

**BIOMS Program Policy Statement**

**Interdisciplinary Biomechanics and Movement Science Master's and Doctoral ~~Ph.D.~~ Programs**

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# Part I. Program History

1. **Purpose**

The human body is comprised of a variety of complex, integrated systems. An understanding of the role of these systems with respect to even a limited set of problems, such as the performance of everyday or highly skilled motor activities or the causes and resolution of bone/joint dysfunction, requires experimental approaches from a number of disciplines. As a result, a group of faculty at the University has assembled with a mission to study the body from an interdisciplinary approach. An understanding of structural integrity along with movement generation is the basis for this program of study. The faculty come from backgrounds in physiology, biomechanics, computer science, engineering, motor control and rehabilitation science. Interests range from robotic interfaces for environmental controls for the disabled, to fracture fixation, to understanding of normal and pathological movement.

A significant percentage of the population has some form of physical disability that limits their functional abilities. The form of these disabilities may be progressive deterioration of tissue, congenital defects or trauma-inflicted damage. The adverse effects of many disabilities could be reduced or alleviated through appropriate research on topics ranging from microscopic bone remodeling to corrective device development.

The program title stems from the fact that although biomechanical methods are important to gain an understanding of human movement, such methods also play an important role in non-movement problems such as bone remodeling after injury or developing better prosthetic devices. Thus, the program attempts to bring together scientists from a number of complementary disciplines to address unresolved problems of human function that are related both directly and indirectly to problems of movement. The interdisciplinary nature of the program encourages collaborative efforts incorporating biomechanics, human physiology, motor neurophysiology, engineering and computational approaches, with the goal of improving human life. Such efforts will, in time, advance and amplify the ability of medical practitioners to respond to maladies and to prescribe appropriate preventative or corrective measures. We believe that this program provides an opportunity for graduate students to study the human body in a way not possible through any of the traditional programs currently offered at this university.

This program was formed by a group of twenty faculty and administrators from four different units. The impetus for a single unified program of study grew out of the realization that each of the four units was seeking a vehicle to create an academic program that dealt with the application of science and engineering toward solving the problems realized by the physically challenged. During the initial phase of planning, the group examined and analyzed models of existing programs in biomedical and rehabilitation engineering from institutions around the country. In addition, advice was sought from administrators of Operations Research, the University's only intercollegiate, interdisciplinary graduate program. Directors of other graduate degree programs on campus were contacted for input on how the creation of this program would impact existing graduate degree programs. The resulting program represents the synthesis of countless communications between group members, and an astounding quantity of consensus decisions reached through in-depth discussions of course requirements, seminar formats, student recruitment and admission policies, administrative structures and responsibilities, and numerous additional details.

#  Date of Permanent Status

The Interdisciplinary Program in Biomechanics and Movement Science was awarded permanent status in 2000.

# Degrees Offered

The degrees awarded to those who complete this program will be either a Master's of Science in Biomechanics and Movement Science, Master of Arts in Biomechanics and Movement Science, or a Doctor of Philosophy in Biomechanics and Movement Science.

# Part II. Admission

1. **Admission Requirements for the MS and PhD**

Applicants must submit all materials directly to the University Graduate College ~~Office of Graduate and Professional Education~~ using the online admission process before admission can be considered. To be admitted, a student must have identified a faculty mentor and obtained their commitment for advisement. ~~Admission applications are available at: https://grad-admissions.udel.edu/apply/~~

The BIOMS admission process is completed as follows: First, finished applications consisting of the online application, undergraduate/graduate transcripts, GRE scores, letters of recommendation, and the written statement of goals and objectives are reviewed by BIOMS faculty members seeking new students. Faculty members identify students whose background, goals, and objectives are compatible with their own areas of research and funding. The faculty member then notifies the Program Coordinator ~~Director~~ that they have agreed to advise the potential student by submitting an Application Review Checklist for the applicant. Submission of the checklist indicates proper vetting of the candidate by the advisor and that formal review of the applicant’s application materials is requested by the Biomechanics and Movement Science Executive Committee ~~and the application materials are reviewed by the Biomechanics and Movement Science Executive Committee.~~ The Executive Committee arrives at an admission decision after reviewing the completed checklist and application. ~~To be admitted, a student must have an advisor.~~

All international applicants for graduate study at the University of Delaware are expected to have or gain English proficiency prior to enrolling in graduate coursework. The recommended minimum TOEFL score is 100 and/or IELTS of 7. A waiver of the TOEFL exam is only allowed when a bachelor’s, master’s, or doctoral degree has been or will be earned from a college or university accredited by a regional accrediting association in the United States OR from a university recognized by the ministry of education in a country where English is the primary language. ~~International applicants must submit official proof of English proficiency such as TOEFL or IELTS scores. The recommended minimum TOEFL score is 100 and/or IELTS of 6.5. Additional information regarding English proficiency can be found at http://grad.udel.edu/apply/tofel-ielts/~~

# Prior Degree Requirements

Baccalaureate degree from an accredited college or university

# Application Deadlines

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# BIOMS accepts applications throughout the year on a rolling basis. Students can enroll in the Fall or Spring semester, or ~~Winter/~~Summer ~~Special~~ Session~~s~~.

# Special Competencies Needed

Admission decisions are made by the Executive Committee of the Biomechanics and Movement Science Program. Deficiencies in more than two areas of the below requirements will automatically result in an admission denial by the Executive Committee. Students will be admitted to the program based upon enrollment availability and their ability to meet the following minimum recommended entrance requirements.

* + Acceptance by a primary advisor
	+ GRE score of 285 or greater (300 or greater strongly preferred) ~~A GRE score of 300~~ on math and verbal sections combined
	+ A undergraduate GPA of 3.0 or higher
	+ Pre-requisites with a grade of “B” or better in:
		- ~~Math through~~ Calculus ~~(2 semesters)~~
		- Anatomy/Physiology
		- ~~Physics (2 Semesters)~~ Mix of Laboratory Science courses and/or courses most applicable to the individual’s planned area of research (12 credits)
		- ~~Chemistry (2 Semesters)~~

Faculty advisor must indicate these laboratory science courses for consideration on the applicant’s Admission Checklist to be determined by the BIOMS Executive Committee.

# Admission Categories

Students admitted into the Biomechanics and Movement Science Program may be admitted into one of two ~~three~~ categories.

1. **Regular**. 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. **Conditional ~~Admission~~**: Conditional status is offered to applicants who are seeking admission to a degree program but lack specific prerequisites needed in the University of Delaware degree requirements. All conditional requirements, determined by the Executive Committee and communicated in writing to the student by the faculty advisor, must be met within the deadline given before regular status can be granted. Failure to meet the conditions by this deadline is grounds for dismissal from the program. ~~Successful applicants are typically admitted conditionally because information stated on, and documentation uploaded into, the application is self-reported and unofficial. Fulfilling the conditions stated on an offer of conditional admission by the first date of graduate coursework is critical, so the instructions stated on the letter must be followed carefully. Failure to clear all stated conditions by the start of graduate coursework may result in revocation of admission to the graduate program.~~
3. **~~Provisional~~**~~. Provisional status is offered to applicants who are seeking admission to a degree program but lack specific prerequisites needed in the University of Delaware degree requirements. All provisional requirements must be met within the deadline given before regular status can be granted. Failure to meet the provisions by this deadline is grounds for dismissal from the program. Students admitted with provisional status to a degree program are generally not eligible for assistantships nor fellowships.~~

#  University Statement

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 other appropriate strengths.

