PH.D. IN APPLIED PHYSIOLOGY WITHIN THE DEPARTMENT OF KINESIOLOGY AND APPLIED PHYSIOLOGY

Program Policy Statement

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Part I. Program History

A. Mission Statement

The mission of the PhD program is to provide advanced training to students in the field of **Applied Physiology** with the goal of preparing students for research-based careers. Areas of in-depth study are driven by faculty research and encompass cardiovascular physiology, exercise physiology, musculoskeletal physiology, and neurophysiology. The programmatic emphasis is on the regulation, adaptation, and integration of mechanisms across all levels of biological organization from molecules to organ systems. New knowledge on health, aging, chronic disease, and injury prevention will be generated and disseminated. Along with in-depth, laboratory-based immersion, the mission of the program is to provide high quality classroom-based instruction through a core graduate curriculum, electives, and seminars.

B. Date of Permanent Status

The Applied Physiology PhD program was approved by the Faculty senate on February 7, 2011 and received permanent status in Spring of 2018.

C. Degrees Offered

The degree awarded to those who complete this program is a Doctor of Philosophy (Ph.D.) in Applied Physiology.

D. Commitment to Diversity, Equity, and Inclusion

Diversity and inclusion are key drivers of academic excellence and impactful research. We are committed to supporting all of our students and in particular, those from diverse backgrounds, experiences, and perspectives. We are committed to creating a graduate community that is inclusive and respectful of all. Beyond the University's code of conduct for students and employees, which we fully support, we have <u>additional standards and expectations</u> for members of the College of Health Sciences and the Applied Physiology PhD program.

Part II. Admission

A. Admission Requirements

Admission to the graduate program is competitive. Those who meet stated requirements are not guaranteed admission, nor are those who fail to meet all of those requirements necessarily precluded from admission if they offer appropriate strengths.

To be admitted, a student must have identified a faculty mentor and obtained their commitment for advisement. Prior to submitting an application, prospective students should visit the faculty webpages of potential advisors or communicate with them directly to determine whether they are recruiting students (see https://www.udel.edu/academics/colleges/chs/departments/kaap/research/). Faculty members tend to advise students whose background, goals, and objectives are compatible with their own areas of research and funding.

Specific admission requirement are as follows:

- 1. A completed University of Delaware Graduate Studies application.
- 2. Support of a faculty advisor.
- 3. A Bachelor of Science, Master of Science or equivalent degree from an accredited college or university. A minimum undergraduate GPA of 3.0 on a 4.0 scale is required.
- 4. GRE scores are optional. International student applicants must demonstrate a satisfactory level of proficiency in the English language if English is not the first language. An official paper-based TOEFL score of at least 600, or at least 100 on the Internet-based TOEFL with a minimum speaking score of 18 is necessary for an applicant to be considered for admission. Applicants completing the IELTS must have a minimum score of 7.0 overall with no individual speaking sub-score below 6.0.
- 5. Applicants must submit an essay response to specific questions asked on the application; a resume; and a statement of professional goals and objectives.
- 6. Applicants should have taken one year of mathematics at the undergraduate level, preferably to include calculus and/or statistics.
- 7. Students are admitted to the program with the expectation that they will devote full-time to their training. Written requests for part-time enrollment must be included in the personal statement section of the application.
- 8. Applicants must submit at least three letters of recommendation. It is highly recommended that letters of recommendation come from individuals who can speak to the applicant's potential for success in graduate school from both academic and research perspectives. All letters of recommendation should be managed electronically through the Graduate College.
- 9. One official transcript of all US colleges and universities attended must be sent directly from the institution to the Graduate College or be provided in a sealed envelope with the application packet. Students who have attended the University of Delaware need not supply a transcript from Delaware.
- 10. Applicants can submit unofficial transcript(s) in the application, but must submit official, final transcript(s) after they accept an offer of admission. One official transcript of all non-US based college and university records is required. The transcript must list all classes taken and grades earned. If the transcript does not state that the degree has been awarded, send a degree certificate that states that the degree has been awarded. If the degree has not been awarded or the degree certificate has not been issued, evidence of the awarded degree must be provided prior to the first day of classes in the term of admission. For institutions that issue documents only in English, send the English original. For institutions that issue documents both in English and a foreign language, send both the English language original and the foreign language original. For institutions that issue documents only in a foreign language, send the foreign language original and a certified translation in English. The translation must be certified by an official of the issuing institution, a state- or court-appointed translator, or the Embassy of the issuing country in the United States. If it is necessary to send non-original documents:
 - a. The documents must be original "attested copies", officially attested to by the issuing institution or the Embassy of the using country in the United States, and

