that the student provides an electronic copy to the program coordinator for the program's records.

If the student "passes with revisions" for the final examination, the student must make the requested revisions and resubmit the dissertation to the committee for approval. Once final approval has been given and the final draft has been prepared, the student must follow the procedures outlined above for students who received a "pass" grade.

If a student receives a "not pass" on the final examination, they may schedule a second defense no sooner than 1 month after the first examination. Prior to the second examination, the student should receive and respond to faculty feedback as to why their performance during examination was insufficient. As noted in the first exam, a student may receive a "pass", "pass with revisions" or "not pass" on this second final examination. Students receiving "pass" or "pass with revisions" should follow the procedures noted from first exam outcomes above. Student receiving a "not pass" grade will be recommended for a terminal Master of Science degree.

*** PhD students must be registered during the Fall or Spring term in which they are expected to graduate. Summer and Winter registration are not required; however, lack of registration may limit some University privileges (e.g., library, rec center).

1.h. Terminal Master of Science Degree

Students enrolled in the doctoral program who decide or are directed to pursue a terminal Master of Science degree in Physiological Sciences are expected to complete the following five requirements:

1. Contact Program Committee (copy Program Chair and Program Coordinator) in writing of intention/circumstances to obtain a MS, not a PhD
2. Passed PhD coursework with B grade or above in each course
3. Form a MS committee comprised of three members, two faculty of which are from Physiological Sciences; and alert the Program Committee of your intentions, and the makeup of your committee by submitting the "Master's Committee Form" (https://physiological-sciences.arizona.edu/current-students/program-forms).
4. Passed qualifying comprehensive exams (written and oral)
5. Demonstrate scientific insight/integrative thinking (three options):
    a. Write a critical literature review
    b. Write a dissertation proposal
    c. Write a first author manuscript

The student must choose one of the options in requirement # 5 and complete an oral defense. The specific content of written portion of MS requirement for students enrolled in PhD program are established on a case-by-case basis by the student's MS committee.

1.i. Financial Structure of the Doctoral Program

The funds utilized by the Program to support the doctoral student stipends are derived from NIH training grants, Graduate College fellowships, teaching assistantships, and faculty grants. In general, these funds dictate the number of students supported by the program. It is the intention of the PS GIDP and its members to provide support for full-time predoctoral students who are in good standing in the program for up to five consecutive years. However, because of uncertainties

in funding sources, this support cannot be construed as a guarantee of continuous support for any student. The five-year period begins with the year of admission into the program. Support ends at the time of graduation.

The program covers the first year of all PS GIDP PhD students, unless the student arrives with an independent fellowship. Once a mentor is selected the student salary is provided by the student's major adviser (either by a position on a training grant or a research assistantship). The program may cover tuition if Graduate Tuition Scholarships (GTS) can be used, depending on the mentor's funding source. Students will not be allowed to join a laboratory that does not have ongoing support.

1.i.1. Stipends

The minimum level of graduate-student stipends is set by the Graduate College. It is the program's goal to provide all PhD students with the minimal stipend provided through ABBS (Arizona Biological and Biomedical Sciences) at the University of Arizona, which routinely adjusts the stipend to remain competitive with other universities and NIH guidelines. Salary levels are set in the Spring of each year for the upcoming academic year.

1.i.2. Competitive Predoctoral Fellowships

The program encourages students to apply for funding. The program provides all necessary documentation of support and resources to aid in application submission. The application process provides our trainees with an opportunity to develop grant-writing skills, while bringing prestige to the student and the program. The finance committee will distribute potential funding opportunities when they are noticed, however, the students should also look and apply for opportunities throughout their time in the program (e.g., National Institutes of Health F31 Awards, National Science Foundation Graduate Research Fellowships, United States Department of Agriculture Predoctoral Fellowships, American Heart Predoctoral Research Fellowships).

1.i.3. Scientific Conferences: Attendance and Funding

The program encourages students to attend and present their research at scientific conferences by authoring a "first author" poster or talk at a national meeting. The program encourages students to apply for GIDP travel awards (e.g., Herb Carter, and Graduate and Professional Student Council awards), which at present require the student to be a first author on a submitted abstract. The program will send out these announcements when received from the Graduate College.

2. THE MD-PhD DUAL DEGREE PROGRAM

The MD-PhD Dual Degree Program in Physiological Sciences (PS) prepares students for academic careers involving research and teaching, as well as other careers where systems and cellular/molecular physiology research training is required (biotechnology, government laboratories, industry, and health-related organizations). Unless explicitly stated in this section, the rules/requirements of the PhD outlined previously apply to students in the MD/PhD program.

2.a. Dual Degree Objectives

The Association of American Medical College summarizes the objective of an advanced dual degree as follows: "The MD-PhD training organizes the experimental and clinical thinking of the physician-scientist. This synergy enables a physician-scientist to recognize new ways that clinical care or the understanding of disease mechanisms will benefit from research and to mount the appropriate effort. Likewise, the synergy achieved in dual-degree training enables the physician-scientist to see how the results of research discoveries and insights can be converted into clinically significant outcomes."

The goal of the University of Arizona MD and PS GIDP PhD Dual Degree Program is to provide outstanding aspiring physician scientists with biomedical training so that they emerge as leaders in both academic medicine and research. Students accomplish this by spending the first two academic years exclusively in the College of Medicine, followed by 3-4 years of interdisciplinary doctoral training in physiological sciences. Upon successful completion of a PhD thesis, students then return to the College of Medicine and complete their final two years of clinical training.

Candidates are admitted independently to the College of Medicine and the Physiological Sciences Graduate Interdisciplinary Program, Graduate College. Although the time to completion of both programs, combined is usually nine years, the PS GIDP MD/PhD Dual Degree Program makes it possible to complete both degree objectives in 7-8 years. This is accomplished by counting certain units of College of Medicine course in the Physiological Sciences study program.

2.b. Dual Degree Program Requirements

Dual degree applicants must meet the application deadlines and testing requirements to each program independently. Students pursuing the dual degree will spend the first two academic years exclusively in the College of Medicine, followed by completion of graduate course work and dissertation research, and then by completion of the clinical medical school requirements.

2.b.1. Required Coursework

36 units of graduate-level coursework. 18 units must be in the major subject area, must be taken as letter-grade, and must be courses at the 500-level or greater. 18 dissertation credits are required, as are at least 9 units of coursework for the minor, depending on the requirements of the minor program. In total, the MD-PhD student will complete 63 units.

- Combined credit – Units credited to both degrees (9 units)
    - 9 units of medical school curriculum will be accepted by the Graduate College as counting towards the PhD in physiological sciences. Any 9 credits from MED 806, 807, 808
- PhD courses/credits – Course descriptions are in the PhD Program Requirements section of this handbook (32 units, 26 A/B/C and 6 S/P/F)
    - **PSIO 503 — Cellular and Molecular Physiology; 6 units**
      Through examination of fundamental cellular processes, the integrated function of diverse cell types is discussed. Topics include mechanisms involved in protein expression, intracellular protein targeting and regulation of protein function; membrane transport phenomena; cell signaling mechanisms, excitability, ion channels and synaptic function; and muscle and vascular function.

      -OR-
    - **PSIO 603A — Systems Physiology; 6 units**
      This course in human physiology contains an extended discussion of the nervous, cardiovascular, renal, respiratory, endocrine and gastrointestinal systems. Topics are presented at the systems level while building on cell and molecular physiology and leading to an integrated view of the function of the human organism. Lectures introduce individual elements and concepts that constitute physiology and integrate these basic principles into a comprehensive understanding of physiological systems. Weekly discussion sections complement the lecture series and focus on primary research articles and problem sets that augment lecture topics.
    - **PSIO 696A — Physiology Seminar Series; 1 unit**
      This course consists of a weekly seminar series featuring internal and external speakers. Students must enroll in PSIO 696A every semester they are enrolled in the program unless there is a documented class conflict.
    - **PS 696C — PS Student forum; 1 unit each semester**

This course run by the Physiological Sciences graduate program must be taken for credit every semester that a student is enrolled in the program, unless there is a class conflict. Student forum meets for one hour every other week, alternating with Seminar. After the first year, MD, PhD students are expected to present two forums, one 20-minute presentation in year 4 (Year 2 of PhD training) and a full 40-minute presentation in year 5 (Year 3 of PhD training). Mentors will attend their student's forum presentation. Student attendance will be taken at each student forum.

