

### HEALTH SCIENCES B.S.

All students must meet the University Requirements (<http://catalogue.uvm.edu/undergraduate/academicinfo/degreerequirements/>).

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The mission of the UVM Health Sciences program is to strive for health equity by preparing the next generation of leaders to improve the health of individuals and communities through basic science and applying the principles of population health. Students learn how to define, assess and address health issues facing individuals and communities. The program is public health focused, and includes: health promotion and education, global health, epidemiology, health communication, and understanding the US health care systems.

The UVM Health Sciences program (B.S.) is an applicant for accreditation by the Council on Education for Public Health. The accreditation review will address the Health Sciences B.S. Other degrees and areas of study offered by this institution will not be included in the unit of accreditation review

### HEALTH SCIENCES CORE COURSES (36 CREDITS)

HSCI 021	Introduction to Public Health	3
HSCI 120	SU:Read and Eval Rsch in Hlth	3
HSCI 103	D2: Fndns of Global Health	3
STAT 111	QR: Elements of Statistics <sup>1</sup>	3
or STAT 141	QR:Basic Statistical Methods 1	
NH 120	Health Care Ethics	3
HSCI 130	Health Promotion	3
HSCI 140	Struct & Finan of US Hlthcare	3
HSCI 160	Health Communication	3
HSCI 202	Epi, Pub Hlth & Emerg Disease	3
HSCI 240	Project Planning and Eval.	3
HSCI 250	Writing for Health Profess.	3
HSCI 280	Capstone	3

### ENGLISH (6 CREDITS)

ENGS 001	FW:Written Expression	3
English Elective		3

### HUMANITIES (6 CREDITS)

See advisor to request approval for a course not listed or to ask if courses can apply to more than one area. Select from the following:

ARTH (any)		3
ECLD 056	D1:Lang Policy Issues,Race&Sch	3
GRK 205	Greek Philosophers	3
MU 001	Exploring Music History	3
MU 005	D1: Intro to Jazz History	3
MU 010	D1: Blues & Related Traditions	3
MU 012	D1:Music & Culture:New Orleans	3
MU 105	History of Jazz	3
MU 111	Music History & Literature I	3
MU 112	Music History & Literature II	3
CLAS 021	Greek History and Civilization	3
CLAS 022	Etymology	3
CLAS 023	Classical Roman Civilization	3
CLAS 024	Myths/Legends Trojan War	3
CLAS 121	Greek History and Civilization	3
CLAS 122	Roman History and Civilization	3
CLAS 147	Ancient Law	3
CLAS 163	Stoicism	3
HS 139	Modern Germany	3
HS 180	Moral&Rel Persp on Holocaust	3
HS 190	The Holocaust	3
HS 191	World War II	3
HS 227	Seminar in Modern Europe	3
PHIL (any course except PHIL 013)		
HST (any)		
POLS 041	Intro to Political Theory	3
POLS 182	Ancient Law	3
POLS (any course within 140s and 240s)		
DNCE 050	Dance History & Legends	3
REL (any)		
Any language course		

**MATH OR STATISTICS (6 CREDITS)**

Must complete 6 credits in addition to either STAT 111 or STAT 141. Students can take both STAT 111 and 141 if desired.

STAT (any) or MATH (019 or higher)	
STAT (any) or MATH (019 or higher)	

**SOCIAL AND BEHAVIORAL SCIENCES (12 CREDITS)**

Must be from at least 2 different disciplines. PSYS 001 and SOC 001 are recommended. Select from the following:

ANTH (any)		
GEOG (any course except 040, 140, 143, 148)		
POLS (any course except 041, 182 and all courses within the 140s and 240s)		
CRES 061	D1: Asian-American Experiences	3
PSYS (any course except 111, 115, 211, 215, 216, 217, 218, 219)		
CSD 094	Dev of Spoken Language	3
GSWS 001	D2: Gender Sexuality Wmn's Stdy	3
SOC (any)		
EC (any)		
LING (any)		
VS 052	Sustainable Vermont	3
PH 306	Social&Behavioral Public Hlth	3

See advisor to request approval for a course not listed or to ask if courses apply to more than one area.