b. Certified translations must be originals, no copies will be accepted.

B. Application Deadlines

For Fall admission, applications should be submitted by December 15 for departmental funding consideration, with a final deadline of March 15. For Spring admission, applications should be submitted by October 1 for funding consideration, with a final deadline of December 1. Please note, there are typically limited or no assistantships available for spring applicants.

C. Admission Categories

Students admitted to the Applied Physiology Program may be admitted into one of two categories:

- 1. Regular status is offered to students who meet all of the established entrance requirements, who have a record of high scholarship in their fields of specialization, and who have the ability, interest, and maturity necessary for successful study at the graduate level in a degree program.
- 2. Provisional status is offered to students who are seeking admission to the degree program but lack one or more of the specified prerequisites. All provisional requirements must be met within the deadline given before regular status can be granted. Students admitted with provisional status are generally not eligible for assistantships or fellowships. Students who file an application during the final year of undergraduate or current graduate work and are unable to supply complete official transcripts showing the conferral of the degree will be admitted pending conferral of the degree if their records are otherwise satisfactory and complete.

Part III. Degree Requirements for the Doctor of Philosophy in Applied Physiology

The degree requirements are the same, whether a student is entering the program with a bachelor's degree or a master's degree.

A. Course Requirements

The Doctor of Philosophy in Applied Physiology requires a minimum of **46 credits** including **9 credits** (KAAP969) of dissertation. The program is designed to be completed in 4 years, however, those students entering with only a bachelor's degree typically require 5 years to complete the program. The 46 required credits are specified in the student's plan of study and normally include:

Required courses (28 credits):

For KAAP630 and 631, a minimum grade of B required.

4 semesters at the 0-credit level.)

•	KAAP630 Advanced Human Physiology I	(3)
•	KAAP631 Advanced Human Physiology II	(3)
•	Research (KAAP868)	(12)
•	Statistics*	(6)
•	Seminar (KAAP801)	(4)
	(Seminar taken 8 semesters, 4 semesters at the 1-credit	level and

*This statistics requirement can be met by the following courses:

BISC 643: Biological data analysis EDUC665: Elementary Statistics

EDUC812: Regression and Structural Equation Modeling

STAT608: Statistical research methods

STAT656: Biostatistics

Additional statistical courses may be considered and substituted with approval by the advisor and Program Director.

Elective Courses (9 credits): Suggested courses are listed in Appendix A.

Students who have had substantially similar courses to one or more of those required prior to entering the Applied Physiology Program may substitute other appropriate courses with the approval of the advisor and the Program Committee.

Only those courses in the 600, 800, 900 levels will apply towards the doctoral degree. Independent study courses will be accepted based on approval of the advisor and the Department Chair. A maximum of 9 independent study credits may be included in the plan of study.

B. Plan of Study and Revisions

Students are required to develop a plan of study with their advisor during the first semester of study. The plan of study form is available on the program website. Depending on the student's background and interests, the plan of study may include courses beyond the minimum number required for the degree. The plan of study must first be approved by the advisor and then the Program Committee by the end of the first semester. A typical plan of study (showing only the minimum requirements for the degree) is shown below.

