Health and Fitness Major

Overview

**Please note: This program is currently undergoing a review and the curriculum is subject to change. Students will have the option to continue in this published program or to elect the revised program requirements as approved by the Health and Fitness faculty.**

The Health and Fitness program provides a science-based curriculum, focusing on physical activity across the lifespan. Our program prepares students for careers and advanced learning in health promotion, while addressing the health and wellness need for people of all ages and abilities.

The Health and Fitness major offers students the knowledge and skills required for successfully entering the growing field of Health and Fitness. Physical activity/inactivity and obesity have become a national focus. The School of Kinesiology has adapted to better accommodate this trend in physical awareness by providing knowledge of activity across the lifespan. Students majoring in Health and Fitness learn how to communicate to members of the public of varying ages, abilities, and backgrounds, behaviors that can prevent diseases, injuries, and other health problems by encouraging healthy lifestyles and wellness. The Health and Fitness curriculum includes courses required for American College of Sports Medicine (ACSM) Certifications as well as business and legal courses necessary for those wishing to establish new businesses or work in corporate settings.

Students who complete the Health and Fitness program will receive a Bachelor of Science (B.S.) degree. Students should consult the Health and Fitness Program Chair within Kinesiology for further information about Health and Fitness Program requirements, admissions procedures, and application deadlines. The Kinesiology Office of Undergraduate Student Affairs and the Health and Fitness Program Chair are the two main sources of information and support for Health and Fitness students.

Curriculum Objectives/Outcomes

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1. **Exercise Prescription & Exercise Adaptation**
   - Exercise training & Conditioning
     - Understand the physiologic adaptations to exercise and strength conditioning.
     - Be able to apply exercise, strength training and conditioning in a safe and responsible manner.
   - Health & Nutrition
     - Understand the bioenergetics of food and how it applies to exercise and physical activity.
     - Understand and apply energy balance.
     - Administer assessments of physical fitness.
• Understand and administer tests of physical health e.g. body composition.
• Understand the effects of ergogenic aids and the concepts of pharmacokinetics.
• Apply modern applications and trackers for activity and health behaviors.

**Psychology & Exercise**
• Recognize the psychological factors which influence involvement in sport and exercise.
• Apply this knowledge as it relates to physical activity educators.

2. **Community, Social and Corporate Health**

**Physical Activity & Inactivity**
• Identify activity level behaviors by age, population and socioeconomic level.
• Describe the pathways by which socioeconomic indicators influence health behaviors.
• Describe the socioeconomic disparities in physical activity participation.

**Ethics**
• Develop knowledge of the theoretical approaches used to address the wide range of ethical issues faced by professionals in both community and workplace wellness.
• Apply the epidemiological information gained to evaluate and develop public health intervention programs.

3. **Exercise Research Techniques**

**Scientific method**
• Study design i.e. methods, results & conclusions.
• Qualitative and quantitative statistics.
• Collaborative writing.

4. **Business**

Identify, analyze and discuss legal aspects of sport
• Contracts, constitutional law, labor employment and IP rights.
• Conduct marketing analysis.
• Use current communication tools to enhance learning and professional development.
• Demonstrate knowledge of laws governing individuals with physical disabilities.
• Understand the ramifications of banned substances in sport.

5. **Disease prevention, Injury prevention & Special populations**

• Recognizing the contributors to heart disease.
• Identify and manage common injuries and apply injury prevention techniques.
• Understand the relationship between PT, OT and adapted PE.
• Distinguish factors that contribute to atypical motor development and function.

**Requirements**

*Incoming HF freshmen must complete MATH 105 at the University of Michigan; the course cannot be transferred. AP credit for MATH 115 will be accepted.*

*Students who receive the Calculus Definite Math Placement recommendation are not required to take MATH 105.*

Kinesiology students who wish to graduate in Health and Fitness must complete an academic plan of study (shown below).

*No online courses will be accepted for transfer/petition for any required courses.*

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Prerequisite Courses in Kinesiology:
- HF 100 – Freshman Seminar (2 cr.)
- HF 218 – Emergency Response (3 cr.) Cannot be transferred.
- HF 220/HF 221 – Applied Human Anatomy and Physiology and Applied Lab (4 cr.) (NS) – Must be taken concurrently with (NS) – Cannot be transferred.
- HF 290 – Field Experience (2 cr.)

