

DEPARTMENT OF KINESIOLOGY AND HEALTH (KNH)



Updated 5-8-09

Exercise Science

The Exercise Science major leads to a Bachelor of Science degree in Kinesiology and Health. The Exercise Science major is designed for students who are interested in the scientific aspects of human movement and how movement affects health and performance. The Exercise Science major allows you to individualize your degree program. In consultation with your advisor, you can elect up to 25% of the 128 credit hours required for graduation.

The KNH Department houses specially-equipped laboratories that support the Exercise Science major. The exercise physiology laboratory includes treadmills, bicycle ergometers, carbon dioxide and oxygen analyzers, electrocardiographs, blood analysis hardware, and a Bod Pod. The motor behavior laboratory is equipped with a force platform, electromyography equipment, digital computer-aided video analysis equipment, and an isokinetic dynamometer. These and other state-of-the-art equipment are used in Exercise Science courses, and students gain skills in using the equipment and interpreting the data it provides.

INTERESTS

Students who choose this major should have interests in chemistry, physics, physiology and anatomy, for these subjects are foundational for the scientific analysis of movement/exercise.

CAREER OPPORTUNITIES

The Exercise Science major prepares students for careers or further study in fitness, health promotion, research, and the clinical aspects of the allied health field such as cardiac rehabilitation. Exercise Science is also an appropriate major for students interested in careers in medicine, physical therapy, occupational therapy, dentistry, physician assistance, chiropractic and other allied health professions.

Planning for Medicine, Physical Therapy or other Allied Health Professions

The prerequisites for graduate programs in health professions such as medicine and physical therapy are fairly similar. Consult the Miami's Mallory-Wilson Center for Healthcare Education (www.cas.muohio.edu/mwche) to learn more about recommended course work, required entrance exams, and pre-professional advising. You are urged to talk with a pre-professional advisor in your area of interest as early as possible.

Pre-Professional Advisors:

Physical / Occupational Therapy

Dr. Helaine Alessio, Department of Kinesiology and Health

Dr. William Berg, Department of Kinesiology and Health

Medical / Dental / Physician Assistant

Robert Balfour, Department of Zoology

Chiropractic

Dr. Dean Smith, Department of Kinesiology and Health

ADMISSION REQUIREMENTS FOR EXERCISE SCIENCE

Students must enroll in the Department of Kinesiology and Health (KNH) to take KNH courses as pre-majors. Students are eligible to apply to become a major after fulfilling the following requirements:

- a. Enroll as an Exercise Science pre-major
- b. Complete 24 credit hours
- c. Complete 12 credit hours in the Miami Plan (included in the 24 credit hours from b.)
- d. Complete KNH 188, ZOO 161, and CHM 141 **or** CHM 141R **and** CHM 144 (lab)
- e. Achieve a 2.5 GPA in the courses listed in d. and all other Miami Plan Foundation courses (combined)

Upon completion of the above requirements and after all grades have been posted to your DARS, download the Exercise Science Application from the KNH Student link on Blackboard to apply to change your status from pre-major to major. Complete the form, attach your DARS, and submit them to the Undergraduate Secretary, 106-D Phillips Hall. Students will be notified of their acceptance via their Miami e-mail address.

YOUR KNH ACADEMIC ADVISOR will be listed in your STUDENT TAB in *My Miami*. Meet with your advisor regularly and always bring a current copy of your DARS.

Sources of Additional Information

Department of Kinesiology and Health

106 Phillips Hall / 513-529-2700

Program requirements, advising, professional and career opportunities

KNH Homepage: <http://www.muohio.edu/knh>

Office of Career Services

241 Hoyt Hall / 513-529-3831

Career Resource Center

Dictionary of Occupational Titles

Occupational Outlook Handbook

Student Counseling Services

195 Health Services Center / 513-592-4634

Career Counseling

Career Resource Library

Dictionary of Occupational Titles

Occupational Outlook Handbook

Miami Plan for Liberal Education (Exercise Science)

Foundation	Course #	Hours	Course Title
IA	ENG 111	3	College Composition
IB	ENG 112	3	Composition & Literature
IIA	Fine Arts	3	Choice
IIB	Humanities	3	Choice
IIC	PSY 111	4	Introduction to Psychology
II A, B, or C	KNH 276 or KNH 188	3	Select from courses in your major program marked II A, B, or C below
IIIA	U.S. Cultures	3	Choice
IIIB	World Culture	3	Choice
IV A	ZOO 161	4	Principles of Human Physiology
IV B	CHM 141 or CHM 141R and CHM 144	5-6	College Chemistry and Laboratory
V	Mathematics, Formal Reasoning, Technology	3	Choice
Thematic Sequence	Choice	9	Choice
Senior Capstone	KNH 402 (Recommended)	3	Critical Reflection on Practices in Health and Physical Culture

Note: Remember historical (H) perspective requirements of the Miami Plan.

