

Health Sciences

Health Science

Erik Hayes and Bob Aronson, Advisors

While preparation for graduate work in medicine or allied health fields can be done through any major available at Taylor, if necessary preparatory courses are taken, majors in these areas offer concentrations designed specifically for this purpose. The Health Science major includes a dual degree program leading to an undergraduate degree in Nursing.

A major in Health Science is offered with either a concentration in Pre-Nursing or Pre-Nursing and Public Health. Upon successful completion of three years at Taylor University, students then complete an approved Bachelor of Science in Nursing (BSN) program at an approved accredited school. Upon receipt of an official transcript verifying the satisfactory completion of the BSN program, the student is awarded a baccalaureate degree by Taylor University.

Careful planning should allow opportunity for study in affiliated programs, including health science and public health courses in Ecuador or Uganda.

All Taylor University degree requirements are applicable with the following exception: 22 of the final 30 credit hours completed through Taylor. Normally, students complete all applicable requirements within three years, including a total of 101 credits from a minimum of 43 major hours, foundational core curriculum, and general electives. A minimum of 64 earned credit hours must be through Taylor.

Taylor University currently maintains a preferred admissions agreement with Indiana Wesleyan University's 14 month accelerated nursing program, but cannot guarantee acceptance into this BSN program for any individual student.

Health Science (BS)

The Bachelor of Science degree with a major in Health Science requires 42-65 hours including a concentration in Pre-Nursing or Pre-Nursing and Public Health in addition to the successful completion of an approved BSN program from an accredited school. Taylor University cannot guarantee acceptance into a BSN program. All major courses, including those in the concentration, must be completed with a grade of C- or better and are included in the major GPA; only courses taken through Taylor count toward the major and cumulative GPA.

Major Requirements

BIO 201	4	Biology I: Foundations of Cell Biology and Genetics
BIO 244	4	Human Anatomy and Physiology I
BIO 245	4	Human Anatomy and Physiology II
KIN 221	3	Exercise as Medicine
MAT 210	4	Introductory Statistics
PBH 100	3	Introduction to Public Health
PSY 395	3	Health Psychology

Select one of the following chemistry course combinations:

CHE 201	4	General, Organic, and Biochemistry I
CHE 202	4	General, Organic, and Biochemistry II
or		
CHE 211	4	College Chemistry I
CHE 212	4	College Chemistry II

Select one of the following concentration areas:

Pre-Nursing

BIO 370*	3-4	Special Topics (advisor approval)
EXS 316	3	Applied Nutrition
KIN 355	3	Research Methods

Successful completion of an approved BSN program from an accredited school.

*Must be an approved Microbiology for Nursing course.

Pre-Nursing and Public Health

BIO 370*	3-4	Special Topics (advisor approval)
EXS 316	3	Applied Nutrition
KIN 355	3	Research Methods
PBH 110	3	Global Health
PBH 320	4	Epidemiology
PBH 330	3	Public Health Interventions
PBH 350	3	Determinants of Health and Health Equity

Select 2 credits from the following courses:

EXS 217	3	Wellness Programs
EXS 346	3	Public and Community Health
PBH 340	3	Principles of Community Health Development
PBH 393	3	Practicum

Successful completion of an approved BSN program from an accredited school.

*Must be an approved Microbiology for Nursing course.

Human Physiology and Preventive Medication

Erik Hayes and Brian Dewar, Advisors

Human Physiology and Preventive Medicine is designed specifically for students seeking to enter into professional schools related to health care (e.g., medical school, physician assistant, physical therapist, occupational therapist, nursing). It first explores a basic foundation of human anatomy, physiology, cellular biology, and chemistry followed by more in depth physiology courses related specifically to physiological systems, the pathophysiology of chronic disease of those systems, and the scientific evidence and mechanism for prevention of disease through lifestyle modification. Students will gain a basic background in human nutrition, health psychology, and public health preparing them for work as health educators in our local medical clinic working to help members of the community prevent and treat chronic disease. The major is intentionally small enough to allow students space to meet all the prerequisite requirements for professional school entrance exams and professional school admission requirements. In addition, students will have room to pursue semester abroad experiences, faculty mentored research, and clinical internships.

Students wishing to follow more traditional paths to professional schools in medicine and health care (e.g., biology or chemistry) or choosing majors that would not typically be associated directly with health care but are nonetheless related to human health and flourishing (e.g., social work, music therapy, missions) may choose to complete a minor in Preventive Medicine.