Fall - Year I		Spring – Year I	Spring – Year I	
KAAP630	(3)	KAAP631 (3)	
Research I	(3)	Research II (3)	
Statistics	(3)	Statistics (3)	
Seminar	(1)	Seminar (1)	

Preliminary Exam at end of year 1

Fall – Year 2		Spring – Year 2	
Elective	(3)	Elective	(3)
Research III	(3)	Research IV	(3)
Seminar	(1)	Seminar	(1)
Fall – Year 3		Spring – Year 3	
Seminar	(0)	Seminar	(0)
Elective	(2)	Dro Candidaou	(6)
Liccuive	(3)	Pre-Candidacy	(0)

Fall – Year 4		Spring – Year 4	
Seminar	(0)	Seminar	(0)
Dissertation	(9)	Sustaining	(0)

Students may need to alter their approved plan of study due to scheduling conflicts, creation of new courses, or change of research focus. Students who wish to make changes to their plan of study should first obtain permission from their advisor. The revised plan of study must be approved by the Program Committee.

Students must have a minimum overall cumulative grade point average of a 3.0 on a 4.0 scale to be eligible for the advanced degree. Grades in all required courses (listed on page 5) for the degree must be a minimum of B- with one exception. A grade of B is required in both KAAP630 and KAAP631. All graduate numbered courses taken with graduate student classification at the University of Delaware are applied to the cumulative index. Credit hours and courses for which the grade is below "C-" do not count toward the degree even though the grade is applied to the student's cumulative grade point average. Candidates should ensure that all grades have been submitted by their professors. Temporary grades of "S" (Satisfactory) are assigned for Research and Dissertation until a final letter grade is submitted upon completion of the dissertation. Any student receiving a grade of "U" (Unsatisfactory) for Research or Dissertation will be given written conditions which must be met for improving and continuing in the program by the student's advisor and the Program Committee. Failure to meet these conditions will result in recommendation for dismissal from the program.

C. Internships

Students desiring to complete an internship outside of the University during their time in the program must receive approval from their advisor and dissertation committee. This requires taking time off from the program and should be discussed with the advisor early in the program. It is recommended that the internship occurs during the summer months. During this time, a student will no longer be on contract (see Part V below). If it occurs during the semester, the student must apply for a Professional leave of absence through the Graduate College. Finally, pursuing an internship may delay graduation and have implications for funding later in the program if a student's progress exceeds the typical four years as outlined in section B.

D. Residency Requirement

At least 4 academic years of graduate work are required for the PhD degree. At least one continuous academic year must be devoted exclusively to full-time study (9 credit hours per semester) in applied physiology in residence at the University of Delaware. This residency requirement may be fulfilled using a fall and spring semester combination or a spring and fall semester combination, but summer and winter sessions do not meet the qualifications. Course credit earned in the master's program in Exercise Science at the University of Delaware may be applied toward the doctoral degree residency requirement.

E. Faculty Advisors and Committees for Preliminary Exams and Dissertation.

a. **Faculty Advisors.** During the application process, each student must identify a faculty advisor from among the faculty holding appointments in the program. The faculty

member must be willing to serve as advisor and to accept responsibility for oversight of the student's academic progress in the program.

If, during the course of a student's academic program, the advisor is unable or unwilling to continue as advisor, it is the student's responsibility to identify a faculty member willing to be the new advisor. The new advisor must be identified within 6 months in order for the student to be considered making satisfactory progress toward the degree.

Students may also elect to switch to a different advisor at any time with the approval of the Program Committee and with the consent of the new faculty advisor. Switching advisors does not change the deadlines for completing the requirements for a degree.