# Part III. Academic Degree: Master of Science (MS)

1. **Degree Requirements for the Master of Science (MS)**
2. **Program of Study**

All accepted students are expected to submit a planned program of study by the end of their first semester, created with their primary advisors to be approved by the BIOMS Executive Committee. Students must complete 24 credits of standard grading courses with a grade of “B” or better, plus 6 credits of thesis to earn degree. Failure to earn a “B” grade or better in degree related coursework may be remedied by modification of the plan of study if possible. If a student is ultimately unable to successfully modify their plan of study, the student may petition the BIOMS Executive Committee for admission to the MA program in Biomechanics and Movement science. Acceptance by the Executive Committee and a Change of Classification Form must be submitted and approved by the Graduate College. ~~An area of concentration must be declared in the program of study document.~~

**~~Areas of Specialization within BIOMS~~**~~:~~

~~Applied Anatomy and Physiology~~

~~Biomechanics~~

~~Molecular/Tissue Biomechanics or Cytomechanics~~

~~Motor Control/Behavior~~

~~Clinical and Translational Science~~

 **Required Courses (MS):**

~~Experimental Design or~~ Statistics 3

Instrumentation 3

Research Methods Design/Analysis: 3 credits

BMSC 622: Readings in Movement Science – Critically Evaluating the Literature: 3 credits

~~Outside Specialization (Breadth) 6~~

Electives ~~Inside Specialization (Depth)~~ 12

BIOMS Seminar (BMSC 865) 2 semesters

Thesis 6

Total 30

1. **Independent Study and Transfer Credits**

Students in the Master’s degree program are allowed to take a maximum of 6 credits of independent study. Additional independent study credits can be taken, but will not count towards graduation. A maximum of 9 graduate credits earned at another U.S institution may be applied to the Master’s degree if not used to complete a previous degree. Grades must be a “B” or better to be acceptable for transfer and no older than five years. ~~transferred from another institution to the degree. Candidates for the degree must have regular status.~~

1. **Changes to the Program of Study**

Students may need to alter approved programs of study once matriculated into ~~they have entered~~ the program due to reasons that can include scheduling conflicts or the creation of new courses directly related to the student’s goals. Students who wish to make ~~minor~~ changes to their program of study must obtain permission from their advisor and approval from the Executive Committee. ~~Major changes to the program of study must be approved by the Executive Committee. Any change of a previously approved program of study must be submitted in writing to the Program Director.~~ Students may petition in writing for a variance in the degree requirements and must have approval from their faculty advisor and the BIOMS Executive Committee.

1. **~~GPA Requirements~~**

~~A grade below a B- will not be counted toward the course requirements for a degree but is calculated in the student’s cumulative grade point average. To be considered in good academic standing, a student must maintain a minimum cumulative graduate grade point average (GPA) of 3.00 on a 4.00 scale each semester. To be eligible for an advanced degree, a student’s cumulative grade point average shall be at least a 3.00 and the student’s grades in courses counted toward the degree requirements of the program shall equal at least a 3.00.~~

# Committees for Theses

1. **Establishment of Thesis Committee**

The student and his/her advisor will create a thesis committee at the time the student begins to develop the thesis proposal. The thesis committee shall include three University faculty from within the Biomechanics and Movement Science Program, and may have no more than six members. The thesis advisor must be a member of the BIOMS faculty and at least one of the BIOMS committee members must be from an area of focus in biomechanics and movement science different from that of the advisor. With the approval of the BIOMS Executive committee, a professional staff member who holds a secondary faculty appointment within an academic department may serve as a committee member. Faculty who have retired or resigned from the University may maintain committee membership or continue to chair committees of students whose work began under their direction prior to their retirement or departure from the University. Non-tenure BIOMS faculty may co-advise BIOMS students and Co-chair the thesis committee provided that the other co-advisor/co-chair is a tenure track BIOMS faculty member. ~~BIOMS faculty who do not have regular faculty status may co-chair the thesis committee provided that the other co-chair meets the definition for regular faculty status.~~ It is the responsibility of the thesis advisor to replace members who withdraw from the committee during the thesis process.

1. **Defense of the Thesis Proposal**

The thesis proposal must be in the format of an NIH R03 proposal. Sections A-E of the Research Plan must be included. The number of pages required will be at the discretion of the advisor. The thesis proposal defense will be scheduled only after a majority of members of the thesis committee have determined that a defense is appropriate. A final copy of the thesis proposal must be delivered to the members of the thesis committee at least two weeks in advance of the proposal defense. A copy of the thesis proposal must be available one week prior to the proposal defense by either submitting an electronic copy to the BIOMS administrative staff for redistribution, or by delivering a hard copy to each site supporting BIOMS faculty. Prior to the presentation, proposals that involve the use of human or animal subjects must receive approval from the University Institutional Review Board (IRB). Details for training, creating consent forms and submitting studies for review by the IRB can be obtained from the University of Delaware Research office.

The thesis proposal defense, will be open to the public, and invitations will be sent to all BIOMS faculty and students at least one week prior to the date of the defense. The candidate will present a summary of the proposed research, and will then field questions from the committee, attending faculty, and invited guests. After all questions have been fielded, the thesis committee will meet to decide whether the thesis proposal outcome was a pass, conditional pass, re-examination, or failure. Results of the meeting will then be presented to the student. The student may not receive more than one dissenting vote from members of the committee to receive a passing grade. Upon completion, the student is responsible for obtaining all the necessary signatures on the Thesis Proposal Defense Form. A signed copy of the form will be forwarded to the program director. Students who fail the thesis proposal defense will receive one additional opportunity to repeat the process and defend a new or modified thesis proposal at a time agreed upon by committee members, but within 6 months. If a student is ultimately unable to successfully defend their thesis proposal, the student may petition the BIOMS Executive Committee for admission to the MA program in Biomechanics and Movement science. Acceptance by the Executive Committee and a Change of Classification Form must be submitted and approved by the Graduate College.

1. **Defense of the Thesis**

The format of the thesis must adhere to the University’s Thesis and Dissertation Manual and style guidelines. These documents are available on the University’s website. The thesis defense will be scheduled only after the chair of the thesis committee has determined that a defense is appropriate. A copy of the thesis proposal must be available one week prior to the proposal defense by either submitting an electronic copy to the BIOMS administrative staff for redistribution, or by delivering a hard copy to each site supporting BIOMS faculty.

The thesis defense will be open to the public, and invitations will be sent to all BIOMS faculty and students at least one week prior to the defense. The candidate will present a summary of the completed research, and will then field questions from the committee, attending faculty, and invited guests. After all questions have been fielded, the thesis committee will meet privately to decide whether the thesis is accepted, rejected, or accepted pending revisions. Results of the meeting will then be presented to the student. The student may not receive more than one dissenting vote from members of the committee to receive a passing grade. If a student is ultimately unable to successfully defend their thesis, the student may petition the BIOMS Executive Committee for admission to the MA program in Biomechanics and Movement science. Acceptance by the Executive Committee and a Change of Classification Form must be submitted and approved by the Graduate College.

1. **[Processing the Final Document](http://grad.udel.edu/policies/step-by-step-guide-to-graduation/)**

Students must follow the university approved step-by-step guidelines for graduation. The thesis must be approved by the Chair of the student's thesis committee, the Director of the Biomechanics and Movement Science program, and the Graduate College ~~Senior Vice Provost for Graduate and Professional education~~. Three original abstracts (on bond paper) must be submitted with the thesis. The thesis must be submitted to the Graduate College ~~Office of Graduate and Professional Education~~ for approval not later than six weeks prior to the degree conferral date.

The University reserves the right to duplicate a thesis for distribution to other libraries or for the use of individual scholars. However, the University will not publish a thesis for general distribution without the written consent of the author. ~~Copyrighting of a master's thesis can be accomplished by submitting a copy and $55 fee to the Office of Graduate and Professional Education, which is processed through ProQuest and the Copyright Office in Washington, D.C.~~ If copyrighting of a dissertation is desired, it may be arranged when the dissertation is submitted to the Graduate College. Published works are eligible for copyright protection in the United States if the work is first published in the United States.

1. **~~[Satisfactory Progress toward a Graduate Degree and Time Limits](http://grad.udel.edu/policies/graduate-academic-policies/%22%20%5Cl%20%22progress)~~**

~~The BIOMS program will follow the University of Delaware, Office of Graduate and Professional Education recommended policy for determining students’ failure to make Satisfactory Progress towards degree requirements and time limits for completion. Students enrolled in at least 9 credit hours or in sustaining credit are considered full-time students, although students holding assistantships are considered full-time with 6 credits.~~

1. **[Grievance Procedures](http://www.udel.edu/stuguide/15-16/grievance.html)**

Students concerned that they have received an unfair evaluation or have been graded inappropriately may file grievances in accordance with student guide to University of Delaware policies. Students are encouraged to contact the BIOMS Graduate Program Director prior to filing a formal grievance in an effort to resolve the situation informally.

