

EXERCISE AND SPORT SCIENCES – MASTER OF SCIENCE DEGREE WITH THESIS

Exercise and Sport Sciences – Master of Science Degree with Thesis (30 credits)

The master of science program with thesis serves a twofold purpose. First, it can be viewed as the initial step toward advanced study. Second, the program challenges those individuals who desire to advance their knowledge in exercise physiology, sport psychology, or human performance. Both theoretical and applied research are encouraged. The thesis is based on the student's independent research, but the work is guided, from selection of a topic through final revision, by a thesis committee. The completed thesis must receive the approval of the thesis committee, the graduate program chair, and the dean of Health Sciences and Human Performance.

Graduation Requirements

For all concentrations, the student must complete 24 credits, and 6 credits of thesis to complete the program.

All students must complete an oral defense of the thesis. The thesis must be completed within the area of concentration.

Oral Examination

In order to be eligible for the oral defense of the thesis, the student must have completed the required courses and have a cumulative GPA of 3.00 or higher for all graduate courses completed as part of the program. This includes graduate courses taken at Ithaca College, exchange courses at Cornell University, and approved transfer courses taken at other institutions.

Thesis Plan Credits

Code	Title	Credits
Required Courses ²		
ESSG 61000	Research and Statistics in Exercise and Sport Sciences I	3
ESSG 61100	Research and Statistics in Exercise and Sport Sciences II	3
ESSG 61200	Leadership in Exercise and Sport	3
ESSG 62000	Thesis I	3
ESSG 62100	Thesis II	1-3
ESSG 64000	Seminar ¹	0
Area of concentration		6-9
Selected Electives		6-9
Total Credits		30

¹ Take two semesters

(The total may include up to 6 credits approved for transfer from other schools.)

Exercise and Sports Sciences Areas of Concentration

One of the distinctive characteristics of Ithaca College's plan of study is the opportunity to pursue an area of concentration, an experience usually reserved for doctoral study at many institutions. For the master's degree with thesis, the student must complete 9-15 credits of courses approved by the adviser in one area of concentration – exercise physiology, sport psychology, or human performance. (For the master's degree without thesis, 18 credits of courses in one area of concentration are necessary.) The concentration approach to graduate study is designed to provide depth to the program and also to provide more focused educational experiences for specific future employment opportunities. Included in each of the concentrations is the possibility of independent study and internship to increase relevant and practical learning opportunities.

Exercise Physiology Concentration

Exercise physiology is the study of physiological responses and adaptations consequent to exercise. Through specific coursework, this concentration focuses on both the theoretical and applied/clinical aspects of exercise physiology. Students who want to emphasize theoretical learning are advised to pursue the thesis option, while those with a clinical orientation should consider the non-thesis option with an internship. If desired, a student can have a more comprehensive experience by completing all prescribed coursework, the thesis, and an internship.

An objective of the exercise physiology concentration is to assist in preparation for registration as a clinical exercise physiologist and for external certification as a health/fitness instructor or exercise specialist through the American College of Sports Medicine (ACSM). Students are actively encouraged to seek additional credentials according to their interests.

Prerequisites for applicants to the exercise physiology concentration include completion of undergraduate coursework in anatomy and physiology, biomechanics or kinesiology, statistics or tests and measurements, and exercise physiology.

Thesis plan students must complete 12 credits and their thesis (6 credits) in this area of concentration. Students in the non-thesis plan must complete 18 credits in this area of concentration. All exercise physiology students are eligible for related internships. An internship is strongly encouraged for those following the non-thesis plan. Exercise physiology students may study special topics through ESSG 62000, ESSG 63000, and ESSG 63100.

Exercise Physiology Concentration Courses

Code	Title	Credits
Required		
ESSG 54000	Physiological Mechanisms of Exercise	3
ESSG 54200	Physiological Mechanisms of Exercise: Systemic Aspects	3
ESSG 54400	Multidimensional Assessment of Physical Function	3
ESSG 54600	Cardiopulmonary Assessment for Exercise	3
ESSG 54800	Pathophysiology, Limited Capacity, and Exercise (optional) ¹	3

ESSG 64800	Strength and Conditioning: Theories, Mechanisms, and Applications (optional) ¹	3
Selected Electives		6
ESSG 51800	Exercise and Rehabilitation Psychology	
ESSG 52000	Human Movement Biomechanics of Sport and Exercise	
ESSG 52100	Advanced Study in Exercise Physiology	
ESSG 64500	Psychophysiology of Exercise and Sport	
ESSG 66000	Internship	
ESSG 74200	Advanced Techniques of Athletic Training	
Total Credits		18

