

**GRADUATE PROGRAMS IN  
KINESIOLOGY**

**HANDBOOK OF INFORMATION**

**TEMPLE UNIVERSITY  
PHILADELPHIA, PA 19122**

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# Introduction

This handbook is designed to provide prospective students with basic information concerning graduate study in the Department of Kinesiology at Temple University. Such topics as programs of study, admission standards and procedures, financial aid, and graduate faculty are covered. No attempt has been made to include all of the policies governing the various degree programs. Consult the Graduate School's web site at <http://www.temple.edu/grad/policies/gradpolicies.htm> for additional information. Information concerning tuition costs, salaries for Teaching and Research Assistants (TA/RA), and specific program requirements is current as of this writing; changes may be made at any time.

If you have questions which are not answered in these materials, write or call the Graduate Program Coordinator, Dr. Michael Sachs, as follows:

**Coordinator of Graduate Studies**  
**Department of Kinesiology, 048-00**  
**Temple University**  
**Philadelphia, PA 19122**  
**215-204-8718**  
or  
**[msachs@temple.edu](mailto:msachs@temple.edu)**

## Temple University

Temple University is one of the East Coast's major urban, state-related universities. The main campus is located at Broad Street and Montgomery Avenue in the heart of North Philadelphia. Other campuses include the Medical School, a mile north on Broad Street; Tyler School of Art; the Center City campus; and the suburban Ambler Campus. The university consists of 17 schools and colleges which enroll more than 35,000 students and employ approximately 1,500 faculty.

The facilities of the university include the Paley Library, housing over 1.5 million volumes; the medical library at the Medical School; the Computer Science building and a new Technology Center, housing the university's computers (IBM 3090 and CDC 4686 UNIX mainframes and desktop PCs) and associated support services; out-patient health services on the campus; Career Services, which assists students in finding employment after graduation; the Student Activities Center; the Independence Blue Cross (IBC) fitness center, field house, and various recreational facilities; and the Student Book Store. Temple's students also have varying degrees of access to the facilities and programs at a wide range of other educational institutions in the greater Philadelphia area. These include the University of Pennsylvania, Villanova University, St. Joseph's University, Drexel University, LaSalle University, and Thomas Jefferson University.

## Tuition

Current tuition rates (2009-2010 academic year) are \$613/credit for Pennsylvania residents and \$897/credit for non-residents. These rates are subject to change by action of the Board of Trustees and typically increase slightly every year - at the beginning of the second summer session.

## Housing

One and two bedroom apartments are located on the main campus and are available to juniors, seniors, and graduate students. Further information may be obtained by contacting:

**Office of University Housing  
Student Activities Center - Room 315  
Temple University, Philadelphia, PA 19122  
215-204-7223**

This office also maintains a list of other rooms, apartments, and houses which are located in the greater Philadelphia area and available for student rental. The local Philadelphia newspapers may also be helpful. Another source of information about housing is other graduate students in the department.

## The College of Health Professions

The Department of Kinesiology is the newest member of the College of Health Professions and Social Work. Temple University's College of Health Professions and Social Work was founded in 1966 to meet the growing need for highly skilled professionals, and continues to adapt today to increasingly sophisticated needs as it leads the design and delivery of effective health care programs through education, training, research, and service. The College of Health Professions and Social Work excels as a regional and national leader in the education of health professionals and innovative health-related research. The College fosters interdisciplinary collaboration among students, staff, industry leaders, clients, and the community to better address health needs, eliminate disparities in care, increase lifespan, and improve quality of life. The Dean of the College of Health Professions and Social Work is Dr. Ron Brown.

There are nine academic programs in the College of Health Professions and Social Work: Communication Sciences, Health Information Management, Kinesiology, Nursing, Occupational Therapy, Physical Therapy, Public Health, Therapeutic Recreation, and the School of Social Work. Four of the College's graduate programs have been ranked among the top 50 programs of their type in the nation by *U.S. News and World Report*: Communication Sciences, Occupational Therapy, Physical Therapy, and Public Health.

For more information on the College of Health Professions and Social Work please check the following web site:

<http://www.temple.edu/CHP/>

## The Department of Kinesiology

The Department of Kinesiology consists of 16 full-time faculty, 20 TA/RA positions, and 60 part-time faculty. The department is organized into two program groups: Behavioral Sciences (Curriculum and Instruction and the Psychology of Movement) and Somatic Sciences (Athletic Training/Sports Medicine and Integrative Exercise Physiology). Most of the TAs teach classes in the Basic Instruction Program (BIP) or laboratory sections of courses in the undergraduate program. The BIP includes a large number and variety of courses. The undergraduate professional program consists of three curriculum areas: core courses in the discipline of human movement, university core course requirements, and a professional application track. The latter consists of Athletic Training, Exercise and Sport Science, Teacher Education, and Pre-Professional Program.

## The Biokinetics Research Laboratory

The Biokinetics Research Laboratory (BRL) serves as the center for the research activities of the faculty and graduate students in the Department of Kinesiology. The BRL is comprised of four divisions: Athletic Training, Curriculum and Instruction, Integrative Exercise Physiology (including the

HyMAP Lab – Hypertension, Molecular and Applied Physiology Laboratory as well as the Cardiovascular Genomics Laboratory), and Exercise and Sport Psychology. Its facilities and equipment are extensive. A limited list includes: environmental chamber, hydrostatic weighing tank, metabolic cart with non-invasive critical care unit and nutritional analyses, gamma counter for hormonal analyses, advanced spectrophotometer, several treadmills and bicycle ergometers, facilities and equipment for exercise and stress testing, Biodex Isokinetic Dynamometer, Biodex Stability System, 16 Channel Noraxon Telemetry EMG System, Neuro Diagnostic EMG Unit, two high speed (500 fps) cameras, Peak Performance Motion Analysis System, Polhemus Liberty motion analysis system, and exercise and sport psychology consultation/research laboratory room.

## **The Health-Fitness and Wellness Center**

The Health-Fitness and Wellness Center (HFWC) is a modern fitness center for the University's faculty, staff, and graduate students. The HFWC has an array of cardiovascular and strength equipment designed to allow the user to optimize health and fitness. Programs are also offered in areas such as stress management. Cost of membership in the HFWC is modest.

## **Graduate Program Admission Requirements**

Applicants for graduate degree programs in the Department of Kinesiology will be evaluated using the criteria listed below.

### **Academic Achievement**

Applicants must have a bachelor's degree or its equivalent from an accredited institution of higher learning and an overall grade point average (GPA) of at least 3.0 (on a 4.0 scale). Two copies of official transcripts are required from each institution of higher education attended by the applicant. It is the applicant's responsibility to request these transcripts. Please refer to the Application for Admission materials for details concerning the forwarding of transcripts. Occasionally, applicants with undergraduate GPAs below 3.0 are considered for admission. These applicants must have standardized test scores above the 65<sup>th</sup> percentile or have achieved a 3.25 graduate GPA in at least 9 credit hours of graduate coursework, or have other exceptional circumstances which would warrant consideration for admission to the program.

### **Analytical Skills**

Applicants must demonstrate competency in analytical skills pertinent to their graduate goals. All applicants are required to take a standardized test: master's applicants have the option of taking the GRE (Graduate Record Examination) or MAT (Miller Analogies Test), doctoral applicants are required to take the GRE. Both the verbal and quantitative sections of the GRE are required.

In addition, proficiency in analytical skills may be further supported through: (a) course work\* providing prerequisite skills necessary for statistics, computer technology, and/or other pertinent graduate courses required by the program of study; and (b) previous experiences such as publication of research articles in which the student selects and interprets statistics or other quantitative applications in research related to the chosen area of graduate study. This latter method of demonstrating competency may require further verification.

\*Differences in programs of study will lead to differences in requirements among programs. Program groups and advisors will determine exact competency requirements for specific programs and students

## **Communication Skills**

Applicants demonstrate their communication skills as follows:

Master's and doctoral applicants are required to submit a written statement of their career goals (between 150 and 200 words) with their graduate application.

## **Related Life Experiences**

Applicants demonstrate the extent of experiences which may contribute to the assessment of their application by being required to submit a current curriculum vitae which include previous and current educational and work experiences; professional publications and presentations; memberships in professional organizations; certifications; attendance at professional conferences and workshops; and any other pertinent information. Master's and doctoral applicants are required to submit three letters of recommendation.