Program Requirements – KNH Core:

KNH 102 Fundamentals of Nutrition (3)
 KNH 184 Motor Skill Learning and Performance (3)
 KNH 184.L Motor Skill Learning and Performance Lab (1)
 KNH 276 The Meaning of Leisure (3) (MPF IIC) (H) **or**
 KNH 274 Critical Perspectives on the Body (3)
 KNH 188 Exercise and Health (3) (MPF II C) **or**
 KNH 242 Personal Health (3) (MPF II C) **or**
 KNH 245 Personal Health and Pedagogy for Early Childhood Teachers (3)

Exercise Science Major Requirements:

PSY 111 Introduction to Psychology (4) (MPF IIC)
 CHM 141 College Chemistry (3) (MPF IVB) **or**
 CHM 141R College Chemistry (4) (MPF IVB) **and**
 CHM 144 College Chemistry Laboratory (2) (MPFIVB)
 CHM 142 College Chemistry (3) (MPT CHM2) **and**
 CHM 145 College Chemistry Laboratory (2) (MPT CHM2)
 CHM 231 Fundamentals of Organic Chemistry (4) (MPT CHM2)
 ZOO 161 Human Physiology (4) (MPF IVA)
 PHY 171 College Physics (3) **and**
 PHY 183 College Physics Laboratory (1)
 KNH 188 Exercise and Health (3) (MPF IIC)
 KNH 244 Functional Anatomy (3) **and**
 KNH 244.L Functional Anatomy Laboratory (1)
 KNH 375 Psychological Perspective in Sport and Exercise (3) **or**
 KNH 329 Psychological Perspectives on Health (3)
 KNH 381 Biodynamics of Human Performance (3) **and**
 KNH 381.L Biodynamics of Human Performance Laboratory (1)
 KNH 382 Fitness Assessment and Exercise Prescription (4) (*formerly KNH 483*)
 KNH 468 Physiology and Biophysics of Human Activity (3) **and**
 KNH 468.L Physiology and Biophysics of Human Activity Laboratory (1)
 KNH 482 Exercise Management of Chronic Disease (3) (*required only for students entering the pre-major June 1, 2007 or later*)

Program Electives: Since several Miami Plan courses are included in the KNH core and Exercise Science major, students can fulfill all Exercise Science program requirements in 96 hours, allowing an additional 32 hours of elective courses.

SAMPLE Outline for Major in Exercise Science

FIRST YEAR SUGGESTIONS:

COURSE	MIAMI PLAN	CREDIT HRS
CHM 141 (3) OR 141R (4) AND CHM 144 LAB (2)	MPF IV B	5-6
CHM 142 (3) AND CHM 145 LAB (2)	MPT CHM2	5
ENG 111	MPF I	3
ENG 112	MPF I	3
KNH 102		3
KNH 188 (3)	MPF II C	3
ZOO 161	MPF IV A	4
Miami Plan Options	MPF	<u>6</u>
		32-33

SECOND YEAR SUGGESTIONS:

COURSE	MIAMI PLAN	CREDIT HRS
CHM 231	MPT CHM 2	4
KNH 184 (3) AND KNH 184.L Lab (1)		4
KNH 244 (3) AND KNH 244.L Lab (1)		4
KNH 274 OR KNH 276 (MPF)	MPF IIC	3
PHY 171 (3) AND PHY 183 Lab (1)		4
PSY 111	MPF II C	4
Miami Plan Options	MPF	6
Electives		<u>3</u>
		32

THIRD YEAR SUGGESTIONS:

COURSE	MIAMI PLAN	CREDIT HRS
KNH 329 OR KNH 375		3
KNH 381 (3) AND KNH 381.L Lab (1)		4
KNH 382		4
Miami Plan Options Foundations & Thematic Sequence	MPF/MPT	3-9
Minor		3
Electives		<u>6-9</u>
		23-32

FOURTH YEAR SUGGESTIONS:

COURSE	MIAMI PLAN	CREDIT HRS
KNH 468 (3) AND KNH 468.L Lab (1)		4
KNH 482		3
SENIOR CAPSTONE (KNH 402 recommended)	MPC	3
Minor, Thematic Sequence, Electives	MPT	3
		<u>20</u>
		33

TOTAL REQUIRED HOURS = 128

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