¹ Required for non-thesis option; recommended for thesis plan

Sport Psychology Concentration

The primary focus of this concentration is on the psychological factors that influence sport participation and performance. Topics are derived from clinical, developmental, educational, experimental, cognitive, perceptual, and social psychology, and also from the basic understanding of sport and its varied task demands. Emphasis is on application, description, explanation, and prediction of sport participation and performance. Applicants for the sport psychology concentration must have at least three prerequisite courses in conceptually relevant (e.g., psychology, sport psychology, counseling, sport sociology) content areas. A statistics or tests and measurements class is also a prerequisite. Sport psychology applicants must also demonstrate some familiarity with sport, such as high level playing experience, occupational experiences, or undergraduate coursework.

Thesis plan students must complete 12 credits and their thesis (6 credits) in this area of concentration. Students in the non-thesis plan must complete 18 credits in this area of concentration. Sport psychology students may study special topics through ESSG 62000, ESSG 63000, and ESSG 63100.

Sport Psychology Concentration Courses

Code	Title	Credits
Required		
ESSG 51200	Theoretical Perspectives of Mental Performance in Sport and Exercise	3
ESSG 51300	Applications of Mental Performance in Sport and Exercise	3
ESSG 51400	Concepts and theory of supportive relationships in sport	3
ESSG 51500	Effective Team Building (optional) ¹	1
ESSG 51600	Motivation for Superior Performance (optional) ¹	2
ESSG 51800	Exercise and Rehabilitation Psychology (optional) ¹	3
ESSG 61400	Ethics & Professional Issues in Mental Performance and Coaching (optional) ¹	3
Selected Electives		6
ESSG 54400	Multidimensional Assessment of Physical Function	

ESSG 64500	Psychophysiology of Exercise and Sport	
ESSG 66000	Internship	
Total Credits		15

¹ Required for non-thesis option; recommended for thesis plan

Human Performance Concentration

The human performance concentration is designed for those students who want to study a custom blend of exercise physiology and sport psychology. Students must complete the human performance core that includes courses in exercise physiology and sport psychology, and then select a number of theory-based and applied courses to focus their studies. Core human performance topics include motivation and exercise adherence, team development and communication, stress and anxiety management, psychophysiology of exercise, psychological skills training, exercise physiology, biomechanics, and strength and conditioning.

This concentration is designed specifically for those wanting to work with clients in a holistic manner or do research in the area of psychophysiology. Prerequisites for applicants to the human performance concentration include completion of coursework in anatomy and physiology, biomechanics or kinesiology, exercise physiology, content relevant areas in psychology, and statistics or tests and measurements.

Thesis plan students must complete 12 credits and their thesis (6 credits) in this area of concentration. Students in the non-thesis plan must complete 18 credits in this area of concentration. All human performance students are eligible for related internships. An internship is strongly encouraged for those following the non-thesis plan. Human performance students may study special topics through ESSG 62000, ESSG 63000, and ESSG 63100.

Human Performance Concentration Courses

Code	Title	Credits
Required		
ESSG 51400	Concepts and theory of supportive relationships in sport	3
ESSG 51500	Effective Team Building (optional) ¹	1
ESSG 51600	Motivation for Superior Performance (optional) ¹	2
ESSG 52000	Human Movement Biomechanics of Sport and Exercise (optional) ¹	3
ESSG 52100	Advanced Study in Exercise Physiology (optional) ¹	3
ESSG 64800	Strength and Conditioning: Theories, Mechanisms, and Applications	3
Selected Electives		9
ESSG 51800	Exercise and Rehabilitation Psychology	
ESSG 54400	Multidimensional Assessment of Physical Function	
ESSG 54600	Cardiopulmonary Assessment for Exercise	
ESSG 54800	Pathophysiology, Limited Capacity, and Exercise	
ESSG 61400	Ethics & Professional Issues in Mental Performance and Coaching	
ESSG 64500	Psychophysiology of Exercise and Sport	

ESSG 66000	Internship	
ESSG 74200	Advanced Techniques of Athletic Training	
Total Credits		15

¹ Required for non-thesis option; recommended for thesis plan