



## Undergraduate Degree Map for Completion in Four Years

<b>College:</b>	College of Science, Engineering & Technology <input type="button" value="v"/>
<b>Department:</b>	Chemistry & Geology <input type="button" value="v"/>
<b>Name of Program:</b>	BIOCHEMISTRY <input type="button" value="v"/>
<b>Degree Designation:</b>	BS <input type="button" value="v"/>
<b>Emphasis/Concentration:</b>	<input type="text"/> <input type="button" value="v"/>
<b>Option:</b>	<input type="text"/>
<b>Version:</b>	1 <input type="button" value="v"/>
<b>Version Explanation:</b>	<input type="text"/>
<b>Type of Program:</b>	Broad Major <input type="button" value="v"/>
<b>Minor Required:</b>	No <input type="button" value="v"/>
<b>Specific Minor (if required):</b>	<input type="text"/>

### Program Description:

Biochemistry is a discipline which encompasses both biology and chemistry. This rapidly expanding science focuses on the study of the molecular aspects of living organisms. The tools and concepts of biochemistry are important as a foundation for careers in many areas of research and in medicine. Students considering a BA or BS degree in biochemistry should consult a biochemistry advisor for specific information regarding the program. This major is appropriate for students in pre-professional programs such as pre-dental, pre-medical, and pre-pharmacy programs.

### Admission Requirements:

Admission to a program is necessary before a student can enroll in 300- and 400-level courses. To be eligible for admission to the biochemistry program a student must have declared biochemistry as a first major, completed 32 credits, including BIOL 105 and BIOL 106 as well as CHEM 201 and CHEM 202 and achieved a minimum grade point average of 2.0. Students should also have an assigned biochemistry advisor with whom they have discussed the program. Applications for admission to the biochemistry program are available in the department office.

### Advising:

You are expected to meet with your advisor on a regular basis to ensure courses are taken in an order that will lead to successful completion of the degree.

College of Science, Engineering & Technology Advising Center  
 Ken Adams, Student Relations Coordinator  
 Trafton C-125  
 507-389-1521

A complete listing of program faculty, policies, and course descriptions is available in the undergraduate bulletin.

## TERM 1 - FALL

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA $\geq$ 2.0 Course Completion Rate $\geq$ 67% Completion of $\geq$ 15 credit hours
CHEM	201	GENERAL CHEMISTRY I	5	C OR BETTER
MATH	121	CALCULUS I	4	C OR BETTER
ENG	101	COMPOSITION	4	
		GENERAL EDUCATION COURSE	3	OVERALL GPA IN REQUIRED COURSES $\geq$ 2.2

 Insert item
**Term 1 Notes:**


## TERM 2 - SPRING

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA $\geq$ 2.0 Course Completion Rate $\geq$ 67% Completion of $\geq$ 30 credit hours Advance to Sophomore status
CHEM	202	GENERAL CHEMISTRY II	5	C OR BETTER
BIOL	105	GENERAL BIOLOGY I	4	
MATH OR STAT	122 OR 154	CALCULUS II OR ELEMENTARY STATISTICS	4 OR 3	
		GENERAL EDUCATION COURSE	3	OVERALL GPA IN REQUIRED COURSES $\geq$ 2.2

 Insert item
**Term 2 Notes:**


## TERM 3 - FALL

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA $\geq$ 2.0 Course Completion Rate $\geq$ 67%
CHEM	305	ANALYTICAL CHEMISTRY	4	C OR BETTER
CHEM	322	ORGANIC CHEMISTRY I	4	C OR BETTER
BIOL	106	GENERAL BIOLOGY II	4	C OR BETTER
		GENERAL EDUCATION COURSE	3	APPLY FOR ADMISSION TO COLLEGE
				OVERALL GPA IN REQUIRED COURSES $\geq$ 2.2

 Insert item
**Term 3 Notes:**

## TERM 4 - SPRING

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA $\geq$ 2.0 Course Completion Rate $\geq$ 67% Completion of $\geq$ 60 credit hours Advance to Junior status
CHEM	324	ORGANIC CHEMISTRY II	3	C OR BETTER
CHEM	325	ORGANIC CHEMISTRY II LABORATORY	1	
CHEM	340	QUANTITATIVE SKILLS FOR CHEMISTRY AND BIOCHEMISTRY I	1	C OR BETTER
BIOL	211	GENETICS	4	
BIOL	270	MICROBIOLOGY	4	
		GENERAL ELECTIVE COURSE	3	OVERALL GPA IN REQUIRED COURSES $\geq$ 2.2

Insert item

**Term 4 Notes:**


## TERM 5 - FALL

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA $\geq$ 2.0 Course Completion Rate $\geq$ 67% Apply for Graduation
CHEM	460	BIOCHEMISTRY I	3	OVERALL GPA IN REQUIRED COURSES $\geq$ 2.2
CHEM	465	BIOCHEMICAL TECHNIQUES I	1	
CHEM	474	CHROMATOGRAPHY	2	
PHYS OR PHYS	211 OR 221	PRINCIPLES OF PHYSICS I OR GENERAL PHYSICS I	4 OR 4	C OR BETTER
		GENERAL EDUCATION COURSE	1-4	
		GENERAL EDUCATION COURSE	1-4	
		GENERAL EDUCATION COURSE	1-4	
		GENERAL EDUCATION COURSE	1-4	