## **Letters of Recommendation**

Three letters of recommendation are required for each application. Generally, at least two of these recommendations will be from 'academic' references (e.g., former professors) – many applicants will have three letters from academic references. But in some cases, letters from clinical supervisors, former employers, etc., would be entirely appropriate.

## **Portfolio**

Applications may be enhanced by the inclusion of a portfolio which might include video or audio presentations, published works, representative samples of other works, evaluations, and any other supporting materials which demonstrate the applicant's abilities.

## **International Applicants**

Applicants who are nonnative speakers of English (regardless of previous language of instruction) must score a minimum of 550 on the paper-based (PBT), 213 on the computer-based (CBT), or 79 on the internet-based (IBT) version of the TOEFL. Students admitted with a TOEFL score below 600 (250 on the computerized test) are required to take an English skills course their first semester at Temple unless they have passed the SPEAK test before the start of that semester. Exceptions to this rule can only be made by the Dean of the Graduate School.

Applicants whose native language is not English and who wish to be considered for financial awards requiring competency in English (e.g., graduate teaching assistantships) must submit, with their application, evidence of their ability to communicate effectively in spoken English. Such evidence might include results of the Test of Spoken English (TSE), a letter from the chair or head of their home university's English Department attesting to the applicant's competence in Spoken English, or other similar evidence.

All international students must submit a statement of financial certification to receive an I-20 form from the university and to qualify for a student visa. The I-20 form may be issued only to those students who have been formally admitted to the Graduate School. Consequently, international applicants must begin the application process well in advance (6 months minimum) of the semester in which they wish to begin graduate work.

International students must be enrolled in a full-time course of study to satisfy the regulations established by the Immigration and Naturalization Service concerning the issuance of a student visa. International students should contact the Center for International Services and Programs at the address below for assistance:

Center for International Services and Programs  
 201 Mitten Hall, 043-81  
 Temple University  
 Philadelphia, PA 19122  
 USA  
 215-204-7229

## Graduate Program Application Procedures

### Application

Applicants can access the on-line application at the Graduate School web site:

<https://voyager.adminsvc.temple.edu/GradApp/Online.asp>

Progress of your application can be tracked via OwlNet at <http://owlnet.temple.edu/>, using the nine digit TUID number issued you once you have submitted your application and the PIN number you received in the mail. You will need your ID number and PIN in order to log onto the system."

### Fee

A nonrefundable application fee of \$60 must accompany the application.

### Deadlines

Graduate application deadlines and tentative admission decision dates for the Department of Kinesiology are as follows:

<u>Application Due</u>	<u>Decision By</u>
October 1	November 1
January 15	March 1
April 1	May 1
June 1	July 1

The application due dates refer to completed applications which include all credentials (e.g., transcripts, test scores, goal statements, and recommendations). As indicated by the above dates, applications are reviewed four times each year; however, available openings in each program of study are limited and may be filled by qualified applicants before all review dates have passed. Furthermore, candidates interested in teaching assistantships and other forms of financial aid are encouraged to meet the earliest deadline possible. Candidates applying for admission for the spring semester must meet the October 1 deadline.

### Letter of Admission

Applicants who are recommended for admission to a specified degree program by the Department of Kinesiology will receive a Letter of Admission from the Dean of the Graduate School. This letter is valid for the semester in which admission is granted. However, a one semester (or two semesters in rare cases) deferment may be approved. If the student does not enroll while the letter is valid, admission will be cancelled. If a new application is filed, another fee of \$60 must accompany the application. If the Graduate Program Coordinator in the Department of Kinesiology is forewarned, it would not be necessary to provide a complete set of new credentials.

## Application Review Process

Applications and supportive materials (e.g., transcripts, GRE/MAT scores) are sent to the Office of Admissions & Enrollment at the College of Health Professions at the following address:

**College of Health Professions  
Office of Admissions & Enrollment  
Graduate Admissions Officer (602-00)  
Temple University  
3307 North Broad Street  
Philadelphia, PA 19140**

As required materials are received by the Office of Admissions & Enrollment they are checked in and then forwarded to Dr. Michael Sachs, the Graduate Coordinator, for processing within the Department. Students sometimes assume the application is being reviewed when it is still awaiting a missing reference letter, test score, or other material. Applicants should feel free to check with Dr. Sachs on the status of their applications.

Once complete, Dr. Sachs forwards the applications to the appropriate area of concentration. Once at the area of concentration, decisions may take a few days or several weeks, depending on when the application is received, competition (quality of other applications), and other factors.

Applications fall into one of two categories: (a) Interview group - ones in which we are particularly interested, and students are contacted for interviews; and (b) Not accept group - applications that do not meet standards sought by the department and will receive rejection letters. Please note that it may take several weeks or more before a decision is made as to whether an application falls in the interview group or the not accept group. This decision may be affected by the time of the semester, competition (quality of other applications), and other factors. Interviews are scheduled for those applications in the first group - please do not call to schedule an interview (you will be contacted if an interview is appropriate).

For master's applicants in the interview group, personal (usually on campus) or telephone interviews are conducted with at least one faculty member from the program group to which the applicant is applying. For doctoral applicants in the interview group, personal (usually on campus) interviews are conducted with at least two faculty members from the program group to which the applicant is applying (telephone interviews may be conducted in situations where an on campus interview is not possible, such as with international applicants). Additionally, for doctoral applicants, during the interview the applicant will be required to demonstrate writing competency (topic determined by the reviewing program group).

Once decisions have been reached, it may take several weeks for the applications to be returned to Dr. Sachs, signed off by Dr. Michael Sitler, the department chairperson, and then processed by the College of Health Professions, with official acceptance letters being sent by the Dean of the Graduate School. Students are encouraged not to assume they have not been accepted or are no longer being considered if they have not heard from us - your application may be on its way to the Dean's desk for a signature at the very moment you decide to accept an offer from another university. Please check with Dr. Sachs if you are near a decision point and still wish to consider our program. He can update you as to the status of your application.

## Financial Aid

A variety of financial aid is available to full-time graduate students. University funded support may be available on a competitive basis for graduate teaching assistantships (TA), research assistantships (RA), and University fellowships. Other support is available from outside agencies such as the National Defense Education Act Title IV fellowships, student loans, and the work-study program.

## Teaching and Research Assistantships (TA/RA)

The Department of Kinesiology has approximately 20 TA/RA positions, although all positions are not vacated each year. Students who fill these positions may be assigned to duties within the department. These include: teaching activity courses in a variety of movement forms and sports; teaching laboratory sections of undergraduate major courses such as Biomechanics, Physiology of Exercise, and Human Anatomy and Physiology; or serving as a research assistant in the BRL. To be considered for an assistantship, applicants must already be admitted to the Graduate School. An application may be obtained on-line at: <http://www.temple.edu/chp/departments/kinesiology/index.html>

Applications and supporting materials for TA/RA positions are due March 1, although materials submitted later may still be considered. Recipients of positions with instructional responsibilities will be required to attend an orientation and training workshop in late August. If they are not native speakers of English they may, in addition, be required to take a competency examination in spoken English and/or attend workshops in spoken English before being allowed to undertake instructional activities. Failure to pass a competency examination will not result in the withdrawal of a student's financial award. However, failure to become competent in spoken English in a reasonable period may jeopardize the renewal of such an award. The Dean of the college may certify the competence of the student in spoken English in lieu of a competency exam.

**Teaching Assistantships (TA).** To be eligible for consideration for a teaching assistantship position, the graduate student must have been admitted to a master's or doctoral program at Temple University. Students are appointed as TAs on the basis of their academic record and teaching and/or administrative strengths. The stipend for TAs for the 2009-2010 academic year is \$15,145. In addition to the stipend, each TA receives tuition remission for 18 credits of course work per academic year. The value of this varies from \$11,034 for an in-state student to \$16,146 for an out-of-state student (2009-2010 tuition rates).

Each TA will be assigned a work load which is the equivalent of 20 hours per week. This usually consists of teaching three activity or four laboratory classes. TAs are expected to enroll for nine credits of graduate courses each academic semester.

Master's degree students are eligible for only two appointments (a total of two years as a TA). Doctoral students may be considered for TA appointments totaling no more than four years. All appointments are predicated on satisfactory progress in the degree program and satisfactory performance of all assigned duties.

