



Manchester
University

**Exercise Science and Athletic
Training Department
Student Handbook**

2021-2022

MISSION STATEMENT

The Department of Exercise Science and Athletic Training (ESAT) is an active participant in the educational mission of Manchester University. Through undergraduate and graduate teaching, research, service, and clinical activities, the department emphasizes practical application of discipline-specific content knowledge, technological expertise, and scholarly advancement to develop young professionals in multiple health, sport, and physical activity fields.

ESAT MAJORS AND MINORS

The Exercise Science and Athletic Training department offers three majors and three minors.

Majors

Clinical and Rehabilitation Sciences: prepares students for graduate programs in one of the exercise sciences (e.g., physical therapy, occupational therapy, athletic training, biomechanics, exercise physiology, nutrition, and fitness). It is expected that students completing this concentration will seek advanced degrees. This is also an appropriate major for those students desiring to pursue graduate study in physical or occupational therapy.

Human Performance: prepares students for careers in strength and conditioning and fitness (e.g. CSCS strength and conditioning coach, fitness instructor, etc). It is expected that this degree would be the terminal degree. While being educational partners with the National Strength and Conditioning Association students are prepared to take the certification examination to become a Certified Strength and Conditioning Specialist (CSCS) through the NSCA.

Human Performance Education: prepares students for physical education teaching and potential licensure in the state of Indiana as a physical education teacher. This major is a combination of Human Performance and Education courses. Meets all standards to sit for licensure exam for the state of Indiana.

Minors

Coaching: Chosen by students wishing to prepare for coaching at various levels within a community. Scientific, psychological and administrative principles are presented that focus on appropriate coaching behaviors with young people.

Medical Health Education and Sales: Chosen by students preparing for a profession in orthopedic or health sales. Examples: ZimmerBiomet, Depuy, Medtronic, etc. These students are interested in the background of orthopedics with an emphasis in sales and marketing orthopedic products.

Orthopedic Studies: Prepares and supports students with a profession in clinical orthopedic setting. This position is focused on medical assisting in an environment with orthopedic specialists such as PA's, NP's, MD's and DO's.

SPECIFIC MAJOR INFORMATION

Clinical and Rehabilitation Objectives

Learning Objectives

Upon completing the requirements for this major, students should be able to:

Demonstrate knowledge of:

- Normal structure and function of the human body
- Typical acute and chronic adaptations of the body to exercise
- Nutritional concepts as they effect the exercising human
- Administrative principles associated with health and fitness organizations, including facility design, human resources, budgeting, and risk management
- Fundamental concepts of inorganic chemistry
- Accepted research procedures in human performance
- Statistical concepts as applied to human performance

Demonstrate skill in:

- Accurate measurement of various physiological parameters (e.g. oxygen consumption, body composition, blood pressure)
- Accurately and critically interpreting relevant research in human performance

Academic Advising

During a student's first year they will be assigned to a success advisor as well as an academic advisor in their department or specialty. The department chair of the ESAT department will place each student with a department advisor initially. Any student has the ability to change advisors through the registrar office as long as the student has the permission of the new advisor the student is choosing.

Academic advising is a very important process. Good advising helps ensure that you're meeting your major and CORE or LARC requirements, and thereby assists you in graduating on time. Meet with your advisor frequently, make appointments well in advance of deadlines, keep those appointments, and most importantly, **DO NOT BE AFRAID TO APPROACH YOUR ACADEMIC ADVISOR WITH QUESTIONS!** If you are struggling academically, your academic advisor is one person you can talk with.