**NATURAL AND APPLIED SCIENCES (18 CREDITS)**

One semester of chemistry (4 credits) is recommended. Select from the following:

BHSC 034	Human Cell Biology (required)	4
ANTH 026	D2: Biological Anthropology	3
ANPS 019	Ugr Hum Anatomy & Physiology 1 <sup>1</sup>	4
ANPS 020	Ugr Hum Anatomy & Physiology 2 <sup>1</sup>	4
BIOL 001	Principles of Biology	4
BIOL 002	Principles of Biology	4
BCOR 011	Exploring Biology	0 or 4
BCOR 012	Exploring Biology	0 or 4

BCOR 101	Genetics	3
BCOR 103	Molecular and Cell Biology	4
BIOC 201	Fundamentals of Biochemistry	3
BIOC 295	Advanced Special Topics	1-18
BHSC 242	Immunology <sup>1</sup>	3
BHSC 281	Applied Molecular Biology <sup>1</sup>	3
CHEM 023	Outline of General Chemistry	4
CHEM 025	Outline of General Chemistry	3
CHEM 026	Outline of Organic & Biochem	4
CHEM 031	General Chemistry 1	4
CHEM 032	General Chemistry 2	4
CHEM 042	Intro Organic Chemistry	4
CHEM 141	Organic Chemistry 1	4
CHEM 142	Organic Chemistry 2	4
ENSC 001	SU: Intro Environmental Sci	3
GEOL 001	Earth System Science	4
PATH 101	Intro to Human Disease <sup>1</sup>	3
PHYS 011	Elementary Physics	4
PHYS 012	Elementary Physics	4
PHYS 021	Introductory Lab I	1
PHYS 022	Introductory Lab II	1
PBIO 004	SU: Intro to Botany	4
MMG 065	Microbiology & Pathogenesis <sup>1</sup>	4
MMG 101	Microbiol & Infectious Disease <sup>1</sup>	4
MMG 222	Advanced Medical Microbiology (may count as health-related elective) <sup>1</sup>	4
MMG 223	Immunology	3
MLS 221	Clinical Chemistry I <sup>1</sup>	4
MLS 222	Clinical Chemistry II <sup>1</sup>	3
MLS 231	Hematology <sup>1</sup>	3-4
BHSC 244	Immunology Lab <sup>1</sup>	1
MLS 255	Clinical Microbiology II <sup>1</sup>	3
MLS 282	Public Health Lab Practicum <sup>1</sup>	12
NFS 143	Nutrition in the Life Cycle <sup>1</sup>	3
NFS 153	Principles of Food Technology <sup>1</sup>	3

NFS 154	Principles Food Technology Lab <sup>1</sup>	1
NFS 183	Introduction to Biochemistry <sup>1</sup>	3
NFS 203	Food Microbiology <sup>1</sup>	3
NFS 213	Food Microbiology Lab <sup>1</sup>	1
PHRM 201	Introduction to Pharmacology <sup>1</sup>	3
PHRM 240	Molecules & Medicine <sup>1</sup>	3
PHRM 272	Toxicology <sup>1</sup>	3
PHRM 292	Independent Study <sup>1</sup>	3

<sup>1</sup> course may count as health-related elective

## HEALTH-RELATED ELECTIVES (18 CREDITS)

Must select at least 6 credits at 100-level. See advisor to request approval for a course not listed or to ask if courses can apply to more than one area. Select from the following:

ANPS 019	Ugr Hum Anatomy & Physiology 1	4
ANPS 020	Ugr Hum Anatomy & Physiology 2	4
ANTH 089	D2:SU:Global Health Devl & Div	3
ANTH 172	D2:Gender Sex Race & the Body	3
ANTH 174	D2:Culture, Health and Healing	3
ANTH 242	Research in Hum Biol Diversity	4
ASCI 177	Animal Plagues & Global Health	3
AT 168	Directed Obsv. in Athl Trng	1
BCOR 101	Genetics	0 or 3
BCOR 103	Molecular and Cell Biology	0 or 4
BHSC 297	Leadership & Mgt in Hlth Care	3
BIOL 241	Human Diversity and Evolution	3
BIOL 242	Research in Hum Biol Diversity	4
CDAE 002	D2:SU:World Food,Pop & Develop	3
CSD 020	Intro to Disordered Comm	3
CSD 094	Dev of Spoken Language	3
CSD 199	Adv Topics in Clin Aud & SLP	3
CSD 208	Cognition & Language	3
CSD 274	D2: Culture of Disability	3
CSD 281	Intro Cognitive Neuroscience	3
CSD 287	D2:Mindfulness&Helping Skills	3