Required Core Courses in Health and Fitness:
- MOVESCI 230/MOVESCI 231 – Human Musculoskeletal Anatomy (3 cr.) (NS) – Must be taken concurrently with MOVESCI 231 – Lab (1 cr.) (NS) – (4 cr.)
- HF 242 – Essentials of Exercise Physiology (3 cr.) (HF Prereqs: AT/HF 220, 221; C or better)
- HF 315 – Exercise Prescription and Testing (3 cr.) (NS)
- HF 331 – Applied Principles of Biomechanics (3 cr.) Prereqs: Math 105 and HF 220/221; Min grade of C or higher.
- HF 332 – Principles of Motor Behavior (3 cr.) (NS) Prereqs: HF 220/221; Min grade of C or higher.
- HF 403 - Internship (3 cr.) (Prereqs: Permission, HF 218, SM 217, HF 315, Junior standing, 2.5 GPA)
- HF 313 – Exercise Psychology (3 cr.)
- HF 451 – Physical Activity Across the Lifespan (3 cr.) (Prereqs: MOVESCI 340 or HF 242 and MOVESCI 219 or SM 217)
- MOVESCI/HF/KINESLGY 446 – Social Factors in PA Behavior (3 cr.) (Prereqs: MOVESCI 219 or SM 217 and MOVESCI 340 or PHYSED/HF 242) OR HF 416 – Environmental and Policy Approaches to Increasing Physical Activity (3 cr.)

Required Supporting Courses:
- SM 101 - Public and Small Group Communication (3 cr.) (HU)
- MOVESCI 110 – Biological and Behavioral Bases of Human Movement (3 cr.)
- SM 217 – Business Communications (3 cr.) (HU) OR MOVESCI 219 – Scientific Writing (3 cr.) (Prereq: Sophomore standing)
- FYWR - (4 cr.) Must achieve a C or better.
- MATH 105 - Data, Functions, and Graphs (4 cr.) (NS) Cannot be transferred. C or better OR MATH 115 – Calculus – C- or better or placement test into Math 115.
- PSYCH 111 or 112 - Introduction to Psychology (4 cr.) (SS or NS)
- MVS 250/STATS 250/STATS 280/SOC 210 - Statistics (3-4 cr.)

Required Concentration Electives: (Please see your assigned advisor). Each student will choose 15 hours of electives from a pre-determined list that focuses on a Clinical or Management Track.

Distribution Requirements
Students must complete the Distribution Requirement of a minimum of 12 credits in Natural Science, Humanities, and Social Science. To see which required courses count toward distribution, students should refer to the HF Record Sheet on the Policies and Procedures page (http://www.kines.umich.edu/student-life/policies-procedures) of the Kinesiology website. For general distribution information, see the LSA course guide.
Internship Requirements
Students must complete an approved internship in the field of Health and Fitness to earn their degree. To be eligible for the internship you must have junior standing, have a cumulative GPA of 2.5 or higher, completed HF 315 Exercise Prescription, HF 218, and SM 217 (if you have MVS 219 instead of SM 217 you must attend an Internship Preparation Seminar). HF 403 Internship Policy Guidelines can be found on the Policies and Procedures page of the Kinesiology website (http://www.kines.umich.edu/student-life/policies-procedures). Students may repeat the internship for credit if content and summary of work differs. Internships can be either paid or unpaid.

Study Abroad
Credit from Kinesiology-sponsored and non-Kinesiology-sponsored study abroad programs can be used as general credit toward graduation and to fulfill Distribution requirements. With prior approval by the HF Faculty Committee, students can use study abroad credit to fulfill certain HF requirements. For additional information, please see the Global Engagement Coordinator.

Cross Campus Transfer Requirements
Students can only transfer in 12 HF (36 credits) required courses from outside universities. This does not include approved study abroad courses. Prior program petitions will be considered on a case by case basis.

Sophomore – Cumulative GPA of 3.0 and completion of the following:
- MATH 105
- MOVESCI 110
- HF/AT 220, HF/AT 221 (Winter only)

Junior – Cumulative GPA of 3.0 and completion of the following:
- MATH 105
- MOVESCI 110
- HF/AT 220, HF/AT 221 (Winter only)
- MOVESCI 250/STATS 250/STATS 280/SOC210 - Statistics
- HF 332 (Winter only)
- HF 242 (Winter only)

Seniors need to petition HF faculty to begin program. Petitions will be considered on a case by case basis.