



HANDBOOK TO GRADUATE STUDY IN INTEGRATIVE PHYSIOLOGY



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Introduction

Welcome to the University of Montana and graduate study in Integrative Physiology and Athletic Training (IPAT). This handbook is designed to acquaint you with the requirements for continuing and graduating from our program. *The guidelines presented herein are by no means comprehensive, and you should always refer to the Graduate Bulletin for the year you entered the graduate program or to the Graduate School for clarification.* In addition, the graduate catalog and information regarding various deadlines can be found on the [Graduate School website](#). You may also contact the graduate program coordinator, Charles Dumke, or your academic advisor if you have questions.

Graduate Degrees in Integrative Physiology

The [School of Integrative Physiology and Athletic Training](#) (IPAT) in the College of Health at UM offers thematically related graduate degrees in Integrative Physiology at the Masters and Doctoral level. Masters degree options, focused on exercise science, include a research concentration for students with careers directed toward terminal degrees (clinical or research doctorates), and an applied concentration for students with career interests in clinical (e.g., cardiac rehabilitation), fitness/wellness, coaching, or strength and conditioning. The Sport Performance concentration prepares students to be practitioners in the field of sport performance, such as performance psychology or strength and conditioning. The Doctoral degree in Integrative Physiology and Rehabilitation Sciences serves research-minded students with a career interest in academia, industry, and as an additional credential for collaborative work with other rehabilitation sciences.

- Integrative Physiology M.S. Exercise Science-Research concentration
- Integrative Physiology, M.S. Exercise Science-Applied concentration
- Integrative Physiology, M.S. Sport Performance
- Integrative Physiology and Rehabilitation Sciences, Ph.D.

Professional Outcomes

Within the mission of IPAT, it is our hope that you will become an increasingly effective scholar in the study of humans and movement through our program of study and guided research. More specifically, during your graduate education we hope you will:

1. Demonstrate mastery in oral and written communication;
2. Demonstrate an understanding of current research and methodology;
3. Develop a distinct familiarity with the literature pertaining to one's choice of specialization;
4. Demonstrate appropriate technological skills;
5. Design, conduct, and report research in a scholarly fashion;
6. Develop investigative skills to promote independent pursuit of learning beyond the confines of curricular requirements;
7. Demonstrate a sense of responsibility and professional behaviors requisite for effective functioning as an advanced IPAT professional.

Western Region Graduate Programs

The Masters degree in IPAT is recognized by the Western Region Graduate Programs. This means that some students from [WICHE States](#) do not pay full out of state tuition. Instead, they will pay 150% of a Montana resident's in-state tuition. A tremendous cost savings to applicants from the Western WICHE States. Each program is limited in the number of WICHE students. If you qualify, see the graduate program coordinator.

University and Departmental Policies

Establishing a Program of Study

Normally, it takes 2 years to complete the MS degree if the student begins the IPAT graduate program in fall semester. It is expected the IPRS PhD program is completed in 4 years. Refer to the specific option degree requirements and meet with your assigned faculty advisor to obtain the specific requirements. Upon acceptance into the IPAT Graduate Program, you will be assigned a graduate curriculum advisor. The advisor and you will develop a program of study.

Students in both the MS and PhD program, in working with your advisor, complete the Program of Study (POS) form within the first 10 credits of your program. Turn in the completed Program of Study form to the Graduate Program Coordinator. Any change in your program after the POS form is on file must receive written approval from the advisor or the Graduate Committee. Any deviation from the recommended course of study, excluding electives which can be determined in consultation with your advisor, must be formally petitioned to the IPAT Graduate Committee (see Course Substitution policy, part I).

Course Substitutions

All IPAT graduate students must complete degree course requirements for their specific option. Any deviation from the recommended degree course requirements, excluding degree electives must be formally petitioned to the IPAT Graduate Committee. The IPAT Committee Course Substitution Petition Instructions are located on the IPAT webpage which is available on-line at the main [IPAT website](#).

Comprehensive Exams

All IPAT graduate students must demonstrate comprehensive knowledge in their chosen area. For the MS degree this takes the form of one of 3 options, a written comprehensive exam, or the successful defense of a professional paper or thesis. For the PhD degree this takes the form of the successful defense of a dissertation. Students are encouraged to follow the detailed information found in the *Handbook to Complete Graduate Comprehensive Exams in IPAT* under separate cover.

