

# Health and Human Physiology, B.A.

## Learning Outcomes

The B.A. degree in health and human physiology:

- provides students a broad education in the health sciences;
- prepares students to employ their fundamental knowledge of human physiology and health sciences together with the scientific method to solve problems in their chosen professional and/or graduate career fields; and
- instills an understanding and appreciation of the relevance of healthy behaviors to a fulfilling and productive life, and the importance of lifelong learning in the rapidly evolving fields of physiology and the health sciences.

## Requirements

The Bachelor of Arts with a major in health and human physiology requires a minimum of 120 s.h., including work for the major, which varies by track. The health promotion track requires a total of 47-51 s.h. of work for the major; the health studies track requires 43-47 s.h. of work for the major; and the exercise science track requires 48-52 s.h. of work for the major. Students must maintain a g.p.a. of at least 2.00 in all courses for the major and in all UI courses for the major. They also must complete the College of Liberal Arts and Sciences GE CLAS Core.

The health promotion track is intended for students seeking careers that promote wellness in the community and the workplace. The health studies track is designed for students who want a more flexible health science curriculum. The exercise science track is intended for students seeking careers as professionals in fitness and in strength and conditioning.

Students may earn a B.A. in health and human physiology or a B.S. in human physiology, but not both.

Students who earn a B.A. in health and human physiology may not earn the minor in lifestyle medicine.

Students in all tracks are required to complete the following science and math foundation courses and departmental core courses, as well as additional courses required specifically for their track.

The B.A. with a major in health and human physiology requires the following coursework.

Code	Title	Hours
	Science and Math Foundation Courses	10-12
	Departmental Core Courses	12-14
	Track Courses	21-26
	<b>Total Hours</b>	<b>43-52</b>

## Science and Math Foundation Courses

All students complete three foundation courses (minimum of 10 s.h.): one each in chemistry, biology, and mathematics or statistics.

Code	Title	Hours
<b>Chemistry</b>		
One of these:		
CHEM:1080	General Chemistry II	3
CHEM:1120	Principles of Chemistry II	4
<b>Biology</b>		
One of these:		
BIOL:1140	Human Biology: Nonmajors	4
BIOL:1141	Human Biology: Health Professions	4
BIOL:1411	Foundations of Biology	4
<b>Mathematics or Statistics</b>		
One of these:		
MATH:1020	Elementary Functions	4
MATH:1350	Quantitative Reasoning for Business	4
MATH:1380	Calculus and Matrix Algebra for Business	4
MATH:1440	Mathematics for the Biological Sciences	4
MATH:1460	Calculus for the Biological Sciences	4
MATH:1850	Calculus I	4
PSQF:4143/ STAT:4143	Introduction to Statistical Methods	3
STAT:1020/ PSQF:1020	Elementary Statistics and Inference	3
STAT:1030	Statistics for Business	4
STAT:3510/ IGPI:3510	Biostatistics	3

## Departmental Core Courses

All students must complete the four-course departmental core (12-14 s.h.).

Code	Title	Hours
One of these:		
HHP:1100	Human Anatomy	3
HHP:1150	Human Anatomy Lecture with Lab	4
One of these:		
HHP:1300	Fundamentals of Human Physiology	3
HHP:1350	Fundamentals of Human Physiology with Laboratory	4
Both of these:		
HHP:2200	Physical Activity and Health	3
HHP:2310	Nutrition and Health	3

## Tracks

### Exercise Science Track Requirements

The exercise science track provides focused study in physical fitness, physical activity, sport nutrition, and sport conditioning as they pertain to health and performance outcomes. The curriculum has been approved by the American College of Sports Medicine (ACSM) as meeting the academic preparation for certification as an ACSM certified exercise physiologist and ACSM certified personal trainer. It also prepares students for certification by the National Strength and Conditioning Association as a certified strength

and conditioning specialist and certified special population specialist. The strong physiological science-based curriculum can serve as preparation for professional or graduate study in rehabilitation sciences, performance sciences, or medical fields.

In addition to completing the courses listed above under Science and Math Foundation Courses and Departmental Core Courses, exercise science track students must complete the following exercise science core courses (20 s.h.) and major electives (6 s.h.).

