

# MEDICAL SCIENCES (B.S.)

To graduate in this program, students must earn a minimum grade of C in BIOL 115 and BIOL 115L. Required course work includes the university requirements (see regulation J-3 (<https://catalog.uidaho.edu/general-requirements-academic-procedures/j-general-requirements-baccalaureate-degrees/>)) and:

Code	Title	Hours
BIOL 101	Opportunities in Biological Sciences	1
BIOL 151	Intro to Health Professions	1
BIOL 115 & 115L	Cells and the Evolution of Life and Cells and the Evolution of Life Laboratory	4
BIOL 227	Anatomy and Physiology I	4
BIOL 228	Anatomy and Physiology II	4
BIOL 250 & BIOL 255	General Microbiology and General Microbiology Lab	5
BIOL 310 & BIOL 315	Genetics and Genetics Lab	4
BIOL 312 & BIOL 313	Molecular and Cellular Biology and Molecular and Cellular Laboratory	4
BIOL 380	Biochemistry I	4
CHEM 111 & 111L	General Chemistry I and General Chemistry I Laboratory	4
CHEM 112 & 112L	General Chemistry II and General Chemistry II Laboratory	5
CHEM 277 & CHEM 278	Organic Chemistry I and Organic Chemistry I: Lab	4
MATH 170	Calculus I	4
PHIL 103	Introduction to Ethics	3
PSYC 101	Introduction to Psychology	3
SOC 101	Introduction to Sociology	3
STAT 251 or STAT 301	Statistical Methods or Probability and Statistics	3
Select one of the following Physics sequences:		8
PHYS 111 & 111L	General Physics I and General Physics I Lab	
PHYS 112 & 112L	General Physics II and General Physics II Lab	
OR		
PHYS 211 & 211L	Engineering Physics I and Laboratory Physics I	
PHYS 212 & 212L	Engineering Physics II and Laboratory Physics II	
Select 3 credits of Written Communication courses from the following:		3
ENGL 202	Technical Writing I	
ENGL 208	Personal & Exploratory Writing	
ENGL 317	Technical Writing II	
ENGL 318	Science Writing	
ENGL 320	Grant and Proposal Writing	
Select one of the following Senior Capstone courses:		2
BIOL 401	Undergraduate Research (Max 8 credits)	
BIOL 407	Practicum in Biology Laboratory Teaching	

BIOL 408	Human Anatomy and Physiology Laboratory Pedagogy (Max 8 credits)	
BIOL 411	Senior Capstone	
Select one of the following:		3
ANTH/SOC 417	Social Data Analysis	
BIOL 456	Computer Skills for Biologists	
CHEM 302	Principles of Physical Chemistry	
MATH 437	Mathematical Biology	
STAT 431	Statistical Analysis	
Select 3 credits of Critical Thinking courses from the following:		3
ENGL 207	Persuasive Writing	
PHIL 201	Critical Thinking	
PHIL 202	Introduction to Symbolic Logic	
PHIL 417	Philosophy of Biology	
Select 2-3 credits of Leadership and Professional courses from the following:		2-3
BIOL 398	Internship	
INTR 492	College of Science Ambassadors (Max 8 credits)	
INTR 496	Pre-Health Peer Mentors (Max 4 credits)	
MHR 311	Introduction to Management	
PHIL 361	Professional Ethics (Max 6 credits)	
PSYC 414	Traumatic Events: Preparation, Intervention, Evaluation	
Select 6 credits of Psychology courses from the following:		6
PSYC 305	Developmental Psychology	
PSYC 311	Abnormal Psychology	
PSYC 325	Cognitive Psychology	
PSYC 372	Physiological Psychology	
PSYC 470	Introduction to Chemical Addictions	
PSYC 472	Introduction to the Pharmacology of Psychoactive Drugs	
Select 6 credits of Global and Cultural Competence courses from the following:		6
ANTH 327	Belief Systems	
COMM 335	Intercultural Communication	
FN 450	Global Nutrition	
HIST 380	Disease and Culture: History of Western Medicine	
JAMM 340	Media and Diversity	
POLS 385	Political Psychology	
SOC 201	Introduction to Inequity and Justice	
SOC 340	Environmental Sociology and Globalization	
SOC 427	Racial and Ethnic Relations	
Select 9 credits of Biomedical Sciences courses from the following:		9
BIOL 314	Ecology and Population Biology	
BIOL 340	Pathophysiology	
BIOL 421	Advanced Evolution	
BIOL 428	Microscopic Anatomy	
BIOL 432	Immunology	
BIOL 433	Pathogenic Microbiology	
BIOL 444	Genomics	
BIOL 447	Virology	
BIOL 454	Biochemistry II	