Institutional Review Board

If your research involves human subjects you must work with your committee chair to complete and submit the [UM IRB](#) required paperwork and forms and complete an on-line course in human subject protection. This must be done BEFORE you begin collecting any data for your proposed thesis, and if applicable, professional paper, project. Allow enough time before data collection begins to make any necessary revisions to your IRB submitted paperwork and forms (e.g. it may take 1-6 weeks to obtain IRB approval for your project. If your research utilizes laboratory animals, [IACUC](#), approval is necessary.

General Information

At least one semester before the Master's degree is to be awarded, the student must submit to the Graduate School the [Application for Graduation Form](#) and a graduation fee. Refer to the graduation deadlines at the UM [Graduate School Website](#) for the exact date of when to file paperwork. Visit the Grad School website to see a complete list of [UM Graduate School Policies](#). IPAT grad program forms can be found [here](#).

The Graduate School will conduct a degree audit and send copies of this form back to the graduate program early in the final graduating semester. The department and student should note any barriers to graduation and rectify them prior to the end of the final semester.

Graduation Amendment Form

If the student fails to meet the original graduation date as requested on the form, the student may request the application be reactivated for the following semester by notifying the Graduate School one semester prior to the revised completion date.

All necessary forms (e.g. the Certificate of Approval Form and Final Paper Checklist Form) as well as guidelines for formatting your thesis/professional paper can be found on the UM [Graduate School website](#).

Good Standing, Probation and Suspension

All graduate students within IPAT are expected to follow the [UM Student Code of Conduct](#). The program will follow all UM policies related to [grievances](#), [student complaints](#), and [appeals](#).

Student in Good Standing

To remain a student in good standing within the IPAT graduate program, students must maintain a GPA > 3.0 and demonstrate progress towards their degree (continued enrollment, hitting timely benchmarks such as comps/proposal).

Probation

IPAT graduate students will be placed on probation if any one of the following occurs:

- their cumulative GPA <3.0
- they cease continued enrollment
- They receive <C in any class
- Provisional admission conditions are not met

The student will be given up to two semesters of program probation status in order to remediate the situation. Individual cases will be considered by the IPAT graduate committee.

Suspension

IPAT graduate students will be suspended from the program if they are unable to remediate issues which led to the probation status within the given time frame. The student can be suspended from the program if they have not met the academic, programmatic, professionalism and retention criteria. The student has the right to appeal program dismissal through the graduate school.

Suspension Appeal

If a student wishes to appeal their suspension, they must follow the steps in the following timeline:

1. Notice of Appeal. The student must notify the Graduate School of their intent to appeal within five (5) business days of receiving the suspension letter.
2. Submission of Appeal. The student has an additional ten (10) business days to provide a letter and any supporting documents to the Graduate School. The Appeal should provide specific evidence, context, or mitigating factors that address directly the program or Graduate School standards that were not met.

The following sections describe the specific course requirements and credits for each of the IPAT graduate degree options.

MS in Exercise Science

The **Research Option** is designed for those students who intend to pursue further graduate studies. This option involves a more intensive study of laboratory methods and statistical and research design. A thesis is required.

The **Applied Option** is intended for those students who plan to pursue professional careers in Exercise or Applied Sciences (corporate/adult fitness, cardiac rehabilitation, strength, and conditioning). This option involves additional required course work and an internship. Coursework is modified to meet student needs.

Core Requirements (20 credits)			Credits
HHP	520	Research Methods	3
		Grad level Stats (SOC, BMED, etc..)	3
HHP	529	Advanced Physiology of Exercise I	3
HHP	525	Advanced Biomechanics	3
HHP	530	Advanced Physiology of Exercise II	3
HHP	531	Laboratory Procedures in Exercise Science	3
HHP	594	Graduate Seminar (2 x 1 credit each fall)	2

Research Option Requirements: (38 credits minimum)			Credits
HHP	699	Thesis	6

Applied Option Requirements: (38 credits minimum)			Credits
HHP	598	Internship	>3
HHP	599	Professional Paper	3
OR			
HHP	699	Thesis	6
OR			
Written comprehensive exam			

Electives (to meet minimum credit requirements)

Elective credits must be chosen in consultation with and approved by the student's academic advisor.

