

BIOMEDICAL SCIENCES (BS)

Degree Requirements

Code	Title	Hours
General Education Requirements		
Select General Education Requirements (p. 1)		56-58
Major Requirements		
<i>Biomedical Sciences Core</i>		
A. Complete the following:		
BMD 201	Seminars in Biomedical Science	1
BMD 321	Biochemistry I-Molecular Biol	3
BMD 322	Biochemistry II-Metabolism	3
BMD 323	Biochemistry Laboratory	2
B. Complete the following: see footnote table below (p. 1) ¹		
BMD 251	Human Anatomy & Physiology I	4-6
or BMD 311 & BMD 334	Human Anatomy and Human Physiology I	
C. Complete the following:		
BMD 210 & 210L	Microbiology in Healthcare and Microbiology in Healthcare Lab	4
or BMD 402	Medical Microbiology	
<i>Electives</i>		
A. Select 16-17 hours from the following:		16-17
BMD 210	Microbiology in Healthcare	
BMD 210L	Microbiology in Healthcare Lab	
BMD 212	Introduction to Food Science	
BMD 212L	Intro to Food Science Lab	
BMD 251	Human Anatomy & Physiology I	
BMD 252	Human Anatomy & Physiology II	
BMD 290	Sp Top - H -	
BMD 311	Human Anatomy	
BMD 331	Biotechnology Skills I	
BMD 334	Human Physiology I	
BMD 335	Human Physiology II	
BMD 336	Physiology Lab - W	
BMD 350	Human Genetics and Genomics	
BMD 351	Global Health-W	
BMD 390	Sp Top -	
BMD 401	Immunology	
BMD 402	Medical Microbiology	
BMD 403	Molecular Basis of Cancer	
BMD 410	Pathophysiology	
BMD 420	Pharmacology	
BMD 430	Neurosciences	
BMD 441	Epidemiology	
BMD 450	Introduction to Research	
BMD 451	Biotechnology Skills II	
BMD 490	Special Topics	
BMD 493	Ethical Issues in Health - W	
BMD 494	Directed Research Studies	
BMD 499	Honors Research Thesis - W - H	
BLY 301	Cell Biology	

BLY 411	Developmental Biology	
BLY 459	General Parasitology	
EMS 210	Medical Terminology	
<i>Concentration Options</i>		
Select one of the following options:		14-15
A. Pre-Health Professional (PHP) Option		
BMD 335	Human Physiology II	
BMD 336	Physiology Lab - W	
BMD 350	Human Genetics and Genomics	
BMD 401	Immunology	
BMD 4XX		
B. Public and Global Health (PGH) Option		
IS 100	Global Issues	
KIN 263	Intro to Nutrition	
BMD 351	Global Health-W	
BMD 441	Epidemiology	
HS 475	Public Health	
C. Biotechnology (BT) Option		
BMD 331	Biotechnology Skills I	
BMD 350	Human Genetics and Genomics	
BMD 451	Biotechnology Skills II	
BLY 445	Computational Genetics-W	
Minor Requirements		
A minor is not required for this degree program		0
Total Hours		103-109

Footnote

¹ Students enrolled in the Pre-Health Professional (PHP) concentration are required to complete BMD 311 and BMD 334.

General Education Requirements

Code	Title	Hours
Area I - Written Composition		
A. Complete the following:		
EH 101	English Composition I	3
B. Complete the following:		
EH 102	English Composition II	3
Area II - Humanities & Fine Arts		
A. Complete the following:		
CA 110	Public Speaking	3
B. Select one of the following:		
ARH 100	Survey of Art	
ARH 103	Art History I	
ARH 123	Art History II	
ARS 101	Art Appreciation	
DRA 110	Introduction to Theatre	
MUL 101	Introduction to Music	
C. Select one of the following: see footnote table below (p. 3) ¹		
EH 215	Brit Lit before 1785	
EH 216	Brit Lit after 1785	
EH 225	Am Lit before 1865	
EH 226	Am Lit after 1865	