BIOL 461	Neurobiology
BIOL 474	Developmental Biology
BIOL 482	Protein Structure and Function
BIOL 487	Cellular and Molecular Basis of Disease
CHEM 372	Organic Chemistry II
CHEM 472	Medicinal Chemistry
ENT 411	Veterinary & Medical Entomology
ENT 476	Medical Parasitology
FN 415	Advanced Nutrition
ESHS 450	Critical Health Issues
ESHS 451	Psychosocial Determinants of Health
PLSC 440	Advanced Laboratory Techniques
PSYC 473	Blood and Airborne Pathogens: HIV/STDs/ Hepatitis/TB

**Total Hours** **102-103**

**Courses to total 120 credits for this degree**

## Four-Year Plan

Fall Term 1	Hours	
BIOL 101	Opportunities in Biological Sciences	1
BIOL 151	Intro to Health Professions	1
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
ENGL 101	Writing and Rhetoric I	3
MATH 170	Calculus I	4
PSYC 101	Introduction to Psychology	3
<b>Hours</b>		<b>16</b>

Spring Term 1	Hours	
BIOL 115	Cells and the Evolution of Life	3
BIOL 115L	Cells and the Evolution of Life Laboratory	1
CHEM 112	General Chemistry II	4
CHEM 112L	General Chemistry II Laboratory	1
ENGL 102	Writing and Rhetoric II	3
STAT 251 OR STAT 301		3
<b>Hours</b>		<b>15</b>

Fall Term 2	Hours	
BIOL 227	Anatomy and Physiology I	4
CHEM 277	Organic Chemistry I	3
CHEM 278	Organic Chemistry I: Lab	1
BIOL 250	General Microbiology	3
BIOL 255	General Microbiology Lab	2
SOC 101	Introduction to Sociology	3
<b>Hours</b>		<b>16</b>

Spring Term 2	Hours	
BIOL 228	Anatomy and Physiology II	4
PHIL 103	Introduction to Ethics	3
Oral Communication Course		3
ENGL 202 OR ENGL 208 OR ENGL 317 OR ENGL 318 OR ENGL 320		3
PSYC 305 OR PSYC 311 OR PSYC 325 OR PSYC 372 OR PSYC 470 OR PSYC 472		3
<b>Hours</b>		<b>16</b>

Fall Term 3	Hours	
BIOL 380	Biochemistry I	4
BIOL 310	Genetics	3
BIOL 315	Genetics Lab	1
ENGL 207 OR PHIL 201 OR PHIL 202 OR PHIL 417		3
(PHYS 111 AND PHYS 111L) OR (PHYS 211 AND PHYS 211L)		4
<b>Hours</b>		<b>15</b>

Spring Term 3	Hours	
BIOL 312	Molecular and Cellular Biology	3
BIOL 313	Molecular and Cellular Laboratory	1
Elective Course		1
(PHYS 112 AND PHYS 112L) OR (PHYS 212 AND PHYS 212L)		4
ANTH 327 OR COMM 335 OR FN 450 OR HIST 380 OR JAMM 340 OR POLS 385 OR SOC 201 OR SOC 340		3
BIOL 398 OR INTR 492 OR INTR 496 OR MHR 311 OR PHIL 361 OR PSYC 414		2
<b>Hours</b>		<b>14</b>

Fall Term 4	Hours	
Humanistic and Artistic Ways of Knowing Course		3
BIOL 314 OR BIOL 421 OR BIOL 428 OR BIOL 432 OR BIOL 433 OR BIOL 444 OR BIOL 447 OR BIOL 454 OR BIOL 461 OR BIOL 474 OR BIOL 482 OR BIOL 487 OR CHEM 372 OR ENT 411 OR ENT 476 OR FN 415 OR H&S 450 OR H&S 451		3
BIOL 314 OR BIOL 421 OR BIOL 428 OR BIOL 432 OR BIOL 433 OR BIOL 444 OR BIOL 447 OR BIOL 454 OR BIOL 461 OR BIOL 474 OR BIOL 482 OR BIOL 487 OR CHEM 372 OR ENT 411 OR ENT 476 OR FN 415 OR H&S 450 OR H&S 451		3
ANTH 417 OR BIOL 456 OR CHEM 302 OR MATH 437 OR STAT 431		3
PSYC 305 OR PSYC 311 OR PSYC 325 OR PSYC 372 OR PSYC 470 OR PSYC 472		3
<b>Hours</b>		<b>15</b>

Spring Term 4	Hours	
International Course		3
Elective Course		3
BIOL 401 OR BIOL 407 OR BIOL 408 OR BIOL 411		2
BIOL 314 OR BIOL 421 OR BIOL 428 OR BIOL 432 OR BIOL 433 OR BIOL 444 OR BIOL 447 OR BIOL 454 OR BIOL 461 OR BIOL 474 OR BIOL 482 OR BIOL 487 OR CHEM 372 OR CHEM 472 OR ENT 411 OR ENT 476 OR FN 415 OR H&S 450 OR H&S 451		3
ANTH 327 OR COMM 335 OR FN 450 OR HIST 380 OR JAMM 340 OR POLS 385 OR SOC 201 OR SOC 340		3
<b>Hours</b>		<b>14</b>
<b>Total Hours</b>		<b>121</b>