### Exercise Science Core

Code	Title	Hours
All of these:		
HHP:2350	Biomechanics of Sport and Physical Activity	3
HHP:3045	Physical Activity Psychology	3
HHP:3400	Applied Exercise Physiology	3
HHP:4200	Metabolic Exercise Testing and Prescription	4
HHP:4210	Musculoskeletal Exercise Testing and Prescription	4
HHP:4310	Sport and Exercise Nutrition	3

### Exercise Science Major Electives

Code	Title	Hours
At least 6 s.h. from these:		
Health and human physiology courses numbered HHP:2000 or above		

### Health Promotion Track Requirements

The health promotion track prepares students to directly work with individuals and communities to improve health and quality of life. Students learn how to assess, plan, implement, evaluate, and oversee programs designed to improve health behaviors, create environments supportive of healthy lifestyles, and effectively communicate health issues to key stakeholders. The health promotion track prepares students to take the certification exam from the National Commission for Health Education Credentialing. The mix of natural and social sciences in this track also provides a foundation for professional or graduate study in allied health, health management, or public health.

In addition to completing the courses listed above under Science and Math Foundation Courses and Departmental Core Courses, health promotion track students must complete the following health promotion core courses (16 s.h.), the applied learning requirement (3 s.h.), and major electives (6 s.h.).

### Health Promotion Core

Code	Title	Hours
All of these:		
HHP:3200	Health Behavior and Health Promotion	3
HHP:3430	Health Management and Administration	3
HHP:4010	Behavioral and Clinical Health Assessment Laboratory	4
HHP:4020	Health Communication and Coaching Strategies	3
HHP:4420	Planning and Evaluating Health Interventions	3

### Health Promotion Experiential Learning

Code	Title	Hours
3 s.h. from these:		
HHP:3820	Community Wellness Guided Practicum	3
HHP:4350	Health and Human Physiology Practicum	1-3
HHP:4365	Practicum in Health Coaching	3
HHP:4490	International Medicine: Experiential Learning	3
HHP:4500	Undergraduate Independent Study	arr.
HHP:4900	Honors Research	3
HHP:4930	Health and Human Physiology Internship	3-9,12

### Health Promotion Major Electives

Code	Title	Hours
At least 6 s.h. from these:		
Health and human physiology courses numbered HHP:2000 or above		

### Health Studies Track Requirements

The health studies track interconnects the systems, technologies, and policies driving the U.S. wellness and health care industries. It provides flexible opportunities to work with faculty in developing the knowledge and skills needed to understand health determinants and anticipate continuing changes in preventive and clinical health delivery.

In addition to completing the courses listed above under Science and Math Foundation Courses and Departmental Core Courses, health studies track students must complete the following health studies core courses (9 s.h.) and major electives (12 s.h.).

### Health Studies Core

Code	Title	Hours
All of these:		
HHP:4030	Policy, Environmental, and Social Determinants of Health	3
HHP:4040	Health Services: Current Barriers and Innovative Solutions	3
HHP:4390	Understanding Human Disease	3

### Health Studies Major Electives

Code	Title	Hours
At least 12 s.h. from these:		
Health and human physiology courses numbered HHP:2000 or above		

## Combined Programs

### B.A. (Exercise Science Track)/ M.S. in Athletic Training

The Department of Health and Human Physiology and the Department of Orthopedics and Rehabilitation (Carver College of Medicine) offer a combined Bachelor of Arts in health and

human physiology (exercise science track)/Master of Science in athletic training. The combined degree program allows students to count a limited amount of credit toward both degrees, enabling them to begin the study of athletic training before they complete their bachelor's degree. Coursework taken during the first three years on campus constitutes the required prerequisites for application to the master's degree program.

## Admission

Students apply to the M.S. program in their third year of undergraduate study. Admission to the M.S. program in athletic training is for summer entry. Students should consult their advisor about the appropriate sequence of courses and other requirements.

For more information, see the M.S. in athletic training in the Catalog.

## Honors

### Honors in the Major

Students have the opportunity to graduate with honors in the major. Departmental honors students must maintain an overall g.p.a. of at least 3.33 in work for their major and a cumulative University of Iowa g.p.a. of at least 3.33.

In order to graduate with honors in the major, students must successfully complete the honors research course sequence HHP:4800 Research Methods and Ethics and HHP:4900 Honors Research; write an honors thesis that is judged to be of honors quality; and make an oral or poster presentation of the honors thesis in an approved venue, such as a department research seminar or professional conference.

### University of Iowa Honors Program

In addition to honors in the major, students have opportunities for honors study and activities through membership in the University of Iowa Honors Program. Visit Honors at Iowa to learn about the University's honors program.

Membership in the UI Honors Program is not required to earn honors in the health and human physiology major.

