

Human Physiology, B.S.

Learning Outcomes

The B.S. degree in 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 Science with a major in human physiology requires a minimum of 120 s.h., including 62 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. Transfer students must complete a minimum of 16 s.h. in human physiology coursework at the University of Iowa, including HHP:3550 Human Physiology with Laboratory.

The major in human physiology is designed primarily for individuals who intend to continue their education beyond the B.S. in the health professions, including medicine, physician assistant, physical therapy, dentistry, occupational therapy, chiropractic, and optometry, and for those who intend to pursue graduate degrees in basic life sciences.

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

Students who earn a B.S. in human physiology may not earn the minor in human physiology.

The B.S. with a major in human physiology requires the following coursework.

Code	Title	Hours
	Human Physiology Courses	31
	Cognate Area Courses	31
Total Hours		62

Human Physiology Courses

Code	Title	Hours
All of these:		
HHP:2200	Physical Activity and Health	3
HHP:3115	Anatomy for Human Physiology with Lab	5
HHP:3550	Human Physiology with Laboratory	5

At least 18 s.h. from these, with at least 12 s.h. in HHP coursework:

HHP:3230/PSY:3230	Psychopharmacology	3
HHP:3300	Human Growth and Motor Development	3

HHP:3450	Immunology in Health and Disease	3
HHP:3900	Writing for Health and Human Physiology	3
HHP:4110	Advanced Human Anatomy Laboratory	4
HHP:4130	Skeletal Muscle Physiology	3
HHP:4150	Clinical Exercise Physiology	3
HHP:4200	Metabolic Exercise Testing and Prescription	4
HHP:4210	Musculoskeletal Exercise Testing and Prescription	4
HHP:4220	Biomechanics of Human Motion	3
HHP:4250	Human Pathophysiology	3
HHP:4260	Respiratory Pathophysiology	3
HHP:4300	Sensorimotor Neurophysiology	3
HHP:4410	Exercise Physiology	3
HHP:4440	Physiology of Nutrition	3
HHP:4450	Human Genetics and Disease	3-4
HHP:4460	Cardiovascular Physiology	3
HHP:4465	Environmental Exercise Physiology	3
HHP:4470/ASP:4470	Physiology of Aging	3
HHP:4490	International Medicine: Experiential Learning	3
HHP:4500	Undergraduate Independent Study	arr.
HHP:4510	Energetics in Health and Disease	3
HHP:4900	Honors Research	3
BIOL:2254	Endocrinology	3
BIOL:2512	Fundamental Genetics	4
BIOL:2723	Cell Biology	3
BIOL:2753	Introduction to Neurobiology	3
BMB:3110	Biochemistry	3
MICR:2157	General Microbiology	3
MICR:2158	General Microbiology Laboratory	2
MICR:3168	Viruses and Human Disease	3
PCOL:3101	Pharmacology I: A Drug's Fantastic Journey	3
PCOL:3102	Pharmacology II: Mechanisms of Drug Action	3
SOC:3510	Medical Sociology	3
May include one of these:		
PSY:2130	Advanced Psychology for Pre-Medical Track	3
PSY:2930	Abnormal Psychology: Health Professions	3

Cognate Areas

Students must earn a minimum of 31 s.h. in cognate areas—subjects outside of human physiology—by completing courses from the following lists.

Code	Title	Hours
Biology		
This sequence:		
BIOL:1411- BIOL:1412	Foundations of Biology - Diversity of Form and Function	8
Chemistry		
This sequence:		
CHEM:1110 & CHEM:1120	Principles of Chemistry I-II	8
Mathematics		
One of these:		
MATH:1460	Calculus for the Biological Sciences	4
MATH:1550	Engineering Mathematics I: Single Variable Calculus	4
MATH:1850	Calculus I	4
Physics		
This sequence:		
PHYS:1511- PHYS:1512	College Physics I-II	8
Statistics		
One of these:		
STAT:2010	Statistical Methods and Computing	3
STAT:3510/ IGPI:3510	Biostatistics	3
STAT:4143/ PSQF:4143	Introduction to Statistical Methods	3

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 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: calculus 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 Plan 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.

Human Physiology, B.S.

Course	Title	Hours
Academic Career		
Any Semester		
Transfer students must complete a minimum of 16 s.h. in human physiology coursework at the University of Iowa, including HHP:3550 Human Physiology with Laboratory.		
GE CLAS Core: Sustainability ^a		
Hours		0
First Year		
Fall		
MATH:1460	Calculus for the Biological Sciences _{b, c}	4
RHET:1030 or ENGL:1200	Rhetoric or The Interpretation of Literature	3 - 4
GE CLAS Core: Diversity and Inclusion ^d		3
GE CLAS Core: Literary, Visual, and Performing Arts ^d		3
CSI:1600	Success at Iowa	2
Hours		15-16
Spring		
CHEM:1110	Principles of Chemistry I ^{c, e}	4
RHET:1030 or ENGL:1200	Rhetoric or The Interpretation of Literature	3 - 4
GE CLAS Core: Social Sciences ^d		3
Elective course ^f		3
Elective course ^f		2
Hours		15-16

Second Year**Fall**

BIOL:1411	Foundations of Biology ^c	4
CHEM:1120	Principles of Chemistry II	4
HHP:2200	Physical Activity and Health	3
GE CLAS Core: World Languages First Level Proficiency or elective course ^g		4 - 5

Hours **15-16**

Spring

BIOL:1412	Diversity of Form and Function	4
GE CLAS Core: Historical Perspectives ^d		3
GE CLAS Core: International and Global Issues ^d		3
GE CLAS Core: World Languages Second Level Proficiency or elective course ^g		4 - 5

Hours **14-15**

Third Year**Fall**

HHP:3115	Anatomy for Human Physiology with Lab	5
PHYS:1511	College Physics I	4
Major: statistics requirement		3
GE CLAS Core: World Languages Second Level Proficiency or elective course ^g		4 - 5

Hours **16-17**

Spring

HHP:3550	Human Physiology with Laboratory ^h	5
PHYS:1512	College Physics II	4
GE CLAS Core: World Languages Fourth Level Proficiency or elective course ^g		4 - 5
Elective course ^f		3

Hours **16-17**

Fourth Year**Fall**

Major: Elective course ⁱ		3
Major: Elective course ⁱ		3
Major: Elective course ⁱ		3
Elective course ^f		3
Elective course ^f		3

Hours **15**

Spring

Major: Elective course ⁱ		3
Major: Elective course ⁱ		3
Major: Elective course ⁱ		3
Elective course ^f		3
Elective course ^f		2

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

Hours **14**

Total Hours **120-126**

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

d 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.

e Enrollment in chemistry courses requires completion of a placement exam.

f 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.

g 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.

h This course must be completed at the University of Iowa.

i Students complete at least 18 s.h. in approved major electives, of which at least 12 s.h. must be in HHP coursework.

j 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.

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 Enrollment in math courses requires completion of a placement exam.