- **PS 700 — Research Methods in Physiological Sciences; 3 units**
  One rotation is required, with each rotation consisting of 3 units (3 units total). This laboratory course provides students with an understanding of the types of research available within the Physiological Sciences Graduate Interdisciplinary Program (GIDP). The purpose of the course varies according to the individual needs and interests of the student. In general, the investigator should not expect the student to complete a major research project. Rather, the course provides an opportunity for students to become acquainted with the ongoing research of the laboratory and to gain exposure to important technical aspects of the work under the tutelage of a regular faculty member with an active appointment in the Physiological Sciences Graduate Program. Laboratory placements with faculty outside of the PS GIDP are not allowed unless petitioned and approved by the Program Committee.
- **PHCL 595B — Scientific Writing Strategies, Skills and Ethics; 2 units**
  Provides students with skills to write and communicate effectively for a variety of scientific audiences, including scientific journals, funding institutions, potential employers, and administrative audiences in academia and industry.
- **One Semester of Statistics; 3 units;** Students must complete one semester of an upper-division statistics course at the 500 level or above. Suggested courses include: EPID 576A or BIO 576A — Biostatistics, MATH 509C — Statistics for Research, or PSY 507A, 507B, 507C — Statistical Methods I, II, III
- **PS900 – Research; 6 units**
- **PS920 – Dissertation credits; 18 units**

2.b.2. Incomplete Policy
Students earning a grade of Incomplete, "I" for a course should submit a completed Report of Incomplete Grade form to the Program Coordinator for inclusion in their academic record. http://registrar.arizona.edu/gradepolicy/incomplete.htm. Incomplete grades should be completed in a timely manner and are submitted at the discretion of the course Instructor.

2.c. Dual Degree Program Timeline

A summary of the structure of the combined program is detailed below.

Pre-clerkship Phase of Medical School: (18 months)

- Coursework for the first 2 semesters (12 months): Courses may be used for graduate credit upon request and approval.
  - MED 802 - Foundations (6 weeks)
  - MED 804 - Musculoskeletal System (6 weeks)
  - MED 803 - Nervous System (9 weeks)
  - MED 805 - Cardiovascular, Pulmonary, Renal Systems (11 weeks)
  - MED 806 DMH - Digestion, Metabolism & Hormones (9 weeks)
- Coursework for the next semester (6 months): Courses may be used for graduate credit upon request and approval.
  - MED 808 - Life Cycle (7 weeks)

    - MED 807 - Immunity and Infection (8 weeks)
    - MED 809 - Advanced Topics (4 weeks)
- Following the 18-month pre-clerkship phase, complete Step 1 United States Medical Licensing Exam (USMLE)

First Year of PhD (Start Spring Semester, 2nd year of dual degree program)

- Coursework:
    - PSIO 503 Molecular Physiology (6 credits)
    - PS 696C Physiological Sciences Student Forum (2 credits)
    - PSIO 696A Physiology Seminar Program (2 credits)
    - PS 700 Research Methods in Physiology (3 credits)
    - PS 900 Research (3 credits)
- Form Comprehensive Exam Committee.
- Complete Comprehensive Exams by end of winter of 1st year in PhD program (Requirements listed in the Comprehensive Examination section of this handbook.)

Second Year of PhD

- Coursework:
    - PS 696C Physiological Sciences Student Forum (2 credits)
    - PSIO 696A Physiology Seminar Program (2 credits)
    - PS 595b Scientific Writing Strategies, Skills and Ethics (2 credits)
    - Statistics (3 credits) from following:
        - PHL 576, Biostatistics for Public Health
        - EPID 576a Biostatistics
        - Math 509C, Statistics for Research
        - PSIO 575, Statistical Analysis
        - PSY 507A, 507B, *or* 507C Statistical Methods I, II, *or* III.
    - PS 900 Research (3 credits)
    - PSIO 920 Dissertation (6 credits)
- Form a Dissertation Committee and complete a dissertation proposal.

Third Year of PhD

- Coursework:
    - PS 696C Physiological Sciences Student Forum (2 credits)
    - PSIO 696A Physiology Seminar Program (2 credits)
    - PSIO 920 Dissertation (12 credits)
- Complete a dissertation defense

*** If additional years are needed to complete the PhD, continued enrollment in classes stated for the third year above are expected.

Clerkship Phase of Medical School (12 months)

Transition to Clerkships (1 week)

- Intersessions (2 weeks)
- 7 Required Clerkships and Ambulatory Medicine
    - Neurology (4 weeks), Psychiatry (6 weeks), Obstetrics and Gynecology (6 weeks), Surgery (8 weeks), Medicine (8 weeks), Pediatrics (6 weeks), Family and Community Medicine (6 weeks), Ambulatory medicine (4 weeks)
- Complete Step 2 United States Medical Licensing Exam (USMLE)

Transition to residency Phase (56 weeks)

- 44 units in UACOM-T are required for graduation
  - Core Sub-Internship rotation (4 weeks)
  - Integrated EM/CC rotation (4 weeks)
  - Surgery Specialty Selective (4 weeks)
  - Applications of the Basic Sciences to Clinical Medicine Course (4 weeks)
- 28 units of Elective courses/rotations (less if other units/credits accumulated)
- Enter the Residency Match Process
- Complete Residency Interviews

2.d. Financial Structure of the Dual Degree Program

The MD/PhD Program provides students with tuition and a yearly stipend for the medical school years. The graduate program and laboratory the student joins will cover graduate tuition and provide a stipend during the PhD years (See 1.i).

2.e. Information that matches the PhD Program

See sections 1.e-1.h for additional information that applies equally to the Doctoral and Dual Degree students.

3. THE MASTER'S PROGRAM (Two-year research-intensive option)

3.a. Degree Objectives

The mission of the two-year MS program is to provide an avenue for students to gain experience in and exposure to the broad range of the physiological sciences, obtain in-depth knowledge in a specific area of physiology, conduct hands-on research in a laboratory from which they expand the understanding of their field, and develop scientific communication skills. This program is well-suited for people who want to explore a career in scientific research or communication.

*** All faculty members of the Physiological Sciences GIDP are eligible to participate fully in the MS Program. They can serve both as committee members and as major advisors/research project directors (i.e., mentors).

3.b. Master's Program Requirements

The Graduate College mandates MS degree credit hours (units). These requirements include:

- A minimum of 30 credit hours of graduate coursework (500 level or above) with an overall GPA $\geq$ 3.0.
  - At least 24 of these credits must be exclusive of thesis units. This refers to courses in which regular grades can be earned (i.e., A/B/C or S/P).
- A minimum of 9 research units (PS 900/910).
  - 910 units are only required for those students who are choosing the *Master's Thesis and Oral Examination* option described on page 31. Students choosing either the *Research Manuscript (written document) and Oral Examination* or the *Written Scientific Document (review) and Oral Examination* options should register for only 900 credit hours.

Master's students are expected to complete this coursework and a research project within two years, barring exceptional circumstances.

3.c. Physiological Sciences Coursework:

3.c.1. Required Coursework

- **PSIO 503 — Cellular and Molecular Physiology; 6 units**
  Through examination of fundamental cellular processes, the integrated function of diverse cell types is discussed. Topics include mechanisms involved in protein expression, intracellular protein targeting and regulation of protein function; membrane transport phenomena; cell signaling mechanisms, excitability, ion channels and synaptic function; and muscle and vascular function.
- **PSIO 603A — Systems Physiology; 6 units**
  This course in human physiology contains an extended discussion of the nervous, cardiovascular, renal, respiratory, endocrine and gastrointestinal systems. Topics are presented at the systems level while building on cell and molecular physiology and leading to an integrated view of the function of the human organism. Lectures introduce individual elements and concepts that constitute physiology and integrate these basic principles into a comprehensive understanding of physiological systems. Weekly discussion sections complement the lecture series and focus on primary research articles and problem sets that augment lecture topics.
- **PSIO 696A — Physiology Seminar Series; 1 unit each semester**
  This course consists of a weekly seminar series featuring internal and external speakers. Students must enroll in PSIO 696A every semester they are enrolled in the program unless there is a documented class conflict.
- **PS 696C — PS Student forum; 1 unit each semester**
  This course run by the Physiological Sciences graduate program must be taken for credit every semester that a student is enrolled in the program, unless there is a class conflict. Student forum meets for one hour every other week, alternating with Seminar. After the first year, MD, PhD students are expected to present two forums, one 20-minute presentation in year 4 (Year 2 of PhD training) and a full 40-minute presentation in year 5 (Year 3 of PhD training). Mentors will attend their student's forum presentation. Student attendance will be taken at each student forum.
- **PS 700 — Research Methods in Physiological Sciences; 3 units**
  One rotation is required, with each rotation consisting of 3 units (3 units total). This laboratory course provides students with an understanding of the types of research available within the Physiological Sciences Graduate Interdisciplinary Program (GIDP). The purpose of the course varies according to the individual needs and interests of the student. In general, the investigator should not expect the student to complete a major research project. Rather, the course provides an opportunity for students to become acquainted with the ongoing research of the laboratory and to gain exposure to important technical aspects of the work under the tutelage of a regular faculty member with an active appointment in the Physiological Sciences Graduate Program. Laboratory placements with faculty outside of the PS GIDP are not allowed unless petitioned and approved by the Program Committee.
- **PS900/910 – Research/Thesis Units; 8 units Total; 4 units/2 semesters**
  Students choosing to submit a formal thesis must register for 2 units of 910 and 6 units of 900. Those choosing a written research project should register for 8 units of 900.

