

Health Sciences

The Whitworth Health Sciences Department offers majors in health science, pre-athletic training and pre-occupational therapy.

The mission of the Whitworth Health Sciences Department is to equip its graduates to serve humanity through study of the form and function of the human body and the body's connection to health and wellness. Through a curriculum that integrates theory and practice, graduates will be able to appreciate this relationship both critically and creatively and will learn to apply it to various health-related fields.

The learning outcomes of this major prepare graduates to:

- Explain the form and function of the human body
- Explain various factors that make up holistic human health and wellness
- Demonstrate appropriate strategies to communicate health and wellness concepts
- Demonstrate critical thinking skills and the ability to access and evaluate health information and resources
- Identify their strengths and interests and demonstrate how these can be used to serve humanity
- Articulate a worldview that integrates their personal values with professional ethics
- Apply concepts of cultural competence as future professionals

Requirements for a Health Science Major, B.S. (54)

Major Core Courses

BI 140	General Biology I: Genes, Cells and Evolution	4
CH 161 or CH 101	General Chemistry I Introduction to Chemistry	3
CH 161L or CH 101L	General Chemistry I Lab Introduction to Chemistry Lab	1
CH 181 or CH 102	General Chemistry II Bioorganic Chemistry	3
CH 181L or CH 102L	General Chemistry II Lab Bioorganic Chemistry Lab	1
HS 162	Personal Health	3
HS 220	Anatomy and Physiology I	4
HS 221	Anatomy and Physiology II	4
HS 261	Community Health	3
HS 315	Nutrition	3
HS 326	Exercise Physiology	4
HS 326L	Exercise Physiology Lab	0
HS 365WH	Evidence Based Health Science	3
HS 498	Health Policy and Professional Ethics	2
One credit of internship is required		1
HS 490	Internship	
Students must take a minimum of 15 credits from major electives		15

Major Electives

- Classes identified in the catalog as recommended for "Preparation for Health Professions" may also qualify as major electives.
- Courses should be selected in consultation with advisor, and based on postgraduate goals.

Electives for B.S. in Health Science (must take a minimum of 15 credits)

BI 143	General Biology II: Ecology and Evolution	4
BI 306	Medical Microbiology	4

BI 311	General Biochemistry	3
BI 350	Comparative Vertebrate Anatomy	4
BI 350L	Lab: Comparative Vertebrate Anatomy	0
BI 363	Genetics	4
CH 271	Organic Chemistry I	3
CH 271L	Organic Chemistry I Lab	1
CH 278	Organic Chemistry II	3
CH 278L	Organic Chemistry II Lab	1
CH 401	Biochemistry I	3
CH 401L	Biochemistry I Lab	1
CH 403	Biochemistry II	3
HS 320	Functional Anatomy & Applied Biomechanics	4
HS 340	Health Communication & Advocacy	3
HS 366	Applied Health Science Research	3
HS 370	Food Systems & Public Health	3
HS 376	Health Psychology	3
or PY 376	Health Psychology	
HS 385	Sexuality and Society	3
HS 387	Drugs and Society	3
HS 410	Chronic Disease Epidemiology and Prevention	3
HS 433	Principles of Conditioning	3
HS 450	Health Policy and Management	3
HS 490	Internship (1-3 credits)	1-3
HS 475W	Health Promotion Planning Implementation and Evaluation	3
PH 302	Medical Ethics	3
PY 210	Developmental Psychology	3
PY 236	Biological Psychology	3
PY 357	Developmental Psychopathology	3
PY 358	Psychopathology	3
SO 304	Global Social Issues, Social Health in Scandinavia	3
SO 309	Principles of Social Engagement	3
SO 310	Essentials of Social Policy	3
SO 335	Organizational and Community Practice	3

B.S. in Health Science, Pre-Athletic Training Track

The B.S. in health science, pre-athletic training track, is designed for individuals interested in pursuing a career in athletic training. The entry-level degree required to become a certified athletic trainer is a master's degree; this undergraduate degree track incorporates foundational knowledge, prerequisite coursework and internship experiences that prepare students to apply for graduate school in athletic training.