Human Physiology and Preventive Medicine (BS)

The Bachelor of Science degree with a major in Human Physiology and Preventive Medicine 54-56 major hours. *Students must also complete at least 160 clinical hours as approved and verified by department. All major courses must be completed with a grade of C- or better and are included in the major GPA.*

Major Requirements

BIO 201	4	Biology I: Foundations of Cell Biology and Genetics
BIO 244	4	Human Anatomy and Physiology I
BIO 245	4	Human Anatomy and Physiology II
EXS 316	3	Applied Nutrition
HPH 493	3	Human Physiology Capstone
KIN 221	3	Exercise as Medicine
NAS 230	2	Health Education for Behavior Change
PBH 100	3	Introduction to Public Health
PHI 311	3	Medical Ethics
PSY 100	3	Introductory Psychology
PSY 395	3	Health Psychology

Select one of the following chemistry course combinations:

CHE 201	4	General, Organic, and Biochemistry I
CHE 202	4	General, Organic, and Biochemistry II

or

CHE 211 ¹	4	College Chemistry I
CHE 212 ¹	4	College Chemistry II

Select one course from the following:

BIO 280	2	Research Methods
KIN 355	3	Research Methods

Select two courses from the following:

HPH 310	3	Cardiorespiratory Physiology and Chronic Disease
HPH 315	3	Pathophysiology of Immunological and Metabolic Chronic Diseases
HPH 320	3	Neuromuscular Physiology and Chronic Disease

Select one additional course from the following:

BIO 300	4	Medical Physiology
EXS 482	3	Lifespan and Environmental Physiology
HPH 310	3	Cardiorespiratory Physiology and Chronic Disease
HPH 315	3	Pathophysiology of Immunological and Metabolic Chronic Diseases
HPH 320	3	Neuromuscular Physiology and Chronic Disease
PSY 441	3	Physiological Psychology

Recommended Courses

Students may choose to select any of the following courses based upon consultation with advisor and contact with specific graduate or professional school to ensure all entrance requirements are met; recommended courses are not counted toward major requirements nor major GPA.

BIO 203 ¹²³	4	Principles of Genetics
BIO 210 ²³⁴	3	Medical Terminology
BIO 312 ¹²	4	Cellular and Molecular Biology
BIO 471 ²	4	Microbiology and Immunology
CHE 311 ¹²	4	Organic Chemistry I
CHE 312 ¹	4	Organic Chemistry II
CHE 411 ¹	3	Biochemistry I
IAS 210 ²	3	Medical Terminology
MAT 210 ¹²³⁴	4	Introductory Statistics
PHY 203 ¹³⁴	4	General Physics I
PHY 204 ¹³	4	General Physics II
PSY 250 ³⁴	3	Life Span Development
PSY 300 ³⁴	3	Abnormal Psychology
PSY 330 ⁴	3	Applied Psychological Statistics
SOC 100 ¹	3	Introduction to Sociology
SOC/ANT ⁴	3-4	Sociology or Anthropology Course

¹Recommended for Medical School

²Recommended for Physician Assistant

³Recommended for Physical Therapy

⁴Recommended for Occupational Therapy

Preventive Medicine Minor

A minor in Preventive Medicine requires 20 hours. *Students must also complete two semesters of 80 clinical hours each semester as approved and verified by department. All minor courses must be completed with a grade of C- or better and are included in the minor GPA.*

Minor Requirements

EXS 316	3	Applied Nutrition
KIN 221	3	Exercise as Medicine
NAS 230	2	Health Education for Behavior Change
PBH 100	3	Introduction to Public Health
PHI 311	3	Medical Ethics
PSY 100	3	Introductory Psychology
PSY 395	3	Health Psychology

Human Physiology Courses

HPH 310 3 hours Cardiorespiratory Physiology and Chronic Disease

This course explores the physiology of the cardiac, respiratory and vascular systems, pathophysiology of the most common cardiorespiratory diseases, and current evidence and mechanisms for disease prevention through lifestyle modification. *Prerequisites: BIO 201; BIO 244; BIO 245; and CHE 202 or CHE 212.*

HPH 315 3 hours Pathophysiology of Immunological & Metabolic Chronic Diseases

This course explores the pathophysiology of immunological and metabolic chronic diseases with specific emphasis on cancer, hyperlipidemia, diabetes, obesity, and frailty, as well as the major organ systems most commonly impacted by those diseases and current evidence and mechanisms for disease prevention through lifestyle modification. *Prerequisites: BIO 201; BIO 244; BIO 245; and CHE 202 or CHE 212.*

HPH 320 3 hours Neuromuscular Physiology and Chronic Disease

This course explores the physiology of the central and peripheral nervous system with specific emphasis on neuromuscular control, the pathophysiology of the most common neurological and neuromuscular diseases (e.g., stroke, Parkinson's, Alzheimer's, and mental illness), and the current evidence and mechanisms for disease prevention through lifestyle modification. *Prerequisites: BIO 201; BIO 244; BIO 245; and CHE 202 or CHE 212.*

HPH 493 3 hours Human Physiology Capstone

This course will revisit and add to the theological and philosophical underpinnings of human health and medicine that were initially explored in KIN 221 Exercise as Medicine. Students will review their reflective writings from their freshmen year and develop an updated philosophy of human health and flourishing and the practice of medicine. In addition students will be required to research a specific chronic disease and present an in depth presentation of the current scientific evidence for disease prevention. This course will culminate in a multi-day retreat where students will give their presentations and engage their peers and faculty in discussions centered around their philosophy papers. *Must be a graduating senior to enroll. Offered interterm.*