3.c.2. Elective Coursework

Many students find that additional didactic training in teaching methods, research methods, ethics, or statistics is helpful in developing the skills they require. An individual curriculum plan specifying any other coursework will be developed by the student and his/her advisor and approved by

his/her MS Committees. A program of study should be developed as soon as possible and submitted on the "Plan of Study" form in GradPath. If the student and mentor decide to alter their original goals, a modified "Plan of Study" should be submitted through GradPath.

3.c.3. Exceptions to Required Physiological Sciences MS Coursework:
In some cases, certain program requirements may be waived if equivalent coursework has been completed previously. However, if a waiver is desired, the student must submit a written petition to the Physiological Sciences GIDP Program Committee, which will either grant or deny the waiver. Individual faculty are not authorized to waive any of the program requirements without prior approval of the Program Committee. Transfer credit from other institutions can be applied to an advanced degree if "approved by the head of the program, the grade earned is 'B' or above, and it was awarded graduate credit at the institution where the work was completed" (For additional information see the UA Graduate College website, http://grad.arizona.edu/new-and-current-students). If waivers are granted for coursework taken at other institutions, these courses are referred to as "Transfer Credit" by the Graduate College, and must be listed as such on the Master's Plan of Study form (in UAccess > Student > Advising > GradPath > GradPath forms, after completing the Transfer Credit form). The Master's Plan of Study must be filed during the third semester.

3.c.4. Incomplete Policy
Students earning a grade of Incomplete, "I" for a course should submit a completed Report of Incomplete Grade form to the Program Coordinator for inclusion in their academic record. http://registrar.arizona.edu/gradepolicy/incomplete.htm. Incomplete grades should be completed in a timely manner and are submitted at the discretion of the course Instructor.

3.d. Timeline
Year 1
- Complete GradPath form: Responsible Conduct of Research Statement and Plan of Study.
- Attend Forum and Seminar for both semesters.
- Complete the required coursework by satisfactorily passing PSIO 503 and 603A (grade of "B" or better)
- Complete 3 credits of Research Methods in Physiological Sciences (PS 700) in the laboratory of your choice.
- Form a thesis committee and meet with them
- Submit Master's/Specialist Committee Appointment Form on GradPath

Year 2
- Attend forum and seminar for both semesters.
- Complete a 20-minute student forum presentation.
- Complete 900 or 910 credits
- Defend your thesis or written research project

3.e. Completion Options
With approval from the student's committee, students choose one of three options:
1. Master's Thesis and Oral Examination: A traditional thesis written following the Graduate College Master's Thesis Formatting Guide. A public oral presentation is required, followed by a defense of the document to the committee.
2. Research Manuscript and Oral Examination: A summary of the research project in the form of a "first author" manuscript that may be submitted for publication. A public oral presentation is required, followed by a defense of the document to the committee.
3. Written Scientific Document (Review) and Oral Examination: Demonstrate scientific insight/integrative thinking by writing a critical literature review. A public oral presentation

is required, followed by a defense of the review and oral examination by the committee. Note: This option is most common for students completing a 1-year MS without in-lab research training.

3.f. Transfer from MS to PhD Program:

MS students in the Physiological Sciences GIDP must complete their MS degree before entering the PhD program.

3.g. Financial Support for Master's Students

There are three primary avenues of financial support for the master's students: graduate teaching assistantships, research assistantships, and other support. In some cases, combinations of partial teaching assistantships and partial research assistantships may be arranged. Regardless of the avenue of support, all master's applicants are held to the same minimum academic requirements for admission into and completion of the program. Applicants will be informed about support options early in the recruiting process.

The Physiological Sciences program has no financial commitment for the support of master's students accepted into the program, and students must indicate that they are aware of this restriction at the time of application. Students may qualify for and receive support from TA-ships administered through the Department of Physiology, these are independent of the Physiological Sciences GIDP.

3.g.1. Teaching Assistantship.

This option requires the student to TA in order to provide a stipend/salary. Teaching does not contribute to the MS degree, it funds the route to the degree. Thus, all MS students are required to complete a significant research project and defend a thesis or manuscript for their MS.

Students are welcome to pursue teaching assistantships across campus. Students are not eligible to accept assistantships above 0.5 FTE without prior approval by their principal investigator and the program committee. Such approval is valid for a single semester and must be re-approved each year.

Teaching assistantships are administered through the Department of Physiology, and thus the number of students recruited and admitted for these positions will be specified by that department. Some prior coursework in physiology may be required as a prerequisite for students applying for support under this option and will be stated explicitly in the TA offer from the department. Students awarded a PSIO teaching assistantship must also enroll in additional coursework in their first year:

- Physiological Sciences Teaching Workshop (PS 697A and B); 1 unit/ea. Must be taken in the first year in which the student is a teaching assistant.
    - Fall (A): Theoretical background on learning/teaching; Handy hints from good teachers; Development of teaching philosophy and techniques
    - Spring (B): Observations and feedback (peer & faculty); More handy hints; Evolution of own style and skill.

3.g.2. Research Assistantship.

This option is available to students that have identified a faculty sponsor who can support the student as a Research Assistant (at 50% time or 0.50 FTE). The faculty sponsor must sign the student's funding form indicating that this support will be provided. Students supported by 0.50 FTE RA's do not have teaching requirements.

3.g.3. Other Support.
Students must state in this circumstance that they can reasonably expect to have an independent means of support for 2 years, such as a 2-year fellowship, personal income from a job, or other options.

3.h. Master's Completion Requirements
Successful completion of the master's program includes the completion of required coursework, completion of the 20-30 minute student forum presentation, completion of a research project culminating in a research paper, successful defense of research, and completion of GradPath forms.

Each master's student is expected to complete the program in two years, barring exceptional circumstances. If the master's student has not chosen a faculty mentor by the end of the first semester of study, the PS Program Committee will help identify a faculty mentor who can mentor the student. Ultimately, it is up to the student to identify a mentor who is willing to advise them in order to complete a MS in Physiological Sciences.

By the beginning of the second semester in the program, each student will select a formal master's committee consisting of the major advisor/research project director and two committee members from the faculty of the Physiological Sciences GIDP. The MS student's committee should meet in the second semester to review the curriculum and research plan, and at least once per semester thereafter to evaluate student progress and advise the student on appropriate options for meeting the requirements for final completion. Penultimate copies of the completed research paper must be distributed to the committee members with enough time to review before the defense, typically two weeks prior.

3.h.1. Committee.
Each student selects a formal Master's committee (major advisor plus two PS GIDP faculty members) by the beginning of the second semester. The committee should meet in the second semester to review the curriculum plan, and at least once per semester thereafter. Students are expected to complete the program within two years, barring exceptional circumstances.

***Progress will be monitored on an annual basis by the Program Committee, the student mentor, and master's committee. Should these milestones be delayed or missed, a meeting with Program Chair and/or Program Committee Chair will be necessary to discuss a plan to improve progress and the student's future in the program.

4. THE MASTER'S PROGRAM (One year literature review based option)

4.a. Degree Objectives
The mission of the newly developed (2025) one-year MS program is to provide an avenue for students to gain experience in and exposure to the broad range of physiological sciences and to offer a mechanism for trainees to obtain in-depth knowledge in a specific area of physiology on which they will complete a literature review. This program is particularly well-suited for students interested in medical school or other health professional programs.

4.b. Master's Program Requirements
Identical to 3.b.

4.c. Physiological Sciences Coursework:
Identical to 3.c. except there is no PS910 option.

4.d. Timeline

- Complete GradPath form: Responsible Conduct of Research Statement and Plan of Study
- Attend Forum and Seminar for both semesters.
- Complete a 20-minute student forum presentation.
- Complete the required coursework by satisfactorily passing PSIO 503 and 603A (grade of "B" or better)
- Complete 3 credits of Research Methods in Physiological Sciences (PS 700) in the laboratory of your choice.
- Complete 900 credits
- Form a thesis committee and meet with them
- Submit Master's/Specialist Committee Appointment Form on GradPath
- Defend your thesis or written literature review

4.e. Degree Completion

- Written Scientific Document (Review) and Oral Examination: Demonstrate scientific insight/integrative thinking by writing a critical literature review. A public oral presentation is required, followed by a defense of the review and oral examination by the committee. Note: This option is most common for students completing a 1-year MS without in-lab research training.