Insert item

**Term 5 Notes:**


## TERM 6 - SPRING

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA $\geq$ 2.0 Course Completion Rate $\geq$ 67% Completion of $\geq$ 90 credit hours Advance to Senior status
CHEM	341	QUANTITATIVE SKILLS FOR CHEMISTRY AND BIOCHEMISTRY II	1	C OR BETTER

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA $\geq$ 2.0 Course Completion Rate $\geq$ 67% Completion of $\geq$ 90 credit hours Advance to Senior status
CHEM	461	BIOCHEMISTRY II	3	
CHEM	466W	BIOCHEMICAL TECHNIQUES II	2	
PHYS OR PHYS AND PHYS	212 OR 223 AND 233	PRINCIPLES OF PHYSICS II OR GENERAL PHYSICS III AND GENERAL PHYSICS III LABORATORY	4 3 1	
		GENERAL EDUCATION COURSE	2-4	
		GENERAL EDUCATION COURSE	2-4	
		GENERAL EDUCATION COURSE	2-4	OVERALL GPA IN REQUIRED COURSE S $\geq$ 2.2

Insert item

**Term 6 Notes:**

MINIMUM GENERAL EDUCATION COURSES CREDITS 6

### TERM 7 - FALL

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA $\geq$ 2.0 Course Completion Rate $\geq$ 67%
CHEM	440	PHYSICAL CHEMISTRY I	3	OVERALL GPA IN REQUIRED COURSE S $\geq$ 2.2
CHEM	450	PHYSICAL CHEMISTRY I LABORATORY	1	
CHEM	498	UNDERGRADUATE RESEARCH	1	
		UPPER-DIVISION COURSE BIOL OR CHEM	1-4	
		UPPER-DIVISION COURSE BIOL OR CHEM	1-4	
		UPPER-DIVISION COURSE BIOL OR CHEM	1-4	
		UPPER-DIVISION COURSE BIOL OR CHEM	1-4	
		GENERAL EDUCATION COURSE	2-4	
		GENERAL EDUCATION COURSE	2-4	

Insert item

**Term 7 Notes:**

UPPER-DIVISION COURSES BIOL OR CHEM MINIMUM CREDITS 4  
GENERAL EDUCATION COURSES MINIMUM CREDITS 4

### TERM 8 - SPRING

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA $\geq$ 2.0 Course Completion Rate $\geq$ 67%
CHEM	494	BIOCHEMISTRY CAPSTONE EXPERIENCE	1	OVERALL GPA IN REQUIRED COURSES $\geq$ 2.2
CHEM	498	UNDERGRADUATE RESEARCH	1	

<b>Designator:</b>	<b>Course:</b>	<b>Course Name:</b>	<b>Credits:</b>	<b>Milestones:</b>
				Overall GPA ≥ 2.0 Course Completion Rate ≥ 67%
BIOL	479	MOLECULAR BIOLOGY	4	
		UPPER-DIVISION COURSE BIOL OR CHEM	1-4	
		UPPER-DIVISION COURSE BIOL OR CHEM	1-4	
		UPPER-DIVISION COURSE BIOL OR CHEM	1-4	
		GENERAL EDUCATION COURSE	2-4	
		GENERAL EDUCATION COURSE	2-4	
		GENERAL EDUCATION COURSE	2-4	

Insert item

**Term 8 Notes:**

UPPER-DIVISION COURSE BIOL OR CHEM MINIMUM CREDITS 4  
GENERAL EDUCATION COURSES MINIMUM CREDITS 4

**PROGRAM NOTES**

1. APPLIES FOR ADMISSION TO COLLEGE AFTER 3 SEMESTERS.
2. UPPER-DIVISION COURSE BIOL OR CHEM MUST BE APPROVED BY BIOCHEMISTRY ADVISER IF THE COURSES ARE TO BE USED TOWARD A BIOCHEMISTRY BS.
3. TO USE THIS MAP, STUDENTS MUST HAVE A CURRENT ACT MATH SUBSCORE OF 24, OR A MINIMUM ACCUPLACER COLLEGE LEVEL MATH SCORE 103 OR A MINIMUM ACCUPLACER CALCULUS READINESS SCORE OF 22 OR A MINIMUM SCORE OF C OR BETTER IN MATH 115 OR BOTH MATH 112 AND MATH 113. NOTE THAT 'C-' IS NOT 'C'.

**DEGREE MAP CHECKLIST: GRADUATION REQUIREMENTS**

<input type="checkbox"/>	1. Minimum of 15 credits per semester
<input type="checkbox"/>	2. General Education = 44 credits
<input type="checkbox"/>	3. Diverse Cultures = 2 course (6 credits minimum) from two disciplines
<input type="checkbox"/>	4. Writing Intensive = 2 courses (6 credits minimum)
<input type="checkbox"/>	5. Major = <input type="text"/> credits
<input type="checkbox"/>	6. Upper-Division Requirements = 40 credits minimum
<input type="checkbox"/>	7. Professional Education (if required) = 30 credits
<input type="checkbox"/>	8. Language Requirements (if BA) = 8 credits minimum
<input type="checkbox"/>	9. Minor = <input type="text"/> credits
<input type="checkbox"/>	10. Total credits required for degree <input type="text"/>

**DEGREE MAP COMPLETE**

<input checked="" type="checkbox"/>	Map is complete and ready for review 1. Faculty please send an email to your Department Chair when map is ready to review.
-------------------------------------	---

- 2. Department Chair please send an email to your Dean when map is ready to review.
- 3. Dean please send an email to the Assistant Vice President for Undergraduate Studies when map is ready to review.

**DEAN APPROVAL**

Map reviewed and approved by Dean

**Save and Close**