## Five-Year Plan

Fall Term 1	Hours	
BIOL 101	Opportunities in Biological Sciences	1
BIOL 151	Intro to Health Professions	1
MATH 143	College Algebra	3
ENGL 101	Writing and Rhetoric I	3
MATH 144	Precalculus II: Trigonometry	1
PSYC 101	Introduction to Psychology	3
Oral Communication Course		3
<b>Hours</b>		<b>15</b>

Spring Term 1	Hours	
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
ENGL 102	Writing and Rhetoric II	3
MATH 170	Calculus I	4
1 credit Elective Course		1
<b>Hours</b>		<b>12</b>

Fall Term 2	Hours	
BIOL 115	Cells and the Evolution of Life	3
BIOL 115L	Cells and the Evolution of Life Laboratory	1
PHIL 103	Introduction to Ethics	3
CHEM 112	General Chemistry II	4
CHEM 112L	General Chemistry II Laboratory	1
<b>Hours</b>		<b>12</b>

Spring Term 2	Hours	
CHEM 277	Organic Chemistry I	3
CHEM 278	Organic Chemistry I: Lab	1
Elective Course		2
ENGL 202 OR ENGL 208 OR ENGL 317 OR ENGL 318 OR ENGL 320		3

STAT 251 OR STAT 301		3
<b>Hours</b>		<b>12</b>
<b>Fall Term 3</b>		
BIOL 227	Anatomy and Physiology I	4
BIOL 250	General Microbiology	3
BIOL 255	General Microbiology Lab	2
(PHYS 111 AND PHYS 111L) OR (PHYS 211 AND PHYS 211L)		4
<b>Hours</b>		<b>13</b>
<b>Spring Term 3</b>		
BIOL 228	Anatomy and Physiology II	4
Psychology, Major Elective Course		3
Critical Thinking, Major Elective Course		3
Humanistic and Artistic Ways of Knowing Course		3
<b>Hours</b>		<b>13</b>
<b>Fall Term 4</b>		
BIOL 380	Biochemistry I	4
BIOL 310	Genetics	3
BIOL 315	Genetics Lab	1
(PHYS 111 AND PHYS 111L) OR (PHYS 211 AND PHYS 211L)		4
<b>Hours</b>		<b>12</b>
<b>Spring Term 4</b>		
BIOL 312	Molecular and Cellular Biology	3
BIOL 313	Molecular and Cellular Laboratory	1
Global and Cultural Competence Elective, Major Elective Course		3
Leadership & Prof., 2- Major Elective Course		3
(PHYS 112 AND PHYS 112L) OR (PHYS 212 AND PHYS 212L)		4
<b>Hours</b>		<b>14</b>
<b>Fall Term 5</b>		
Biomedical, Major Elective Course		3
Biomedical, Major Elective Course		3
Analysis/Comp/Math Skills, Major Elective Course		3
Psychology, Major Elective Course		3
<b>Hours</b>		<b>12</b>
<b>Spring Term 5</b>		
Biomedical, Major Elective Course		3
Global and Cultural Competence Elective, Major Elective Course		3
International Course		3
1 credit Elective Course		1
BIOL 401 OR BIOL 407 OR BIOL 408 OR BIOL 411		2
<b>Hours</b>		<b>12</b>
<b>Total Hours</b>		<b>127</b>

The degree map is a guide for the timely completion of your curricular requirements. Your academic advisor or department may be contacted for assistance in interpreting this map. This map is not reflective of your academic history or transcript and it is not official notification of completion of degree or certificate requirements. Please contact the Registrar's Office regarding your official degree/certificate completion status.

1. Learn and integrate: Through independent learning and collaborative study, students will attain, use, and develop knowledge in biology, chemistry, and related disciplines with specialization in biology. Students will be able to integrate biological and chemical information to understand living systems from the molecular to population level with relevance to biomedical issues.
2. Think and create: Students will be able to use multiple thinking strategies to examine issues in biology, including the proposal of biological hypotheses and the design and analysis of biological experiments capable of testing hypotheses. Students will be able to

apply biological knowledge to real world challenges, such as those that may be encountered in medicine.

3. Communicate: Students will be able to acquire and analyze biological information from the scientific literature. Students will be able to communicate biological information via verbal, written, and other non-verbal methods such as appropriate graphics.
4. Clarify purpose and perspective: The program will allow students to explore medical sciences and biology primarily in the context of a career in the biomedical sciences, as well as to apply a biomedical perspective to novel issues or problems within biology, medicine or other disciplines.
5. Practice citizenship: Students will understand and accept their roles as educated biologists and scientists in society. Students will be able to communicate with others, including non-scientists, from the special perspective of an educated biologist on issues related to medicine and other topics.