4.f. Financial Support

- The 1-Year MS Program is typically self-funded or supported through external fellowships
- Limited teaching assistantships may be available based on departmental needs
- Students should plan for tuition and living expenses for the academic year

All faculty members of the Physiological Sciences GIDP are eligible to participate fully in the 1-Year MS Program. They can serve as committee members and as major advisors/literature review directors.

5. MINOR IN PHYSIOLOGICAL SCIENCES

Students majoring in another discipline who desire a minor in Physiological Sciences must complete a minimum of 9 units. Students must complete PSIO 503 or 603A, and can register for PSIO 696A and PS 696C, forum and seminar for 2 semesters/3 credits to make 9 credits. The minor will not be granted if the student fails to maintain a B average (GPA of 3.0) for these courses.

6. ADDITIONAL POLICIES AND PROCEDURES

If a student wishes to appeal any of the aforementioned requirements the appeal should be made in writing to the Program Chair. The appeal will be reviewed by the Program Committee and may include a collective meeting with the student. A decision to accept/reject the appeal will be based on a majority vote of the Program Committee. The program faculty may place additional requirements/deadlines on the student as a prerequisite for continuing in the program. Students who wish to appeal, the decision of program faculty/Program Committee must submit an appeal in writing to the Graduate College. Information regarding appeals or grievances is available on the academic policies section of the Graduate College website: http://grad.arizona.edu/policies/academic-policies/summary-grievance-types-and-responsible-parties

6.a. Academic Appeals

6.a.1. Students may appeal academic decisions including:

- Comprehensive examination results
- Annual review outcomes
- Course grades (following university grade appeal policy)
- Dismissal from the program

6.a.2. Grounds for appeal:

- Procedural error in the decision-making process
- Evidence not properly considered
- New evidence not available at time of original decision
- Decision inconsistent with program or university policy

6.a.3. Appeal Process:

- Step 1: Informal Resolution (within 14 calendar days of decision)
    - Discuss concerns directly with decision-maker (instructor, committee, mentor)
    - Many issues can be resolved through direct communication
- Step 2: Program-Level Appeal (within 14 days of Step 1)
    - Submit written appeal to Chair of the Program Committee
    - Include: Original decision, grounds for appeal, supporting documentation
    - Program Committee will review
    - Decision rendered within 14 calendar days
- Step 3: Executive-Level Appeal (within 14 calendar days of Step 2)
    - Submit written appeal to PS GIDP Director
    - Include: All previous correspondence and decisions
- Executive Committee will review and render final decision

Note: Appeals based solely on disagreement with academic judgment are generally not successful. The appeal must demonstrate procedural error or new evidence.

7. GRIEVANCES

7.a. Non-Academic Grievances

For issues involving:

- Discrimination or harassment: Contact Office of Institutional Equity
- Research misconduct: Contact Research Integrity Officer
- Workplace safety: Contact Risk Management Services
- Mentor-student conflicts: Contact the Chair of the Program Committee or the Director of the Physiology GIDP

Resources:

- Graduate and Professional Student Council (GPSC): gpsc.arizona.edu
- Ombudsperson: ombuds.arizona.edu
- Dean of Students: deanofstudents.arizona.edu
- Office of Institutional Equity: equity.arizona.edu

8. ANNUAL PROGRESS REVIEW

All PS GIDP are annually evaluated to monitor progress towards the completion of degree requirements. The Physiological Sciences progress report forms are distributed by the program coordinator and should be returned by the deadline to maintain satisfactory progress in the program.

8.a. Purpose

The Annual Progress Review ensures students are making satisfactory progress toward their degree and provides an opportunity for feedback and mentorship. All PS students must complete an annual review each academic year.

8.b. Timeline

- Self-assessment due: April 1
- Committee meeting: April 1-30
- Final report due to Program: May 15 (Students graduating in spring semester of the review year are not required to complete this review. For clarity, if you are graduating in May you do not need to complete your April assessment).

8.c. Required Components

8.c.1. Student Self-Assessment (submitted via program portal)

- Research progress summary (1-2 pages)
- Coursework completion status
- Publications, presentations, and awards
- Goals for the coming year
- Challenges or concerns

8.c.2. Mentor's Evaluation

- Assessment of research progress
- Academic performance evaluation
- Professional development assessment
- Recommendation for continuation

8.c.3. Dissertation Committee Meeting (for doctoral students past Year 2)

- Brief research presentation (15-20 minutes)
- Discussion with full committee
- Written feedback from committee

8.c.4. Outcomes

- Satisfactory Progress: Continue in program
- Conditional Progress: Specific improvements required within stated timeline
- Unsatisfactory Progress: May result in a recommendation for probation or dismissal, consistent with Graduate College policy.

8.c.5. Appeals

Students who receive a Conditional or Unsatisfactory rating may appeal to the Program Committee within 14 days of notification.

Any recommendation for probation or dismissal will follow Graduate College policy and include written notice, an opportunity for response, and access to the appeals process described in Section 8.***Important information regarding Graduate College policies, procedures, professional

development, and **family-friendly resources**, can be found on the New and Current Students page of the Graduate College website: http://grad.arizona.edu/new-and-current-students

9. COMMUNICATION AND RESOURCES

9.a. Official Communication Channels

- University email (@arizona.edu) is the only official communication channel
- Students are responsible for checking email regularly (at least once daily during the work week)
- Official announcements will only be sent to university email addresses

9.b. Program Website:

https://physiological-sciences.arizona.edu/

Provides information to prospective and current students including information about the program, student resources, faculty members, alumni, and professional development opportunities through the graduate college,

9.c. GradPath:

All official program milestones must be recorded in GradPath:

- Committee appointments
- Comprehensive exam results
- Advancement to candidacy
- Degree conferral
  Access: https://grad.arizona.edu/degree-services/gradpath

10. FORMS AND DOCUMENTS

Commonly Used Forms:

Committee Appointment Form

- Purpose: Officially establish comprehensive or dissertation committee
- Location: GradPath @ Uaccess.arizona.edu
- When to submit: At least 4 weeks before examination

Comprehensive Exam Announcement

- Purpose: Schedule comprehensive examination
- Location: GradPath @ Uaccess.arizona.edu
- When to submit: At least 2 weeks before exam date

Dissertation Proposal Approval

- Purpose: Document committee approval of dissertation proposal
- Location: Graduate Program Coordinator
- When to submit: Within 2 weeks of committee approval of your research proposal

Final Oral Defense Announcement

- Purpose: Schedule dissertation defense
- Location: GradPath @ Uaccess.arizona.edu
- When to submit: At least 3 weeks before defense date

Transfer Credit Request

- Purpose: Transfer credits from another institution
- Location: GradPath @ Uaccess.arizona.edu https://arizona.app.box.com/v/grad-gsas-transfercredit
- When to submit: During first year of enrollment

11. LEAVE OF ABSENCE POLICY

Graduate students may request a leave of absence for medical, personal, or family reasons. Approved leaves protect the student's status in the program and stop the clock on time-to-degree limits.

Leave of Absence Request

- Purpose: Request approved leave from the program
- Location: Graduate College website grad.arizona.edu https://grad.arizona.edu/policies/enrollment-policies/leave-absence
- When to submit: Before the leave period begins

11.a. Types Of Leave:

Medical Leave

- Duration: Up to one year (may be extended)
- Documentation: Healthcare provider statement required
- Return: Medical clearance may be required

Personal Leave

- Duration: Up to one semester (one year with approval)
- Documentation: Written statement of circumstances
- Approval: Mentor, Director of Graduate Studies, Graduate College

Parental Leave

• Duration: Up to one semester
• Available to all new parents (birth, adoption, foster)
• Funding: May be continued per grant and department policies. Please see https://grad.arizona.edu/gaships/policies/ga-parental-leave-policy for additional information

Military Leave

- Duration: As required by service
- Protection: Per federal and state law
- Documentation: Military orders required

11.b. Process

1. Discuss with mentor and PS GIDP Director
2. Submit Leave of Absence Request to Graduate College
3. Receive written approval before leave begins
4. Maintain contact with program during leave
5. Request return from leave in writing at least 30 days before intended return

11.c. Impact on Funding

- Stipend: Typically, not paid during leave (exceptions for parental leave)
- Tuition: Not charged during approved leave
- Health insurance: May continue at student's expense
- RA/TA position: Will be held if possible;
- Funding during or after leave is subject to availability and does not constitute an entitlement.