# Articulation Between Master’s and Doctoral Degrees:

The master's degree is considered terminal unless the student plans to continue in a doctoral program. Students receiving their master's degree at the University of Delaware are not eligible to remain classified as graduate students and are automatically reclassified CEND (Continuing Education Non-degree) in any subsequent semester that they register following degree clearance unless the department, with the approval of the Graduate College ~~Office of Graduate and Professional Education~~, has already admitted them into a doctoral program. The procedures for changing status after earning a master's degree are as follows:

If a master's degree candidate is continuing toward a doctoral degree in the same major as the master's degree, the student must ~~should~~ request that the department submit a Change of Classification Form at the same time or before the student submits an Advanced Degree Application for the master's degree. If the department is unable to determine the student's eligibility to pursue a doctoral degree until after the master's degree is awarded, the department will ~~should~~ notify the Graduate College ~~Office of Graduate and Professional Education~~ by writing such a statement on the student's Advanced Degree Application for the master's degree. A student's classification changes from regular status in a master's degree program, to pre-candidacy when admitted to a doctoral program. If a master's degree candidate desires to continue toward a doctoral degree in a different major than the master's degree, the student should submit a completed admission application form to the Graduate College ~~Office of Graduate and Professional Education~~ and follow the same procedure for admission as any other applicant.

# Part IV. Academic Degree: Master of Arts (MA)

### Degree Requirements for the Master of Arts (MA)

1. **Pathway to MA**

The MA degree in Biomechanics and Movement Science is not a research degree requiring a research thesis. There is no direct entry into the Masters of Arts degree by new matriculating students. Prospective students must petition the BIOMS Executive Committee for admission and a Change of Classification Form must be submitted and approved by the Graduate College. The MA degree is designed for entry by graduate students in the PhD or MS BIOMS programs that are unable to complete the research requirements because of one or more of the following reasons:

* Probationary status due to cumulative GPA falling below a 3.0
	+ Requires the mathematical possibility of achieving a 3.0 GPA upon completion of degree related coursework
* Failure to earn a “B” grade or better in degree related coursework that cannot otherwise be remedied by modification of the plan of study
* Failure to pass the PhD qualifying exam, the PhD dissertation proposal/defense or MS thesis proposal/defense
* Failure to make satisfactory progress
* Pursuing a research degree is no longer a career goal
* The faculty advisor is no longer willing or able to mentor them and no other mentor is available

The BIOMS program recognizes that such students may have invested a year or more toward their respective degrees and may not find it desirable to seek transfer to another degree program. Thus, the MA degree provides an option to complete a master’s degree in BIOMS.

1. **Program of Study:**

Entry to the MA program requires immediate revision of the student’s prior BIOMS MS or PhD plan of study. The revised plan of study, created with their primary advisors requires approval by the BIOMS Executive Committee. Students must complete 24 credits of standard grading courses with a grade of “B” or better, plus 6 credits of a Capstone project to earn degree. Failure to earn a “B” grade or better in degree related coursework may be remedied by modification of the plan of study if possible. If ultimately modification of the plan of study is not possible and/or a 3.0 GPA is not attainable, the student will be de-enrolled from the university.

### Required Courses (MA): 30 credits

### Statistics**:** 3cr.

### Instrumentation**:** 3cr.

### Research Methods Design/Analysis**:** 3cr.

### **BMSC 622:** Readings in Movement Science **-** Critically Evaluating the Literature**:** 3cr.

### Electives**:** 12cr.

### **BMSC 865:** **Seminar:** 2 semesters, 0 cr.

### **BMSC 860: Capstone in Biomechanics and Movement Science: 6** cr.

1. [**Independent Study**](http://www.udel.edu/registrar/helpdocs/indstudy.html) **and** [**Transfer Credits**](http://www.udel.edu/registrar/transfer/)

Students in the Master’s degree program are allowed to take a maximum of 6 credits of independent study. Additional independent study credits can be taken, but will not count towards graduation. A maximum of 9 credits earned at another U.S. institution may be applied to the Master’s degree if not used to complete a previous degree. Grades must be a “B” or better to be acceptable for transfer and no older than five years.

1. **Changes to the Program of Study**

Students may need to alter approved programs of study once matriculated into the program due to reasons that can include scheduling conflicts or the creation of new courses directly related to the student’s goals. Students who wish to make changes to their program of study must obtain permission from their advisor and approval from the Executive Committee. Students may petition in writing for a variance in the degree requirements and must have approval from their faculty advisor and the BIOMS Executive Committee.

###  Committees for Capstone

1. **Establishment of Capstone Committee**

The student’s advisor and prior qualifier or thesis/dissertation committee will serve as the Capstone Committee. If the student no longer has an advisor and/or other prior committee members are unwilling, other BIOMS faculty or the BIOMS Executive Committee will serve as the student’s Capstone Committee.

1. **Capstone Project**

The capstone project gives the candidate the opportunity to synthesize and apply the skills developed in the MA program, and to demonstrate mastery and knowledge and skills expected of a BIOMS MA graduate.

A culminating 6 credit Capstone project and integrative experience that examines a current topic in biomechanics and movement sciences, which may apply accumulated didactic knowledge for the experience. The written document will take the form appropriate for the type of project format the candidate is to undertake. For example, for an academic position paper, the degree candidate will survey the literature, write a report demonstrating proficiency and assimilation enabling formulation of a position statement or other type of integrative analysis. The candidate will make a public presentation to the department, represented by the Capstone Committee.

The format of the project will may be one of the following:

* Analytical Research/Process Focus (Ex: Academic Position Paper)
* Teaching Faculty Focus (Ex: Teaching Portfolio and Presentations)
* Research Technician Focus (Ex: Lab Manual)
* Other – must have approval from the student's advisor & committee and/or BIOMS Executive Committee prior to beginning project.

This degree will culminate in a capstone project consisting of seven parts:

1. Abstract or executive summary
2. Research question(s)
3. Review of the literature (academic and/or professional)
4. Analysis (quantitative and/or qualitative)
5. Findings
6. Recommendation
7. Oral presentation of the project
8. **Presentation of the Capstone Project**

The Capstone presentation will be open to the public, and invitations will be sent to all BIOMS faculty and students at least one week prior to the defense. The candidate will present a summary of the completed project, and will then field questions from the committee, attending faculty, and invited guests. After all questions have been fielded, the thesis committee will meet privately to decide whether the project is accepted, rejected, or accepted pending revisions. Results of the meeting will then be presented to the student. The student cannot receive more than one dissenting vote from members of the committee to receive a passing grade. Students who fail the Capstone will receive one additional opportunity to repeat the process and defend a new or modified project at a time agreed upon by committee members, but within 6 months.

1. **Grievance Procedures**

Students concerned that they have received an unfair evaluation or have been graded inappropriately may file grievances in accordance with student guide to University of Delaware policies. Students are encouraged to contact the BIOMS Graduate Program Director prior to filing a formal grievance in an effort to resolve the situation informally.

### **Articulation between Master’s and Doctoral Degrees**

The Master of Arts degree is considered terminal for the BIOMS program. Students receiving their master's degree at the University of Delaware are not eligible to remain classified as graduate students and are automatically reclassified CEND (Continuing Education Non-degree) in any subsequent registered semester following degree clearance unless the department, with the approval of the Graduate College, has already admitted them into a doctoral program other than BIOMS. The procedures for changing status after earning a master's degree are as follows: If a master's degree candidate desires to continue toward a doctoral degree in a different major than the master's degree, the student must submit a completed admission application form to the Graduate College and follow the same procedure for admission as any other applicant.