Requirements for B.S. in Health Science, Pre-Athletic Training Track (54)

BI 140	General Biology I: Genes, Cells and Evolution	4
CH 101	Introduction to Chemistry	3
or CH 161	General Chemistry I	
CH 101L	Introduction to Chemistry Lab	1
or CH 161L	General Chemistry I Lab	
HS 220	Anatomy and Physiology I	4
HS 221	Anatomy and Physiology II	4
HS 261	Community Health	3

HS 320	Functional Anatomy & Applied Biomechanics	4
HS 326	Exercise Physiology	4
HS 326L	Exercise Physiology Lab	0
HS 363	Personal Health and Nutrition	3
HS 365WH	Evidence Based Health Science	3
AT 271		2
AT 390	Internship	1
PY 101	Introductory Psychology	3
PS 151	General Physics I	3
or PS 131	College Physics for Life Sciences	
Major Electives from the following:		12
B.S. Health Science Electives		
MSAT Courses (if approved by department)		
HS 498	Health Policy and Professional Ethics	
HS 315	Nutrition	

B.A. in Health Science, Pre-Occupational Therapy

The B.A. in health science, pre-occupational therapy is designed to prepare students for careers in health sciences, as well as provide some students direct entry into the Doctor of Occupational Therapy (OTD) graduate program at Whitworth. This major is designed to be part of a 3 + 3 program when combined with Whitworth's Doctor of

Occupational Therapy program. All undergraduate degree requirements for a bachelor's degree will still apply. Students will complete all Shared Curriculum requirements in the first three years, before beginning OT coursework in their fourth year. Courses taken in the fourth year will count toward existing undergraduate requirements of 126 total credits and 36 upper division credits. Students apply in year three and, if accepted, will start the graduate degree program in year four, but will still be considered undergraduate students until the bachelor's degree is posted after year four. Credits taken cannot count towards two degrees at the same time. Credits taken as an undergraduate student go on the undergraduate transcript and GPA. Students in the Pre-OT major will not receive the B.A. in Health Science until successfully completing the fourth year of study.

Mission Statement

The mission of the entry-level Doctorate in Occupational Therapy at Whitworth University provides innovative, creative, holistic and interprofessional mind-and-heart education to develop and empower ethically competent and transformational leaders in occupational therapy and healthcare. Guided by and committed to faith integration, reciprocal therapeutic relationships and an understanding of the potency of daily life activities, the program prepares practice scholars who use best scientific evidence to be catalysts for change, advocates for occupational justice and servants of humanity.

Requirements for B.A. in Health Science, Pre-Occupational Therapy (43)

BI 140	General Biology I: Genes, Cells and Evolution	4
CH 101	Introduction to Chemistry	3
or CH 161	General Chemistry I	
CH 101L	Introduction to Chemistry Lab	1
or CH 161L	General Chemistry I Lab	
HS 185	Medical & Anat. Terminology	1
HS 220	Anatomy and Physiology I	4
HS 221	Anatomy and Physiology II	4
HS 261	Community Health	3
HS 320	Functional Anatomy & Applied Biomechanics	4
or PS 131	College Physics for Life Sciences	
& PS 133	and College Physics for Life Sciences II	
HS 363	Personal Health and Nutrition	3
HS 365WH	Evidence Based Health Science	3
or HS 475W	Health Promotion Planning Implementation and Evaluation	

HS 390	Internship	1
or HS 490	Internship	
PY 101	Introductory Psychology	3
PY 210	Developmental Psychology	3
PY 358	Psychopathology	3
SO 120	Introduction to Sociology	3
or SO 120H	Honors Introduction to Sociology	

Other courses outside the major, taken as electives or to fulfill shared curriculum requirements, but required to be completed before admittance into the OTD program include (15 credits):

- MA 256: Elementary Probability and Statistics - 3 credits
- EL 211: Introduction to Professional Writing - 3 credits
- Nine (9) credits in performing arts, humanities, and wellness (ex. nutrition, physical education, dance, theology)

AT Courses

AT 170 Advanced CPR and First Aid 1

This course provides a comprehensive survey of,cardiopulmonary resuscitation and first aid,,focusing especially on situations likely to be,encountered by professionals in health science,and kinesiology. The intention is to provide the,knowledge and skills necessary to work in an,emergency to help sustain life, reduce pain, and,minimize the consequences of injury or sudden,illness until more advanced medical help can,arrive. Leads to certification at the healthcare,provider level.

AT 271 Introduction to Athletic Training 2

Survey of the profession of athletic training.,Injury prevention, assessment, treatment, taping,and rehabilitation of common athletic injuries,will be presented. Include lab. Spring semester.

AT 338 Sports Medicine Study Program;Preparation 1

The purpose of this course is to prepare students,who are participating in the May Term off campus,program in Japan. The course will provide an,introduction to the historical and contemporary,aspects of Japanese society. We will pay,particular attention to healthcare, culture and,theological dimensions of Japanese life.