## Career Advancement

The Pomerantz Career Center offers multiple resources to help students find internships and jobs.

## Academic Plans

### Four-Year Graduation Plan

The following checkpoints list the minimum requirements students must complete by certain semesters in order to stay on the University's Four-Year Graduation Plan. Courses in the major are those required to complete the major; they may be offered by departments other than the major department.

**Before the fifth semester begins:** one foundation course and at least six more courses in the major.

**Before the seventh semester begins:** at least six more courses in the major (total of 13) and at least 90 s.h. earned toward the degree.

**Before the eighth semester begins:** at least two more courses in the major (total of 15).

**During the eighth semester:** enrollment in all remaining coursework in the major, all remaining GE CLAS Core courses, and a sufficient number of semester hours to graduate.

## Sample Plans of Study

Sample plans represent one way to complete a program of study. Actual course selection and sequence will vary and should be discussed with an academic advisor. For additional sample plans, see MyUI.

### Health and Human Physiology, B.A.

- Exercise Science Track [p. 3]
- Health Promotion Track [p. 4]
- Health Studies Track [p. 5]

### Exercise Science Track

Course	Title	Hours
<b>Academic Career</b>		
<b>Any Semester</b>		
GE CLAS Core: Sustainability <sup>a</sup>		
<b>Hours</b>		<b>0</b>
<b>First Year</b>		
<b>Fall</b>		
CHEM:1070	General Chemistry I <sup>b</sup>	3
RHET:1030	Rhetoric	3 - 4
	or ENGL:1200 or The Interpretation of Literature	
GE CLAS Core: Diversity and Inclusion <sup>c</sup>		3
GE CLAS Core: Social Sciences <sup>c</sup>		3
CSI:1600	Success at Iowa	2
<b>Hours</b>		<b>14-15</b>
<b>Spring</b>		
CHEM:1080	General Chemistry II	3
HHP:2200	Physical Activity and Health <sup>d</sup>	3
Major: math/statistics major requirement <sup>d</sup>		3
RHET:1030	Rhetoric	3 - 4
	or ENGL:1200 or The Interpretation of Literature	
Elective course <sup>e</sup>		3
<b>Hours</b>		<b>15-16</b>
<b>Second Year</b>		
<b>Fall</b>		
HHP:2310	Nutrition and Health	3
Major: biology requirement <sup>d</sup>		4
GE CLAS Core: Historical Perspectives <sup>c</sup>		3
GE CLAS Core: World Languages First Level Proficiency or elective course <sup>f</sup>		4 - 5
Elective course <sup>e</sup>		2
<b>Hours</b>		<b>16-17</b>
<b>Spring</b>		
HHP:1100	Human Anatomy	3
HHP:3045	Physical Activity Psychology	3
GE CLAS Core: International and Global Issues <sup>c</sup>		3
GE CLAS Core: World Languages Second Level Proficiency or elective course <sup>f</sup>		4 - 5
Elective course <sup>e</sup>		3
<b>Hours</b>		<b>16-17</b>

**Third Year**

**Fall**

HHP:1300	Fundamentals of Human Physiology	3
HHP:4310	Sport and Exercise Nutrition	3
GE CLAS Core: Literary, Visual, and Performing Arts <sup>c</sup>		3
GE CLAS Core: World Languages Second Level Proficiency or elective course <sup>f</sup>		4 - 5
Elective course <sup>e</sup>		3

**Hours 16-17**

**Spring**

HHP:2350	Biomechanics of Sport and Physical Activity	3
HHP:3400	Applied Exercise Physiology	3
GE CLAS Core: World Languages Fourth Level Proficiency or elective course <sup>f</sup>		4 - 5
Elective course <sup>e</sup>		3
Elective course <sup>e</sup>		3

**Hours 16-17**

**Fourth Year**

**Fall**

HHP:4200	Metabolic Exercise Testing and Prescription	4
Major: elective course <sup>g</sup>		3
Elective course <sup>e</sup>		3
Elective course <sup>e</sup>		3
Elective course <sup>e</sup>		2

**Hours 15**

**Spring**

HHP:4210	Musculoskeletal Exercise Testing and Prescription	4
Major: elective course <sup>g</sup>		3
Elective course <sup>e</sup>		3
Elective course <sup>e</sup>		3
Elective course <sup>e</sup>		2

Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall)

**Hours 15**

**Total Hours 123-129**

a Sustainability must be completed by choosing a course that has been approved for Sustainability AND for one of these General Education areas: Natural Sciences; Quantitative and Formal Reasoning; Social Sciences; Historical Perspectives; International and Global Issues; Literary, Visual, and Performing Arts; or Values and Culture.