EH 235	World Lit before 1650
EH 236	World Lit after 1650
D. Select three hours from the following:	3
AFR 101	Intro to African Amer Studies
EH 215	Brit Lit before 1785
EH 216	Brit Lit after 1785
EH 225	Am Lit before 1865
EH 226	Am Lit after 1865
EH 235	World Lit before 1650
EH 236	World Lit after 1650
LG 101	Introductory Latin I
LG 102	Introductory Latin II
LG 111	Introductory French I
LG 112	Introductory French II
LG 121	Introductory Chinese I
LG 122	Introductory Chinese II
LG 131	Introductory Spanish I
LG 132	Introductory Spanish II
LG 141	Intro Classical Greek I
LG 142	Intro Classical Greek II
LG 151	Introductory German I
LG 152	Introductory German II
LG 153	Accelerated Intro German
LG 171	Introductory Russian I
LG 172	Introductory Russian II
LG 173	Accelerated Intro Russian
LG 201	Intermediate Latin I
LG 202	Intermediate Latin II
LG 211	Intermediate French I
LG 212	Intermediate French II
LG 213	Accelerated Inter French - H
LG 221	Intermediate Chinese I
LG 222	Intermediate Chinese II
LG 231	Intermediate Spanish I
LG 232	Intermediate Spanish II
LG 234	Inter Spanish Accel -H
LG 241	Interm Classical Greek I
LG 242	Interm Classical Greek II
LG 251	Intermediate German I
LG 252	Intermediate German II
LG 271	Intermediate Russian I
LG 272	Intermediate Russian II
LG 273	Intensive Second Year Russian
LGS 101	Introductory Japanese I
LGS 102	Introductory Japanese II
LGS 106	Introductory Arabic I
LGS 107	Introductory Arabic II
LGS 110	Intro American Sign Language I
LGS 111	Intro American Sign Lang II
LGS 171	Introductory Korean I
LGS 172	Introductory Korean II
LGS 201	Intermediate Japanese I

LGS 202	Intermediate Japanese II	
LGS 206	Intermediate Arabic I	
LGS 207	Intermediate Arabic II	
LGS 210	Intermediate ASL I	
LGS 211	Intermediate ASL II	
PHL 110	Introduction to Philosophy	
PHL 120	Critical Thinking	
PHL 121	Introduction to Logic	
PHL 131	Introduction to Ethics	
PHL 220	Medical Reasoning	
PHL 231	Social Ethics	
PHL 240	Western Philosophy: Classical	
REL 100	Intro to the Study of Religion	
REL 200	Old Testament/Hebrew Bible	
REL 201	Survey of the New Testament	
Area III – Natural Sciences & Mathematics		
A. Select 3-4 hours from the following:	3-4	
MA 113	Precalculus Trigonometry	
MA 115	Precal Algebra-Trigonometry	
MA 120	Calculus and Its Applications	
MA 125	Calculus I	
MA 126	Calculus II	
MA 227	Calculus III	
MA 237	Linear Algebra I	
MA 238	Differential Equations I	
B. Complete the following:		
CH 131 & 131L	General Chemistry I and General Chemistry I Lab	4
CH 132 & 132L	General Chemistry II and General Chemistry II Lab	4
Area IV – History, Social & Behavioral Sciences see footnote table below (p. 3) ¹		
A. Select one of the following:		3
HY 101	HY of Western Civilization I	
HY 102	HY of Western Civilization II	
HY 121	World Civilization I	
HY 122	World Civilization II	
HY 135	US History to 1877	
HY 136	US History since 1877	
B. Select nine hours from the following:		9
AN 100	Intro to Cultural Anthropology	
AN 101	Intro Archaeology-Bio Anthro	
CA 100	Intro to Communication	
CA 211	Interpersonal Comm	
ECO 215	Prin of Microeconomics	
ECO 216	Prin of Macroeconomics	
GEO 114	People, Places, Environment	
GEO 115	World Regional Geography	
GS 101	Intro to Gender Studies	
HY 101	HY of Western Civilization I	
HY 102	HY of Western Civilization II	
HY 135	US History to 1877	
HY 136	US History since 1877	

IS 100	Global Issues	
IST 201	Seasons of Life	
NAS 101	Intro Native American Studies	
PSC 130	Intro to US Government	
PSY 120	Introduction to Psychology (see footnote table below (p. 3)) ²	
PSY 250	Life Span Development (see footnote table below (p. 3)) ²	
SY 109	Introductory Sociology (see footnote table below (p. 3)) ²	
SY 112	Social Problems (see footnote table below (p. 3)) ²	

Area V - Supporting Required Courses**A. Complete the following:**

BLY 121 & 121L	General Biology I and General Biology I Lab	4
CH 201 & 201L	Organic Chemistry I and Organic Chemistry I Lab	4

B. Select one of the following:

ST 210	Stat Reason and Application	3
ST 305	Applied Stat Health Sciences	

C. Complete the following: see footnote table below (p. 3)³

AN 121 & 121L	Biological Anthropology and Biological Anthropology Lab	4-5
or PH 114 & 114L	Physics with Algebra-Trig I and Alg-Trig Based Physics I Lab	

Total Hours **56-58**

Footnote

¹ Students must complete a 6 credit hour sequence either in literature (Area II – EH 215 & EH 216, EH 225 & EH 226, or EH 235 & EH 236) or history (Area IV – HY 101 & HY 102, HY 121 & HY 122, or HY 135 & HY 136).

² Recommended

³ Only students in the Public and Global Health (PGH) Concentration should enroll in AN 121 / AN 121L.