# Part ~~I~~V. Academic Degree: Doctor of Philosophy (PhD)

1. **Degree Requirements for a PhD in Biomechanics and Movement Science**
2. **Program of Study:**

All accepted students must ~~are expected to~~ submit a planned program of study by the end of their first semester, created with their primary advisor(s) to be approved by the BIOMS Executive Committee. Students must complete 33 credits of standard grading courses with a grade of “B” or better, plus 9 credits of dissertation to earn degree. Failure to earn a “B” grade or better in degree related coursework may be remedied by modification of the plan of study if possible. If a student is ultimately unable to successfully modify their plan of study, the student may petition the BIOMS Executive Committee for admission to the MA program in Biomechanics and Movement science. Acceptance by the Executive Committee and a Change of Classification Form must be submitted and approved by the Graduate College. ~~An area of specialization must be declared in the program of study document.~~

**~~Areas of Specialization within BIOMS~~**~~:~~

~~Applied Anatomy and Physiology~~

~~Biomechanics~~

~~Molecular/Tissue Biomechanics or Cytomechanics~~

~~Motor Control/Behavior~~

~~Clinical and Translational Science~~

 **Required Courses (PhD):**

~~Experimental Design or~~ Statistics 3

Instrumentation 3

Research Methods Design/Analysis: 3 credits

BMSC 622: Readings in Movement Science – Critically Evaluating the Literature: 3 credits

~~Outside Specialization (Breadth) 6~~

Electives: 21 credits – Including BMSC 866 and BMSC 868 ~~Inside Specialization (Depth)~~

BIOMS Seminar (BMSC 865) 3 semesters

Dissertation 9

Total 42

1. **[Independent Study](http://www.udel.edu/registrar/helpdocs/indstudy.html), Research and** [**Transfer Credits**](http://grad.udel.edu/policies/#transfer)

Students in the Doctoral degree program are allowed to apply a maximum of 12 credits of combined independent study (BMSC 866), and ~~a maximum of 6 credits of~~ research (BMSC 868), where no more than 6 credits may be research. ~~However, no more than 12 combined credits from research and independent study courses may can be used to meet the 33 credit requirement (before dissertation credits).~~ Additional independent study credits can be taken, but will not count towards the required 33 credits for graduation. A maximum of 9 graduate credits earned at another U.S. institution may be applied to the Doctoral degree if not used to complete a previous degree. Grades must be a “B” or better to be acceptable for transfer and not older than five years. ~~transferred from another institution to the degree. Candidates for the degree must have regular status.~~

1. **Changes to the Program of Study**

Students may need to alter approved programs of study once matriculated into ~~they have entered~~ the program due to reasons that can include scheduling conflicts or the creation of new courses directly related to the student’s goals. Students who wish to make ~~minor~~ changes to their program of study must obtain permission from their advisor and approval from the Executive Committee. ~~Major changes to the program of study must be approved by the Executive Committee. Any change of a previously approved program of study must be submitted in writing to the Program Director.~~ Students may petition in writing for a variance in the degree requirements and must have approval from their faculty advisor and the BIOMS Executive Committee.

1. **~~GPA Requirements~~**

~~A grade below a B- will not be counted toward the course requirements for a degree but is calculated in the student’s cumulative grade point average. To be considered in good academic standing, a student must maintain a minimum cumulative graduate grade point average (GPA) of 3.00 on a 4.00 scale each semester. To be eligible for an advanced degree, a student’s cumulative grade point average shall be at least a 3.00 and the student’s grades in courses counted toward the degree requirements of the program shall equal at least a 3.00.~~

# Residency Requirements

At least 4 academic years of graduate work are normally required for the Ph.D. degree. At least one continuous academic year must be devoted exclusively to full-time study ~~(9 credit hours per semester)~~ in the major field in residence at the University of Delaware. Students holding assistantships are considered full-time with 6 credits, and students holding fellowships are considered full-time with 9 credits. This residency requirement may be fulfilled using a fall and spring semester combination or a spring and fall semester combination, but summer or winter sessions do not meet the qualification. Course credit earned in a master's program at the University of Delaware may be applied toward the doctoral degree residency requirement if the candidate is receiving both degrees from the University in the same major field.

# Registration Requirements Prior to Doctoral Candidacy

# Course registration requirements are determined by the student's approved program of study. Once the student has registered for all course requirements in a program of study but has not yet met all of the stipulations for passing into candidacy, the student must maintain registration during the fall and spring semesters in course(s) or in 3-12 credits of Pre-Candidacy Study (964). Pre-Candidacy Study is graded pass/fail. If the student registered in Pre-Candidacy Study is admitted to candidacy before the end of the free drop/add period of the next semester, the registration in Pre-Candidacy Study for the preceding semester may be changed to the course, Doctoral Dissertation (969) by the Graduate College. ~~Full time, regular status students who are holding a graduate assistantship or tuition scholarship must be registered for a minimum of 6 graduate credits, and those holding a fellowship must be registered for a minimum of 9 graduate credits.)~~

1. **Qualifying Examination ~~and Candidacy Exams~~ for the BIOMS PhD Program**

Students will be required to successfully complete a ~~2 hour oral~~ Qualifying Examination, containing both written and oral components, after the end of the second full semester ~~(Fall/Spring)~~ in the program~~, and a written Independent Development Plan (IDP) for their Candidacy Exam by the end of the 4~~~~th~~ ~~semester.~~ The exam will be evaluated by a committee of 3 faculty members and graded as Pass, Conditional Pass, ~~Re-Examination~~, or Fail. The Qualifying Exam must be completed by the end of the third full (not including winter or summer terms) academic semester, including remediation.

1. **Eligibility**

Following the semester in which the student completes at least 12 graduate credits of their required coursework and at least 2 full semesters of study, typically during the summer following the first year of study, they will be eligible to proceed with their Qualifying Exam. For students with non-fall matriculation or part-time study, the timing of the Exam will be determined by course completion (i.e., two semester equivalent) and the approval of the BIOMS Director. To take the Examination, each student must be in good academic standing and have approval of the faculty advisor.

* 1. ~~Qualifying Exam~~

~~During the semester when a student will complete at least 12 graduate credits of their required coursework, they will be eligible to proceed with their oral Qualifying Exam. The Qualifying Exam should be completed at the end of the students second semester (Fall or Spring) and must be completed by the end of the 3~~~~rd~~ ~~academic semester (not including Winter or Summer). In order to take the examination, each student must be in good academic standing and have approval by the faculty advisor.~~

* 1. ~~Candidacy Exam~~

~~During the semester when a student will complete at least 24 credits of their required coursework, they will be eligible to proceed with their written Candidacy Exam. The Candidacy Exam should be submitted no later than 6 months after the completion of the 24 credits, and must be completed by the end of the student’s 5~~~~th~~ ~~academic semester (not including Winter or Summer). In order to submit the examination, each student must be in good academic standing and have approval by the faculty advisor.~~

1. **Qualifying Examination ~~& Candidacy Exams Committee~~ Membership**

The Qualifying ~~student's~~ exam committees will be made up of 3 members, selected by the BIOMS Executive Committee, to include: ~~student’s advisor and approved by the executive committee~~.

1. Student's advisor
2. One BIOMS faculty member who has some ~~similar~~ content expertise relevant to at least one aspect of the students proposed research area
3. One BIOMS faculty member who would be considered outside the student’s primary research area/expertise. ~~One additional committee member(s), who may be internal or external to the BIOMS program and/or the University of Delaware, but who would be considered outside the students primary research area/expertise, and is informed by the students advisor on the review and grading procedures of this examination.~~

\* Members of the Qualifying ~~and Candidacy~~ Exam committee may also become members of ~~be different, and may also be part of~~ the student's dissertation committee, but this is not required.

1. **Scheduling of the Oral Qualifying Exam**

No later than the end of the first week of the summer term, the student will submit to their advisor and the BIOMS Director a document title and brief description of the subject matter proposed for the Exam. This will help guide the Executive Committee’s selection of Qualifying Exam committee members. After submission of the topic description, the student will be given 8 weeks to complete and submit the written component of the Exam. After the written exam has been evaluated, a 90 minute oral examination will take place with the same committee that evaluated the written document. Oral exams are typically scheduled for the week or two before the fall semester starts. Students will be expected to maintain participation in their regular research activities while preparing for the written and oral examinations. Students and their advisors may petition the BIOMS Director and Executive committee for an extension of the Qualifying exam if unforeseen circumstances arise that prevent timely completion. For students with non-fall matriculation or part-time study, the timing of each component of the Exam will be determined by the BIOMS Director, in consultation with the Qualifying Exam committee. ~~Once the committee has been formed, the student will meet with each of their committee members to obtain guidance regarding preparation for the exams. The student is responsible for providing each committee member with a copy of their program of study and syllabi from the courses completed. When the student feels ready, and with the advisors consent, the oral exam will be scheduled.~~

1. **~~Oral~~ Qualifying Exam Components**

The purpose of the Qualifying Exam is to evaluate the preparation of the student in the areas of background knowledge, methods and techniques, critical thinking, and oral and written scientific communication. These criteria will be evaluated through both a written exam and an oral exam. The oral comprehensive exam will include three areas designed to tests the student’s general knowledge base in biomechanics and movement science, the area of study that is consistent with the student’s planned dissertation work, research methodology, and their ability to critically evaluate scientific literature. The examination is organized and administered by the advisor in consultation with the student’s committee.

