Master of Science in Health Sciences

The Master of Health Science program at Montana State provides students with an opportunity to diversify or further solidify their educational foundation through graduate education that can be applied to any of several career paths in the healthcare field. The program supports the educational endeavors of Montana State graduates, post baccalaureate pre-medical certificate students, and non-certificate students who attend MSU to better prepare for entry into health care-related professional schools. In addition to applying to various graduate programs in the healthcare field, some students choose to pursue a Ph.D. following the program.

For those students applying or reapplying to health professional school, the MS in Health Sciences can be completed during the application 'glide' or "gap" year.

How to Apply

Each application will need the following:

1. Transcripts: From all universities and colleges attended are required. Unofficial transcripts can be uploaded to the online application. Official transcripts must be provided upon admission.

1. Two letters of recommendation. Letters are managed solely via the online application. Letter writers will upload their letters to the application system once you have entered your recommenders' contact information (letters should not be mailed or emailed directly to the department).

1. Specify your track of interest on the drop-down menu within the application portal.

1. Statement of health care interest. Your statement should outline your interests, goals, and reasons for applying to the masters.

1. To be eligible to enter directly into the one-year MS in Health Sciences program, students should have a substantial foundation in the basic sciences including 1 year of introductory biology, 1 year of introductory physics, 1 year of general chemistry, 1 year of organic chemistry, and 1 semester of statistics. A year of math, to include one semester of statistics, is also required.

NOTE: Applications are accepted for Fall and Spring terms:

- Fall: Applications due by August 1 prior to the fall term you are applying to.
- Spring: Applications due by December 15 prior to the spring term you are applying to.

Program Specifics

- Minimum: 9 credits from selected emphasis, 24 course credits, 3 scholarly project credits 575, w/presentation (HMED, MB, or CHTH); 30 credits total.
- Maximum: 9 credits from 400 level, 9 credits from transfer (UM, MSU-B), 6 credits of 575 (HMED, MB, or CHTH).
- Special courses: 491, 492, 588 and 589 credits do not apply. No limit for 595 credits. 592, 594, and 598 credits cannot constitute more than 1/3 of total credits. HMED 540 Clinical Practicum, HMED or CHTH 575 Scholarly project, and HMED 594 Journal Club apply to each Emphasis.
- Course listing serves as an example of potential opportunities. Access to any given course will depend on availability and completion of appropriate pre-requisites.
- With limited course exceptions, this program is offered fully in person and intended (but not required) to be completed in two semesters or one year.

Molecular Medicine

BCH 441	Biochemistry of Macromolecules	3
BCH 442	Metabolic Regulation	3
BCH 444R	Biochemistry & Molecular Biology Methods	3
BCH 524	Mass Spectrometry	3
BCH 543	Proteins	3
BIOB 410	Immunology	3
BIOB 425	Adv Cell & Molecular Biology	3
or BIOB 525	Adv. Cell & Molecular Biology	
BIOB 524	Ethical Practice of Science	3
BIOH 405	Hematology	3
BIOH 422	Genes and Cancer	3
BIOH 511	Advanced Human Appendicular Anatomy	4
BIOH 445	Introduction to Pharmacology	3
BIOH 465R	Gene Expression Lab: From Genes to Proteins to Cells	3
or BIOH 565	Gene Expression Lab: From Genes to Proteins to Cells	
NEUR 425	Sensory Neurophysiology	3
NEUR 435	Cognitive Neuroscience	3
NEUR 455	Molecular Medicine	3
BIOM 400	Medical Microbiology	3
BIOM 425	Toxicology: Science of Poisons	3
or MB 527	Toxicology	
BIOM 431	Medical Bacteriology	3
BIOM 441	Eukaryotic Pathogens	4
BIOO 412	Animal Physiology	3
EMEC 424	Cellular Mechanotransduction	3
HSTR 417	Early Modern Science	3
HSTR 419	Modern Science	3
IMID 501	Exper Immunology/Pathology	3
IMID 505	Gene Regulation in Human Development, Disease, and Immunity	3
MB 505	Host-Associated Microbiomes	4
MB 520	Microbial Physiology	3
MB 525	Advanced Immunology	3
MB 528	Advanced Microbial Genetics	3
MB 530	Virology	3
BIOH 509	Advanced Human Torso Anatomy	4
HMED 575	Professional Paper and Project	1-6

HMED 540	Clinical Practicum	1
HMED 594	Seminar	1

Community Health

Core Focus: Provides a foundation for understanding community health with a focus on advancing public health and promoting the well-being of communities related to health care administration, education, non-profit, government or other community health organizations and settings.

Required courses

HMED 540	Clinical Practicum	1
HMED 575	Professional Paper and Project	1-6

Electives

AC 502	Psychopharmacology and Addictions	3
AC 504	Alcohol and Drug Studies	3
CHTH 405	Caregiving & Aging Families	3
CHTH 430	Mental Health & Social Issues in Aging	3
CHTH 435	Human Response To Stress	3
CHTH 502	Theories and Models in Health	3
HADM 445	Managing Healthcare Organizations	3
HTH 455	The Ethic of Care	3
HMED 594	Seminar	1

Health and Medicine track

Core Focus: Emphasizes anatomy, nutrition, and psychology to provide students a better understanding in preventive medicine for their professional journey in either professional health schools, advanced graduate study, or employment.

Required courses

HMED 540	Clinical Practicum	1
HMED 575	Professional Paper and Project	1-6

One course from one of the discipline areas – 3cr-4cr

Anatomy/Cell Biology

BIOH 509	Advanced Human Torso Anatomy	4
BIOH 511	Advanced Human Appendicular Anatomy	4
BIOH 454	Microanatomy (Histology)	3
BIOB 525	Adv. Cell & Molecular Biology	3

Nutrition/Metabolism

NUTR 421	Macronutrient Metabolism	3
NUTR 422	Micronutrient Metabolism	3
NUTR 526	Nutrition for Fitness/Performance	3

Psychology/Wellbeing

CHTH 435	Human Response To Stress	3
PSYX 477	Science of Psych Well-Being	3

Electives Choose 19-23 credits

HMED 594	Seminar	1
BIOB 420	Evolution	3
BIOB 525	Adv. Cell & Molecular Biology	3
BIOH 509	Advanced Human Torso Anatomy	4
BIOH 511	Advanced Human Appendicular Anatomy	0-4
BIOH 454	Microanatomy (Histology)	3
BIOO 412	Animal Physiology	3
CHTH 430	Mental Health & Social Issues in Aging	3
CHTH 435	Human Response To Stress	3
CHTH 440	Principles of Epidemiology	3
KIN 506	Exercise and Chronic Disease	3
KIN 515	Exercise Performance and Nutrition	3
KIN 545	Graduate Exercise Physiology	3
NEUR 440	Neuroscience of Mental Illness	3
NRSG 602	Adv Physio/Pathophysiology	4
NRSG 603	Advanced Pharmacology I	2
NRSG 610	Health Care Informatics	3
NUTR 411	Nutrition for Sports and Exercise	4
NUTR 421	Macronutrient Metabolism	3
NUTR 422	Micronutrient Metabolism	3
NUTR 511	Exercise Metabolism and Health	3
NUTR 526	Nutrition for Fitness/Performance	3
PSYX 463	Social Cognition	3
PSYX 477	Science of Psych Well-Being	3
PSYX 541	Cognitive Processes	3
PSYX 544	Social Psychology	3
PSYX 546	Social Cognition	3

Students interested in pursuing a career in post-secondary education may apply 12 credits the College Teaching Certificate toward their program.

Substitutions with consultation and approval of program chair