MS in Sport Performance

This option prepares students to be practitioners in the field of sport performance, such as performance psychology or strength and conditioning. This option offers the flexibility to design individualized programs, enabling students to pursue career paths requiring expertise in multiple areas. It can be used to prepare students for subsequent certifications, such as the National Strength and Conditioning Associations Certified Strength and Conditioning Specialist (CSCS), or a Certified Mental Performance Consultant (CMPC).

Core Requirements (20 credits)			Credits
HHP	520	Research Methods	3
		Grad level Stats (SOC, BMED, etc..)	3
HHP	525	Advanced Biomechanics	3
KIN	440	Sport Psychology	3
HHP	594	Graduate Seminar (2 x 1 credit each fall)	2
HHP	598	Internship	≥3
HHP	599	Professional Paper	3
		OR	
HHP	699	Thesis	6
		OR	
		Written Comprehensive Exam	
Total			≥17

Electives:

Elective credits must be chosen in consultation with and approved by the student's academic advisor.

PhD Integrative Physiology and Rehabilitation Sciences

Program Overview

The PhD in the Integrative Physiology and Rehabilitation Sciences (IPRS) graduate program educates, trains, and prepares students interested in applications of applied/integrative physiology and rehabilitative sciences. The IPRS PhD is a research-intensive terminal degree, which combines integrative physiology didactic coursework and experiential learning along with a rehabilitation-sciences directed research emphasis. The IPRS prepares graduate students that have completed an approved master's degree (or clinical graduate degree, e.g., AT, PT, OT) to undertake academic and research-based careers in clinical and rehabilitative sciences such as Athletic Training, Cardiac Rehabilitation at research hospitals, Occupational Therapy, Physical Therapy, and other professions founded on an exercise and integrative physiology background. Possible research foci of IPRS students include Physiology, Biomechanics, Athletic Training, Cardiopulmonary Rehabilitation, Clinical Exercise Physiology, Exercise/Fitness/Sport/Wellness, Occupational Therapy, and Physical Therapy. Student research interests will correspond with an identified IPAT faculty mentor and/or faculty mentors in collaborating programs (e.g., School of Physical Therapy). Partnering with a faculty mentor begins by contacting that individual, discovering mutual research interests, and coming to an agreement for a doctoral plan of study. In addition to the identification of a mentor, and plan of study, it is expected that all in-coming IPRS doctoral students will have an identified source of funding to cover their stipend (and possibly [tuition and fees](#)), research projects, and other doctoral activities. Typically, these funds are supported by the doctoral mentor's grants, but other types of assistantships can be used to support graduate work, as available.

Full-time/part-time student status:

IPRS PhD program is designed to be completed in 4 years of full-time graduate work, although different time frames may be required depending on the developed plan of study and research to be conducted. Part-time students (e.g., students with a clinical doctorate who remain employed during their graduate studies, etc.) will be accepted as negotiated with IPRS Doctoral Program Committee. Changes in IPRS student full/part-time status can be negotiated with the IPRS Doctoral Program Committee as needed.

Doctoral program plan of study:

The doctoral plan of study is typically 4 years (8 fall/spring semesters, plus summer work), although alternative plans of study are negotiable pending graduate committee approval.

Graduate coursework includes the accumulation of credits based on the following:

	Credits
Credits in required courses	54
Credits from electives	18
Total credits required beyond the MS	72

Required Courses, with electives			Credits
HHP	520	Research Methods	3
HHP	529	Advanced Physiology of Exercise I	3
HHP	530	Advanced Physiology of Exercise II	3
HHP	531	Laboratory Procedures in Exercise Science	3
HHP	526	Higher Education Pedagogy in Integrative Sciences	3
BMED	605	Biomedical Research Ethics	1
HHP	594	Graduate Seminar (2 x 1 credit each fall)	2
BMED	628	Grantsmanship Skills	1
Subtotal			20
Research Methods/Statistical Coursework (6-9 credits)			6-9
Electives			18
A total of 27 credits is required from Preparatory Research & Dissertation			6-12
Dissertation			12-18
Total			72

Up to 15 transferable credits can be carried into the IPRS PhD program pending approval from the IPAT Graduate Committee

Electives

Elective credits must be chosen in consultation with and approved by the student's academic advisor to reach the degree requirements.

The following list are possible electives to meet the credit requirements in the IP grad degrees.