* + 1. **Written Component**

The written exam requires the student to prepare a 5-7-page document, consisting of the following:

* A literature review establishing the Background and Significance of a proposed area of research;
* A Summary of Important Methodologies, Measurements, Analyses, and Outcomes from the proposed area of research, together with their strengths and weaknesses;
* An identification and expansion upon at least one Important Gap in the Current Knowledge that could be addressed through their future research;
* A separate Works Cited section (no page limit)

This document should be formatted as follows:

* No less than 0.5-inch margins (top, bottom, and sides);
* Single spaced;
* Font no smaller than 11pt;
* Arial, Georgia, Helvetica, or Palatino Linotype font suggested;
* Correct citation style, conforming to the current NIH SF424 guide requirements and the standards of the student’s field of study, should be used throughout.

This document can be (but does not have to be) a draft of the introduction, background and significance, and methods sections of the student’s future dissertation and of papers anticipated to arise from their dissertation research.

Students may consult their advisor, other faculty members, and other students regarding the development of the scientific question to be the focus of the work. However, the preparation of this work and the writing must be the student’s original and independent work. That is, unpublished works completed by or in collaboration with an advisor (abstracts, drafts or manuscripts or grants) may not be used. Any text or figures used from published source (including previously published works by the student and/or advisor) must be properly cited. Failure to do so would constitute plagiarism.

The Qualifying Exam committee will evaluate the written exam to determine (1) whether the student demonstrates an acceptable knowledge of the scientific background and techniques relevant to their topic and (2) whether the student demonstrates written scientific communication skills expected of a student completing the first year of a BIOMS Ph.D. program.

Along with submission of the written document, the student will also submit to the Qualifying Exam committee a copy of their current Plan of Study and syllabi from each of the courses completed to date. The committee will have a standardized rubric to evaluate the written exam and will provide the student with formal written feedback on the written exam prior to the oral exam date. This feedback will be provided 2 weeks prior to the schedule oral exam.

* + 1. **Oral Component**

The student will prepare a 15-minute oral presentation based on the key components of their written exam and may address written feedback provided by their committee. Following the presentation, there will be one hour and 15 minutes for questions, which will be divided between items relating to the written exam content, obtaining responses to the feedback from written exam, and questions on general biomechanics and movement science knowledge based on the student’s completed core and elective courses.

~~The oral comprehensive exam will include three areas designed to tests the student’s general knowledge base in biomechanics and movement science, the area of study that is consistent with the student’s planned dissertation work, research methodology, and their ability to critically evaluate scientific literature. The examination is organized and administered by the advisor in consultation with the student’s committee.~~

~~Each member of the committee will be responsible for providing 2 scholarly articles to the student in preparation for the exam, at least 2 weeks in advance of the oral qualifying exam. Committee members may ask questions of the student to orally critique/interpret these articles, but may also broaden the scope of their questions to BIOMS content from the courses, or the student’s area of study. Any committee member may ask questions regarding research specific methodology, data analysis and interpretation. This questioning will be confined within the expected depth and breadth of the student's knowledge, based upon the program of study that they have completed. The oral exam will have a 2-hour time limit. Students must pass the oral exam to progress in the doctoral program.~~

1. ~~Research Specific & Current Literature Questions~~

~~The student's advisor will offer questions regarding the existing literature that requires the student to demonstrate their grasp of research methodology, experimental design, data analysis and interpretation in their chosen area of study.~~

1. ~~Content Area Questions~~

~~The committee member/s from within the student's area of concentration will focus on providing the student with questions from within their content area. A particular emphasis will be placed on an understanding of the background literature within the student’s area of research interest. The committee will be encouraged to ask questions relating to the history, importance, and current evidence surrounding their proposed research area. Students are expected to have an understanding of the papers provided. The committee is encouraged to ask questions pertaining to foundational works within the student’s field.~~

1. ~~Breadth Questions~~

 ~~The committee member from outside the student's area of concentration will focus on providing the student with questions from outside the students’ content area. Students are expected to be knowledgeable in all areas pertaining to course content they have taken since enrolling in the program. Students who have transferred credits from another institution will also be accountable for material from those courses.~~

1. **~~Written Candidacy Exam Components~~**

 ~~The purpose of the written candidacy examination is to give the student the opportunity to demonstrate:~~

1. ~~An understanding of the research area and the analytical techniques in which the student is interested.~~
2. ~~Comprehension of didactic material learned in the curriculum.~~
3. ~~The ability to plan and develop an experimental approach to solve problems within the student’s area of research. The student will write a document in the format of a National Institutes of Health (NIH) Independent Development Plan (IDP). The student’s plan should be individually tailored and well integrated with his/her research area. This document will serve as a written plan for evaluating the student’s progress in research. It must be created by the student and approved by the advisor, prior to submission to the Written Candidacy Exam Committee for final approval by consensus of the committee.~~
4. ~~Format for the Independent Development Plan~~
5. ~~Student’s Background (Maximum 1 page)~~
	* 1. ~~Describe the student’s commitment to a BIOMS-related research career. Describe the student’s current and previous professional and academic responsibilities in the laboratory and elsewhere. Describe the relationship between current activities and the proposed graduate work.~~
		2. ~~Describe prior training and how it relates to the objectives and long-term career plans of the student.~~
		3. ~~Describe the student's research efforts to this point in his/her research career, including any publications, prior research interests and experience.~~
		4. ~~Provide evidence of the student's potential to develop into an independent investigator.~~
6. ~~Research Plan (Maximum 2 pages)~~
	* 1. ~~The student must prepare a succinct review of the current state of the literature related to the overall aims of the laboratory. The student should describe his or her anticipated research contribution to the field. Detailed research design, preliminary data, and specific methods are not required within this document, but a rationale and general research plan should be discussed.~~
7. ~~Candidate's Plan for Career Development/Training Activities During their Doctoral Studies Period (Maximum 2 pages)~~
	* 1. ~~The student must prepare this section to include goals, a training plan, a mentorship plan, and a timeline.~~
		2. ~~The student must describe his/her overall career goals, and explain how the proposed research training will enable the attainment of these goals. The didactic (if any) and the research aspects of the plan must be designed to develop the necessary knowledge and research skills in scientific areas relevant to the candidate's career goals. Identify the skills, theories, conceptual approaches, etc. to be learned or enhanced during this program.~~
		3. ~~Describe the professional responsibilities/activities (if any) that will occur during the phases of training. Explain how these responsibilities/activities will help ensure career progression.~~
		4. ~~A well described mentorship plan must be included. This mentorship plan must include a list of the student’s dissertation committee and the roles that each committee member will serve in enhancing the student’s research goals.~~
		5. ~~A timeline for completing the proposed training, dissertation proposal, and research should be included.~~

~~The document must be completed, approved by the advisor, and circulated to the Candidacy Exam committee. The document should be in Arial 11 font, single spaced and 1 inch margins.~~

1. **Qualifying ~~& Candidacy~~ Exam Results**

The Qualifying Examination Committee will submit a recommendation to the BIOMS Executive Committee that the student either ‘Pass’, ‘Conditionally Pass’ or ‘Fail’ the Qualifying Exam. The recommendation will reflect the committee consensus opinion:

1. **Pass**: A decision of ‘Pass’ means that the committee feels that the student’s preparation is adequate to continue their work toward the candidacy stage.
2. **Conditional Pass:** A decision of ‘Conditional Pass’ indicates that the committee believes the student is not currently, but will be able to, successfully complete dissertation-level research, after successfully completing additional education or training within no longer than one additional semester. When completed, the student will be able to be successful in independent dissertation-level research. If the committee recommends a student’s Conditional Pass, they should also prepare a proposed study and mentoring plan to address any identified areas of weakness or insufficient preparation. The qualifying exam committee will review the student’s additional education or training outcomes and make recommendations to the Executive Committee for passing or failing the conditional status.