- b. Preliminary Exam Committee. The Program Committee will identify, each year, at least three faculty members and the Program Director who will have responsibility for writing and assessing preliminary exams for those students ready to take this exam. All members of the Applied Physiology faculty are encouraged to participate in the oral portion of the exam. However, responsibility for determining the final outcome of the exam (pass, re-examination, failure) will lie with the named members of the Preliminary Exam Committee. In the event of a re-examination, the same committee members will have responsibility for composing the exam and assessing the outcome.
- c. Dissertation Committee. The student and their advisor will identify members of a Dissertation Committee within one semester of successful completion of the preliminary examination. Ph.D. dissertation committees must consist of a minimum of four members and a maximum of seven members, including the advisor. At least three of the members should be University faculty with appointments within the Applied Physiology Program. At least one member is to be selected from outside of the Applied Physiology Program and/or from outside of the University. These outside committee members should be chosen based on their expertise in the area of study related to the dissertation, and in consultation with the advisor and other committee members. Outside committee members will normally hold a doctoral degree. An outside committee member not holding a doctoral degree must be approved by the Program Committee. It is the responsibility of the advisor to replace members who withdraw from the committee during the dissertation process.

Students must convene their dissertation committees at least once every six to eight months. Upon completion of the meeting, the student's advisor must complete a meeting report and submit it to the graduate director. Students who do not have committee meetings in a timely manner will be considered as failing to progress and will be required to meet with the Program Committee to determine whether a recommendation for dismissal from the program is warranted.

d. Laboratory Safety and Research Regulations and Standards of Student Conduct.
Graduate students performing laboratory research are subject to all University

regulations regarding safety, human subjects, animal use, and hazardous and radioactive material use and disposal. These guidelines may be found in the University of Delaware Policies and Procedures Manual. Additional information can be obtained from the UD Research Office website: http://www.udel.edu/research/ All training and regulatory authorizations must be updated at the time of proposal submission.

F. Preliminary Examination Requirement

Students must pass a preliminary examination that tests their general knowledge base in applied physiology and their ability to critically evaluate scientific literature. The preliminary examination is an oral exam and content of the exam is usually based on: 1) the two-semester course sequence in Advanced Human Physiology (KAAP 630 and 631) taken during the student's first year of the academic program and 2) an area of study that is consistent with the student's planned dissertation work. In order to be eligible to take the preliminary exam, students must have completed Advanced Human Physiology I and II courses with a grade of B or better. Students are required to take the preliminary exam at a time set by the Program Director as soon as is feasible after the first year courses have been successfully completed. If the student fails to complete the preliminary exam by this time, the student is subject to dismissal. Students may petition the APHY graduate committee in writing to take the exam at a later date pending unusual circumstances (i.e. retake one of the required courses). The results of this examination will be one of the following:

- 1. **Pass.** The student demonstrated to the examination committee that they are ready to proceed to the next stage of their degree training.
- Conditional pass. The examination committee feels the student performed marginally in one or more areas. Conditions to address noted deficiencies may include the following.
 - a. The student may be asked to complete (with a grade of B or better) one or more courses or a section of a course as a condition for changing the preliminary examination grade to Pass.
 - b. The student may be asked to complete a re-examination on one or more topical areas (but not all) in either oral or written form. The student must satisfy the conditions assigned to achieve a Pass and remain in the Program.
- 3. **Complete Re-examination.** This result is appropriate for a student whose performance was unsatisfactory, but displayed evidence of the potential to complete graduate degree training. The re-examination is an oral exam that must be completed within 6 months. The possible outcomes of the re-examination are pass, conditional pass (see conditions in 2a and 2b) or failure. The student may not take the exam a third time.
- 4. **Failure.** This outcome would indicate that the examination committee considers the student incapable of completing degree training and the student would be recommended for dismissal from the program.

G. Dissertation Proposal Defense and Dissertation Defense Requirements

Students in the Applied Physiology Program normally should complete an oral dissertation proposal defense by the end of their sixth semester of enrollment. Prior to

the presentation, proposals normally should have received approval from the University Human Subjects Review Board (HSRB) and/or the Institutional Animal Care and Use Committee (IACUC). Similarly, following completion of the dissertation, an oral defense of the dissertation is required.