**DEPARTMENT OF EXERCISE SCIENCE AND ATHLETIC TRAINING
CLINICAL AND REHABILITATION SCIENCES**

Core Courses (24 hrs)

ESAT	103	Foundations of Physical Education and Sport Sciences	(3)	_____
ESAT	200	Basic Principles of Nutrition	(3)	_____
ESAT	325	Exercise Physiology	(3)	_____
ESAT	325L	Exercise Physiology Lab	(1)	_____
ESAT	410	Administration of Health and Physical Activity Programs	(3)	_____
ESAT	476	Internship in Health/Fitness/Wellness	(3)	_____
BIOL	202	Fundamentals of Human Anatomy	(3)	_____
BIOL	202L	Fundamentals of Human Anatomy Lab	(1)	_____
BIOL	204	Fundamentals of Human Physiology	(3)	_____
BIOL	204L	Fundamentals of Human Physiology Lab	(1)	_____
BIOL	422	Advanced Physiology	(3)	_____
BIOL	422L	Advanced Physiology Lab	(1)	_____
DATA	210	Statistical Analysis with Lab	(4)	_____

Choose ONE 8-hr chemistry sequence from Group A or B below.
Please note that doctorate of physical therapy programs prefer Group B.

Group A

CHEM	105	Introduction to Inorganic Chemistry	(3)	_____
CHEM	105L	Introduction to Inorganic Chemistry Lab	(1)	_____
CHEM	106	Introduction to Organic Chemistry	(3)	_____
CHEM	106L	Introduction to Organic Chemistry Lab	(1)	_____

Group B

CHEM	111	General Chemistry I	(3)	_____
CHEM	111L	General Chemistry I Lab	(1)	_____
CHEM	113	General Chemistry II	(3)	_____
CHEM	114L	General Chemistry II Lab	(1)	_____

Directed Electives

Selected in consultation with advisor and approval of Department Chair (12)

DPT programs: 1 year of physics (8 credits) and developmental Psychology (4 credits)

_____	_____	_____	()	_____
_____	_____	_____	()	_____
_____	_____	_____	()	_____
_____	_____	_____	()	_____

Total Hours 51

Clinical and Rehabilitation Sciences Major Curriculum Map (Major Courses Only)

1st Year

Course	SH	Course	SH	Course	SH
ESAT 103-Found. Of Phys. Ed. & Sport Sciences	2			Directed Elective	3
Total SH		Total SH		Total SH	

2nd Year

Course	SH	Course	SH	Course	SH
BIOL 204 – Fund. Of Human Physiology	3			BIOL 202 – Fund. of Anatomy	3
BIOL 204L – Fund. Human Phys. Lab	1			BIOL 202L – Human Anatomy Lab	1
ESAT 200 – Basic Principles of Nutrition	3			Directed Elective	3
Directed Elective	3				
Total SH		Total SH		Total SH	

3rd Year

Course	SH	Course	SH	Course	SH
ESAT 325 – Exercise Physiology	3	DATA 210-Statistical Analysis w/ lab	4	*Chem 106 or 113	3
ESAT 325L – Exercise Physiology Lab	1			*Chem 106L or 113L: Lab	1
*Chem 105 or 111	3				
*Chem 105L or 111L: Lab	1				
Total SH		Total SH		Total SH	

4th Year

Course	SH	Course	SH	Course	SH
ESAT 410 – Administration	3	ESAT 476-Internship in Health/Fitness/Wellness	3	Bio 422-Advanced Physiology	3
Directed Elective	3			Bio 422L-Advanced Physiology Lab	1
Total SH		Total SH		Total SH	

***This 8 hr sequence of chemistry and lab can be replaced by CHEM 111, 111L, 113, and 113L (8 hrs) Please note that graduate physical therapy programs prefer this substitution.**

Exercise Science Club

The Exercise Science Club is a student organization designed to promote a departmental identification for students and to provide a forum for exchange of information related to the exercise science disciplines. Evening meetings are held monthly, last about an hour, and usually feature an outside guest speaker from an exercise science-related field. Attendance is strongly encouraged, but not required. Club activities include several social events throughout the year. The club affords leadership opportunities for students. You will receive e-mails announcing the meetings and posters are placed around campus.