b Course not required before CHEM:1080 if student has completed high school chemistry.

c GE CLAS Core courses may be completed in any order unless used as a prerequisite for another course. Students should consult with an advisor about the best sequencing of courses.

d Fulfills a major requirement and may fulfill a GE requirement.

e Students may use elective courses to earn credit towards the total s.h. required for graduation or to complete a double major, minors, or certificates.

f Students who have completed four years of a single language in high school have satisfied the GE CLAS Core World Languages requirement. Enrollment in world

languages courses requires a placement exam, unless enrolling in a first-semester-level course.

g Students must complete at least 6 s.h. selected from HHP courses numbered 2000 or above.

h Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Graduation Services.

**Health Promotion Track**

**Course Title Hours**

**Academic Career**

**Any Semester**  
 GE CLAS Core: Sustainability <sup>a</sup>  
**Hours 0**

**First Year**

**Fall**

CHEM:1070	General Chemistry I <sup>b</sup>	3
RHET:1030	Rhetoric	3 - 4
or ENGL:1200	or The Interpretation of Literature	

GE CLAS Core: Diversity and Inclusion <sup>c</sup> 3

GE CLAS Core: Social Sciences <sup>c</sup> 3

CSI:1600 Success at Iowa 2

**Hours 14-15**

**Spring**

HHP:2200	Physical Activity and Health <sup>d</sup>	3
CHEM:1080	General Chemistry II	3
Major: math/statistics requirement <sup>d</sup>		3 - 4
RHET:1030	Rhetoric	3 - 4
or ENGL:1200	or The Interpretation of Literature	

Elective course <sup>e</sup> 3

**Hours 15-17**

**Second Year**

**Fall**

HHP:2310	Nutrition and Health	3
Major: biology requirement <sup>d</sup>		4
GE CLAS Core: International and Global Issues <sup>c</sup>		3
GE CLAS Core: World Languages First Level Proficiency or elective course <sup>f</sup>		4 - 5
Elective course <sup>e</sup>		2

**Hours 16-17**

**Spring**

HHP:1100	Human Anatomy	3
GE CLAS Core: Historical Perspectives <sup>c</sup>		3
GE CLAS Core: Literary, Visual, and Performing Arts <sup>c</sup>		3
GE CLAS Core: World Languages Second Level Proficiency or elective course <sup>f</sup>		4 - 5
Elective course <sup>e</sup>		3

**Hours 16-17**

**Third Year**

**Fall**

HHP:1300	Fundamentals of Human Physiology	3
HHP:3200	Health Behavior and Health Promotion	3

Major: elective course <sup>g</sup>	3
GE CLAS Core: World Languages Second Level Proficiency or elective course <sup>f</sup>	4 - 5
Elective course <sup>e</sup>	3

**Hours 16-17**

### Spring

HHP:4020 Health Communication and Coaching Strategies	3
Major: elective course <sup>g</sup>	3
GE CLAS Core: World Languages Fourth Level Proficiency or elective course <sup>f</sup>	4 - 5
Elective course <sup>e</sup>	3
Elective course <sup>e</sup>	3

**Hours 16-17**

### Fourth Year

#### Fall

HHP:3430 Health Management and Administration	3
HHP:4010 Behavioral and Clinical Health Assessment Laboratory	4
Elective course <sup>e</sup>	3
Elective course <sup>e</sup>	3
Elective course <sup>e</sup>	3

**Hours 16**

#### Spring

HHP:4420 Planning and Evaluating Health Interventions	3
Major: experiential learning requirement	3
Elective course <sup>e</sup>	3
Elective course <sup>e</sup>	3
Elective course <sup>e</sup>	3

Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall)<sup>h</sup>

**Hours 15**

**Total Hours 124-131**

a Sustainability must be completed by choosing a course that has been approved for Sustainability AND for one of these General Education areas: Natural Sciences; Quantitative and Formal Reasoning; Social Sciences; Historical Perspectives; International and Global Issues; Literary, Visual, and Performing Arts; or Values and Culture.

b Course not required before CHEM:1080 if student has completed high school chemistry.

c GE CLAS Core courses may be completed in any order unless used as a prerequisite for another course. Students should consult with an advisor about the best sequencing of courses.

d Fulfills a major requirement and may fulfill a GE requirement.

e Students may use elective courses to earn credit towards the total s.h. required for graduation or to complete a double major, minors, or certificates.

f Students who have completed four years of a single language in high school have satisfied the GE CLAS Core World Languages requirement. Enrollment in world languages courses requires a placement exam, unless enrolling in a first-semester-level course.

g Complete at least 6 s.h. from HHP courses numbered 2000 or above.

h Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Graduation Services.

