



*Four-Year Degree Plan: Bachelor of Science in Biochemistry*

Catalog Year: 2023-2024

**COLLEGE OF  
LETTERS,  
ARTS AND  
SCIENCES**

This is a degree plan for completing a Bachelor of Science in Biochemistry in eight semesters. This document is meant to be used as a guide for planning purposes only and is intended for use in consultation with a Professional Academic or Faculty advisor. **Students are responsible for consulting advisors and the [MSU Denver catalog](#) for degree requirements.**

Year One					
Semester 1			Semester 2		
Fall		Credits	Spring		Credits
CHE 1800	General Chemistry I*	4	CHE 1810	General Chemistry II	4
CHE 1801	General Chemistry Lab	1	CHE 1811	General Chemistry II Lab	1
ENG 1010	Composing Arguments	3	MTH 1410	Calculus I*	4
BIO 1080	General Biology I	3	ENG 1020	Research and Argument Writing	3
BIO 1090	General Biology Laboratory I	1	BIO 1081	General Biology II	3
--	Oral Communication	3	BIO 1091	General Biology Laboratory II	1
--	Elective	1			
<b>Semester 1 Total</b>		<b>16</b>	<b>Semester 2 Total</b>		<b>16</b>

Year Two					
Semester 3			Semester 4		
Fall		Credits	Spring		Credits
CHE 3000	Analytical Chemistry	3	CHE 3100	Organic Chemistry I	4
CHE 3010	Analytical Chemistry Lab	2	CHE 3120	Organic Chemistry I Lab	1
MTH 2410	Calculus II	4	BIO 3600	General Genetics	4
--	General Studies	3	--	General Studies	6
--	Free Elective	3			
<b>Semester 3 Total</b>		<b>15</b>	<b>Semester 4 Total</b>		<b>15</b>

Year Three					
Semester 5			Semester 6		
Fall		Credits	Spring		Credits
CHE 3110	Organic Chemistry II	3	CHE 4310	Biochemistry I	4
CHE 3130	Organic Chemistry II Lab	2	--	General Studies	6
PHY 2311	General Physics I and	4	PHY 2331	General Physics II and	4
PHY 2321	General Physics I Lab	1	PHY 2341	General Physics II Lab	1
	<b>OR</b>			<b>OR</b>	
PHY 2010	College Physics 1 and	4	PHY 2020	College Physics II and	4
PHY 2030	College Physics 1 Lab	1	PHY 2040	College Physics II Lab	1
--	CHE Electives	3			
<b>Semester 5 Total</b>		<b>13</b>	<b>Semester 6 Total</b>		<b>15</b>

Year Four					
Semester 7			Semester 8		
Fall		Credits	Spring		Credits
BIO 3050	Cell Biology	4	CHE 3190	Survey of Physical Chemistry	4
CHE 4320	Biochemistry II	4	CHE 3200	Survey of Physical Chemistry Lab	1
CHE 4350	Biochemistry Laboratory	2	CHE 4390	Adv Biochemistry Lab	3
--	General Studies	3	--	General Studies and Electives	6
--	Free Elective	3			
<b>Semester 7 Total</b>		<b>16</b>	<b>Semester 8 Total</b>		<b>14</b>

**Program Total: 120**

\*This plan assumes math prerequisites have been met.

\*\*MTH 1410 counts as a Quantitative Literacy General Studies course

\*\*Biology and Physics courses count as Natural and Physical Science General Studies courses.

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### Detailed Course Listing

Core Requirements		
CHE 1800	General Chemistry I	4
CHE 1801	General Chemistry I Laboratory	1
CHE 1810	General Chemistry II	4
CHE 1811	General Chemistry II Laboratory	1
CHE 3000	Analytical Chemistry	3
CHE 3010	Analytical Chemistry Laboratory	2
CHE 3100	Organic Chemistry I	4
CHE 3110	Organic Chemistry II	3
CHE 3120	Organic Chemistry I Laboratory	1
CHE 3130	Organic Chemistry II Laboratory	2
CHE 3190	Survey of Physical Chemistry	4
CHE 3200	Survey of Physical Chemistry Lab	1
CHE 4310	Biochemistry I	4
CHE 4320	Biochemistry II	4
CHE 4350	Biochemistry Laboratory	2
<b>Core Requirements Total</b>		<b>40</b>

Electives, Ancillary, & Additional Courses**		
BIO 1080	General Biology I	3
BIO 1090	General Biology Laboratory II	1
BIO 1081	General Biology II	3
BIO 1091	General Biology laboratory II	1
BIO 3600	General Genetics	4
BIO 3050	Cell Biology	4
MTH 1410	Calculus I	4
MTH 2410	Calculus II	4
CHE 4390	Adv Biochemistry Lab	3
PHY 2010	College Physics I	4
PHY 2020	College Physics II	4
PHY 2030	College Physics I Laboratory	1
PHY 2040	College Physics II Laboratory	1
	<b>OR</b>	
PHY 2311	General Physics I	4
PHY 2321	General Physics I Laboratory	1
PHY 2331	General Physics II	4
PHY 2341	General Physics II Laboratory	1
<b>Electives, Ancillary and Additional Total</b>		<b>37</b>

## Program Totals

General Studies Requirements	33
Core Requirements	40
Elective and Ancillary**	27
General Electives as Needed	20
<b>Total to Graduate</b>	<b>120</b>



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