Internships

A 3-credit internship is required in the major and is typically completed in the summer between the junior and senior years or in January Session of the senior year. Although faculty members can assist you in securing an internship, the ultimate responsibility is yours. There are forms to fill out and sign, objectives to be designed, and deadlines to meet BEFORE you can even enroll in an internship, so you are advised to work well in advance of the proposed internship semester and to work closely with your academic advisor on the process.

Midpoint Academic Review

In December or January of your sophomore year, you will be asked to make an appointment to meet with your academic advisor and one other ESAT faculty member to assess your academic progress to that point. Your educational goals and career objectives will be discussed, as well as your academic performance. You will have an opportunity to ask any questions about your program and your discipline. Each student must complete this process before the Election of Major form is signed by the Department Chair. A signed "EOM" is required before registering for your junior year classes.

SPECIFIC MAJOR INFORMATION

Human Performance

LEARNING OBJECTIVES

Upon completing the requirements for this major, students should be able to:

Demonstrate knowledge of:

- Normal structure and function of the human body
- Typical acute and chronic adaptations of the body to exercise
- Nutritional concepts as they effect the exercising human
- Administrative principles associated with health and fitness organizations, including facility design, human resources, budgeting, and risk management
- Principles of biomechanics as applied to the human body
- Appropriate exercise prescription based on client objectives, physical condition, and available resources
- Appropriate techniques for teaching of exercises designed to enhance fitness

Demonstrate skill in:

- Accurate measurement of various physiological parameters (e.g. flexibility, heart rate, body composition, blood pressure)
- Performing accurate biomechanical analysis of human movement
- Prescribing appropriate exercise based on client objectives, physical condition, and available resources, including progression or regression of intensity, frequency, duration, and mode of exercise
- Teaching appropriate exercise techniques to clients

Academic Advising

During a student's first year they will be assigned to a success advisor as well as an academic advisor in their department or specialty. The department chair of the ESAT department will place each student with a department advisor initially. Any student has the ability to change advisors through the registrar office as long as the student has the permission of the new advisor the student is choosing.

Academic advising is a very important process. Good advising helps ensure that you're meeting your major and CORE requirements, and thereby assists you in graduating on time. Meet with your advisor frequently, make appointments well in advance of deadlines, keep those appointments, and most importantly, **DO NOT BE AFRAID TO APPROACH YOUR ACADEMIC ADVISOR WITH QUESTIONS!** If you are struggling academically, your academic advisor is one person you can talk with.

**DEPARTMENT OF EXERCISE SCIENCE AND ATHLETIC TRAINING
HUMAN PERFORMANNC E**

Core Courses (24)

ESAT	103	Foundations of Physical Education and Sport Sciences	(2)	_____
ESAT	200	Basic Principles of Nutrition	(3)	_____
ESAT	325	Exercise Physiology	(3)	_____
ESAT	325L	Exercise Physiology Lab	(1)	_____
ESAT	410	Administration of Health and Physical Activity Programs	(3)	_____
ESAT	476	Internship in Health/Fitness/Wellness	(4)	_____
BIOL	202	Fundamentals of Human Anatomy	(3)	_____
BIOL	202L	Fundamentals of Human Anatomy Lab	(1)	_____
BIOL	204	Fundamentals of Human Physiology	(3)	_____
BIOL	204L	Fundamentals of Human Physiology Lab	(1)	_____

Fitness and Recreation Concentration (25)

ESAT	209	Principles of Coaching	(2)	_____
ESAT	243	Principles of Fitness	(3)	_____
ESAT	243L	Principles of Fitness Lab	(0)	_____
ESAT	205	Team Performance Training	(3)	_____
ESAT	250	Performance Teaching Lab I	(1)	_____
ESAT	206	Individual/Dual Performance	(3)	_____
ESAT	260	Performance Lab II	(1)	_____
ESAT	276	Practicum in Health/Fitness/Wellness	(2)	_____
ESAT	339	Fundamental Techniques of Exercise and Fitness	(3)	_____
ESAT	345	Functional Kinesiology	(3)	_____