AT 339 Seminar in Sports Medicine: Japan 1-3

This study abroad opportunity offers students the,chance of a lifetime to explore western Japan. ,Students will travel to Japan with an energetic,community to engage in contemporary culture. ,Particular emphasis will be placed on experiencing,Japanese society as it relates to gender, sports,,religion, healthcare and education.

AT 390 Internship 1-6

AT 390H Honors Internship 1-12

Students of junior or senior standing wishing to,enroll in an Honors-designated internship must,first identify a professor to oversee the,internship. Students will then register for a,390H in the discipline of the supervising,professor and complete the Honors Internship,form, available on the honors web pages under,"Forms," and Career Services Internship Contract,located at Pirate Port/Forms/ Career,Services/Internship contract. Any semester.

AT 391H Honors Independent Study 1-4

Students of junior or senior standing wishing to,enroll in an Honors-designated independent study,or creative project must first identify a,professor who will oversee this work. Students,will then register for a 391H (first time) or,491H (second time) in the discipline of the,supervising professor using this online form,located at Pirate Port/Forms/Registrar/Teaching,Assistant Independent Study. Any semester.

AT 392H Honors Study Abroad

1-12

Students wishing to enroll in an Honors-designated Off-Campus Program will enroll via this online form located at PiratePort/Forms/Registrar/Teaching Assistant-Independent Study-HOC, and registering for a 1-credit 392H (first time) or 492H (second time) in the discipline of the program (e.g., FR392H for Jan-term in Paris). Any semester, Students must also complete the Off-Campus Programs application (available on the honors web pages under "Forms"), which explains the honors requirements (a pre- and post-trip cultural assessment through Cultural Intelligence, scheduled via Karly Rasmussen, [krasmussen@whitworth.edu]), the reading and discussion of Expand Your Borders text [available from the honors program] with the supervising professor, as well as any additional assignments and activities [e.g. blog, journal, etc.], determined by the professor). Any semester.

HS Courses

HS 162 Personal Health

3

In this course students will investigate and discuss current issues related to personal health, and holistic wellness. Topics include: health in our society, chronic diseases, mental health, and stress, spirituality, sleep, nutrition, fitness, body weight and composition, body image, substance abuse, relationships, violence, social health and justice, and health policy.

HS 179 Foundations of Health Science

2

Foundations of Health Science is an exploration of the core themes and careers in our discipline. Through lectures, readings, class discussions, and guest speakers, students will be introduced to a variety of Health Science related topics and professions. This introductory course is required for 1st year students and is offered in fall and spring semesters.

HS 185 Medical & Anat. Terminology

1

Designed to help students understand health care, related language, and prepare for HS 220 and HS 221. Medical terms, abbreviations, prefixes, suffixes, and root words will be examined as they related to body systems, medical disorders, and health care.

HS 215 Nutrition for Nursing

3

Introductory course on nutrition with a focus on how it impacts all aspects of health. Consideration will be given to nutrient metabolism, the clinical applications of nutrition specific to nurses, and assessment of one's own health. Prerequisites: Full year of Chemistry; Jan Term. This course is intended for nursing majors only.

HS 220 Anatomy and Physiology I

4

Gross anatomy and physiological applications of the integumentary, skeletal, muscular, respiratory, and nervous systems of the human body. Emphasis given to the relationship of major organs to health and disease. Lab component provides practical application in the location and isolation of anatomical parts. Designed for students in nursing, athletic training, and kinesiology as well as other allied health programs. Lab required. Prerequisite: sophomore standing. Fall semester. Lab fee.

HS 220L Lab: Anatomy and Physiology I

0

HS 221 Anatomy and Physiology II

4

Gross anatomy and physiological applications of the cardiovascular, lymphatic, endocrine, digestive, urinary, and reproductive systems of the human body. Emphasis given to the relationship of major organs to health and disease. Lab component provides practical application in the location and isolation of anatomical parts and physiological assessments. Designed for students in nursing, athletic training, and kinesiology as well as other allied health programs. Lab required. Prerequisite: HS 220. Spring semester. Lab fee.

HS 221L Lab: Anatomy and Physiology II

0

HS 261 Community Health 3

This course will explore foundations of community,health, our nation's health status, health,disparities, social determinants of health, and,local and national health agendas. Specific,emphasis is placed on social, behavioral, and,environmental community health-related issues and,the controversies; that surround them. Group and,presentation work will be included in the course.,Class discussions and written reports will,examine the complexity of the relationship,between the natural environment, the built,environment, and health outcomes. Offered fall,,jan, and spring semesters.