1. **Fail**: A decision of ‘Fail’ means that the committee feels that the student’s present areas of weakness and/or insufficient preparation are significant enough to prevent the student from successfully achieving programmatic milestones necessary to demonstrate and complete independent dissertation-level research, and that these deficiencies cannot be corrected within the timeframe set by the Graduate Program (by the end of the third full semester) for accomplishing these milestones.

The recommendation of the Qualifying Examination Committee will be reviewed by the Executive Committee, who will make final decisions. The BIOMS Director will communicate the decision to the student and provide and retain a written copy of the study and mentoring plan, if applicable. Progress made on the study and mentoring plan shall be documented on subsequent periodic reports, in line with specifications made in the plan and consistent with the requirement to complete the plan within one semester. Inadequate progress in the study and mentoring plan recommended by the committee may be grounds for dis-enrollment from the PhD program.

If the student fails the exam, they will be dis-enrolled from the PhD program, but may qualify to complete a Non-thesis Masters of Arts degree in Biomechanics and Movement Studies, which requires a total of 30 credits. Alternatively, the student may petition their advisor and the BIOMS Executive Committee for admission into the BIOMS Masters of Science degree program, which requires a thesis and the commitment of a willing advisor. Students concerned that they have received an unfair evaluation or have been graded inappropriately may file grievances in accordance with the student guide to University of Delaware policies. Students are encouraged to contact the BIOMS Graduate Program Director prior to filing a formal grievance in an effort to resolve the situation informally.

~~The results of these examinations will be by committee consensus:~~

1. ~~Pass: The student may proceed to the proposal defense stage of his/her degree training.~~
2. ~~Conditional pass: In the event that the examination committee feels the student's performance was generally acceptable but with a specific deficiency, the committee will then deliberate to determine condition(s) that will be specified for the student to satisfy in order to achieve a Pass and a time limit agreed upon by a consensus. Examples of these conditions may include suggested readings, additional courses, a written and/or oral re-examination on one or more question areas.~~
3. ~~Re-examination: This result is appropriate for a student whose performance was unsatisfactory, but displayed evidence of the potential to complete graduate degree training. Re-examination must be completed within one semester. The possible outcomes of the re-examination are pass or failure. The student may not take the exam a third time.~~
4. ~~Failure: This outcome would indicate that examination committee considers the student incapable of completing degree training and the student would be recommended for dismissal from the program.~~

~~\* A student with the results of a conditional pass or re-examination is entitled to only one re-examination. The second outcome of a “conditional pass” or “re-examination” is pass or fail.~~

1. ~~Grievance Procedures: Students concerned that they have received an unfair evaluation or have been graded inappropriately may file grievances in accordance with student guide to University of Delaware policies. Students are encouraged to contact the BIOMS Graduate Program Director prior to filing a formal grievance in an effort to resolve the situation informally.~~

# ~~University Requirements and~~ ~~Deadlines for~~ Admission to Doctoral Candidacy

The University requirements ~~Upon the recommendation of the doctoral student's candidacy exam committee and director of BIOMS program, students may be admitted to candidacy for the Ph.D. degree. Students are responsible for obtaining all the necessary signatures on the Doctoral Degree Candidacy Recommendation form. The stipulations~~ for admission to doctoral candidacy are that the student has (1) had a Plan ~~program~~ of Study approved, (2) completed one academic year of full-time graduate study in residence at the University, (3) ~~successfully passed their candidacy exam~~ fulfilled the foreign language requirement, if any, (4) passed the Qualifying Examination, (5) shown the ability to do research, and (6) had a research project accepted by the advisory committee with human/animal subjects approval (if appropriate for the research).

For BIOMS PhD students, successfully defending the Dissertation Proposal (described below), serves as the final acceptance of the research project. When a student has met the requirements for admission to candidacy, the Recommendation for Candidacy for Doctoral Degree should be completed and submitted.

~~The deadline for admission to candidacy for the fall semester is August 31. The deadline for admission to candidacy for the spring semester is January 31. The deadline for admission to candidacy for the summer is April 30. Responsibility for seeing that admission to candidacy is secured at the proper time rests with the student.~~

# ~~Registration Requirements after Admission to Candidacy~~

~~Once a student has met all of the stipulations for candidacy, the student is required to register in 9 credits of Doctoral Dissertation (969). Students may not register for Doctoral Dissertation (969) until admitted to candidacy. Registration in Doctoral Dissertation (969) and Doctoral Sustaining (999) is restricted to students with candidacy status. Once the student has registered in 9 credits of Doctoral Dissertation, the student is required to maintain matriculation in the doctoral program by registering in Doctoral Sustaining (999) in subsequent semesters until the degree is awarded. All students must be registered in the term in which the degree is officially awarded. Sustaining registration is required in summer session if the degree is awarded at the conclusion of the summer session.~~

# Continuous Progress towards Degree Completion

# The student’s progress in the program must be reviewed with the advisor on an annual basis. ~~towards the goals listed on the written Candidacy Exam IDP must be reviewed with the advisor on an annual basis, starting 1 calendar year after completing the Written Candidacy Exam.~~ The student is responsible for completing an Individualized Development Plan (IDP) ~~annual report~~, which will be evaluated and maintained by their advisor. Students must ~~Faculty advisors are encouraged to have their students~~ develop goals with their faculty advisor on an annual basis to ensure students are progressing appropriately throughout the program and ~~Students~~ must also satisfy all the requirements for academic progress as specified in the academic progress policy guidelines ~~found at http://www.udel.edu/gradoffice/polproc/policies.html.~~ Modifications to the IDP to address any shortcomings in academic preparedness should be made on an as needed basis. Failure to make satisfactory progress towards degree requirements and time limits for completion could result in dismissal from the program.

~~Students concerned that they have received an unfair evaluation or have been graded inappropriately may file grievances in accordance with student guide to University of Delaware policies. Students are encouraged to contact the BIOMS Graduate Program Director prior to filing a formal grievance in an effort to resolve the situation informally.~~

# Regulations Governing Dissertations

1. **Establishment of Dissertation Committee**

The student and their ~~his/her~~ advisor will create a dissertation committee at the time the student begins to develop the dissertation proposal. The dissertation committee shall include at least three University faculty from within the Biomechanics and Movement Science Program, and at least one member from outside of the program. The dissertation advisor must be a member of the BIOMS faculty, and at least one of the BIOMS committee members must be from an area of focus in biomechanics and movement science different than that of the advisor. With the approval of the BIOMS Executive committee, one professional staff member who holds a secondary faculty appointment within an academic department may serve as a committee member. However, all three within-program committee members must hold the doctoral degree. Faculty who have retired or resigned from the University may maintain committee membership or continue to chair committees of students whose work began under their direction prior to their retirement or departure from the University. Non-tenure BIOMS faculty may co-advise BIOMS students and co-chair the dissertation committee provided that the other co-advisor/co-chair is a tenure track BIOMS faculty member. ~~BIOMS faculty who do not have regular faculty status may co-chair the dissertation committee provided that the other co-chair meets the definition for regular faculty status.~~ Outside committee members must hold a doctoral degree, and shall include individuals not affiliated with the Biomechanics and Movement Science Program. These may be individuals from outside of the University who are nationally recognized for their expertise in the area of study specified by the dissertation. The BIOMS Director must approve committee members from outside of the University. It is the responsibility of the dissertation advisor to replace members who withdraw from the committee during the dissertation process.

1. **Defense of the Dissertation Proposal**

~~The dissertation proposal must be in the format of an NIH R01 proposal. Sections A-E of the Research Plan must be included.~~ The dissertation proposal includes both a proposal for a research project as well as a career development plan. The proposal document is to be written generally in the format of an NIH F31 (pre-doctoral) training grant, with some exceptions (described below).