Directed Electives selected with advisor and approval of department chair (4)

_____	_____	()	_____
_____	_____	()	_____
_____	_____	()	_____
_____	_____	()	_____

Total Hours 49

Human Performance Major Curriculum Map (Major Courses Only)

1st Year

Course	SH	Course	SH	Course	SH
ESAT 103-Found. Of Phys. Ed. & Sport Sciences	2			Directed Elective	2
Total SH		Total SH		Total SH	

2nd Year

Course	SH	Course	SH	Course	SH
ESAT 205- Team Performance Training	3			BIOL 202 – Fund of Human Anatomy	3
ESAT 250- Performance Lab I	1			BIOL 202 – Fund of Human Anatomy	1
ESAT 209 – Principles of Coaching	2			ESAT 243 - Principles of Fitness	3
Total SH		Total SH		Total SH	

3rd Year

Course	SH	Course	SH	Course	SH
ESAT 200 – Basic Principles of Nutrition	3	ESAT 276 – Practicum in Health / Fitness / Wellness	2	ESAT 206 – Individual/Dual Performance	3
BIOL 204 – Fund of Human Physiology	3			ESAT 260 – Performance Lab II	1
BIOL 204 – Fund of Human Phys Lab	1			ESAT 345 – Functional Kinesiology	3
				ESAT 339 – Fund Technique of Exercise & Fitness	3
Total SH		Total SH		Total SH	

4th Year

Course	SH	Course	SH	Course	SH
ESAT 410 – Administration	3			ESAT 476-Internship in Health/Fitness/Wellness	4
ESAT 325 – Ex Phys	3			Directed Elective	2
ESAT 325L – Ex Phys Lab	1				
Total SH		Total SH		Total SH	

Exercise Science Club

The Exercise Science Club is a student organization designed to promote a departmental identification for students and to provide a forum for exchange of information related to the exercise science disciplines. Evening meetings are held monthly, last about an hour, and usually feature an outside guest speaker from an exercise science-related field. Attendance is strongly encouraged, but not required. Club activities include several social events throughout the year. The club affords leadership opportunities for students. You will receive e-mails announcing the meetings and posters are placed around campus.

Practicum & Internship

A 2 credit practicum and 4-credit internship are required in the major and is a crucial component to one's professional development. It is during this internship that the skills learned in the classroom are applied to actual clients. The internship is typically completed in the Spring Semester of the senior year. Although faculty members can assist you in securing an internship, the ultimate responsibility is yours. There are forms to fill out and sign, objectives to be designed, and deadlines to meet BEFORE you can even enroll in an internship, so you are advised to work well in advance of the proposed internship semester and to work closely with your academic advisor on the process.

Midpoint Academic Review

In December or January of your sophomore year, you will be asked to make an appointment to meet with your academic advisor and one other ESAT faculty member to assess your academic progress to that point. Your educational goals and career objectives will be discussed, as well as your academic performance. You will have an opportunity to ask any questions about your program and your discipline. Each student must complete this process before the Election of Major form is signed by the Department Chair. A signed "EOM" is required before registering for your junior year classes.

**DEPARTMENT OF EXERCISE SCIENCE AND ATHLETIC TRAINING
HUMAN PERFORMANCE EDUCATION**

Core Courses (24)

ESAT	103	Foundations of Physical Education and Sport Sciences	(2)	_____
ESAT	200	Basic Principles of Nutrition	(3)	_____
ESAT	325	Exercise Physiology	(3)	_____
ESAT	325L	Exercise Physiology Lab	(1)	_____
ESAT	410	Administration of Health and Physical Activity Programs	(3)	_____
ESAT	476	Internship in Health/Fitness/Wellness	(4)	_____
BIOL	202	Fundamentals of Human Anatomy	(3)	_____
BIOL	202L	Fundamentals of Human Anatomy Lab	(1)	_____
BIOL	204	Fundamentals of Human Physiology	(3)	_____
BIOL	204L	Fundamentals of Human Physiology Lab	(1)	_____