Procedures for the dissertation proposal defense and the dissertation defense are the same. The written dissertation proposal and the written dissertation will be made available to all members of the Applied Physiology faculty at least two weeks prior to the oral defense date. The oral defense will be open only to the University community, and invitations will be sent to all Applied Physiology and departmental faculty and students at least two weeks prior to the defense date. The oral defense meetings will include both a defense of the student's proposed or completed dissertation research and an in-depth examination of the student's knowledge of their research specialization. Students are expected to demonstrate competency in both oral and written communication skills.

Following the oral presentation and questions from faculty in attendance the Dissertation Committee will meet separately and vote on the outcome. The possible outcomes of the oral defense are pass, conditional pass, or failure. The outcome will be presented to the student, along with any conditions or requirements for proposal or dissertation revisions. For conditional pass, requirements must be addressed within six months of the original exam date.

Once the proposal defense has been successfully completed, the student must apply to the graduate school for admission into candidacy. Please see the Graduate College's Doctoral Degree Candidacy Recommendation Form (PDF) for details.

- H. Requirements for Satisfactory Progress towards the Degree (up to date information is available on the Graduate College webpage https://www.udel.edu/academics/colleges/grad/current-students/academic-support/policies/)
 - a. Time Limit for Completing the Degree. The time limit for completion of degree requirements begins with the date of matriculation. Students entering a doctoral program with a master's degree are given 10 consecutive semesters to complete the requirements. Students entering a doctoral program with a bachelor's degree are given 14 consecutive semesters to complete the degree requirements. Students who change their degree plan and have transferred from one degree program to another degree program are given 10 consecutive semesters from the beginning of the first year in the latest program. Students completing the requirements for the master's degree who are subsequently granted permission to continue toward the doctoral degree are given an additional 10 consecutive semesters.

An extension of time limit may be granted for circumstances beyond the student's control. Requests for time extensions must be made in writing and approved by the student's dissertation committee and the director of the Applied Physiology Program. The director will forward the request to the Graduate College.

b. Submission of Required University Forms. When a student has met the requirements for admission to candidacy as previously explained, the student should submit a Doctoral Degree Candidacy Recommendation form to the Graduate College. The student's classification will change to post candidacy upon admission to candidacy status. The deadlines for admission to doctoral candidacy are updated annually by the Graduate College. Responsibility for seeing that admission to candidacy is secured at the proper time rests with the student.

To initiate the process for degree conferral, candidates must submit an "Application for Advanced Degree" to the Graduate College. The application deadlines are February 15 for Spring candidates, December 15 for Winter candidates, April 15 for Summer candidates, and September 15 for Fall candidates. The application must be signed by the candidate's adviser and department chair. There is an application fee. Payment is required when the application is submitted. Upon completion of the audit, the Graduate College notifies students in writing when they have met all degree requirements.

c. **Grade Requirements for Satisfactory Progress.** Failure to satisfactorily progress in the program will be based on the University Graduate Policy as noted below:

The Graduate College monitors the academic progress of all graduate students and notifies students in writing of all academic deficiencies. The cumulative GPA after each 9-hour increment determines academic standing.

The University's Academic Probation Policy is expressed in the following chart:

If student is on:	And earns a GPA of:	The status becomes:
Any status	3.0 or above	Clear
Clear	2.99 – 2.5	Warning
Clear	2.49 - 2.0	Probation
Probation	Below 3.0	Dismissal
Warning	Below 3.0	Probation
Any status	Below 2.0	Dismissal

- d. Reasons for Dismissal from the Program. The Graduate College notifies students when they are dismissed from graduate programs without completing a degree. Dismissals usually take place at the end of a term. Students may be dismissed for the following reasons:
- Upon the expiration of the five-year time limit for those students in a doctoral program who were admitted with a master's degree. Upon the expiration of the seven-year time limit for doctoral students who were admitted with a bachelor's degree.
- Upon the failure to meet the grade point average requirements as stated in the policy on Academic Deficiency and Probation.
- Upon written notice to the Graduate College of voluntary withdrawal from the program.