			Credits
HHP	529	Advanced Physiology of Exercise I	3
HHP	525	Advanced Biomechanics	3
HHP	530	Advanced Exercise Physiology II	3
HHP	531	Lab Procedures in Exercise Physiology	3
HHP	528	Advanced Exercise Prescription	3
KIN	410	Advanced Strength and Conditioning	3
NUTR	411	Nutrition for Sport	3
HHP	475	Legal & Ethical Issues in the Exercise Professions	3
HHP	523	Case Studies in Performance Psychology	3
HHP	560	Advanced Electrocardiogram Assessment	2
HHP	583	Exercise, Disease and Aging	3
CHTH	485	Theories of Health Behavior & Counseling	3
CHTH	445	Program Planning for Community Health	3
CHTH	430	Health Aspects of Aging	3
AHAT	479	Topics in Sports Medicine	3
HHP	465	Leading HHP Organizations	3
HHP	417	Fundamentals of Coaching	3
BIOH	462	Principles of Medical Physiology	3
BIOB	468	Endocrinology	3
ATEP	580	Pharmacology in Sports Medicine	1
ATEP	576	Performance and Tech in Athletic Training	3
ATEP	569	Clinical Anatomy Laboratory	1
COUN	511	Theories and Technology of counseling	3
COUN	512	Counseling Fundamentals	3
COUN	520	Group Counseling	3
COUN	575	Multicultural counseling	3

MS Graduate Degree Requirements Checklist

1. Program curriculum planned and approved in conference with advisor,
2. Complete “**Program of Study**” form in consultation with your IPAT advisor and submit this form to the IPAT Graduate Program Coordinator by the end of your second semester.
 - a. *Note* - If you change your Program of Study after your form has been submitted you *must resubmit* a new form with approval from your IPAT advisor.
3. Complete all coursework as stated in your “Program of Study.”
4. Thesis or professional paper planning conference with advisor by end of the second semester
5. Graduate Committee formed by end of summer between first and second years.
6. Graduate Committee form signed by committee members and filed with Graduate Coordinator.
7. Preparation of thesis or professional paper proposal no later than fall of second year.
8. Submission of chairs approved written proposal to remainder of committee with a minimum of 1 week in advance of public presentation.
9. Conduct thesis or professional paper proposal presentation by November of second year.
10. Submit approved proposal to Institutional Review Board if appropriate
11. Application for Degree. Done in beginning of the semester in which you intend to graduate. See graduate school website.
12. Submission of chairs approved written defense to remainder of committee with a minimum of 2 weeks in advance of public presentation.
13. Submit written defense to the graduate school for formatting approval.
14. Schedule and secure a site for the presentation. Notify IPAT faculty, grad coordinator, staff and students.
15. Conduct thesis or professional paper defense public presentation by April of second year.
16. Committee chair [submits edited final written defense](#) to the graduate school prior to the published [deadlines](#).
17. [Submit final written defense](#) to scholarworks.
18. Committee chair signs graduation audit papers.
19. Degree conferred

Students are encouraged to follow the detailed information found in the *Handbook to Complete Graduate Comprehensive Exams in IPAT* under separate cover.

NOTE: It is the student's responsibility to complete the above requirements. Failure to meet deadlines usually results in a lengthening of the period required to obtain the degree. Each student should attempt to keep all records, letters, etc., relative to graduate work. Keep the checklist up to date and refer to it often.

