

**COLLEGE OF ARTS & SCIENCES**  
**2022-23 B.S. CHEMISTRY DEGREE PLAN**  
**(WITH PRE-ENGINEERING)**

**FIRST YEAR - FRESHMAN**

Fall Semester				Spring Semester			
Dept	Crse#	Course Name	Hrs	Dept	Crse#	Course Name	Hrs
MAT	120	Precalculus <sup>2</sup>	4	MAT	122	Analytics & Calculus I	4
CHE	121	General Chemistry I	3	CHE	122	General Chemistry II	3
CHE	121L	General Chemistry I Lab	1	CHE	122L	General Chemistry II Lab	1
ENG	101	English Composition I <sup>1</sup>	3	ENG	102	English Composition II <sup>1</sup>	3
BPH	100	Special Topics in Science	0.5	BIB	122	Acts of the Apostles <sup>1</sup>	2
BIB	121	Life of Christ <sup>1</sup>	2	ENS	103	Engineering Graphics	3
ENS	101	Introduction to Engineering	2				
			<b>15.5</b>				<b>16</b>

**SECOND YEAR - SOPHOMORE**

Fall Semester				Spring Semester			
Dept	Crse#	Course Name	Hrs	Dept	Crse#	Course Name	Hrs
MAT	223	Analytics & Calculus II <sup>5</sup>	4			Behaviorial Science Elective <sup>1</sup>	3
PHS	211	Physics for Sci. & Engr. I	4	PHS	212	Physics for Sci. & Engr. II	4
CHE	321	Organic Chemistry I	4	CHE	322	Organic Chemistry II	4
BIO	205	Cell Biology <sup>6</sup>	3	MAT	224	Analytics & Calculus III	4
BPH	200	Special Topics in Science	0.5	BIB		Bible Course	2
BIB		Bible Course	2				
			<b>17.5</b>				<b>17</b>

**THIRD YEAR - JUNIOR**

Fall Semester				Spring Semester			
Dept	Crse#	Course Name	Hrs	Dept	Crse#	Course Name	Hrs
HIS		History Elective <sup>1</sup>	3	CHE	221	Analytical Chemistry <sup>5</sup>	4
CHE	331	Biochemistry I <sup>6</sup>	4	CHE	332	Biochemistry II <sup>6</sup>	4
BIO	333	Cell Biology & Molec. Gen. <sup>6</sup>	4	COM	140	Speech Communication <sup>1</sup>	3
CIS	171	Computer Programming I	3	BPH	300	Special Topics in Science	1
BIB	(4)346	Christ. Evid. / Found. of Faith <sup>1</sup>	3	MAT	345	Differential Equations	3
				BIB		Bible Course	3
			<b>17</b>				<b>14</b>

**FOURTH YEAR - SENIOR**

Fall Semester				Spring Semester			
Dept	Crse#	Course Name	Hrs	Dept	Crse#	Course Name	Hrs
CHE	421	Quantum Chemistry <sup>5,7</sup>	4	CHE	422	Kinetics and Thermodynamics <sup>5</sup>	4
		Critical/Creative Elective <sup>1</sup>	3	CHE		UD Chem. Elective (or Bio) <sup>3</sup>	4
CHE		UD Chem. Elective (or Bio) <sup>3</sup>	4	BIO	444	Biological Conc. of Origins	3
ENS	231	Engineering Mechanics I: Statics	3	BPH	400	Science Seminar	1
BIB		Bible Course	2	ENS	232	Engineering Mechanics II: Dynamics	3
				BIB	495	Values in Human Thought & Action	3
			<b>16</b>				<b>15</b>

(Superscripts if needed)

<sup>1</sup> Liberal Arts Core classes

<sup>2</sup> Needed if math ACS score is between 24-26

<sup>3</sup> Chemistry track need UD, biochem need either chem or bio (can be lower)

<sup>5</sup> Required only for chemistry track

<sup>6</sup> Required only for biochemistry track

<sup>7</sup> Only need one for biochemistry track

## ADDITIONAL ITEMS RELATED TO THE MAJOR

\*Students may substitute MAT 224 Analytics and Calculus III or upper-division mathematics courses for up to four (4) of the additional required credit hours. Students may also use CHE 498 or HON 498 Independent Study (must be chemistry or biology related) for up to three (3) of the additional required credit hours. Students completing the pre-engineering program may count ENS 231 Engineering Mechanics I and ENS 232 Engineering Mechanics II toward meeting the seven (7) chemistry elective hours.

**The following guidelines are important. Failure to follow these guidelines may delay graduation.**

1. Plan schedules carefully. Plan to fulfill prerequisites for future courses.
2. Do not alter the sequence of courses without consulting with your academic adviser as not all classes are offered every semester.
3. Before the enrollment period, check to make sure holds will not prevent you from registration.
4. Register for classes early during the registration period to secure classes.

**The Four-Year Degree Plan is a suggested plan of study. This plan does not replace the *Undergraduate Catalog*. The *Undergraduate Catalog* provides the official listing of program requirements.**