**Research Assistantships.** Eligibility and pay scales for RAs are the same as for TAs. Students who are appointed as RAs are assigned to assist with the ongoing research in the BRL. The work load is equivalent to 20 hours per week and 18 credits of tuition remission are awarded. Students interested in an RA must complete the same application as those seeking a TA.

## Fellowships and Scholarships

The Graduate School, in cooperation with the College and Department, administers several different kinds of financial aid. To qualify for any of these, the graduate student must be admitted to the Graduate School and be defined as a full-time graduate student (i.e., enrolled for nine hours of course work or certified by the department as working full-time on the master's thesis or doctoral dissertation).

The following fellowships are available only to doctoral candidates. Applications for these awards may be obtained from the Graduate School. The application deadline is approximately February 1 of each year.

**Presidential Fellowships.** These are the most prestigious awards offered by the Graduate School of Temple University. They are awarded to unique and exceptional students. Each Presidential Fellowship carries a stipend of \$20,000 for a 12-month period and full tuition remission.

**University and Future Faculty Fellowships.** These are available to outstanding students and carry a stipend of \$14,000 for a 12-month period and full tuition remission.

Applicants may qualify for Temple University Presidential, University, or Future Faculty Fellowships. Applicants must have outstanding credentials - the experience of faculty who have served on committees which make recommendations and decisions on these fellowships suggests that GPAs above 3.5 and GRE scores above 1,250 generally represent a minimum standard to be seriously considered, along with excellent references and other supportive information. Please contact Michael Sachs for further information if you think you may qualify for these fellowships. Applications should be submitted as early as possible (ideally January 1) to allow time to be considered by the department and a determination made if the student will be (a) accepted by the department and (b) an application will be submitted for a fellowship by the deadline date.

## Loans and Work Study

Students interested in obtaining other kinds of financial aid should contact:

**Office of Financial Aid  
Conwell Hall  
Temple University  
Philadelphia, PA 19122  
215-204-1405**

## Areas of Concentration

The Department of Kinesiology has two main areas of focus at the graduate level: Behavioral Sciences and Somatic Sciences. Within the Behavioral Sciences there are two areas of concentration: Curriculum & Instruction (pedagogy) and the Psychology of Movement, particularly Exercise and Sport Psychology.

The **Curriculum & Instruction** area of concentration is primarily designed for those interested in teaching in K-12 or college/university settings.

The **Exercise and Sport Psychology** (ESP) area of concentration is primarily for those who wish to pursue research and/or applied work in the varied areas within the field of exercise and sport psychology. Dr. Melissa Napolitano, formerly of Brown University, is the newest member of our ESP faculty. Dr. Napolitano's training is in clinical health psychology; therefore, her research is informed by using psychological theories and techniques for assisting with the acquisition and maintenance of behavior change. Dr. Napolitano's research interests include physical activity adoption and maintenance, obesity and behavioral weight control, smoking cessation, the use of technology in interventions, and women's health.

Within the Somatic Sciences area there are two areas of concentration: Athletic Training and Integrative Exercise Physiology.

The **Athletic Training** area of concentration is primarily designed for NATABOC certified athletic trainers who wish to pursue advanced degrees to conduct basic and applied research in athletic training. The M.S. program in Athletic Training is an NATA accredited graduate program designed to accommodate both NATABOC certified athletic trainers and NATABOC 'certification eligible' athletic trainers. The two-year curriculum is offered through the Department of Kinesiology and the College of Health Professions, and the Program of Study can be individualized based on the student's background, experience, and future goals. The combination of coursework, clinical, and research experiences are

designed to develop the skills necessary to increase proficiency in sports injury prevention, treatment, and rehabilitation, and preparation for doctoral programs at Carnegie Research I institutions.

Through the clinical component of the program, students provide athletic training services to many local school districts, clinics, and universities, which have been in existence for more than 20 years. These services provide local sponsors with highly qualified NATABOC certified athletic trainers at a competitive cost. The services also enable the athletic training graduate students to gain valuable experience necessary to complete their academic requirements. They also help fund graduate athletic training student research projects.

The Ph.D. degree in Athletic Training is a research-based degree designed to prepare students for research positions or teaching/research positions in academia and research institutions. The program is designed for NATABOC Certified Athletic Trainers and/or other qualified health care professionals who are committed to advancing the faculty of reason and critical thinking skills through the evaluation of accepted clinical practice. The program research experience of the faculty include: (1) neuromechanics as related to injury pathomechanics and sensorimotor characteristics to improve function as well as provide protection from injury during physical activity through a broad spectrum of physically active populations and extensive laboratory experiences, and (2) evidence-based practice in athletic training and sports medicine with particular focus on interventions to reduce unintentional injuries and post-surgical outcomes.

The **Integrative Exercise Physiology** area of concentration is designed for those interested in applied and/or research work in a variety of areas within exercise physiology. The M.S. curriculum can be tailored for students who desire advanced knowledge and competencies in clinical or applied integrative physiology of exercise to practice in hospitals, clinics, and wellness centers as a part of the health care team; and, for students who are preparing for doctoral programs at Carnegie Research I institutions. The clinical or applied integrative physiology of exercise program is designed to be a two-year non-thesis program. Students preparing for doctoral programs usually complete a master's research project or thesis. The coursework in cardiovascular, respiratory, and musculoskeletal systems is designed to provide students the opportunity to develop advanced knowledge and competencies in integrated exercise physiology. The PhD. Degree is a research-based degree that is designed to prepare students for research positions or teaching/research positions at Carnegie Research I institutions. Research expertise of the faculty include acute effects and long-term changes resulting from training on the cardiovascular system, renal function, and control of hypertension in specific populations; musculoskeletal system and bone modeling; energy transformation; disabilities; and obesity. The doctoral curriculum is heavily weighed to cellular and molecular aspects of integrative exercise physiology.

Students interested in these areas of concentration should consult the relevant web sites for each area, as well as the list of projects, theses, and dissertations (see pp. 19-22) and research interests of the faculty (see p. 23) for an idea of the interests/orientation of their area of concentration.

Although at both the master's and doctoral levels students tend to specialize in one area of concentration, there is the capacity for an occasional student at the master's level to pursue a general master's, incorporating subject matter from a number of the areas of concentration. Students interested in this possibility should contact the Graduate Coordinator, Dr. Sachs, for more information.

Additionally, many of the areas of concentration have prerequisites and/or expectations of their incoming students in terms of coursework and or experiences. It is best to check with the contact persons in each area (Dr. Rick Swalm for Curriculum & Instruction, Dr. Michael Sachs for Exercise and Sport Psychology, Dr. Ryan Tierney for Athletic Training, and Dr. Zeb Kendrick for Integrative Exercise Physiology - see p. 23 for contact information) to see whether your background meets the entry expectations for the area of concentration in which you are interested.

# Master's Degree Program

The specific master's degree awarded by the Department of Kinesiology is the Master of Science (M.S.) degree. Within this degree program students may elect to do a thesis, project, or clinical internship/practicum option. All three options are part of the 36 credit master's program.

## Requirements

**Admission.** See the admission requirements section of this handbook for general requirements that apply to all students applying for the master's degree.

**Time, Residency, Enrollment, and Scholarship Standards.** The degree program (all courses which count toward the degree, including transferred courses) must be completed within four years of matriculation. During this time the student must be enrolled every fall and spring semester unless on an approved leave of absence. Students may apply for a leave of absence for a period not to exceed one year.

A student is expected to maintain satisfactory progress toward the degree. A student's graduate record begins with the first course credited to the degree and includes all subsequent courses, whether or not such work is necessary for the degree. A graduate student may earn no more than 2 grades of less than B- quality, may receive no more than one grade of F, must have at least a 3.0 GPA at graduation, and may not graduate with an outstanding incomplete (I) grade.

**Program of Study.** The student's program of study is developed with the help of a curriculum advisor. The content of the program depends on the specific subdiscipline studied. The specific programs of study for each of the four areas of concentration are provided in APPENDIX A. The following apply to all programs of study:

1. No more than 6 credits may be transferred from another institution.
2. A graduate student may take an undergraduate course for graduate credit only where: (a) the course in question is an upper level undergraduate course and covers material which is germane to the student's area of study and which is not taught in any graduate course offered the same semester; (b) the student is required to do graduate level work in the course (more advanced work than is required of the undergraduates in the course), and the nature and extent of that work is specified in writing before the start of the course in a document signed by both the instructor and the student; (c) the student has the prior permission of the course instructor and the graduate chair of her or his program; and (d) the student pays graduate tuition for the course.