Human Performance (25)

ESAT	209	Principles of Coaching	(2)	_____
ESAT	243	Principles of Fitness	(3)	_____
ESAT	205	Team Performance Training	(3)	_____
ESAT	250	Performance Teaching Lab I	(1)	_____
ESAT	206	Individual/Dual Performance	(3)	_____
ESAT	260	Performance Lab II	(1)	_____
ESAT	276	Practicum in Health/Fitness/Wellness	(2)	_____
ESAT	339	Fundamental Techniques of Exercise and Fitness	(3)	_____
ESAT	345	Functional Kinesiology	(3)	_____

Directed Electives selected in consultation with advisor
And approval of Department Chair

			(4)	_____
_____	_____		()	_____
_____	_____		()	_____
_____	_____		()	_____
_____	_____		()	_____

Total Hours 49

Professional Education Courses

EDUC	111	Exploring Teaching and Learning	(3)	_____
EDUC	212	The Exceptional Learner	(3)	_____
EDUC	230	Educational Psychology	(3)	_____
EDUC	246	Educational Assessment	(3)	_____
EDUC	343	Literacy in the Content Area	(3)	_____
EDUC	353	Class Management/Conflict Resolution	(3)	_____
EDUC	362	Literacy and English Language Learners	(2)	_____
EDUC	440	General Methods for Adol Learners	(3)	_____
EDUC	410	The Teacher in Today's School	(2)	_____
EDUC	475	High School Student Teaching	(7)	_____
EDUC	477	Junior High/Middle School Student Teaching	(6)	_____

(NOTE: Student Teaching substitutes for ESAT 276 Practicum/476 Internship)

Human Performance Education Major Curriculum Map (Major Courses Only)

1st Year

Course	SH	Course	SH	Course	SH
ESAT 103-Found. Of Phys. Ed. & Sport Sciences	2			Directed Elective	2
Total SH		Total SH		Total SH	

2nd Year

Course	SH	Course	SH	Course	SH
ESAT 205- Team Performance Training	3			BIOL 202 – Fund of Human Anatomy	3
ESAT 250- Performance Lab I	1			BIOL 202 – Fund of Human Anatomy	1
ESAT 209 – Principles of Coaching	2			ESAT 243 - Principles of Fitness	3
Total SH		Total SH		Total SH	

Student is in consultation with Education Department and Exercise Science Department

3rd Year

Course	SH	Course	SH	Course	SH
ESAT 200 – Basic Principles of Nutrition	3	ESAT 276 – Practicum in Health / Fitness / Wellness	2	ESAT 206 – Individual/Dual Performance Training	3
BIOL 204 – Fund of Human Physiology	3			ESAT 260 – Performance Lab II	1
BIOL 204 – Fund of Human Phys Lab	1			ESAT 345 – Functional Kinesiology	3
				ESAT 339 – Fund Technique of Exercise & Fitness	3
Total SH		Total SH		Total SH	

4th Year

Course	SH	Course	SH	Course	SH
ESAT 410 – Administration	3			ESAT 476-Internship in Health/Fitness/Wellness	4
ESAT 325 – Ex Phys	3			Directed Elective	2
ESAT 325L – Ex Phys Lab	1				
Total SH		Total SH		Total SH	

Exercise Science Club

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Practicum & Internship

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Midpoint Academic Review

In December or January of your sophomore year, you will be asked to make an appointment to meet with your academic advisor and one other ESAT faculty member to assess your academic progress to that point. Your educational goals and career objectives will be discussed, as well as your academic performance. You will have an opportunity to ask any questions about your program and your discipline. Each student must complete this process before the Election of Major form is signed by the Department Chair. A signed "EOM" is required before registering for your junior year classes.