11.d. Unapproved Absence

Failure to register or obtain approved leave for two consecutive semesters will result in automatic withdrawal from the program.

12. MEMBERSHIP EXPECTATIONS

Selecting A Mentor

- Timeline: PhD students should identify a mentor by the end of their first year, or after rotations are complete; MS students should select a mentor by the end of the first semester.
- Process: Meet with potential mentors, discuss research interests and expectations
- Considerations: Research fit, mentoring style, funding availability, lab culture

Mentor Responsibilities

- Provide research training and guidance
- Meet regularly with student (recommended: at least weekly in early years, at least biweekly later)
- Support student's professional development
- Provide timely feedback on written work
- Assist with career planning and networking
- Write letters of recommendation
- Ensure adequate funding for research
- Model ethical research conduct

Student Responsibilities

- Communicate regularly with mentor
- Meet agreed-upon deadlines
- Be proactive about professional development
- Raise concerns early before they become problems
- Maintain accurate research records
- Contribute to lab responsibilities as agreed

Individual Development Plan (IDP)

- All PhD students should complete an IDP annually
- The IDP should
    - Assess skills and interests
    - Set short-term and long-term goals
    - Identify training needs
    - Review with mentor and update yearly

Changing Mentors

If a mentor change is necessary:

- The student and PI should discuss this with Chair of Program Committee and Director of PS GIDP
- The program will assist in identifying alternative mentors
- A transition plan will be developed to minimize disruption
- Requests to change mentors will not, by themselves, negatively affect a student's academic standing, funding eligibility, or annual progress evaluation.

13. PROFESSIONAL DEVELOPMENT OPPORTUNITIES AND EXPECTATIONS

Conferences And Presentations

- PhD students should present at least one poster or talk at a regional or national conference

- Funding: Apply to program, department, GPSC, graduate college, and mentor's grants
- Required: Mentor approval before submitting abstract

Publications
- PhD students are expected to work toward peer-reviewed publication of their dissertation research
- Authorship follows guidelines of relevant professional societies
- Discuss authorship expectations with mentor early

Fellowship Applications
- Students are strongly encouraged to apply for external fellowships:
- NSF Graduate Research Fellowship (early career)
- NIH F31 (dissertation research)
- Foundation grants in your research area
- AHA predoctoral fellowship (cardiovascular research)
- Benefits: Funding, prestige, professional development through application process

Networking
- Attend departmental seminars and events
- Join relevant professional societies
- Participate in journal clubs
- Connect with visiting speakers

Career Preparation
- Participate in career development workshops
- Explore diverse career options (academic, industry, government, etc.)
- Develop skills beyond research (communication, leadership, teaching)
- Build professional online presence (ORCID, Google Scholar, ResearchGate)

Resources
- Graduate College Professional Development: grad.arizona.edu/professional-development
- University Career Services: career.arizona.edu
- Office of Research and Discovery: research.arizona.edu

14. COMMITMENT TO EQUITY AND INCLUSION

The Physiological Sciences GIDP is committed to fostering a diverse, equitable, and inclusive environment where all students can thrive. We believe that diversity in backgrounds, perspectives, and experiences enriches our science and our community. This commitment aligns with University of Arizona policies and Graduate College guidance on equity and inclusion.

We Value
- Diversity in race, ethnicity, gender, sexual orientation, disability, socioeconomic background, religion, nationality, and other identities
- Creating an environment where all members feel welcome and respected
- Recruiting and retaining students and faculty from underrepresented and disadvantaged groups
- Addressing barriers to equity in graduate education

Student Support

- GIDP Diversity Committee: Promotes inclusive practices and events
- Mentorship programs for underrepresented and disadvantaged students
- Connections to campus affinity groups and resources

Reporting Concerns:

If you experience or witness discrimination, harassment, or bias please contact your sources below:

- Office of Institutional Equity: equity.arizona.edu
- Director of Graduate Studies (for program-level concerns)
  Dean of Students: deanofstudents.arizona.edu
- Anonymous reporting: ua-reportit.com
- Connections to campus affinity groups and resources

Office of Institutional Equity: equity.arizona.edu

- Director of Graduate Studies: Ben Renquist (for program-level concerns)
- Dean of Students: deanofstudents.arizona.edu
- Anonymous reporting: ua-reportit.com

University Resources:

- Director of Graduate Studies: Ben Renquist (for program-level concerns)
- African American Student Affairs
- Asian Pacific American Student Affairs
- Adalberto & Ana Guerrero Student Center
- Immigrant Student Resource Center
- Native American Student Affairs
- Women & Gender Resource Center
- LGBTQ+ Resource Center
- Disability Resource Center
- Veterans Education and Transition Services

15. TEACHING OPPORTUNITIES

Teaching assistantship is not a requirement for graduation for PhD or MS students in the Physiological Sciences GIDP. Previously, PhD students were required to complete a teaching assistantship (PSIO 201/202) during their second year. The PS GIDP cannot guarantee teaching positions. Teaching is therefore no longer a mandatory requirement for degree completion.

We encourage students to apply for TA positions to which they are qualified across campus. Teaching experience helps students develop communication and presentation skills, strengthen understanding of physiological concepts, add to their CV, and develop teaching skills that are key for many positions in academia.

Available Positions

When TA positions become available, students may apply for teaching opportunities:

- Selection is competitive and based on availability
- Priority may be given to students demonstrating financial need
- Students must complete TA training requirements before teaching

TA Training Requirements

Students selected for TA positions must complete:

- Graduate College TA Training Workshop (offered each August)
- Department-specific orientation session
- FERPA training

Teaching Workload Limits
Students may not exceed 0.5 FTE (20 hours/week) for teaching duties without prior written approval from both their research mentor (PI) and the Program Committee. This policy protects student research progress and ensures adequate time for dissertation work.

- Maximum teaching load: 0.5 FTE (half-time appointment)
- Exceptions require approval from: (1) Research mentor/PI, and (2) Program Committee
- Students should prioritize research progress over additional teaching appointments

Alternative teaching opportunities
Students interested in gaining teaching experience developing teaching skills may explore:

- Guest lectures in departmental courses (coordinate with course instructors)
- Teaching assistantships in other departments
- Graduate College teaching workshops and certifications
- Outreach and science communication programs

NOTE: Students should not delay their research progress to wait for TA positions. The primary focus of PhD training remains research excellence.

16. FINANCIAL SUPPORT AND FUNDING

16.a. Graduate Assistantship Funding

PhD students in good standing receive funding through Graduate Assistantships (GA), which include:

Stipend:

- Current annual stipend: Minimum rates: $25,645 academic year, $33,350 fiscal year
- Paid bi-weekly over 9 or 12 months
- Annual cost-of-living adjustments may apply
- Stipend levels are set by Graduate College and funding agencies

Tuition and Fees:

- Full tuition waiver for GA-supported students
- Student fees (health, recreation, etc.) may still apply
- Summer tuition covered if on summer appointment

Health Insurance:

- Graduate student health insurance provided
- Coverage begins first day of appointment
- Includes medical, dental, and vision options
- Dependents may be added at student's expense

16.b. Funding Sources

Research Assistantship (RA)

- Funded through mentor's research grants
- Primary funding mechanism for most students
- Requires satisfactory research progress

Teaching Assistantship (TA)

- Funded through department instructional budget
- Limited positions available
- May be used to fulfill TA requirement

Training Grants

- NIH T32 and other institutional training grants
- Competitive selection process
- Additional professional development requirements
- Enhanced stipend may apply

External Fellowships

- NSF GRFP, NIH F31, AHA, and others
- Student applies directly to funding agency
- Program provides support for applications
- May include stipend supplement

16.c. Funding Duration

PhD Students:

- Funding: We make every effort to ensure students in good standing who are working in a research laboratory are funded for 5 years.
- Extensions beyond 5 years require mentor support and approval
- Funding contingent on satisfactory progress (annual review)

MS Students:

- Funding availability varies
- Typically, 1-2 years if available
- Contact program for current opportunities

MD/PhD Students:

- Guaranteed funding: 3 years for students in good standing
- Extensions beyond 3 years require mentor support and approval
- Contact MD/PhD program for current expected completion timeline and support opportunities

16.d. Additional Funding Opportunities

Travel Awards:

- GPSC travel grants: Up to $1,000/year
- Graduate College travel funds: Contact Graduate Program Coordinator for more information.
- Conference-specific travel awards

Research Support:

- Small grant programs through GPSC
- Pilot project funds through various centers
- Equipment and supply allocations through mentor

Emergency Funding:

- Graduate College emergency loans
- GPSC emergency grants
- Dean of Students emergency fund

16.e. Tax Information

- Stipends are taxable income
- Tuition waivers may have tax implications
- Consult a tax professional for individual situations

- University provides W-2 and 1098-T forms (W-2 is available in UAccess Employee, 1098-T is available in UAccess Student under financial aid.