Under no circumstances may an undergraduate course which is taken to bring a student up to the level of preparation expected of entering graduate students be used to meet graduate requirements.

3. All students are required to complete Res Methods Kinesiology (KIN 9901), or the equivalent, and one intermediate graduate level statistics course (or the equivalent content in undergraduate statistics courses).

## Thesis Option

The thesis option requires the completion of a minimum of 36 credits which includes the writing of a thesis (6 credits) which is expected to demonstrate the candidate's ability to collect data and present the results in a scholarly manner.

In addition to the general rules for all M.S. programs, the following apply to the thesis option:

1. A minimum of 30 credits of course work. This must include KIN 9901 (Res Methods Kinesiology) or the equivalent.
2. KIN 9995, Masters Research (3 credits) and KIN 9996, Masters Thesis (3 credits) are required.

## Project Option

The project option requires the completion of a minimum of 36 credits of course work, which includes the writing of a project (3 credits). The project option is designed to provide flexible alternatives for the student to choose from in designing a culminating experience for the master's degree.

The project may involve: scholarly research and data collection of a lesser magnitude (e.g., fewer subjects, fewer independent and dependent variables) than that normally required for a thesis, preparation of educational materials, or design and application of policy or programs. Regardless of the type of project experience selected, a written report must be produced. The nature of the report will depend on the project experience. In addition to the general rules for all M.S. programs, the following apply to the project option.

1. A minimum of 33 credits of course work. This must include KIN 9901 (Res Methods Kinesiology) or the equivalent.
2. KIN 9995, Masters Research (3 credits) is required.

## Clinical Internship/Practicum Option

The Clinical Internship/Practicum Option requires the completion of a minimum of 36 credits of coursework, consisting of 10 courses (10 courses x 3 credits = 30 credits) and a clinical internship/practicum (6 credits). This option provides students with a substantive clinical/applied experience rather than a research focus (as would be the case with the thesis, for example). This internship/practicum is comprised of a 300 hour clinical/applied internship at one or more settings (usually one or two sites) that provide students with a varied set of experiences germane to their area of concentration.

Students will be required to select one of these three options upon entering the program and may switch options during the course of their degree program only with the approval of their advisor and program group. Because only a limited number of thesis and project options students can be served at any point in time, the possibility of switching from the clinical internship/practicum option to the thesis or project options is limited. There is a greater likelihood (although no guarantee) of being able to switch from the thesis or project options to the clinical internship/practicum option. Please note that the clinical internship/practicum option is only available in two areas of concentration: (a) integrative exercise physiology and (b) exercise and sport psychology. This option may become available in other areas at a later date. The Athletic Training area also requires most students to complete a project rather than a thesis. Check with a faculty member in your area of interest or the Graduate Coordinator for further information about any of the options available.

Information concerning advanced standing, transfer of credit, academic good standing, auditing, dismissals, and other graduate school policies may be found at the Graduate School's web site at <http://www.temple.edu/grad/policies/gradpolicies.htm> .

## Doctoral Degree Program

The Department of Kinesiology offers the Doctor of Philosophy (PhD) in Kinesiology degree in two areas of the discipline: Behavioral Sciences and Somatic Sciences. Choice of an area of concentration should be based on the needs, interests, and background of the student. Prospective students are not required to hold a bachelor's or master's degree in kinesiology to pursue the doctorate. However, additional course work may be required of students without previous degrees or coursework in kinesiology. Questions concerning any area of study should be directed to one of the faculty members in that program group.

### Requirements

**Admission.** See the admission requirements section of this handbook for general requirements that apply to all students applying for the doctoral degree.

**Time, Enrollment, and Scholarship Standards.** Three years of advanced study beyond that required for the baccalaureate degree are regarded as the minimum requirement for the Doctor of Philosophy degree. A full-time load is a minimum of 9 credits of course work.

While it is expected that most students will complete all requirements for the PhD within 5 years from the date of matriculation in the program, no student will be allowed to continue beyond 7 calendar years unless explicit permission is secured from the College of Health Professions. A student who does not receive the doctoral degree within 5 years of passing the preliminary examination must retake and pass that exam to remain in good academic standing.

Enrollment must be continuous throughout the program (i.e., students must enroll each semester from the semester of admission until the completion of the oral defense of the dissertation). Students may request leaves of absence for a period not to exceed two years.

A student is expected to maintain satisfactory progress toward the degree. A student's graduate record begins with the first course credited to the degree and includes all subsequent courses, whether or not such work is necessary for the degree. A graduate student may earn no more than 2 grades of less than B- quality, may receive no more than one grade of F, must have at least a 3.0 GPA at graduation, and may not graduate with an outstanding incomplete (I) grade.

### Program of Study

The PhD program of study in Kinesiology is based upon the baccalaureate degree in Kinesiology and consists of four primary areas (see Table 1 and APPENDIX B, beginning on p. 27, for programs of study for each area of concentration): basic core of courses in the Discipline of Kinesiology, core of courses in each area of concentration, elective courses, and preliminary examination/dissertation proposal and dissertation. The program of study is designed so that it can be completed in 4-5 years of post baccalaureate, full time study.

Table 1. Program of Study for the PhD in Kinesiology \*

Requirement	Coursework	credits
<b>Department Core</b>	Statistics (2 courses) **	
	Res Methods Kinesiology (KIN 9901)	<b>3</b>
	Mentored Research I, II) (KIN 9683, 9783)	<b>6</b>
	<b>Subtotal</b>	<b>15</b>
<b>Area Core</b>	See specific area requirements in Appendix	
	<b>Subtotal</b>	<b>18-21</b>
<b>Electives</b>	See specific area requirements in Appendix	
	<b>Subtotal</b>	<b>33-36</b>
<b>9994 Preliminary Exam Prep</b>		<b>1</b>
<b>9998-9999 Pre-Dissertation Research -Doctoral Dissertation</b>		<b>9</b>
	<b>Total</b>	<b>78</b>

\* The PhD program of study in Kinesiology is based upon the baccalaureate degree in Kinesiology.

\*\* The two statistics courses must encompass an Intermediate level statistics course and either an Advanced level statistics course or Qualitative Research Methodology course. It is assumed that the student has taken a beginning statistics course or the equivalent either before starting the program or at the beginning of the program (but this course would not count as part of the 78 hours).

The required department core (15 credits) consists of five courses, focusing upon coursework in statistics (two courses), research methods, and mentored research (two courses). These courses are begun during the first year of study and completed prior to completing the Preliminary Examination. The mentored research sequence consists of two courses of three credit hours each. The Mentored Research Courses will be directed by doctoral faculty in the Department of Kinesiology.

In Mentored Research I, students will learn grantsmanship - the skills required to do the background work necessary to write a grant for submission for funding. This course will be offered in the spring semester of each year.

In Mentored Research II, students will build upon their work in Mentored Research I and will write a grant and submit it for funding. This may encompass developing a literature review, conducting research sessions (e.g., collecting and analyzing pilot data), and writing up the grant application. This course will be offered every semester and will involve individual work with a faculty member.

The required courses (18-21 credits) in each Area of Concentration are designed to provide in-depth experience in the subject matter in which the student is concentrating.

Elective courses (33-36 credits) are required to support an emphasis in either the Behavioral Sciences or Somatic Sciences areas of the Discipline of Kinesiology. The elective courses are completed during the first three years of the program and provide the foundation by which students develop an area of research emphasis.

Dependent on the focus and complexity of the student's dissertation research, more specialized courses in statistics are taken as electives (above the two 3 credit statistics course requirement).