* **Part 1. Research Project Proposal (“the science”)**
	+ Specific Aims (max, 1 page)
	+ Research Strategy (no page limit)
	+ Works Cited (no page limit)
* **Part 2. Individual Development Plan (IDP, “the career development plan”)**
	+ Respective Contributions (max, 1 page)
	+ Selection of Sponsor and Institution (max, 1 page)
	+ Doctoral Dissertation and Research Experience (max, 2 pages)
	+ Training Goals and Objectives (max, 2 pages)
	+ Activities Planned (max, 2 pages)

The dissertation proposal defense will be scheduled only after a majority of members of the dissertation committee have determined that a defense is appropriate. A final copy of the dissertation proposal must be delivered to the members of the dissertation committee at least two weeks in advance of the proposal defense. A copy of the dissertation proposal (not including the IDP) must be available one week prior to the proposal defense by either submitting an electronic copy to the BIOMS administrative staff for redistribution, or by delivering a hard copy to each site supporting BIOMS faculty. Prior to the presentation, proposals that involve the use of human or animal subjects must receive approval from the University Institutional Review Board (IRB). Details for creating consent forms and submitting studies for review by the IRB can be obtained from the University of Delaware Research Office.

The Dissertation proposal defense will be open to the public, and invitations will be sent to all BIOMS faculty and students at least one week prior to the defense date. The candidate will present a summary of the proposed research, and will then field questions from the committee, attending faculty, and invited guests. After all questions have been fielded, the dissertation committee will have a closed session with the student, which will focus on the research proposal as well as the IDP. Finally, the committee will meet to decide whether the proposal is accepted, rejected, or accepted with conditions. Results of the meeting will then be presented to the student. The student may not receive more than one dissenting vote from members of the committee to receive a passing grade.

Dissertation committee members will sign the final copy of the approved proposal and the candidacy form. A signed copy of the approved dissertation proposal should be forwarded to the program director. Students who fail the dissertation proposal defense will receive one additional opportunity to repeat the process and defend a new or modified dissertation proposal. If a student is ultimately unable to successfully defend their proposal, the student may petition the BIOMS Executive Committee for admission to the MA program in Biomechanics and Movement science. Acceptance by the Executive Committee and a Change of Classification form must be submitted and approved by the Graduate College.

1. **Defense of the Dissertation:**

The format of the thesis must adhere to the University’s Thesis and Dissertation Manual and style guidelines. A copy of the dissertation must be available one week prior to the dissertation defense by either submitting an electronic copy to the BIOMS administrative staff for redistribution, or by delivering a hard copy to each site supporting BIOMS faculty. The dissertation defense will be scheduled only after the advisor of the dissertation committee has determined that a defense is appropriate.

The dissertation defense will be open to the public, and invitations will be sent to all BIOMS faculty and students at least one week prior to the defense date. The candidate will present a summary of the completed research, and will then field questions from the committee, attending faculty, and invited guests. After all questions have been fielded, the dissertation committee will meet to decide whether the dissertation is accepted, rejected, or accepted pending revisions. Results of the meeting will then be presented to the student. The student may not receive more than one dissenting vote from members of the committee to receive a passing grade. If a student is ultimately unable to successfully defend their dissertation, the student may petition the BIOMS Executive Committee for admission to the MA program in Biomechanics and Movement science. Acceptance by the Executive Committee and a Change of Classification Form must be submitted and approved by the Graduate College.

1. **Processing the Final Document**

Students must follow the university approved step-by-step guidelines for graduation. The University reserves the right to duplicate a dissertation for distribution to other libraries or for the use of individual scholars. However, the University will not publish a dissertation for general distribution without the written consent of the author. If copyrighting of a dissertation is desired, it may be arranged when the dissertation is submitted to the Graduate College ~~Office of Graduate and Professional Education~~. Published works are eligible for copyright protection in the United States if the work is first published in the United States.

# Part VI. Assessment Plan

# The BIOMS program will follow the Academic Program Review (APR) schedule, policies and procedures, established by the Provosts office and faculty senate. Data will be provided by the Office of Institutional Research and Effectiveness, in conjunction with faculty/student interviews, measures of scholarly productivity, alumni surveys and national ranking when available. Annual meetings will be held to discuss curricular changes, course learning objectives, review analyzed data, identify action items, and establish timelines and assignments for responsibilities. The BIOMS program will continue consultation with the Center for Teaching and Assessment of Learning to periodically reexamine appropriate learning outcomes, assessment criteria, and benchmarks for success.

# Part VII. Financial Aid

1. **Financial Assistance**

Financial assistance for students in the BIOMS program is obtained from a variety of sources and will therefore vary in form and availability. Assistance will be awarded on a competitive basis to applicants’ best fitting the needs of the granting agencies and sponsoring faculty. Students receiving full stipends will be expected to work up to 20 hours per week on contract responsibilities ~~faculty projects~~ and students are expected to maintain full-time student status.

1. **Tuition Semesters ~~(Blocks)~~**

When available, requests for tuition semesters ~~(blocks, waivers)~~ must be submitted by the faculty advisors to the BIOMS Executive Committee for approval. The requests must include the following:

* ~~Faculty Advisor:~~
* Student Name:
* Current GPA:
* Number of credits completed/remaining:
* Degree (MS or PhD):
* Number of semesters enrolled:
* ~~Number of semesters previously funded and source of funding (grant, TA, etc.):~~
* Estimated number of semesters until completion of degree:
* Number of tuition semesters requested:
* Rationale for requesting block tuition line:
* Plan to secure funding for future semesters, if applicable:
1. **University of Delaware Dissertation and Graduate Fellows Awards.**

Applications for the University of Delaware Dissertations and Graduate Fellows Awards must follow the Graduate College ~~Office of Graduate and Professional Education (OGPE)~~ guidelines, and be submitted for approval to the BIOMS Executive Committee at least 2 weeks prior to the announced ~~OGPE~~ deadlines. These are competitive and merit based awards with limited submissions permitted from each program.

# PART VIII. General Information Relevant to Both Master’s and Doctoral Degree Candidates

#  Graduate Course Numbering System

Graduate credit may be earned for courses numbered 600 to 699, 800 to 898, and 900 to 998. ~~(Courses numbered 600 to 699 are graduate-level courses open to qualified, advanced undergraduates by permission of the instructor.) Courses numbered 500 to 599 are graduate courses for the nonspecialist and may not be counted for graduate credit in the student's major.~~ With the approval of Biomechanics and Movement Science Executive Committee, 500-level courses taken outside the student's major department may be applied toward a graduate degree.

#  ~~Application for Advanced Degree~~ Advanced Degree Application

To initiate the process for degree conferral, candidates must submit an Advanced Degree Application ~~Application for Advanced Degree~~ to the Graduate College prior to the published deadline for the desired degree conferral term. ~~Office of Graduate and Professional Education. The deadline for degree application is September 15 for December degree conferral, December 15 for Winter degree conferral, February 15 for May degree conferral, and May 15 for August degree conferral. The completed and signed degree application form to the Office of Graduate and Professional Education with payment (you may attach a personal check made payable to the University of Delaware or pay at the Cashier’s Office.) The Master’s fee is $50; Ph.D. fee is $95.~~ No coursework to earn a prior degree may be used for the advanced degree application.

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# ~~Graduate Grade Point Average~~ Academic Good Standing

To be considered in good academic standing, a student must maintain a minimum cumulative graduate grade point average (GPA) of 3.00 on a 4.00 scale each semester. To be eligible for an advanced degree, a student’ cumulative grade point average shall be at least a 3.00 and the student’s grades in courses counted toward the degree requirements of the program shall equal at least a 3.00.

~~Students must have a minimum overall cumulative grade point average of 3.0 to be eligible for the degree. In addition, the grades in courses applied toward the degree program must equal at least 3.0. 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 "B-" do not count toward the degree even though the grade is applied to the overall index. Candidates should see that all final grades have been submitted by their instructors. Temporary grades of "S" (Satisfactory) are assigned for 868 (Research) and 869 (Master's Thesis) and 969 (Doctoral Dissertation) until a final letter grade is submitted upon the completion of the thesis or dissertation.~~

# Academic Probation

The Office of Graduate Studies 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. In addition to the University policy regarding minimum grade point average, some departments require graduate students to maintain certain performance minima in their program of study in all or in particular courses. Failure to meet the standard minima may lead to academic dismissal from the program.