16.f. Summer Funding

- Summer support not guaranteed
- Depends on mentor's grant funding
- TA positions limited in summer
- Students should discuss summer plans with mentor early

17. PROGRAM LEADERSHIP AND CONTACTS

PS GIDP Director

Benjamin (Ben) Renquist, PhD
Associate Professor, School of Animal and Comparative Biomedical Sciences
Email: bjrenquist@arizona.edu

The PS GIDP Director oversees all aspects of the Physiological Sciences GIDP including:

- Student admissions and recruitment
- Curriculum development and oversight
- Student progress monitoring and annual reviews
- Faculty membership and governance
- Budget and resource allocation
- Liaison with Graduate College

PS GIDP Coordinator

Holly Lopez
Email: hollyl@arizona.edu

The Program Coordinator handles day-to-day administrative operations including:

- GradPath form processing
- Course registration assistance
- Event coordination
- Student records maintenance

17.a. Executive Committee

Benjamin Renquist, PhD
Associate Professor, School of Animal and Comparative Biomedical Sciences
Email: bjrenquist@arizona.edu

The Executive Committee serves as the governing body for the PS GIDP. Current members include: Ben Renquist (Chair), Jared Churko (Program Committee), Jason Wu (Teaching Committee), Christopher Arellano(Finance Committee), Jennifer Stern (Activities Committee), and Paul Langlais from Recruiting/Admissions. A graduate student representative, elected annually by students in good academic standing, also serves on the Executive Committee. Students participate in the nomination process for selecting the PS GIDP Chair. The Executive Committee Student representative serves as a voting member except in personnel matters where they are recused.

17.b. Program Committee

Jared M. Churko, PhD
Associate Professor, Cellular and Molecular Medicine
Email: jchurko@arizona.edu

The Program Committee oversees curriculum, student progress evaluation, comprehensive exam question approval, and student petitions. The committee includes both faculty and student representatives, with PhD and MS students represented when possible. Student representatives serve as voting members except in personnel matters.

17.c. Recruiting Committee

Paul Langlais, Ph.D.
Associate Professor, Medicine
langlais@arizona.edu

The Recruiting and Admissions Committee is responsible for publicizing the program, developing an active recruitment plan, evaluating applicants, and recommending admission of qualified candidates to the Executive Committee.

17.d. Finance/Resource Committee

Christopher Arellano, PhD
Associate Professor, Orthopedics
Email: arellanoc@arizona.edu

The Finance/Resource Committee recommends allocation of Graduate Assistant (GA), Graduate College Fellowship (GCF), and Graduate Tuition Scholarship (GTS) funding. Funding decisions are based on:

- Year of training in the program (1st year students are funded first)
- Previous funding mechanisms used by the student
- Student academic excellence and research progress

17.e. Teaching Committee

Jason Wu, PhD
Assistant Professor, Department of Physiology
Email: jingwu1@arizona.edu

The Teaching Committee is responsible for oversight of the PS 696A student forum. They will take into consideration student recommendations and identify willing mentors for forum feedback. They may serve as one of two faculty involved in feedback.

17.f. Activities Committee

Jennifer Stern, PhD
Assistant Professor, Department of Medicine, Division of Endocrinology
Email: jhstern@arizona.edu

The Activities Committee is responsible for creating and hosting events that will encourage professional development, educational experiences, and foster a collaborative scientific environment.

APPENDIX I: PHYSIOLOGICAL SCIENCES PROGRAM BY-LAWS

(Rev. 9/2026)
(Rev. 8/2023)
(Rev. 7/2019)
(Rev. 6/2011)
(Rev. 1/2004)
(Rev 10/1998)

The Physiological Sciences Graduate Interdisciplinary Program (GIDP) is composed of research and graduate educational activities in a broad range of Physiological areas. The program involves faculty members from the Colleges of Medicine, Pharmacy, Agriculture & Life Sciences, Engineering and Science. The Executive Committee (appointed by and responsible to the Chair of Graduate Interdisciplinary Program) serves as the executive, policy and administrative agency for the Program. The structure and organization of the Physiological Sciences GIDP shall conform to the Guidelines for Graduate Interdisciplinary Programs established by the Director of Graduate Interdisciplinary Programs.

It is the responsibility of the Physiological Sciences Program to provide a graduate educational program in the various areas of physiology, to publicize the program, and to maintain graduate participants of the highest quality. It is also the responsibility of the program to maintain vigorous, productive research activities, to maintain an interacting community of physiologists by providing seminars and promoting campus-wide interdisciplinary activities, and to identify promising areas of physiological research and the faculty expertise and facilities needed to explore these areas.

Creative planning and leadership are essential to maintain and foster excellence in physiological research. These and related functions are served by the Physiological Sciences GIDP and its Executive Committee. In the following sections the By-laws that govern policies and operating procedures are outlined.

Article I. Chairperson of the Executive Committee and of the Physiological Sciences Graduate Interdisciplinary Program.

Activities of the Physiological Sciences Program are administered by the Executive Committee whose Chairperson shall also serve as Chair of the Physiological Sciences GIDP.

A. Chair of the Physiological Sciences GIDP

1. The Chair of the Physiological Sciences GIDP will be appointed to a five-year term by Faculty Director of Graduate Interdisciplinary Programs from a nominee submitted by the Executive Committee. It is the policy of the Physiological Sciences GIDP that the Chairperson may serve no more than one consecutive term.

2. In November of the 5th year of the current chair's term, nominations (self and other nominations are allowed) will be collected. In February, all nominees will present their vision for the graduate program to the PS GIDP faculty and staff. Within 2 weeks of these presentations, the faculty and students of the program will vote to nominate the next chair for approval by the executive committee.

   The chair nominee will be selected by the Executive Committee in a closed session, using the advisory votes of the PS GIDP faculty and staff. Importantly, a decision that departs from the vote of the faculty and students must be conveyed with rationale to all faculty and students that are members of the PS GIDP.

In cases where there is a potential conflict of interest on the part of an Executive Committee member, including being the spouse of a candidate or a graduate student in the laboratory of a candidate, that member will be excused from the decision process. Any member of the Executive Committee who is excused from participating in the selection due to potential conflicts of interest will be replaced by another representative. The replacement is temporary and sustained only for the immediate process of discussion and selection of the next chair nominee. The absent member will be replaced by another member of the Physiological Sciences Program, according to the following hierarchical order. If the person qualified to be appointed as a substitute has a conflict of interest, or is currently appointed to the Executive Committee, then the replacement will be determined by the next option in the series.

For faculty substitutes:
a). The former chair of the same committee in the Physiological Sciences program.
b). The senior faculty member of the same current committee, with seniority determined from combined years of service in that position and on other committees of the Physiological Sciences GIDP.

For student representative substitutes:
a). The former student representative to the Executive Committee.
b). The senior student representative from all the current Committees, with seniority determined from combined years of service in that position and on other committees of the Physiological Sciences GIDP.

3. The duties of the Chair of the Program are:
    a. Call and preside at meetings of the Executive Committee as needed but not less than once a year
    b. Call and preside at meetings of the Physiological Sciences GIDP at least once per year or as needed
    c. Appoint and supervise the Standing Committees on Recruiting and Admissions, Program, Teaching, and Activities as detailed in Article II
    d. Administer the budget of the Physiological Sciences GIDP
    e. Manage administrative matters (such as qualifying and thesis committees) with the Graduate College
    f. Direct course change and approval forms
    g. Serve on GIDPAC or appoint replacement PS GIDP faculty representative from the Executive Committee.

B. Executive Committee

1. The Executive Committee will consist of six faculty members representing the major areas of Physiological Sciences and one graduate student. All five faculty members will represent the standing committees (ordinarily the Chair of the standing committee; see below). Faculty members of the Executive Committee will be appointed only from the members of the Physiological Sciences GIDP. Each Executive Committee member will serve three-to-five-year terms. New members of the Executive Committee will be appointed each year by the chair of the program after requesting nominations from the faculty and the Executive Committee. The graduate student member will be elected annually by the students (from those students in good academic standing in the Program).
2. The Executive Committee is responsible for administering the Physiological Sciences GIDP, including admission of graduate students, evaluation of continuing graduate students, publicizing the Physiological Sciences program intra- and extramurally, planning

the development of the Physiological Sciences Program, formulating the annual budget of the Physiological Sciences GIDP, securing and allocating necessary funding, and advising the Dean of the Graduate College and Provost on issues pertinent to Physiological Sciences.