- Upon failure to pass the preliminary, language, or comprehensive/ candidacy examination(s), a dissertation/ proposal defense, or a dissertation defense.
- Upon the failure to achieve a cumulative grade point average of 3.0 upon the completion of the stated number of required credits for a degree.
- Upon the failure to meet the stated minima in specific course requirements as identified by individual programs when a department has a policy that such failure leads to dismissal from the program.
- Upon failure to satisfactorily conduct research required for the degree.
- Upon the determination by the faculty of the student's department that the student has failed to meet or has failed to make satisfactory progress towards meeting academic standards required of the student's program other than the failure to achieve a cumulative grade point average of 3.0 upon the completion of the stated number of required credits for a degree.
- Upon failure of a graduate, research, or teaching assistant to perform assigned duties adequately. A student's stipend may not be terminated without the Dean's approval and the approval of the Associate Dean of the Graduate College. The Graduate College must be informed of a student's stipend termination prior to the initiation of an HR Employee Termination Form.

At the close of each semester, winter session, or summer session, in those circumstances deemed appropriate by the Applied Physiology program faculty exercising its professional judgment, the faculty may evaluate the progress of a graduate student toward meeting the academic standards of the program in which the student is enrolled. In addition to graded course work, academic standards include, but are not limited to, professional, ethical, clinical, and other standards required of graduate students.

Students are entitled to know the procedures and standards by which their academic performance is assessed. Each program has a statement of policies and procedures by which student academic progress is monitored and by which comprehensive, qualifying, and final examinations/defenses are conducted and graded. If, in the professional judgment of the applied physiology program faculty, a student has failed to make satisfactory progress toward meeting the academic standards of the program in which that student is enrolled, the faculty may vote to dismiss that student from the program.

In the case of dismissal, the graduate director is required to send a report to the Graduate College that states the faculty vote on the decision causing dismissal and the justification for this action. The Graduate College will notify a student in writing when the student is being dismissed for failure to make satisfactory progress in the program.

e. **Procedures for Student Appeals.** Students who receive what they perceive as an unfair evaluation by a faculty member or faculty committee may file <u>grievances</u> in accordance with University of Delaware policies. Students are encouraged to contact the faculty advisor and then the department chair prior to filing a formal grievance in an effort to resolve the situation informally.

In the case of academic dismissal, the student may appeal the termination by writing to the Dean of the Graduate College. This appeal must be made within ten class days from the date on which the student has been notified of academic dismissal. The Dean will review the appeal and may either uphold the dismissal, grant reinstatement or refer the case to the Graduate Hearing Board for resolution. If the Dean grants reinstatement, the student must meet the conditions of the reinstatement. Failure to meet these conditions will result in dismissal from the program. A graduate student may be reinstated only once to a given major. The student's academic transcript will reflect the reinstatement with academic probation status.

Students wishing to review their program file must submit a written request to the graduate director at least 24 hours in advance. Students must review the file in the presence of program staff or faculty and are not permitted to remove a file but may photocopy documents from their folder. All access to student records is in accordance with the Family Educational Rights and Privacy Act.

Part IV. Assessment Plan

The objective of the PhD program in Applied Physiology is to prepare students for research-based careers. With that in mind, the following program educational goals (PEGs) were developed.

- 1. Demonstrate core knowledge of human physiology across the major body systems.
- 2. Integrate physiology from the cellular and molecular level to organ systems and organisms.
- 3. Develop clinical/laboratory skills that support research focus.
- 4. Design and conduct original research.
- 5. Effectively read and evaluate scientific information.
- 6. Communicate effectively, both orally and in writing so as to disseminate research to the broader physiological and scientific community via peer-reviewed articles and/or conference/seminar presentations.