# Satisfactory Progress toward a Graduate Degree

If a graduate student fails to make satisfactory progress toward all degree requirements, permission may be denied to continue in the degree program. At the close of each semester, winter session, or summer session, in those circumstances deemed appropriate by the Graduate Director exercising their professional judgment, the Executive Committee of the BIOMS program 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. If, in the professional judgement of the Executive Committee, a student has failed to make satisfactory progress toward meeting the academic standards of the program in which that student is enrolled, the Executive Committee may vote to dismiss that student from the program.

In the case of dismissal, the Program 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. The student may appeal the termination by writing to the Graduate College. This appeal must be made within 10 class days from the date on which the student has been notified of academic dismissal. The Graduate College 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 Graduate College 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 the appropriate academic probation status.

# Time Limits for the Completion of Degree Requirement.

Time limits for the completion of degree requirements begin with the date of matriculation ~~and are specifically expressed in the student's letter of admission. The University policy for~~

* ~~Students entering a master's degree program is 10 consecutive semesters to complete the degree requirements.~~
* ~~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.~~
* Students entering a PhD ~~doctoral~~ program with a MS ~~master's~~ degree are given 10 consecutive semesters to complete the requirements.
* Students entering a PhD ~~doctoral~~ program without a MS ~~master's~~ degree are given 14 consecutive semesters to complete the 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.

#  Extension of the Time Limit

~~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 advisory ~~thesis/dissertation~~ committee, chair of the department’s graduate committee, and the BIOMS Executive Committee ~~director of Biomechanics and Movement Science program~~. The department ~~director~~ will forward the request to the Graduate College ~~Office of Graduate and Professional Education~~. The Graduate College ~~Office of Graduate and Professional Education~~ will determine the student's eligibility for a time extension and will notify the student in writing of its decision to grant an extension of time.

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#  Sustaining Status for Candidates Pursuing Thesis/Dissertation Degree Option

Once a graduate student who is completing a thesis/dissertation option has completed all required course credits needed for the degree (including 6 credits of Master's thesis [869] or 9~~-12~~ credits of dissertation [969]) and all other degree requirements except the submission of thesis or dissertation, the student is required to maintain their ~~his/her~~ matriculation in the degree program ~~during the fall and spring semesters~~ by registering for either Master's Sustaining: Thesis (UNIV 899) or Doctoral Sustaining (UNIV 999). All students, including sustaining students, are required to be registered in the semester in which the degree is officially awarded. Sustaining registration is required for summer session if the student complete the degree in summer session. ~~(Sustaining registration is never required for winter session as graduate degrees are not awarded at the conclusion of winter session.)~~

# Transfer of Graduate Credit ~~Earned as a Continuing Education Student at the University of Delaware~~

Graduate credit earned at another institution will be evaluated at the written request of the student. Such a request must be submitted to the director of the BIOMS program using a Request for Transfer of Graduate Credit form. A maximum of 9 credits required for the degree will be accepted provided that such credits:

* Were earned with a grade of no less than “B”,
* Are approved by the student's adviser and the BIOMS Director
* Are in accord with the student’s approved plan of study,
* Are not older than five years, and
* Were completed at an accredited college or university.

The credits, but not the grades or quality points, are transferable to University of Delaware graduate records. Graduate courses counted toward a degree received elsewhere may not be used. Credits earned at another institution while the student was classified as a continuing education student at that institution are not eligible to be transferred to one's graduate degree at the University of Delaware. Credits from institutions outside of the United States are generally not transferable to the University of Delaware.

~~Students who complete graduate credits with the classification of CEND (Continuing Education Non-degree) at the University of Delaware may use a maximum of 9 graduate credits earned with this classification toward their graduate degree. The CEND credits, grades, and quality points become a part of the student's academic record and grade point average. CEND credit can be transferred provided that:~~

 ~~(a) The course was at the 600-800 level,~~

 ~~(b) The course was taken within the time limit appropriate for the degree,~~

 ~~(c) The course was approved by the student's adviser and BIOMS director~~

 ~~(d) The course was in accord with the student’s approved plan of study.~~

# ~~Transfer of Credit from another Institution~~

~~Graduate credit earned at another institution will be evaluated at the written request of the student. Such a request should be submitted to the director of the BIOMS program using a~~ [~~Request for Transfer of Graduate Credit form~~](http://www.udel.edu/gradoffice/forms/credittransferform.pdf)~~. A maximum of 9 credits required for the degree will be accepted provided that such credits:~~

~~(a) Were earned with a grade of no less than B,~~

~~(b) Are approved by the student's adviser and the BIOMS Director~~

~~(c) Are in accord with the student’s approved plan of study,~~

~~(d) Are not older than five years, and~~

~~(e) Were completed at an accredited college or university.~~

~~The credits, but not the grades or quality points, are transferable to University of Delaware graduate records. Graduate courses counted toward a degree received elsewhere may not be used. Credits earned at another institution while the student was classified as a continuing education student at that institution are not eligible to be transferred to one's graduate degree at the University of Delaware. Credits from institutions outside of the United States are generally not transferable to the University of Delaware.~~

# ~~Transfer of Credit from the Undergraduate Division at the University of Delaware.~~

~~Students who wish to transfer credits from their undergraduate record to their graduate record may transfer a limited number by arranging with the department to have these courses approved by their instructors before the courses are taken. These courses must be at the 600-level, and the student must perform at the graduate level. They must be in excess of the total required for the baccalaureate degree, must have grades of no less than B-, and must not be older than 5 years. The credits, grades, and quality points will transfer.~~

#  ~~Credit for "Special Problem" Course Taken as a Graduate Student~~

~~Some 400-level courses may be completed for graduate credit if the graduate student does additional work. Students must register for the course at the graduate level using the departmental number of 666. The student may process a titling form for the 666 numbered course.~~

#  Expiration of Credit

Course credits expire 5 years after the course has been completed.

**~~Appendix I. Graduate Student Annual Report~~**

**~~Biomechanics and Movement Science Interdisciplinary Program~~**

**~~Graduate Student Annual Report~~**

 ~~Degree program: \_\_\_\_ MS \_\_\_\_ PhD~~

 ~~Date submitted:~~

~~Name:~~

~~Advisor/Mentor:~~

~~Semester date of enrollment:~~

~~Total graduate credits completed to date:~~

~~Graduate GPA:~~

**~~1. Academic Timeline~~** ~~(within each semester since enrollment, list completed courses and grades, courses to be taken, formation of committees)~~

~~Spring 2015~~

~~Fall 2015~~

**~~2. Teaching~~** ~~(list courses taught, guest lectures, etc)~~

**~~3. Research~~**

 ~~Statement of Research Focus:~~

 ~~Publications and Presentations (accepted and submitted/under review)~~

 ~~Grant Activity (accepted and under review, indicate role on project)~~

 ~~Other Research Activities (projects not directly related to dissertation focus)~~

 ~~Other Scholarly Activities (i.e., service in professional organizations, manuscript review, etc)~~

**~~4. Goals~~**

 ~~Immediate~~

 ~~Short Term~~

 ~~Long Term~~

**~~Appendix II. Graduate Student Annual Report~~**

**~~Thesis Proposal Defense Form~~**

**~~Biomechanics & Movement Science Program~~**

~~Submit this signed form to the BIOMS Director, within one week of the Thesis proposal defense.~~

~~Student Name ­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Student ID \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_~~

~~Student Email ­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_~~

**~~\_\_\_ Pass.~~**

**~~\_\_\_ Conditional pass.~~** ~~The conditions must be clearly stated, i.e., the exact nature of the~~

~~deficiency must be described along with a mechanism(s) to repair this deficiency. The Chair of the Thesis Committee must provide the BIOMS Director with written notification when the student has resolved the conditional pass.~~

**~~\_\_\_ Re-examination.~~** ~~Student will be re-examined within one semester before the Thesis~~

~~Committee will render a decision. Please summarize briefly the criticisms that led to this decision and give an estimate of the date of re-examination.~~

**~~\_\_\_ Failure.~~** ~~The Thesis Committee has decided that the student does not have the potential to~~

 ~~complete the MS program. Please indicate why the student failed the examination.~~

~~Comments: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_~~

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~~Signatures (please type each committee member's name under signature line):~~

~~\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_~~

~~Chair, Thesis Committee (Print) Signature~~

~~\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_~~

~~Committee member Signature~~

~~\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_~~

~~Committee member Signature~~

# ~~Last updated October 5, 2015~~