Article II. Standing Committees (No finance/Resource or ad-hoc mentioned?)

For all committees, faculty membership is appointed by the executive committee annually with members normally serving 3-year terms. At least one member (normally the chair) from each committee will represent their committee on the Executive Committee. The graduate student members of committees will be elected annually by the students in good academic standing in the program. For committees with 2 graduate student representatives both students pursuing a PhD and an MS should be represented.

A. The **Recruiting and Admissions Committee** shall consist of at least three faculty members and two graduate students. The Recruiting and Admissions Committee shall be responsible for publicizing the program, developing an active minority recruitment plan, evaluating applicants, and recommending admission of qualified candidates to the Executive Committee.
B. The **Program Committee** shall consist of at least three faculty members and one graduate student. The Program Committee shall be responsible for curriculum and course development, maintaining the Student Handbook, suggesting potential advisors to students, evaluation of graduate student progress including an annual evaluation of the yearly progress reports from the students and their mentors, evaluating and approving written comprehensive examination questions, mediating concerns and grievances by GIDP graduate student trainees (Section 6), and addressing student appeals as detailed above (See sections 5.a. and 7.c.4). The Program Committee shall prepare a report on graduate student progress and submit the report by June 1 of each year to the Executive Committee.
C. The **Activities Committee** shall consist of at least two faculty members and two graduate students. The Activities Committee shall be responsible for organizing educational and social events that promote interactions among the members of the Physiological Sciences Program. These activities shall include at least one picnic at the beginning of each academic year, social outings, intramural sports, and at least one annual poster session.
D. The **Teaching Committee** shall consist of at least two faculty members and one graduate student. The chair of the Teaching Committee will be the teacher of record for PS696C and PS696A. The Teaching Committee will be responsible for working with the Department of Physiology to assign teaching responsibilities to all graduate students, taking into account preferences of course coordinators, students, and their research mentors. Assignments shall be distributed among students in as equitable manner as possible, individual teaching loads being averaged over the year. The Teaching Committee shall also be responsible for ensuring that all students receive an evaluation of their teaching abilities both from the students that they teach and from a faculty member. The teaching committee will also be responsible for ensuring that students do not exceed 0.5 FTE for teaching duties without prior approval from their PI and the program committee.
E. The **Finance/Resource Committee** shall consist of at least 2 faculty members. This committee is responsible for recommending allocation of GA/GCF/GTS funding in the GIDP. All recommendations will be approved by a vote of the executive committee. The rationale for all recommended funding must be provided to the executive committee and may be provided to the entire program. A comprehensive strategy should overlay all decisions within a given funding cycle. Rationale may include, but is not limited to, year of training of the student, status of the PI, funding of the PI, previous mechanism for funding of the student, or excellence of the student.

Article III. Membership in the Physiological Sciences GIDP

The Physiological Sciences GIDP consists of tenured (or tenure-eligible) faculty members at the University of Arizona who participate in graduate education and research in Physiological Sciences. An affiliate membership is available to non-tenure-eligible faculty.

A. Regular Membership

1. Criteria
    a. Faculty (tenure-eligible only) shall be nominated for membership in the Physiological Sciences GIDP by submitting a request for membership (letter explaining their reasons for applying) and a recent curriculum vitae to the Executive Committee. A two-thirds majority of positive votes of the Executive Committee shall be required for nomination to membership to the Director of Graduate Interdisciplinary Programs, who shall confer membership. Criteria for membership shall include demonstrated research activity, interest in graduate education, and resources for graduate training. All new members will present a seminar in the PS696 series in the academic year of admittance. This serves to introduce the faculty member's research to the faculty and staff of the GIDP and fosters collaborations.
    b. A member of the Physiological Sciences GIDP shall be dropped from membership for failure to participate in the activities of the GIDP. Participation includes service as a thesis/dissertation director for graduate students in Physiological Sciences, service on a committee of the Physiological Sciences GIDP, teaching a graduate course in Physiological Sciences, giving a seminar in the Physiological Sciences seminar, continued scholarly and research productivity in Physiological Sciences. Membership shall be subject to periodic review and failure to satisfy those criteria as decided by a two-thirds majority of the Executive Committee shall result in loss of membership.

2. Responsibilities
    a. Members of the Physiological Sciences GIDP may serve as academic and research advisors of graduate students in the program and as members of graduate and other committees.
    b. Members of the Physiological Sciences GIDP shall meet annually or as needed. Meetings shall be conducted in accordance with Robert's Rules of Order.
    c. Each member of the Physiological Sciences GIDP shall have one vote on matters brought to the program by the Executive Committee, a quorum shall constitute one-third of membership. Failing a quorum, electronic voting shall be required, and one-third response shall be a quorum.
    d. Members shall be listed as Faculty of the Physiological Sciences GIDP in the Graduate Catalog and on the PS GIDP website.

B. Affiliate Membership

1. Non-tenure-eligible faculty who otherwise meet the criteria for membership (Art. III, 1.a.), may apply for affiliate membership in the Physiological Sciences GIDP by submitting a request for membership and a recent curriculum vitae to the Executive Committee, a two-thirds majority of positive votes of the Executive Committee shall be required for election to affiliate membership.
2. Affiliate members shall have all the privileges and responsibilities of regular members (Art. III, 1.b.) except that they can only serve as co-directors of graduate dissertation committees in conjunction with a regular member.

Article IV. Amendments

The By-laws shall be amended or revised by movement of the Executive Committee and a two-thirds positive vote of the Physiological Sciences GIDP.

APPENDIX II: THE COMPREHENSIVE EXAMINATION COMMITTEE CHAIR CHECKLIST

The following is a checklist for the Chair of the Comprehensive Examination Committee (NOT the mentor). For additional details, refer to the Physiological Sciences Program Handbook. Questions may be directed to the Program Coordinator or the Program Chair.

Doctoral students must select a Comprehensive Examination Committee during their 3rd semester in the Program. The student will select one member (not the advisor) to chair the committee. The chair is responsible for chairing meetings of the Exam Committee and for managing the development and execution of the exam. The Comprehensive Examination Committee Chair and the Program Committee Chair will include the Program Office on all communication regarding each students' comprehensive exams.

___ Determine the date for the written exam, and if possible, potential dates for the oral exam (if the written is successfully passed).

___ Determine the areas on which the student will be examined, and which committee member is responsible for composing each question (3 systems, 3 cellular/molecular).

___ Set a date by which the questions will be submitted to the chair (see below).

___The questions must be submitted to the Chair of the Program Committee at least 2 weeks prior to the exam date, so that the PS Program Committee can evaluate it for consistency with program goals and suggest changes when warranted.

___ Send final version of the written exam to the Program Coordinator to distribute and collect (unless instructed otherwise).

___ Distribute the questions to the appropriate committee members for grading, and the graded questions are returned to the Committee Chair. **Ensure that exams are graded in a timely manner (5 days).**

___ Once the exams are graded the Committee Chair collects the grades and any comments, notifies the committee, the Program Coordinator, and the student of the results. The Committee Chair provides a copy of the graded exams to the Program Office to be filed.

If the result is "pass", the student proceeds with the Oral Exam. If the result is "fail", the Chair of the Committee follows the guidelines for repeating the written exam by calling another Committee Meeting to determine procedure.

___ After the Oral Examination the Chair reports the results in GradPath.

APPENDIX III: THE WRITTEN COMPREHENSIVE EXAM APPROVAL FORM

Physiological Sciences
Written Comprehensive Exam Approval Form
This form is to be completed on GradPath

Student: _____ Date of Written Exam: _____

Committee Members (Please print name after signature)

Comp Committee Chair: _____

Faculty (Major) _____

Faculty (Major) _____

Faculty (Minor) _____

Faculty (Minor) _____

Results of the Written Comprehensive Exam

	Pass	Fail
Systems Physiology:		
Question 1:	_____	_____
Question 2:	_____	_____
Cellular & Molecular Physiology:	_____	_____
Question 1:	_____	_____
Question 2:	_____	_____

*Failure of one question or section results in one re-take of that section.
*Failure of two questions or both sections result in one re-take of the entire exam.
*Failure of a re-take results in dismissal from the Program, per the student handbook.

Successful Completion/Approval of Defense, signed by Mentor:

Signature: _____ Date: _____

Please submit this form to the Program Coordinator after confirming the grade for the Written Comprehensive Exam.