These PEGs are critical for the success of the student in the Applied Physiology PhD program. They will be measured utilizing a variety of metrics including required coursework, the preliminary exam, the literature review that is required as part of the dissertation proposal evaluated by the dissertation committee, acceptance of an abstract at a professional meeting or submission of a manuscript, and position acquired at the end of graduation. Two PEGs will be assessed per academic year and reported to the KAAP Department Chair and the Dean's office of the College of Health Sciences.

Part V. Financial Aid and Assistantships

A. Financial Awards

Types of Awards, Policy for Granting Financial Awards, Summer Appointments, and Number of Years of Support

Funding for PhD students within the Applied Physiology program will primarily come from faculty advisor grant support and department teaching assistantships. Research Assistant awards will be made on a competitive basis for students that best fit the needs of the sponsoring faculty member. Teaching Assistant awards will be made on a competitive basis for students prepared to teach and otherwise assist with undergraduate instruction.

Students can also apply for internal funding. For example, students can apply for any of the competitive awards offered through the UD Research Office or the Graduate College.

Students can also apply for pre-doctoral support from funding agencies such as the American Heart Association or the National Institutes of Health. All students will be encouraged to apply for these external awards. The sponsoring faculty member will work with the student to develop the proposal.

Summer appointments will be made on an individual basis. If funds are available, it is expected that students will work full-time in the sponsoring faculty's laboratory during the summer months (with a reasonable amount of time for vacation based on the Graduate Student Paid Leave policy).

Support for a student enrolled in the Ph.D. program will not normally be provided for more than 5 years.

2. Responsibilities and Evaluation of Students on Assistantships

Students are expected to maintain full-time status during their graduate studies. While time devoted to classes vs. laboratory work will vary each semester, students are expected to devote 20 hours per week to laboratory work early in the program (when coursework is high), progressing to full-time in the lab upon completion of course work.

Specific teaching related responsibilities for teaching assistants will be assigned by the Department Chair. The Department Chair will review student evaluations of teaching and possibly use other means of evaluating teaching effectiveness. Maintaining a teaching assistant position is contingent on satisfactory teaching performance, as well as the student making satisfactory performance toward the degree.

Specific responsibilities for research assistants will be assigned by the faculty member supplying the funding for the research assistant position. Continuation or termination of the research assistant position will be at the discretion of that faculty member.

Students on contract should consult the Graduate College Additional Work policy, as well as the International Student and Scholar Services office where appropriate, should they intend to pursue employment beyond an average of 20 hours per week.

Part V. Departmental Operations

- A. Responsibilities of program faculty include oversight of program policies and curriculum.
 - 1. **Graduate Director.** The department chair will appoint a graduate director for the Applied Physiology Program from among the affiliated faculty. The graduate director must minimally hold the rank of associate professor. The term of service for the graduate director is three years, with no limit on the number of consecutive terms that may be served. The graduate director serves as the program representative and point person and is responsible for the following:
 - Corresponding with prospective students,
 - Maintaining program records,
 - Chairing Program Committee meetings,
 - Admitting students to the program following approval of the Program Committee.
 - Chairing meetings of the Applied Physiology faculty as necessary for review/revision of program policies and curriculum,
 - Representing the Applied Physiology Program on the Department Curriculum Committee, and
 - Final approval of degree granting.
 - 2. Program Committee. The Applied Physiology Program Committee will consist of three affiliated faculty members, including the graduate director, and shall be chaired by the graduate director. The two members of the Program Committee shall be elected by program faculty for staggered, three-year terms. Responsibilities of the Program Committee shall include:
 - Admission of students into the program,
 - Approval of student programs of study,
 - Approval of student selection of a new faculty advisor after admission to the program,
 - Selection of a panel of four faculty to serve as the Preliminary Exam Committee during each academic year,
 - Oversight of student progress in the program, including dismissal of students who fail to make satisfactory progress, and
 - Approval of dissertation committees.