In planning one's Program of Study, students often ask when core courses are offered in the Department. The following core courses are offered in the following semesters (past practice - subject to change in future, but likely to continue):

KIN 5311	Exercise Physiology	Fall semester, first summer session
KIN 5312	Exercise + Nutrient Metb	Second summer session
KIN 5313	Exercise + Aging	Spring semester
KIN 9311	Biomech of Human Mvmt	Fall semester
KIN 9201	Cardiovascular Ex Phys	Fall semester
KIN 9402	Psych of Human Mut & Dev	Fall semester
KIN 9403	Sociology of Kinesiology	Spring semester
KIN 9204	Cellular Adapt to Exer	Fall semester
KIN 9203	Appl Ex Physio-Neuromusc	Spring semester
KIN 9405	Psy-Soc Interact + Skill	Spring semester, every other year
KIN 9406	Psych-Soc Test/PE + Spt	Spring semester, every other year
KIN 9206	Intro to Environ Physiol	Spring semester, every other year
KIN 9901	Res Methods Kinesiology	Fall Semester
KIN 9683	Mentored Research I	Spring semester
KIN 9783	Mentored Research II	Fall and spring semesters

Upon completion of all coursework, the Preliminary Examination (1 credit) is fulfilled. This requirement encompasses submission and acceptance of an article in a refereed journal (found in the JCR), as well as an oral defense at a forum of qualified faculty of the research conducted for the journal article. The student must be first author on the journal article. The journal article will generally come out of research conducted as part of Mentored Research II (KIN 9783), but can come from other research efforts conducted while a student at Temple.

After successful completion of the Preliminary Examination, the student must write and successfully defend her/his dissertation (9 credits). The dissertation is expected to exhibit scholarship, reflect mastery of technique, and make a distinctive contribution to the Discipline of Kinesiology. To begin the dissertation process, the student, with the approval of an advisor, selects a topic, prepares a proposal, and selects a sponsoring committee who will be responsible for the general supervision of the dissertation. After the proposal has been accepted by the sponsoring committee, the student proceeds with the research, defense, and completion of the dissertation.

**Credits:** No maximum number of credits has been established for course work, although a minimum of 68 credits, exclusive of Preliminary Exam Prep (9994) and dissertation credits (9998 and 9999), is required. Students who have completed a master's degree will be considered for acceptance into the PhD program. For these students, up to 30 hours from a master's degree will be considered for advanced standing. Advanced standing courses must be directly related to the PhD in Kinesiology program of study. Up to 6 hours of coursework taken at another College or University (separate from the advanced standing for the master's degree) may be considered for transfer into the program.

**Preliminary Examination/Dissertation Course Requirements:** All PhD candidates in Kinesiology must complete the following course requirements: KIN 9994 (Preliminary Exam Prep) - Doctoral students must register for 1 credit of KIN 9994 during the semester in which the preliminary examination is completed and during all semesters between the completion of course work and the completion of the preliminary examination. This requirement encompasses submission and acceptance of an article in a refereed journal (found in the JCR), as well as an oral defense at a forum of qualified faculty of the research conducted for the journal article. The student must be first author on the journal

article. The journal article will generally come out of research conducted as part of Mentored Research II (KIN 9783), but can come from other research efforts conducted while a student at Temple.

KIN 9998 (Pre-Dissertation Res) - Doctoral students must register for 3 credits of KIN 9998 during all semesters between completion of the preliminary examination and approval of the dissertation proposal by the dissertation advisory committee. Students are advanced to candidacy upon passing the preliminary examination. Once the dissertation proposal has been approved by the Dissertation Advisory Committee it is submitted to the Graduate School. Institutional Review Board (IRB) application is made at the same time. The student's research may begin upon the Graduate School's approval of the proposal and approval by the IRB.

KIN 9999 (Doctoral Dissertation) - After the dissertation proposal has been approved by the dissertation advisory committee and the Graduate School, doctoral students must register for a minimum of 3 credits of KIN 9999 each semester until the dissertation has been successfully defended, approved by the dissertation examination committee, and filed with the Graduate School. A minimum of 6 credits of KIN 9999 is required for graduation.

**Course Credit:** A graduate student may take an undergraduate course for graduate credit only where: (a) the course in question is an upper level undergraduate course and covers material which is germane to the student's area of study and which is not taught in any graduate course offered the same semester; (b) the student is required to do graduate level work in the course (more advanced work than is required of the undergraduates in the course), and the nature and extent of that work is specified in writing before the start of the course in a document signed by both the instructor and the student; (c) the student has the prior permission of the course instructor and the graduate chair of her or his program; and (d) the student pays graduate tuition for the course.

Information concerning advanced standing, transfer of credit, academic good standing, auditing, dismissals, and other graduate school policies may be found at the Graduate School's web site at <http://www.temple.edu/grad/policies/gradpolicies.htm> .

## **Theses/Projects/Dissertations**

The following list is a sampling of theses, projects, and dissertations completed in the Department of Kinesiology in the past six years. Please contact the Graduate Coordinator or major adviser (MA) for more information if interested.

Sarah Allen (2004) Rowers' experiences of athletic burnout and coping strategies for dealing with athletic burnout (Master's thesis, MA: Emily Roper)

Katherine Bartosik (2004) Anatomical and biomechanical differences of medial tibial stress syndrome. (Master's project, MA: Michael Sitler)

Barbara Beckenhauer (2004) Effects of Pycnogenol™ supplementation on muscle soreness and urinary hydroxyproline:Creatinine ratios following eccentric exercise. (Doctoral dissertation, MA: Zeb Kendrick)

Lydia Benjamin (2006) Relationships among neuropsychological and neuromuscular factors in physically-active healthy males. (Master's project, MA: Michael Sitler)

Lois Butcher (2003) 1-2-3 Kick: The effect of an audible rhythm pattern on kicking performance. (Doctoral dissertation, MA: Michael Sachs)

Tiffany Butler (2009). Effect of Delayed Puberty on the Growth Plate. (Master's project, MA: Vanessa Yingling)

Jeffrey M. Cherubini (2003) The model of intentional development: A grounded theory of individual, social environmental, and physical environmental influences on physical activity in adult African American women. (Doctoral dissertation, MA: Michael Sachs)

Shannon Clegg (2008). Randomized controlled study on the effect of soccer heading on brain injury markers. (Master's project, MA: Ryan Tierney)

Bruce Cohen (2003) Excusercise: Differentiating the relapse stage of exercise behavior change in terms of perceived barriers, self-efficacy, and motives via an internet based data collection. (Doctoral dissertation, MA: Michael Sachs)

Tracey Covassin (2003) Gender differences and neuropsychological impairments of concussions among collegiate athletes. (Doctoral dissertation, MA: Michael Sachs)

Keith Davis (2006) Gender differences in hip strength, hip muscle activation, and dynamic stability. (Master's project, MA: Michael Sitler)

Caren Diehl (2004). Cross-cultural issues in applied sport psychology. (Master's project, MA: Emily Roper)

Peter DiLorenzo (2005) Effects of physical education homework on physical fitness scores and understanding fitness concepts among fourth grade students. (Doctoral dissertation, MA: Rick Swalm)

Kris Foulke (2007). Effect of a plyometric training program on neck muscle activity. (Master's project, MA: Ryan Tierney)

Heidi Freeman (2008) A qualitative exploration of the experiences of mother-athletes training for and competing in the Olympic Games. (Doctoral dissertation, MA: Michael Sachs)

Colin Guthrie (2008) Life at the extreme: An investigation into the experiences of professional sailors competing in a fully crewed around the world race. (Doctoral dissertation, MA: Michael Sachs)

Joseph Havlick (2008) The effects of imagery on juggling instruction. (Doctoral dissertation, MA:

Michael Sachs)

Chad Hayes (2007) Interpersonal influences within a pitcher-catcher dyad: A qualitative analysis of battery mates in NCAA baseball. (Master's thesis, MA: Michael Sachs)

Maria Honorio (2004) Burnout in ethnic minority NATABOC certified athletic trainers. (Master's project, MA: Michael Sitler)

Monique Horshaw (2007) The roles of race and music selection on basketball pre-game preparation: A review of literature. (Master's project, MA: Michael Sachs)

Michelle Jenkin (2009). Clinical usefulness of the Ottawa ankle rules for detecting fractures of the Ankle and mid-foot. (Master's project, MA: Michael Sitler)

Bryan Kim (2009). The effects of guided relaxation and exercise imagery on older adults with a fear of falling. (Doctoral dissertation; Major adviser: Michael Sachs)

Adam Lake (2004) Effectiveness of elbow hypertension prophylactic braces on limiting active and passive elbow extension pre- and post-physiological loading. (Master's project, MA: Michael Sitler)

Crystal Leopanto (2008). Bilateral assessment of synovial fluid biomarkers in osteoarthritic knees. (Master's project, MA: Michael Sitler)

Elizabeth Loughren (2009). Motivation of first time marathon runners to adherence to marathoning. (Doctoral dissertation, MA: Michael Sachs)