APPENDIX IV: PHYSIOLOGICAL SCIENCES DOCTORAL STUDENT CHECKLIST

Name: _____ First Enrollment: _____ Mentor: _____

Program Forms:
Research Methods Work Plan Forms (Faculty/Term) _____ _____ _____
Mentor Selection Form ____/____/____
: ____/____/____

Teaching Fulfilled _____ Transfer Units Approved (if applicable)? _____

Student Forum (Term): Full Length Seminar: ____ 20 Minute Presentations: _____ _____

Required Coursework: (Term/Grade)
PSIO 503_____ PSIO 603_____ Ethics (course #) _____ Stats (course #) _____
PS 697 A_____

18 Dissertation units completed: ___/___/___

Graduate College GradPath Forms:
Responsible Conduct of Research ___/___/___
Doctoral Plan of Study: ____/____/____
Comp Exam Committee Appointment ___/___/___
Announcement of Comprehensive Exam____/____/____
Results of Comprehensive Exam ____/____/____(completed by your oral comprehensive committee)
Dissertation Committee Appointment____/____/____
Prospectus/Proposal Confirmation____/____/____
Announcement of Final Oral Defense: ____/____/____

List the Comprehensive Exam Committee: Faculty Name/Dept., Major and Minor

Comprehensive Committee Meetings: ____/____/____, ____/____/____, ___/____/____
Written Completion Date: ____/____/____ Oral Completion Date: ____/____/____

List the Dissertation Committee: Faculty Name/Dept., Major and Minor

Dissertation Committee Meetings: ____/____/____, ____/____/____, ___/____/____
Dissertation Title:
_____
_____
____

APPENDIX V: PHYSIOLOGICAL SCIENCES MASTER'S STUDENT CHECKLIST

Name: _____ First Enrollment: _____ Mentor: _____
Faculty Preceptor: _____ Student Preceptor: _____

Program Forms:
Research Methods Work Plan Form (Faculty/Term) _____
Mentor Selection emailed to Program Office ____/____/____

Student Forum (Term): 20 Minute Presentation: _____

Required Coursework: (Term/Grade)
PSIO 503_____ PSIO 603_____ PS 697 A and B _____
Transfer Units Approved (if applicable)? _____

Graduate College GradPath Forms:
Responsible Conduct of Research ___/___/___ Master's Plan of Study: ____/____/____
Master's Committee Appointment Form: ____/____/____

Committee:

Committee Meetings: ____/____/____, ____/____/____, ____/____/____,

Graduation Option (check one):

- ☐ Masters Thesis, and oral presentation
- ☐ Research Project Summary (written document) and oral presentation
- ☐ Written scientific document (review) and oral examination

Project or Thesis Title
_____
_____
____

APPENDIX VI: GRADPATH INSTRUCTIONS

GradPath is the electronic system utilized by the University of Arizona to track students' process through their Programs, to keep record of student documentation, and to ensure students meet Graduate College Policies.

PhD GradPath Instructions

Doctoral students initiate the completion of GradPath forms during their third semester in the Program. The following is a list of when each form needs to be completed:

- Year 1, Fall Term:
  - Responsible Conduct of Research Statement
- Year 2, Fall Term:
  - Plan of Study
- Year 2, Spring Term:
  - Comprehensive Examination Committee form.
  - Announcement of Doctoral Comprehensive Exam form. (May be submitted during the Summer term, following the fourth semester.)
- Year 4, Fall Term:
  - Doctoral Dissertation Committee Appointment
- Year 4, Spring Term:
  - Prospectus/Proposal Confirmation.
- Year 5, Spring Term:
  - Announcement of Final Oral Defense

GradPath forms are submitted electronically through UAccess Student Center. For assistance with submitting these forms see https://grad.arizona.edu/gsas/gradpath/faq?audience=35. Any questions may be directed to the Program Office or the Graduate College Degree Counselor.

- Login to UAccess Student Center
- Click the menu showing "advising" and select "GradPath Forms"Click the "GradPath forms" button to go to the GradPath page.
- You must first complete the "Responsible Conduct of Research Statement" form. Check the "I Accept" item and then click "Submit."
- The Plan of Study Form should now be available. You will need at least 36 units for the Major and at least 9 units for the Minor. To add the courses you have already taken, click the "Get Enrollment" button. To add classes, you will take in the future, click the "Get Future Courses" button. In this section, you will want to enter "1" for the number of registrations, and the number of units (1 for a class like PSIO 696, or 4 for a class like PS 900 for research). Dissertation units cannot be included on this form. Once you submit the form, it will go to the Program Coordinator, then your Minor advisor and Minor Director of Graduate Studies, then to your Mentor and our Program Chair, and finally to the Graduate College for approval. If there are any mistakes the form will be "denied" so that changes can be made. You would then "modify" the form to make the necessary changes and resubmit it.
- Once the Plan of Study has been approved, you may submit the Comprehensive Examination Committee form. Select each member from the UAccess database. You must also assign each member a role. Remember that the chair of your Comprehensive Examination Committee cannot be your mentor and must be a different faculty member. Other faculty should be given the role of "member" unless they are a Special Member. Select Special Member for faculty that are either not tenure-track or are not an employee of the University of Arizona. Be sure to communicate with the Program Office to make sure the Special Member is approved by the Graduate College. Contact the Program Office if a member of your committee is not found in the UAccess database.

- Once you have passed your Written Comprehensive Examination and have determined a date, time, and location for your Oral Comprehensive Examination, you may submit the Announcement of Doctoral Comprehensive Exam form. Be sure to submit this form prior to your oral exam. The chair of your Comprehensive Examination Committee will complete the Results of Comprehensive Exam to report your exam results.
- During the Fall term of your 4th Year, submit the Doctoral Dissertation Committee Appointment. The directions for this form are the same as for the Comprehensive Exam Committee form, except your mentor is now the chair of your committee. Your Dissertation Committee may be different from your Comprehensive Examination Committee. See each section in the Doctoral Program section of this handbook for more details on the committees, if needed.
- During the Spring term of your 4th Year, gain approval of your Dissertation Proposal from your committee and complete the Dissertation Proposal Form found on our website under the Current Students Section: Program Forms. Submit a copy of your Proposal and the completed Dissertation Proposal Form to the Program Office. The Program Coordinator will then complete the Prospectus/Proposal Form in GradPath.
- When you are ready to defend your dissertation, and have determined the date, time, and location of your defense, complete the Announcement of Final Oral Defense GradPath form. This form must be submitted at least 10 days prior to your defense, as it must be announced on the public University Master Calendar. Your Mentor will submit the results of your defense by completing the Results of Final Oral Defense form in GradPath.

Master's GradPath Instructions

Other than the Research Methods Work Plan Form which is to be completed in the student's first semester, master's students complete all of their GradPath forms during their third semester in the Program. GradPath forms are submitted electronically through UAccess Student Center. For assistance with submitting these forms see https://grad.arizona.edu/gsas/gradpath/faq?audience=35. Any questions may be directed to the Program Office or the Graduate College Degree Counselor.

- Login to UAccess Student Center
- Click the menu showing "advising" and select "GradPath Forms"Click the "GradPath forms" button to go to the GradPath page.
- You must first complete the "Responsible Conduct of Research Statement" form. Check the "I Accept" item and then click "Submit."
- The Plan of Study Form should now be available. Click "Yes" only if you chose the Thesis Option for your research project – click "N" if you are completing a Research Manuscript or Scientific Paper. You will need at least 30 units. To add the courses you have already taken, click the "Get Enrollment" button. To add classes, you will take in the future, click the "Get Future Courses" button. In this section, you will want to enter "1" for the number of registrations, and the number of units (1 for a class like PSIO 696, or 4 for a class like PS 900 for research). Make sure you add at least 1 unit of PS 910 if you are completing the Thesis Option, but *do not add PS 910* if you are not completing a formal thesis. Once you submit the form, it will go to the Program Coordinator, then to your Mentor, then to our Program Chair, and finally to the Graduate College for approval. If there are any mistakes the form will be "denied" so that changes can be made. You would then "modify" the form to make the necessary changes and resubmit it.
- Once the Plan of Study has been approved, you may submit the Master's/Specialist Committee Appointment Form. Select each member from the UAccess database. You must also assign each member a role – your Mentor will be the Chair and the other faculty will be Members. Select Special Member for faculty that are either not tenure-track or are not an employee of the University of Arizona. Be sure to communicate with the Program Office to make sure the Special Member is approved by the Graduate College. Contact the Program Office if a member of your committee is not found in the UAccess database.
- Bring the Master's Defense Committee Form, found on our website under the Current Student section, Program Forms, (http://physiological-sciences.arizona.edu/link-graduate-college-forms) to your defense. You will need your Committee Chair to sign the bottom of the form to indicate that you passed your defense. Submit that form to the Program Office so that the Program Coordinator may submit the Master's/Specialist Completion Confirmation from in GradPath, indicating that you have met our Program's requirements for graduation.