PhD Graduate Degree Requirements Checklist

1. Program curriculum planned and approved in conference with advisor,
2. Complete “**Program of Study**” form in consultation with your IPAT advisor and submit this form to the IPAT Graduate Program Coordinator by the end of your second semester.
 - a. *Note* - If you change your Program of Study after your form has been submitted you *must resubmit* a new form with approval from your IPAT advisor.
3. Form dissertation Graduate Committee by end of second semester.
4. Graduate Committee form signed by committee chair and filed with Graduate Coordinator.
5. Complete coursework as stated in your “Program of Study.”
6. Conduct a planning conference with dissertation advisor during second semester
7. Conduct committee meeting for progress updates and planning by end of second semester
8. Similar planning meetings should be conducted annually under guidance of dissertation chair.
9. Prepare written comprehensive exam as dictated by dissertation committee.
10. Submission of chairs approved written comprehensive to remainder of committee with a minimum of 2 weeks in advance of presentation.
11. Orally defend comprehensive exam by fall of third year.
12. Preparation of dissertation proposal during spring of third year.
13. Submission of chairs approved written dissertation proposal to remainder of committee with a minimum of 2 weeks in advance of public presentation.
14. Conduct dissertation paper proposal presentation by the beginning of fourth year.
15. Submit approved dissertation proposal to Institutional Review Board.
16. Application for Degree. Done in beginning of the semester in which you intend to graduate. See graduate school website.
17. Submission of chairs approved written defense to remainder of committee with a minimum of 2 weeks in advance of public presentation.
18. Submit written defense to the graduate school for formatting approval.
19. Schedule and secure a site for presentation. Notify IPAT faculty, staff and students.
20. Conduct dissertation paper defense public presentation by April of fourth year.
21. Committee chair [submits edited final written defense](#) to the graduate school prior to the published [deadlines](#).
22. [Submit final written defense](#) to scholarworks.
23. Committee chair signs graduation audit papers.
24. Degree conferred

Students are encouraged to follow the detailed information found in the *Handbook to Complete Graduate Comprehensive Exams in IPAT* under separate cover.

NOTE: It is the student's responsibility to complete the above requirements. Failure to meet deadlines usually results in a lengthening of the period required to obtain the degree. Each student should attempt to keep all records, letters, etc., relative to graduate work. Keep the checklist up to date and refer to it often.

IPAT Graduate Advising Guidelines

Purpose & Scope

To provide additional information for Integrative Physiology & Athletic Training (IPAT) faculty and graduate students to supplement the Graduate School developed Advising Guidelines.

Graduate Student Orientation

Upon entry into the IPAT graduate program you will receive an orientation to the program. This will include introductions, and information on what is expected from both students and faculty. Materials will include the IPAT Graduate Guide, as well as the Graduate School Advising guidelines and the IPAT Graduate Advising Guidelines. Additional information can be found in the [Graduate School Policies](#).

Assignment of graduate student advisors

IPAT graduate students may have two different advisors, a curriculum and/or a thesis/dissertation/professional paper advisor. These may be different or the same IPAT faculty member. The curriculum advisor is responsible for steering you toward successful completion of coursework that meets the requirements for the degree. The thesis/dissertation/professional paper advisor, usually the chair of your project, mentors the successful completion of this capstone experience.

Mechanism for addressing student complaints

If conflicts arise between graduate students and advisors, students are encouraged to seek resolution. If they feel uncomfortable meeting with their advisor, they are encouraged to contact the department chair or graduate program coordinator. If resolution within the department cannot be made, and the students wish to pursue a formal grievance, they can proceed with the [UM grievance protocol](#). Some examples of where grievances may occur:

-  Authorship on a paper
-  'Ownership' of data
-  Recollection of previous conversations
-  Perceived lack of support from mentor/advisor

Students and faculty are encouraged to avoid potential conflicts by practicing professionalism. In addition, records of email conversations, and edits to written work are to be kept. Students should make notations of discussions with faculty advisors in order to correctly dictate future tasks.

Students should recognize that while potential disputes will be considered and resolved on a per case basis, in general, decisions about authorship on potential papers, the order of authorship, and the ownership of data collected are at the sole discretion of the mentoring faculty member.

More information on UM's advising protocol can be found in the [Graduate School Advising Guidelines](#).

Procedure:	IPAT Graduate Advising Guidelines
Date Adopted:	August 2016
Last Revision:	9/11/23
References:	Graduate Council Approved Graduate School Advising Guidelines (302.30)
Approved by:	IPAT Graduate Committee
Resources:	IPAT Graduate Guide, Graduate School Policies

Graduate Student Resources

As these UM and Graduate School Resources are under constant flux, visit these webpages for updated information:

-  **Health and Wellbeing Resources:** <https://www.umt.edu/grad/campus-support/health-and-wellbeing.php>
-  **Campus support:** <https://www.umt.edu/grad/campus-support/default.php>
-  Professional Development: <https://www.umt.edu/grad/campus-support/professional-development/default.php>
-  **Newly admitted grad students:** <https://www.umt.edu/grad/student-journey/new-students.php>
-  **Current student Graduation resources:** <https://www.umt.edu/grad/student-journey/current-students/default.php>
-  **Graduate Student Research Council:** <https://www.umt.edu/grad/student-journey/gsrc/default.php>