Scott M. McDonnell (2006) Beta adrenergic responsiveness in hypertension: Impact of exercise training. (Doctoral dissertation, MA: Joseph Libonati)

Jamie Mansell (2004) Resistance training effects on head-neck segment dynamic stabilization. (Master's project, MA: Michael Sitler)

Emily Markis (2007). Gender differences in head-neck segment kinematics & dynamic stabilization during soccer heading in high school soccer players. (Master's project, MA: Ryan Tierney)

Michael McBride (2006) Cardiovascular exercise performance following repair for total anomalous venous connection during infancy. (Doctoral dissertation, MA: Mayra Santiago)

Jane McDevitt (2009). Neuronal structural protein polymorphisms and MTBI in college athletes. (Master's project, MA: Ryan Tierney)

Abbey Myles (2009). Assessment of postural control following an acute bout of soccer heading. (Master's project, MA: Ryan Tierney)

John McNamara (2005) Traditional, hybrid, and online weight training sections: Comparing strength and knowledge outcomes. (Doctoral dissertation, MA: Rick Swalm)

Tom Moffitt (2003) Tactile stimulation inhibits neuromuscular recruitment in healthy, untrained individuals during Isometric maximum voluntary contractions. (Master's project, MA: Michael Sitler)

Katherine Polasek (2005) A qualitative examination of male ballet and modern dancers' masculinity and relational patterns. (Doctoral dissertation, MA: Emily Roper)

Thomas Porrizzo (2005). Utilization of evidence-based clinical practice by certified athletic trainers. (Doctoral dissertation, MA: Rick Swalm)

John Raffin (2002) Perceptual and physiological responses to exercise at varied crank rates in females. (Doctoral dissertation, MA: Mayra Santiago)

- Patricia O. Reger (2006) Myocardial ischemia/reperfusion tolerance with exercise in hypertension  
Doctoral dissertation, MA: Joseph Libonati)
- Ruel Rigsby (2009). Assessment of certified athletic trainers use of shoulder stability index tests.  
(Master's project, MA: Michael Sitler)
- Chantal Rodenas (2004) Prophylactic ankle braces effect on soleus H-Reflex excitability in the chronic unstable ankle.(Master's project, MA: Michael Sitler)
- Kenneth Rogers (2003) Posterior humeral greater tuberosity subchondral cyst effects on the treatment disposition of rotator cuff pathology. (Doctoral dissertation, MA: Michael Sitler)
- Anne Russ (2008). Neuropsychological influences on neuromuscular activation and functional Stability of the ankle during functional activity. (Master's project, MA: Dani Moffit)
- Christine Sanchez (2006) Performance psychology for military applications. (Master's project, MA: Michael Sachs)
- Naoya Sato (2008). Relationship of foot type and fatigue to hip neuromuscular control and lower extremity kinetics. (Master's project, MA: Michael Sitler)
- Elinor Smith (2004). A survey of perceptions of parents of Caucasian and African American, male and female, high school athletes in order to assess effects of family sport environment. (Doctoral dissertation, MA: Carole Oglesby)
- Gilbert Smith (2004). Effects of a home study course on communication skills knowledge in male, high school varsity basketball coaches. (Doctoral dissertation, MA: Michael Sachs)
- David Stearne (2006) Effect of gender on neuromuscular control of the hip: Implications for knee joint stability and non-contact anterior cruciate ligament injury. (Doctoral dissertation, MA: Michael Sitler)
- Ryan Tierney (2003) Gender differences in head-neck segment dynamic stabilization during head acceleration. (Doctoral dissertation, MA: Michael Sitler)
- Neika Toone (2009). Glial fibrillary acidic protein polymorphism and concussion in collegiate athletes. (Master's project, MA: Ryan Tierney)
- Tabatha Uhrich (2005) Effects of bimanual activity on reading achievement. (Doctoral dissertation, MA: Rick Swalm)
- Kerry Wilbar (2007). Effect of plyometric neck muscle training on head-neck segment kinematics in Division I female soccer players. (Master's project, MA: Ryan Tierney)
- Nicole Wood (2005). Youth sport: Do peer relationships influence athlete withdrawal. (Master's thesis, MA: Michael Sachs)
- Nicole Wood (2008). The social influences of coaches and teammates in youth soccer: Is it possible to have friendly competition? (Doctoral dissertation, MA: Michael Sachs)

# Graduate Faculty

To assist the student in selecting an advisor, the special areas of interest of the Graduate Faculty are presented below. Prospective students who have questions about specific programs of study are encouraged to contact a faculty member in their area of interest for information and answers to questions that are sub-discipline specific.

**Michael D. Brown**, Associate Professor, PhD, University of Maryland (Integrative Exercise Physiology). Research Interests include the roles of exercise and genes, and their interaction, on peripheral vascular and renal function in hypertensive individuals; and the role of genes and exercise on oxidative stress. Pearson Hall 129, 215-204-5218, [brownmd@temple.edu](mailto:brownmd@temple.edu)

**Zebulon V. Kendrick**, Professor, PhD, Temple University (Integrative Exercise Physiology). Research specialization is in the cellular biochemical and physiological adaptations of exercise physiology. Pearson Hall 134, 215-204-8790, [zkend@temple.edu](mailto:zkend@temple.edu)

**Melissa A. Napolitano**, Associate Professor, PhD, Duke University (Exercise and Sport Psychology). Primary interests include physical activity adoption and maintenance, obesity and behavioral weight control, smoking cessation, the use of technology in interventions, and women's health. Pearson Hall 131, 215-204-5580, [mnapolitano@temple.edu](mailto:mnapolitano@temple.edu); Center for Obesity Research and Education Office 15; 215-707-8639

**Joon Y. Park**, Assistant Professor, PhD, The University of Maryland (Integrative Exercise Physiology). Primary interests include cellular/molecular mechanisms underlying salutary effects of exercise, particularly focusing on mechanosensing, oxidative stress and mitochondrial integrity. Pearson Hall 122, 215-204-1957, [joon.park@temple.edu](mailto:joon.park@temple.edu)

**Michael L. Sachs**, Professor, PhD, Florida State University (Exercise and Sport Psychology). Primary interests in exercise and sport psychology, particularly motivation/adherence to exercise and physical activity (especially addressing excuses given for not exercising), the use of exercise as therapy, addiction to exercise, the runner's high, and cognitive strategies used during exercise. Pearson Hall 132, 215-204-8718, [msachs@temple.edu](mailto:msachs@temple.edu)

**Mayra C. Santiago**, Associate Professor, PhD, University of Minnesota (Integrative Exercise Physiology). Primary research interests have focused on promotion of health via exercise/physical activity in persons with physical disabilities. Pearson Hall 126, 215-204-8719, [mayra.santiago@temple.edu](mailto:mayra.santiago@temple.edu)

**Michael R. Sitler**, Professor, EdD, ATC, New York University (Athletic Training/Sports Medicine). Research interests are primarily in evidence-based practice in athletic training and sports medicine, with particular focus on interventions to reduce unintentional injuries and (on) post-surgical outcomes. Pearson Hall 114, 215-204-1950, [sitler@temple.edu](mailto:sitler@temple.edu)

**Ricky Swalm**, Associate Professor, PhD, Temple University (Curriculum). Research involves investigating predominate learning styles of kinesiology students and identifying congruent styles between teaching and learning in order to enhance development. Pearson Hall 128, 215-204-8713, [rswalm@temple.edu](mailto:rswalm@temple.edu)

**Ryan Tierney**, Assistant Professor, PhD, ATC, Temple University (Athletic Training/Sports Medicine). Primary research interests encompass dynamic stabilization of the head and neck to prevent injury. Pearson Hall 018, 215-204-4001, [rtierney@temple.edu](mailto:rtierney@temple.edu)

**Vanessa R. Yingling**, Assistant Professor, PhD, University of Waterloo (Biomechanics). Primary research interests encompass role of endocrine status, nutrition, and exercise in the development of peak bone strength. Pearson Hall 121, 215-204-92881, [yingling@temple.edu](mailto:yingling@temple.edu)

## APPENDIX A

**General Program Requirements for Master's Degree:  
Kinesiology Athletic Training (AT)**

Number of Didactic Credits Required Beyond the Baccalaureate: 36 credits (*Note: Please refer to Policies and Procedures of the Temple University Graduate School for advanced standing or transfer of credit for graduate coursework taken as a non-matriculated student*)