B. General student responsibilities

- Up to date information on general graduate student responsibilities can be found on the program website. https://sites.udel.edu/kaap/graduate-programs/applied-physiology/
- 2. Representation on Department Curriculum Committee. The Applied Physiology Program will have one elected student representative who will be invited to meetings of the Department Curriculum Committee.
- 3. Students are expected to work on an individual planning and development form with their advisors, due at the end of January each year.

C. Student Organization. Students in the program will be encouraged to periodically meet as a group so that the student representative can pass on any pertinent information from program meetings and so the group can discuss any issues or concerns they might have. Concerns can be brought to the attention of the program faculty by the elected student representative.

D. Travel for professional meetings or presentations

The department provides up to \$2,000 per PhD student for travel to conferences to present their research over the course of their time in the program.

The Graduate College also provides funds for travel up to \$1,500 with 1:1 matching over the course of a graduate student's study at UD. This money can be utilized all at once or for several different travel awards. This award can be utilized to cover the cost of presenting one's academic work or for professional development; travel for research or scholarship; or for field or clinical research-based data acquisition. Applications must be submitted one month prior to travel. Please see the Graduate College website for more details: https://grad.udel.edu/graduate-community-portal/students/travel-award/travel-award-application/

The \$2,000 allotment from the KAAP department for PhD students is inclusive of the 1:1 match on the Graduate Student Travel Award. In total, KAAP PhD students are eligible for \$3,500 in travel support over the course of their degree. Students should exhaust the Graduate Student Travel Award prior to applying for KAAP-only funds. Students should contact the Academic Program Coordinator who will work with the Department Business Administrator on requests.

Travel support is subject to change as department and university policies evolve. Any applicable changes will be communicated to students prior to submitting travel requests.

APPENDIX A

RECOMMENDED ELECTIVE COURSES

Course	Credits
KAAP604 Sensorimotor Characteristics of Injury	3
KAAP605 Pathophysiology in Sport	3
KAAP607 Motor Learning and Control	3
KAAP609 Concussion Pathology & Management	3
KAAP617 Biomechanical Lab Instrumentation	3
KAAP620 Advanced Human Anatomy	3
KAAP629 Intro to Programming in Matlab	3
KAAP632 Advanced Muscle Physiology	3
KAAP640 Topics in Physiology	3*
KAAP651 Neuromuscular Control & Electromyography	3
KAAP652 Functional Neuroimaging of Motor Control	3
KAAP655 Advanced Physiology of Exercise	3
KAAP665 12 Lead ECG Interpretation	3
KAAP666 Special Problem	1-6
KAAP686 Mathematics for Biomechanics	3
KAAP808 Seminar in Motor Behavior	3
ANFS655 The Gut Microbiome: Microbial and Host Perspectives	4
BISC602 Molecular Biology of Animal Cells	3
BISC610 Endocrine Physiology	3
BISC612 Advanced Cell Biology	3
BISC615 Developmental Biology	3
BISC626 Advanced Neuroanatomy	3
BISC627 Advanced Neurophysiology	3
BISC639 Developmental Neurobiology	4
BISC656 Evolutionary Genetics	3
BISC665 Advanced Molecular Biology & Genetics	3
BISC671 Cellular and Molecular Immunology	4
BISC675 Cardiovascular Physiology	3
BISC833 Special Topics in Biology	1-4
CHEM641 Biochemistry	3
CHEM642 Biochemistry	3
MMSC608 Molecular Preparatory Techniques	2
MMSC625 Basic Molecular Techniques	4
MMSC627 Flow Cytometry	2
MMSC635 Practical Genomics, Proteomics & Bioinformatics	3
MMSC690 Clinical and Molecular Cell Biology	3
MMSC691 Human Molecular Genetics	3
NTDT611 Advanced Macronutrient Metabolism	3
NTDT612 Advanced Vitamin Metabolism	3
NTDT613 Advanced Mineral Metabolism	3
NTDT631 Advanced Micronutrient Metabolism	3
PSYC653 Introduction to functional MRI	3
*Can be taken more than once	