HS 301 Introduction to Healthcare Administratio,n 3

Introduction to Healthcare Administration This,course provides an introduction to the structure,,operation and financing of the American,healthcare system. It examines the major industry,participants; how healthcare services are,allocated and financed; the factors that,influence the cost and quality of care; and,opposing positions on the future of healthcare,reform. For continuing studies students only.

HS 302 Healthcare Theatre 1

This course is an introduction to the use of,theatre in healthcare. Simulated patients,,portrayed by healthcare students or trained,actors, are frequently utilized in healthcare,education to improve both clinical skills and,interpersonal communication. Students will engage,in simulation and activities designed to enhance,empathy, patient-provider communication skills,,and development/portrayal of characters with,medical conditions.

HS 304 Social Health in Scandanavia 3

This course will examine structures and systems in,Scandinavia that contribute to the social health,of those countries. Students will engage in,comparative analysis of welfare and non-welfare,states by investigating the principles and,challenges that underpin the Scandinavian welfare,states including education, gender and family,policies, and health systems. This course includes,a two-week study tour in Denmark, Sweden, and,Norway. Offered May term, even years.

HS 315 Nutrition 3

Consideration of nutrients and their functions in,the body. Discussion of nutrition and health,,clinical applications of nutrition, facts and,fallacies about diet. Prerequisites: Full year of,Chemistry. Fall and spring semester.

HS 320 Structural and Mechanical Kinesiology 4

A study of human motion, emphasizing analysis of,joint and muscular action and the application of,biomechanical principles for sport skills common,to physical education and athletics. Lab required.,Prerequisite: HS 220 and HS 221. Fall and spring,semester.

HS 326 Exercise Physiology 4

The study of theory and practical application of,exercise as it applies to the human body. Lab,required. Prerequisite: HS 220 and HS 221.

HS 326L Exercise Physiology Lab 0

HS 335 Clinical Anatomy and Orthopedic,Evaluation 3

This course will be an in-depth study of the,upper and lower extremities including clinical,anatomy, physical examinations, and basic injury,recognition. Class will be a combined,lecture/lab format, and experiences will,emphasize recognition and palpation of bony and,soft tissue landmarks, the methods and techniques,in evaluating orthopedic injuries/conditions, and,a discussion of injury/dysfunction implications.,Prerequisite: HS 220 & HS 221. Offered periodic,Jan and May terms.

- HS 340 Health Communication & Advocacy** 3
This course will explore applied health,communication strategies that inform individual,and community decision-making aimed at enhancing,health. It also embeds the role of advocacy in,public health by incorporating social networking,and mobilization, interpersonal communication and,negotiation, as well as the use of media and,social platforms for generating public discourse.,Students will explore the use of counseling,,public campaigns, and political processes to,advocate for health among diverse populations.,Students will integrate professional ethics and,cultural competence to promote health goals,consistent with personal values.
- HS 355 Training Theory & Program Design** 3
In this course, students will learn more complex,principles and applications of exercise training,theory and program design, including needs,assessments, periodization, evidence-based,practice, and current trends in the field.,Prerequisite: HS 326. Periodic Jan term only.
- HS 363 Personal Health and Nutrition** 3
This course will investigate current issues,related to personal health and holistic wellness,with an emphasis on nutrition. Required for and,restricted to Kinesiology, Pre-Athletic Training,,and Community Health Majors only.
- HS 365WH Evidence Based Health Science** 3
An exploration of research methods, critical,appraisal, and the use of evidence to guide,practice in a variety of health-related fields.,Students will learn to formulate a clear clinical,question based on personal area of interest,,conduct a relevant literature review, and be able,to synthesize the evidence to determine best,practice. Fall and spring semesters.
- HS 366 Applied Health Science Research** 3
This course contributes to the Department of,Health Science mission and goals by applying the,research design concepts, statistical techniques,,and critical appraisal of literature skills,introduced in HS 365WH, Evidence-based Health,Science.
- HS 370 Food Systems & Public Health** 3
This course will introduce students to the concept,of food systems and its relationship to public,health in the United States. Through a combination,of lecture, discussion, and experiential learning,(field trips), students will consider the,historical, economic, social, and political forces,that have shaped our regional food system,,including production, processing, distribution,,consumption, and disposal of food, as well as the,implications these have on health.
- HS 372 Global Medicine** 3
This course focuses on three overarching topics:,(a) cultural competency in the provision of,healthcare services, (b) analysis of global,healthcare systems and selected global health,concerns, and (c) international health,volunteerism. Through study and practical,experience, this class aims to equip students to,critically analyze public or private health,delivery organizations, acknowledge the need for,provision of culturally competent healthcare, and,appreciate how regional society (history,,culture, politics, etc.) influence health.,Prerequisites: HS 220 & HS 221. Periodic summer,offering.
- HS 376 Health Psychology** 3
The study of biological, psychological, and,sociocultural perspectives influence an,individual's overall health including: behavior,change theory and application, coping and stress,management, psychoneuroimmunology, the impact of,personality and cognitive patterns, vision and,goal development to facilitate health behavior,change. Cross-listed: PY 376. Prerequisite: PY,101 and junior status.
- HS 385 Sexuality and Society** 3
This course focuses on issues surrounding the,mental-emotional, physical, and social aspects of,human sexuality. Key course content areas,include: communication, sexual anatomy,,reproduction and reproductive technology, sexual,consent and coercion, and decision making,regarding sexual behavior. Prerequisite: HS 261.,Fall semester.