<b>Required Courses (20 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology	8343 (3)	Ortho in Athl/Sport Med
Kinesiology	8344 (4)	Rehab in Athtr-Spts Med
Kinesiology	9287 (2)	AT Sports Med Pract I
Kinesiology	9288 (1)	AT Sports Med Pract II
Kinesiology	8348 (3)	Lab Tech in Ath Train
Kinesiology	8349 (4)	Cadaver Anatomy
Kinesiology	9311 (3)	Biomech of Human Mvmt
<b>Elective Courses (3 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology	5311 (3)	Exercise Physiology
Kinesiology	5313 (3)	Exercise + Aging
Kinesiology	9201 (3)	Cardiovascular Ex Phys
Kinesiology	5312 (3)	Exercise + Nutrient Metb
Kinesiology	9403 (3)	Sociology of Kinesiology
Kinesiology	9101 (3)	Pedagogy in Higher Ed
Kinesiology	9204 (3)	Cellular Adapt to Exer
Kinesiology	9203 (3)	Appl Ex Physio-Neuromusc
Kinesiology	9205 (3)	Exer Testing + Prescrip
Kinesiology	9206 (3)	Intro to Environ Physiol
Physical Therapy	8513	Neuroanatomy
Physical Therapy	8521	Neuroscience
Physical Therapy	9645	Advanced Anatomy
<b>Research (13 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology	8300 (4)	Seminar-Athletic Train
Kinesiology	9901 (3)	Res Methods Kinesiology
Kinesiology	9995 (3)	Masters Research
Educational Psych	8625 (3)	Intermediate Educational Statistics

**General Program Requirements for Master's Degree:  
Curriculum and Instruction**

Number of Didactic Credits Required Beyond the Baccalaureate: 30 or 33 credits (*Note: Please refer to Policies and Procedures of the Temple University Graduate School for transfer of credit for graduate coursework taken as a non-matriculated student*)

<b>Required Courses (15 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology	8101 (3)	Creative Appr to Tch PE
Kinesiology	9104 (3)	Curriculum in Phys Ed
Kinesiology	8500 (3)	Symposium in Kinesiology
Kinesiology	9901 (3)	Res Methods Kinesiology
Educational Psychology	5325 (3)	Introduction to Statistics
<b>Professional Enrichment Courses (15 to 18 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology	9102 (3)	Measurement + Eval in PE
Kinesiology	9103 (3)	Analytic Study of Teach
Selected Content Course	(3)	History & Philosophy of Ed
Selected Content Course	(3)	Educational Psychology
Selected Content Course	(3)	Educational Technology
Elective	(3)	
Elective	(3)	
<b>Research/Clinical Practicum Options (3 or 6 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Research Project Option (3 credits): Kinesiology	9995 (3)	Masters Research
Thesis Option (6 credits)		
Kinesiology	9995 (3)	Masters Research
Kinesiology	9996 (3)	Masters Thesis
Clinical Practicum Option	9785 (6)	Internship-Kinesiology

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**General Program Requirements for Master's Degree in the Kinesiology With an  
Emphasis in Integrative Physiology of Exercise**

Number of Didactic Credits Required Beyond the Baccalaureate: 30 or 33 credits (*Note: Please refer to Policies and Procedures of the Temple University Graduate School for transfer of credit for graduate coursework taken as a non-matriculated student*)

<b>Required Courses (15 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology	5311 (3)	Exercise Physiology
Kinesiology	9201 (3)	Cardiovascular Ex Phys
Kinesiology	9203 (3)	Appl Ex Physio-Neuromusc
Kinesiology	9901 (3)	Res Methods Kinesiology
Intermediate Statistics Course	From approved courses for 3 s.h.	
<b>Elective Courses (15 to 18 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology	5312 (3)	Exercise + Nutrient Metb
Kinesiology	5313 (3)	Exercise + Aging
Kinesiology	9204 (3)	Cellular Adapt to Exer
Kinesiology	9205 (3)	Exer Testing + Prescrip
Kinesiology	9206 (3)	Intro to Environ Physiol
Electives offered in Kinesiology or other graduate departments. Approval by two graduate faculty members required.		
<b>Research/Clinical Practicum Options (3 or 6 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Research Project Option (3 credits): Kinesiology	9995 (3)	Masters Research
Thesis Option (6 credits)		
Kinesiology	9995 (3)	Masters Research
Kinesiology	9996 (3)	Masters Thesis
Clinical Practicum Option	9785 (6)	Internship-Kinesiology

**General Program Requirements for Master's Degree:  
Kinesiology Exercise and Sport Psychology**

Number of Didactic Credits Required Beyond the Baccalaureate: 30 or 33 credits (*Note: Please refer to Policies and Procedures of the Temple University Graduate School for transfer of credit for graduate coursework taken as a non-matriculated student*)

<b>Required Courses (15 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology	9402 (3)	Psych of Human Mut & Dev
Kinesiology	9403 (3)	Sociology of Kinesiology
Kinesiology	9405 (3)	Psy-Soc Interact + Skill
Kinesiology	9901 (3)	Res Methods Kinesiology
Intermediate Statistics or Qualitative Research Methods Course	From approved courses for 3 credits	
<b>Elective Courses (15 to 18 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology	5311 (3)	Exercise Physiology
Kinesiology	9406 (3)	Psych-Soc Test/PE + Spt
Kinesiology	8500 (3)	Symposium in Kinesiology
Counseling Psychology	5519 (3)	Group Counseling
Counseling Psychology	5571 (3)	Introduction to Counseling Psychology
Electives offered in Kinesiology or other graduate departments. Approval by two graduate faculty members required.		
<b>Research/Clinical Practicum Options: (3 or 6 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Research Project Option (3 credits): Kinesiology	9995 (3)	Masters Research
Thesis Option (6 credits) Kinesiology	9995 (3)	Masters Research
Kinesiology	9996 (3)	Masters Thesis
Clinical Internship/Practicum Option	9785 (6)	Internship-Kinesiology

**General Program Requirements for Doctoral Degree: Kinesiology  
With an Emphasis in Athletic Training (AT)**

Number of Didactic Credits Required Beyond the Baccalaureate: 68 credits *Elective Courses may be replaced with the approval of two graduate faculty members (i.e., advisor and faculty member) within the student's program group. (Note: Please refer to Policies and Procedures of the Temple University Graduate School for advanced standing or transfer of credit for graduate coursework taken as a non-matriculated student).*

<b>Required Courses (15 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology	9901 (3)	Res Methods Kinesiology
Kinesiology	9683 (3)	Mentored Research I
Kinesiology	9783 (3)	Mentored Research II
Intermediate Statistics	Approved courses for 6 credits	
Advanced Statistics	Approved courses for 6 credits	
<b>Required AT Core (18 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology	8348 (3)	Lab Tech in Athletic Training
Kinesiology	8300 (3)	Seminar-Athletic Train
Kinesiology	8349 (3)	Cadaver Anatomy
<b>Advanced Anatomy(Select 1 of 2)</b>		
Physical Therapy	9645 (3)	Adv Musculoskeletal Anatomy
Physical Therapy	8521 (3)	Neuroscience
<b>Statistics (Select 2 of 5)</b>		
Psychology	8031 (3)	Multivariate Techniques
Psychology	8041 (3)	Factor Analysis & Scaling
Educational Psychology	5529 (3)	Test and Measurement
Educational Psychology	8826 (3)	Multivariate Research Methods
Educational Psychology	8827 (3)	Experimental Design
<b>Elective Courses (35 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology	5311 (3)	Exercise Physiology
Kinesiology	5312 (3)	Exercise + Nutrient Metb
Kinesiology	5313 (3)	Exercise + Aging
Kinesiology	8343 (3)	Ortho in Athl/Sport Med
Kinesiology	8344 (4)	Rehab in Athtr-Spts Med
Kinesiology	9311 (3)	Biomech of Human Mvmt
Kinesiology	9201 (3)	Cardiovascular Ex Phys
Kinesiology	9401 (3)	Psych Bases of Motor Beh
Kinesiology	9402 (3)	Psych of Human Mut & Dev
Kinesiology	9101 (3)	Pedagogy in Higher Ed
Kinesiology	9204 (3)	Cellular Adapt to Exer
Kinesiology	9203 (3)	Appl Ex Physio-Neuromusc
Kinesiology	9205 (3)	Exer Testing + Prescrip
Kinesiology	9206 (3)	Intro to Environ Physiol
Kinesiology	9882 (3)	Independent Research
Physical Therapy	9301 (3)	Advances Sports Orthopedics