CSD 299	Autism Spect Dis:Assess&Interv	3
COMU (any)		
EC 230	Microecon & Appl w Writing	3
EDHE 146	Personal Health	3
EDPE 200	Contemporary Issues	1-6
EDSP 005	D2:Iss Aff Persons W/Disabil	3
ENVS 107	SU: Human Health & Envirnmnt	3
ENVS 236	Women, Health & Environment	3
ENVS 237	Human Ecology & Health-Arctic	3
or ENVS 295	Advanced Special Topics	
HLTH (any)		
EXSC 213	Biomechanics of Human Movement	3
EXSC 242	Exercise and Sport Psychology	3
HDFS 005	Human Development	3
HLTH (any)		
MMG 002	SU:Unseen Wrlds:Microbes & You	3
MMG 065	Microbiology & Pathogenesis	0 or 4
MMG 101	Microbiol & Infectious Disease	0 or 4
NFS (any)		
NURS 200	SU: Health and Sustainability	3
PEAC 052	Yoga & Mindfulness	1
PEAC 103	Yoga & Ayurveda	1
PEAC 115	Yoga & the Chakras	1
PH (any)		
PRNU 121	Gerontology	0-3
PHRM 200	Medical Cannabis	3
PHRM 201	Introduction to Pharmacology	3
PHRM 240	Molecules & Medicine	3
PHRM 272	Toxicology	3
PRNU 110	Art & Science of Nursing	3
PRNU 121	Gerontology	0-3
PSYS 279	Intro to Health Psychology <sup>2</sup>	3
RMS 157	Prevention & Care Athletic Inj	3
EXSC 175	Applied Kinesiology	3
RMS 191	Iceland Ther Thermal Springs	3

SOC 054	Health Care in America <sup>2</sup>	3
SOC 102	Population, Environment & Soc <sup>2</sup>	3
SOC 120	Aging in Modern Society <sup>2</sup>	3
SOC 157	QR:Population Health Research <sup>2</sup>	3
SOC 223	Sociology of Reproduction <sup>2</sup>	3
SOC 295	Advanced Special Topics <sup>2</sup>	1-18
SURG 200	Emergency Medicine Research I	4
or SURG 201	Emergency Medicine Research II	
SURG 201	Emergency Medicine Research II	4
Health-Related Travel Course		

<sup>2</sup> may also count as social and behavioral elective

**COLLEGE REQUIREMENTS (1 CREDIT)**

NH 050	App to Hlth: From Pers to Syst	1
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**UNIVERSITY REQUIREMENTS**

3 credits University sustainability (fulfilled by HSCI 120), 6 credits diversity fulfillment (D1 elective and D2 fulfilled by HSCI 103), and 3 credits quantitative reasoning (fulfilled by STAT 111 or STAT 141) are required for graduation.

**FREE ELECTIVES (12-14 CREDITS)**

The number of free elective requirements needed may vary by student.

Students must complete a minimum of 120 credits for the B.S. in Health Sciences.

**PLAN OF STUDY**

**A Model Four-Year Residential Health Sciences Curriculum**

First Year	Credits	
	Fall	Spring
NH 050 App to Hlth: From Pers to Syst	1	
HSCI 021 Introduction to Public Health <sup>1</sup>	3	
Social and Behavioral Science Elective <sup>5</sup>	3	3
BHSC 034 Human Cell Biology (or Natural and Applied Science Elective) <sup>4</sup>	4	4
ENGS 001 FW:Written Expression	3	
Learning Community Course <sup>3</sup>	1-3	
Approved Health-Related Elective		3
Math/STAT Elective <sup>6</sup>		3

HSCI 120 SU:Read and Eval Rsch in Hlth <sup>1</sup>		3
Year Total:	15-17	16

Sophomore	Credits	
	Fall	Spring
HSCI 103 D2: Fndns of Global Health <sup>1</sup>	3	
STAT 111 QR: Elements of Statistics <sup>1</sup> or STAT 141 QR:Basic Statistical Methods 1	3	
English Elective	3	
Approved Health-Related Elective	3	3
Math/STAT Elective <sup>6</sup>	3	
Natural and Applied Science Elective <sup>4</sup>		3
HSCI 140 Struct & Finan of US Hlthcare <sup>1</sup>		3
HSCI 130 Health Promotion <sup>1</sup>		3
Social and Behavioral Science Elective <sup>5</sup>		3
Year Total:	15	15

Junior	Credits	
	Fall	Spring
HSCI 202 Epi, Pub Hlth & Emerg Disease <sup>1</sup>	3	
NH 120 Health Care Ethics <sup>1</sup>	3	
Natural and Applied Science Elective <sup>4</sup>	3	3
Humanities Elective	3	3
Diversity (D1) Course	3	
HSCI 160 Health Communication <sup>1</sup>		3
Approved Health-Related Elective		3
Free Elective		3
Year Total:	15	15