## Health Studies Track

Course	Title	Hours
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### Academic Career

#### Any Semester

GE CLAS Core: Sustainability <sup>a</sup>		
<b>Hours</b>		<b>0</b>

#### First Year

##### Fall

CHEM:1070 General Chemistry I <sup>b</sup>	3
RHET:1030 Rhetoric or ENGL:1200 or The Interpretation of Literature	3 - 4
GE CLAS Core: Diversity and Inclusion <sup>c</sup>	3
GE CLAS Core: Social Sciences <sup>c</sup>	3
CSI:1600 Success at Iowa	2

**Hours 14-15**

##### Spring

CHEM:1080 General Chemistry II	3
HHP:2200 Physical Activity and Health <sup>d</sup>	3
Major: math/statistics requirement <sup>d</sup>	3
ENGL:1200 The Interpretation of Literature or RHET:1030 or Rhetoric	3 - 4
Elective course <sup>e</sup>	3

**Hours 15-16**

#### Second Year

##### Fall

HHP:2310 Nutrition and Health	3
Major: biology requirement <sup>d</sup>	4
GE CLAS Core: Historical Perspectives <sup>c</sup>	3
GE CLAS Core: World Languages First Level Proficiency or elective course <sup>f</sup>	4 - 5
Elective course <sup>e</sup>	2

**Hours 16-17**

##### Spring

HHP:1100 Human Anatomy	3
GE CLAS Core: Literary, Visual, and Performing Arts <sup>c</sup>	3
GE CLAS Core: International and Global Issues <sup>c</sup>	3
GE CLAS Core: World Languages Second Level Proficiency or elective course <sup>f</sup>	4 - 5
Elective course <sup>e</sup>	3

**Hours 16-17**

#### Third Year

##### Fall

HHP:1300 Fundamentals of Human Physiology	3
HHP:4030 Policy, Environmental, and Social Determinants of Health	3
GE CLAS Core: World Languages Second Level Proficiency or elective course <sup>f</sup>	4 - 5
Elective course <sup>e</sup>	3

Elective course <sup>e</sup>		3
<b>Hours</b>		<b>16-17</b>
<b>Spring</b>		
HHP:4390	Understanding Human Disease	3
Major: elective course <sup>g</sup>		3
GE CLAS Core: World Languages Fourth Level Proficiency or elective course <sup>f</sup>		4 - 5
Elective course <sup>e</sup>		3
Elective course <sup>e</sup>		3
<b>Hours</b>		<b>16-17</b>
<b>Fourth Year</b>		
<b>Fall</b>		
HHP:4040	Health Services: Current Barriers and Innovative Solutions	3
Major: elective course <sup>g</sup>		3
Elective course <sup>e</sup>		3
Elective course <sup>e</sup>		3
Elective course <sup>e</sup>		3
<b>Hours</b>		<b>15</b>
<b>Spring</b>		
Major: elective course <sup>g</sup>		3
Major: elective course <sup>g</sup>		3
Elective course <sup>e</sup>		3
Elective course <sup>e</sup>		3
Elective course <sup>e</sup>		3
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) <sup>h</sup>		
<b>Hours</b>		<b>15</b>
<b>Total Hours</b>		<b>123-129</b>

- a Sustainability must be completed by choosing a course that has been approved for Sustainability AND for one of these General Education areas: Natural Sciences; Quantitative and Formal Reasoning; Social Sciences; Historical Perspectives; International and Global Issues; Literary, Visual, and Performing Arts; or Values and Culture.
- b Course not required before CHEM:1080 if student has completed high school chemistry.
- c GE CLAS Core courses may be completed in any order unless used as a prerequisite for another course. Students should consult with an advisor about the best sequencing of courses.
- d Fulfills a major requirement and may fulfill a GE requirement.
- e Students may use elective courses to earn credit towards the total s.h. required for graduation or to complete a double major, minors, or certificates.
- f Students who have completed four years of a single language in high school have satisfied the GE CLAS Core World Languages requirement. Enrollment in world languages courses requires a placement exam, unless enrolling in a first-semester-level course.
- g Students must complete at least 12 s.h. selected from HHP courses numbered 2000 or above.
- h Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Graduation Services.