Notes:

- A maximum of 3 hours of BMD 450, BMD 494 or BMD 499 can count toward major electives
- Students interested in Health Professions (e.g., dental, medicine, pharmacy, etc.) and/or Ph.D. programs in Basic Medical Sciences may also need to enroll in General Biology II, Physics II, Organic Chemistry II and/or Calculus.
- All undergraduates must complete two designated writing credit (W) courses, at least one of which must be in the student's major.
- Additional classes may be needed to reach the 120 total credit hours required for graduation.
- General electives can be chosen from any courses, except BMD, to reach the 120 total credits required for graduation.

Graduation Plan

(120 Hours)

Course	Title	Hours
First Year		
Fall		
EH 101	English Composition I	3
BLY 121 & 121L	General Biology I and General Biology I Lab	4
CH 131 & 131L	General Chemistry I and General Chemistry I Lab	4
PSY 120	Introduction to Psychology (or Area IV B. Social Science Elective)	3
BMD 201	Seminars in Biomedical Science	1
		Hours
		15
Spring		
EH 102	English Composition II	3
BLY 122 & 122L	General Biology II and General Biology II Laboratory ²	4
CH 132 & 132L	General Chemistry II and General Chemistry II Lab	4
Math	Area III, A ¹	3-4
Milestone Notes		
MA 113 or MA 115	Precalculus Trigonometry or Precal Algebra-Trigonometry	
		Hours
		14-15
Second Year		
Fall		
CH 201 & 201L	Organic Chemistry I and Organic Chemistry I Lab	4
PH 114 & 114L	Physics with Algebra-Trig I or Calculus-Based Physics I and Calculus-Based Physics I Lab	4-5
or PH 201 and PH 201L		
Fine Arts Elective	Area II, B ¹	3
History	Area IV, A ¹	3
Milestone Notes		
CH 132 & 132L	General Chemistry II and General Chemistry II Lab (with a grade of C or better)	
BLY 121 & 121L	General Biology I and General Biology I Lab (with a grade of C or better)	
		Hours
		14-15
Spring		
CH 202 & 202L	Organic Chemistry II and Organic Chemistry II Lab ²	4
PH 115 & 115L	Physics with Algebra -Trig II ² or Calculus-Based Physics II and Calculus-Based Physics II Lab	4-5
or PH 202 and PH 202L		
ST 210 or ST 305	Stat Reason and Application or Applied Stat Health Sciences	3
CA 110	Public Speaking	3
Milestone Notes		
CH 132 & 132L	General Chemistry II and General Chemistry II Lab (with a grade of C or better)	
		Hours
		14-15
Third Year		
Fall		
BMD 311	Human Anatomy	3
BMD 321	Biochemistry I-Molecular Biol	3
BMD 334	Human Physiology I	3
History	Area IV, B (History #2 for Sequence or Social Science Elective) ¹	3
Literature	Area II, C ¹	3
Milestone Notes		
BLY 122 & 122L	General Biology II and General Biology II Laboratory (with a grade of C or better)	

CH 201 & 201L	Organic Chemistry I and Organic Chemistry I Lab (with a grade of C or better)	
PH 114	Physics with Algebra-Trig I (with a grade of C or better)	
Hours		15
Spring		
BMD 322	Biochemistry II-Metabolism	3
BMD 323	Biochemistry Laboratory	2
BMD 335	Human Physiology II	3
BMD 336	Physiology Lab - W	2
BMD Elective	Major Elective ¹	3
Literature	Area II, D. (Literature #2 for Sequence or Humanities Elective) ¹	3
Hours		16
Fourth Year		
Fall		
BMD 401	Immunology	3
BMD Electives	Major Electives ¹	4
BMD 430	Neurosciences	4
BMD 493	Ethical Issues in Health - W	3
Social Science	Area IV, B. Social Science Elective ¹	3
Milestone Notes		
BMD 311	Human Anatomy (with a grade of C or better)	
Hours		17
Spring		
BMD 402	Medical Microbiology	4
BMD Electives	Major Electives ¹	6
BMD 350	Human Genetics and Genomics	3
General Elective	Elective ¹	3
Hours		16
Total Hours		121-124

¹ See General Education Requirements

² Not required, recommended for students pursuing Health Professions Programs or Graduate School

Notes

- (W) Writing-Intensive Course

Major Milestones

Effective for fall, 2016 Major Milestones are used in all concentrations of the Biomedical Sciences major to help students stay on track for timely graduation. Each regular semester in the Biomedical Sciences major is a tracking term. In order to remain on track, students must complete the milestone requirements for each tracking term. These requirements are viewable in the Milestone Notes above.

Major milestone requirements apply only to full-time, degree-seeking students who first entered Fall 2016 or later. Milestone requirements do not apply to transfer students in the Biomedical Sciences program.

The sample academic plan is designed to ensure graduation in the Biomedical Sciences major in four years. Several academic plans are available – consult with your academic advisor for the plan that is the best fit for you. For specific course requirements, refer to the program requirements above and the General Education requirement of the College of Allied Health Professions.