Senior	Credits	
	Fall	Spring
HSCI 240 Project Planning and Eval. <sup>1</sup>	3	
Approved Health-Related Elective	3	3
Social and Behavioral Science Elective <sup>5</sup>	3	
Free Elective	3-5	3

HSCI 280 Capstone <sup>1,2</sup>		3
HSCI 250 Writing for Health Profess. <sup>1</sup>		3
Year Total:	12-14	12
<b>Total Credits in Sequence: 115-119</b>		

- <sup>1</sup> Core course; HSCI 021 is a pre-requisite for all HSCI core courses.
- <sup>2</sup> HSCI 280 is a project based, service-learning course with hours at a community partner site completed outside of class time.
- <sup>3</sup> Course is assigned based on campus learning community.
- <sup>4</sup> BHSC 034 is a required course that also counts towards Natural and Applied Science Electives and is recommended in the first year (4 credits); one semester of chemistry (4 credits) is also recommended, such as CHEM 023 or CHEM 032.
- <sup>5</sup> PSYS 001 and SOC 001 are recommended.
- <sup>6</sup> To fulfill the MATH requirement, courses must be at the level of MATH 019 or higher.

Total Requirements: Minimum of 120 semester credit hours: 40 credits in core courses in the major, 18 credits in approved health-related courses, 18 credits in natural and applied sciences, 12 credits in social and behavioral sciences, 6 credits in math/statistics (excluding STAT 111 or STAT 141), 6 credits in English (including ENGS 001), 6 credits in humanities, and 12 credits in free electives.

ENGS 001, HSCI 103, HSCI 120, STAT 111 and STAT 141 fulfill University requirements for graduation. Students must select a D1 diversity course.

Course selection should be reviewed by a student's academic advisor.

**Transfer student 2-year curriculum (fall start)**

First Year	Credits	
	Fall	Spring
NH 120 Health Care Ethics	3	
HSCI 021 Introduction to Public Health	3	
STAT 111 QR: Elements of Statistics or STAT 141 QR: Basic Statistical Methods 1	3	
Life and Physical Science Elective (BHSC 034)	4	
Electives	3	
HSCI 120 SU: Read and Eval Rsch in Hlth		3
HSCI 130 Health Promotion		3
HSCI 140 Struct & Finan of US Hlthcare		3
HSCI 160 Health Communication		3

Electives (D1)		3-6
Year Total:	16	15-18
<b>Second Year Credits</b>		
	Fall	Spring
HSCI 103 D2: Fndns of Global Health	3	
HSCI 202 Epi, Pub Hlth & Emerg Disease	3	
HSCI 240 Project Planning and Eval.	3	
Electives	3-6	9-12
HSCI 250 Writing for Health Profess.		3
HSCI 280 Capstone		3
Year Total:	12-15	15-18
<b>Total Credits in Sequence: 58-67</b>		

**TRANSFER student 2-year curriculum (summer start)**

**SUMMER**

HSCI 021 (online)

First Year	Credits	
	Fall	Spring
NH 120 Health Care Ethics	3	
HSCI 103 D2: Fndns of Global Health	3	
STAT 111 QR: Elements of Statistics or STAT 141 QR: Basic Statistical Methods 1	3	
HSCI 120 SU: Read and Eval Rsch in Hlth	3	
Electives (D1)	3-6	
HSCI 130 Health Promotion		3
HSCI 140 Struct & Finan of US Hlthcare		3
HSCI 160 Health Communication		3
Life and Physical Science Elective (BHSC 034)		4
Electives		3-6
Year Total:	15-18	16-19
<b>Second Year Credits</b>		
	Fall	Spring
HSCI 202 Epi, Pub Hlth & Emerg Disease	3	

HSCI 240 Project Planning and Eval.	3	
Electives	6-9	9-12
HSCI 250 Writing for Health Profess.		3
HSCI 280 Capstone		3
Year Total:	12-15	15-18
<b>Total Credits in Sequence:</b>		
		<b>58-70</b>

Minimum of 120 semester credit hours and final GPA of 2.3 or higher required for the major.

Elective credits required will depend on student transcript and transfer credits.

Coursework consists of: 36 credits in core courses; 18 credits in approved health-related courses; 18 credits in life and physical sciences (including BHSC 034, which is required); 12 credits in social and behavioral sciences (in two or more disciplines); 6 credits in math/statistics (excluding STAT 111 and STAT 141); 6 credits in English (including ENGS 001); 6 credits in humanities; and 12 credits in free electives.

University sustainability (SU - 3 credits), diversity fulfillment (D1, D2 - 6 credits), and quantitative reasoning (QR - 3 credits) are required for graduation.