Medical School	5003 (4)	Fundamentals of Biochemistry
Medical School	8004 (4)	Structure and Function of Macromolecules
Medical School	5005 (4)	Fundamentals of Molecular & Cell Bio
Medical School	5006 (4)	Basis of Microbiology & Immunology
Molecular Biology & Genetics	8309 (3)	Principals of Genetics
Anatomy and Cell Biology	8402 (4)	Cell Structure and Function
Microbiology & Immunology	9802 (3)	Molecular Approaches to Research
Biochemistry	8251 (3)	Proteins and Enzymes
Molecular Biology & Genetics	5451 (3)	Principles of Development
<b>Required Comprehensive Exam for Candidacy and Dissertation Res. (10 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology	9994 (1)	Preliminary Exam Prep
Kinesiology	9998 (3)	Pre-Dissertation Res
Kinesiology	9999 (6)	Doctoral Dissertation

### General Program Requirements for Doctoral Degree: Curriculum and Instruction

Number of Didactic Credits Required Beyond the Baccalaureate: 68 credits (*Note: Please refer to Policies and Procedures of the Temple University Graduate School for advanced standing or transfer of credit for graduate coursework taken as a non-matriculated student*)

<b>Required Courses (15 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology Kinesiology Kinesiology Intermediate Statistics Advanced Statistics	9901 (3) 9683 (3) 9783 (3) Approved courses for 6 credits	Res Methods Kinesiology Mentored Research I Mentored Research II
<b>Required Curriculum and Instruction Courses (21 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology Kinesiology Kinesiology Kinesiology Kinesiology Kinesiology Selected Content Course	8101 (3) 9101 (3) 9102 (3) 9103 (3) 9104 (3) 8500 (3) (3)	Creative Appr to Tch PE Pedagogy in Higher Ed Measurement + Eval in PE Analytic Study of Teach Curriculum in Phys Ed Symposium in Kinesiology Learning & Human Development
<b>Professional Enrichment Courses (32 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Selected Content Course Selected Content Course Selected Content Course Elective Elective Elective Elective Elective	(3) (3) (3) (3) (3) (3) (3) (3)	History & Philosophy of Ed Educational Psychology Educational Technology Elective Elective Elective Elective Elective
<b>Comprehensive Exam for Candidacy and Dissertation Research (10 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology	9994 (1)	Preliminary Exam Prep
Kinesiology	9998 (3)	Pre-Dissertation Res
Kinesiology	9999 (6)	Doctoral Dissertation

**General Program Requirements for Doctoral Degree in Kinesiology with an Emphasis in Integrative Physiology of Exercise**

Number of Didactic Credits Required Beyond the Baccalaureate: 68 credits (*Note: Please refer to Policies and Procedures of the Temple University Graduate School for advanced standing or transfer of credit for graduate coursework taken as a non-matriculated student*)

<b>Required Courses (15 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology	9901 (3)	Res Methods Kinesiology
Kinesiology	9683 (3)	Mentored Research I
Kinesiology	9783 (3)	Mentored Research II
Intermediate Statistics	Approved courses for 6 credits	
Advanced Statistics		
<b>Required Exercise Physiology Core (12 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology	5311 (3)	Exercise Physiology
Kinesiology	9201 (3)	Cardiovascular Ex Phys
Kinesiology	9204 (3)	Cellular Adapt to Exer
Kinesiology	9203 (3)	Appl Ex Physio-Neuromusc
<b>Required Biomedical Interdisciplinary Core (8 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Medical School	5003 (4) <b>or</b> 8004 (4)	Fundamentals of Biochemistry <b>or</b> Structure and Function of Macromolecules
Medical School	<b>and</b> 5005 (4) <b>or</b> 5006 (4)	Fundamentals of Molecular & Cell Biology <b>or</b> Basis of Microbiology & Immunology
<b>Required Integrated Bioscience Course (Two of the Following Courses – 6 -8 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Molecular Biology & Genetics	8309 (3)	Principals of Genetics
Micobiology & Immunology	5351 (3)	Host-Pathogen Interactions
Pathology	8401 (3)	Principals of Organ Pathology
Anatomy and Cell Biology	8402 (4)	Cell Structure and Function
Molecular Biology & Genetics	8451 (3)	Cancer Biology
Pharmacology	5751 (3)	Principals of Pharmacology
Physiology	5851 (3)	Principals of Physiology
Micorbiology & Immunology	9802 (3)	Molecular Approaches to Research
Biochemistry	8251 (3)	Proteins and Enzymes
Molecular Biology & Genetics	5451 (3)	Principles of Development

Continued.

<b>Elective Courses (25 to 27 credits)</b>		
Kinesiology Kinesiology Kinesiology Kinesiology Kinesiology Kinesiology Kinesiology Kinesiology Biology Biology Physiology Physiology Physiology Physiology Physiology Physiology Physiology Physical Therapy Physical Therapy	5312 (3) 5313 (3) 9311 (3) 9401 (3) 9402 (3) 9101 (3) 9205 (3) 9206 (3) 8467 (3) 8475 (3) 9204 (2) 9809 (2) 9802 (3) 9808 (1) 9819 (1) 9804 (2) 9805 (2) 9101/9204 (6) 9645 (3)	Exercise + Nutrient Metb Exercise + Aging Biomech of Human Mvmt Psych Bases of Motor Beh Psych of Human Mut & Dev Pedagogy in Higher Ed Exer Testing + Prescrip Intro to Environ Physiol Endocrinology Biochemistry Ion Channels/Nerve & Muscle Concepts of Molecular Physiology Molecular Physiology Renal Physiology Gastrointestinal Physiology Pulmonary Physiology Cardiovascular Physiology Human Gross Anatomy Advanced Musculoskeletal Anatomy
Electives offered in Kinesiology or other graduate departments. Approval by two graduate faculty members required.		
<b>Required Comprehensive Exam for Candidacy and Dissertation Research (10 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology Kinesiology Kinesiology	9994 (1) 9998 (3) 9999 (6)	Preliminary Exam Prep Pre-Dissertation Res Doctoral Dissertation

## General Program Requirements for Doctoral Degree: Kinesiology With an Emphasis in Exercise and Sport Psychology

Number of Didactic Credits Required Beyond the Baccalaureate: 68 credits (*Note: Please refer to Policies and Procedures of the Temple University Graduate School for advanced standing or transfer of credit for graduate coursework taken as a non-matriculated student*)

<b>Required Courses (15 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology	9901 (3)	Res Methods Kinesiology
Kinesiology	9683 (3)	Mentored Research I
Kinesiology	9783 (3)	Mentored Research II
Intermediate Statistics, Advanced Statistics, and/or Qualitative Research Methods	Approved courses for 6 credits	
<b>Required Exercise and Sport Psychology Core (18 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology	5311 (3)	Exercise Physiology
Kinesiology	9402 (3)	Psych of Human Mut & Dev
Kinesiology	9403 (3)	Sociology of Kinesiology
Kinesiology	9405 (3)	Psy-Soc Interact + Skill
Kinesiology	9406 (3)	Psych-Soc Test/PE + Spt
Counseling Psychology	5571 (3)	Introduction to Counseling Psychology
<b>Elective Courses (35 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology	9311 (3)	Biomech of Human Mvmt
Kinesiology	9101 (3)	Pedagogy in Higher Ed
Kinesiology	8500 (3)	Symposium in Kinesiology
Counseling Psychology	5519 (3)	Group Counseling
Counseling Psychology	5526 (3)	Multi-Cultural Counseling
Counseling Psychology	5691 (3)	Theories in Counseling
Adult and Organizational Development	5522 (3)	Facilitating Adult Learning
Adult and Organizational Development	5527 (3)	Training Design and Deliver
Electives offered in Kinesiology or other graduate departments. Approval by two graduate faculty members required.		
<b>Required Comprehensive Exam for Candidacy and Dissertation Research (10 credits)</b>	<b>Course Number (credits)</b>	<b>Course Title</b>
Kinesiology	9994 (1)	Preliminary Exam Prep
Kinesiology	9998 (3)	Pre-Dissertation Res
Kinesiology	9999 (6)	Doctoral Dissertation