HS 387 Drugs and Society 3

The course focuses on drug use and abuse from a biopsychosocial perspective. Specifically, the course explores the health related consequences of drug use, the historical aspects surrounding use and abuse, and issues and solutions in treatment and enforcement.

HS 390 Internship 1-6

HS 410 Chronic Disease Epidemiology and Prevention 3

Survey of major chronic diseases, risk factors, epidemiology, and various public health approaches (e.g. nutrition, physical activity, behavioral interventions and alternative therapies). Conditions include: cancer, cardiovascular disease, diabetes, kidney disease, lung diseases, neurologic disorders, musculoskeletal diseases, and metabolic syndrome. Prerequisites: Take HS 261 and take HS 162 or HS 363. Spring semester.

HS 433 Principles of Conditioning 3

Development of proficiency in the theory, design, and implementation of conditioning programs. Prerequisite: HS 326. Spring semester.

HS 450 Health Policy and Management 3

This course will explore health policy issues, confronting public health. It will review the processes that influence development and implementation of health policies, roles of health service organizations, agencies associated with public health, and current public health trends. Fall semester.

HS 475W Health Promotion Planning Implementation, And Evaluation 3

This course will enable students to create a detailed and effective health promotion program, using evidence-based program design. It will allow students to bridge health content knowledge with behavior change theory and application. Emphasis will be placed on developing and understanding needs assessment, program rationale, mission, statements, goals objectives, implementation, plans, and evaluation protocols. Prerequisite: HS 261 and HS 162 or HS 363.

HS 475WH Health Promotion Planning, And Evaluation 3

This course will enable students to create a detailed and effective health promotion program, using evidence-based program design. It will allow students to bridge health content knowledge with behavior change theory and application. Emphasis will be placed on developing and understanding needs assessment, program rationale, mission, statements, goals and objectives, and planning model. Students will learn areas of responsibility, and ethical standards required for Community Health Education Specialists as required for, Community Health Education Specialists and as assessed in the CHES exam. This course lays the foundation, and is a prerequisite for, the HS 476, course.

HS 476 Health Promotion Implementation and, Evaluation 3

This course will enable students to create a detailed and effective health promotion program, using evidence-based program design. It will allow students to bridge health content knowledge with behavior change theory and application. Emphasis will be placed on developing and understanding evidence-based practice, implementation plans, evaluation protocols, and effective health promotion program advocacy. Students will learn health promotion implementation and evaluation protocols as required for Community Health Education Specialists as assessed in the CHES exam. This course is the second in a series and builds off of the foundation set in HS 475WH, Health Promotion Program Planning. Prerequisite: HS 475WH

HS 489 Supervised Cadaver Dissection 1

Additional study of human anatomy by dissecting a cadaver to provide prosected cadaver demonstrations for HS 220 and HS 221. The course complements HS 220 and HS 221, involves learning dissection techniques, but is not the equivalent of a medical school dissection course.

HS 490 Internship 1-6

3 credits maximum of HS-490 will apply to the Health Science major electives

HS 498 Senior Seminar**3**

Exploration of issues and mechanisms of health, professional accountability, a humanistic basis of healthcare, cultural competence, social justice, issues in healthcare, basic health policy, principles, principles that guide ethical, decision-making, patient rights, and healthcare, professional duties. Senior standing. Fall and, spring semesters.