

## Bachelor of Science in Chemistry (120 hours)

This is a recommended course sequence based on the UHD 2024-25 Undergraduate Catalog for a degree in Chemistry which equips students to pursue careers in oil and gas industry, and research labs. Courses with asterisks (\*) indicate Common Core courses.

### First Year

Semester 1	Hours	Grade	Semester 2	Hours	Grade
ENG 1301* (Composition I) <i>P: A TSIA2 score meeting college readiness in Reading and Writing, or TSIA2 Reading and Writing complete, or TSIA2 Reading and Writing exempt</i>	3		ENG 1302* (Composition II) <i>P: A grade of C or better in ENG 1301 or placement by examination</i>	3	
MATH 2401* (Calculus I) <i>P: A grade of C or better in MATH 1505 or placement by exam taken at UHD; Refer to catalog</i>	4		CHEM 1308/1108 (General Chemistry II Lecture/Lab) <i>P: A grade of C or better in CHEM 1307 and credit or enrollment in CHEM 1108</i>	4	
CHEM 1307/1107 (General Chemistry I Lecture/Lab) <i>P: Credit or enrollment in MATH 1301 and CHEM 1107, ENG 1301 (or 010 core complete), and one year of high school chemistry or CHEM 1305/CHEM 1105</i>	4		PHYS 1307/1107 (General Physics I Lecture/Lab) <i>P: Credit or enrollment in MATH 1302 or the equivalent, enrollment in PHYS 1107</i>	4	
UHD First-year Seminar* <i>Refer to catalog for approved options</i>	3		MATH 2402 (Calculus II) <i>P: A grade of C or better in MATH 2411 or MATH 2401</i>	4	
			POLS 2305* (Federal Government) (Summer Option) <i>P: Enrollment in or completion of ENG 1301 or 010 core complete</i>	3	
<b>Total Hours</b>	<b>14</b>		<b>Total Hours</b>	<b>18</b>	

### Second Year

Semester 1	Hours	Grade	Semester 2	Hours	Grade
CHEM 2301/2101 (Organic Chemistry I Lecture/Lab) <i>P: A grade of C or better in CHEM 1308 and CHEM 1108. Enrollment in CHEM 2101 is recommended</i>	4		CHEM 2302/2102 (Organic Chemistry II w/Lab) <i>P: A letter grade of C or better in CHEM 2301 and CHEM 2101</i>	4	
PHYS 1308/1108 (General Physics II Lecture/Lab) <i>P: PHYS 1307 and credit or enrollment in PHYS 1108</i>	4		BIOL 1301/1101* (General Biology I Lecture/Lab) <i>P: Credit or enrollment in BIOL 1101, ENG 1301 (or 010 core complete) and MATH 1301</i>	4	
Approved Creative Arts course* (Summer Option) <i>Refer to catalog for approved options</i>	3		MATH 2403 (Calculus III) <i>P: A grade of C or better in MATH 2402</i>	4	
Approved Language, Philosophy, and Culture course* (Summer Option) <i>Refer to catalog for approved options</i>	3		POLS 2306* (Texas Government) (Summer Option) <i>P: Enrollment in or completion of ENG 1301 or 010 complete</i>	3	
<b>Total Hours</b>	<b>14</b>		<b>Total Hours</b>	<b>15</b>	

## Third Year

Semester 1	Hours	Grade	Semester 2	Hours	Grade
CHEM 3330/3130 (Physical Chemistry I w/Lab) <i>P: CHEM 2301/CHEM 2101, MATH 2402, one year of general physics, and credit or concurrent enrollment in CHEM 3130</i>	4		Approved American History Course* <i>Refer to catalog for approved options</i>	3	
BIOL 1302/1102* (General Biology I Lecture/Lab) <i>P: BIOL 1101/BIOL 1301 and enrollment in BIOL 1102</i>	4		CHEM 4340/4140 (General Biochemistry I w/Lab) <i>P: BIOL 1102 and BIOL 1302 and CHEM 2101 and CHEM 2301</i>	4	
STAT 3311 (Statistical Analysis for Natural Sciences) or CS 1408 or CS 1411 <i>Refer to catalog for approved options</i>	3-4		CHEM 3332/3132 (Physical Chemistry II w/Lab) <i>P: CHEM 3330 and credit or concurrent enrollment in CHEM 3132</i>	4	
CHEM 3300 (Undergraduate Research)	3		Approved Social & Behavioral Sciences Course* (Summer Option) <i>Refer to catalog for approved options</i>	3	
<b>Total Hours</b>	<b>14-15</b>		<b>Total Hours</b>	<b>14</b>	

## Fourth Year

Semester 1	Hours	Grade	Semester 2	Hours	Grade
CHEM 4362/4162 (Advanced Inorganic Chemistry w/ Lab) <i>P: CHEM 3330/CHEM 3130 and CHEM 3332/CHEM 3132; credit or concurrent enrollment in CHEM 4162</i>	4		CHEM 4410 (Instrumental Methods of Analysis) <i>P: CHEM 3310/CHEM 3110</i>	4	
CHEM 3310/3110 (Quant Analysis/Lab) <i>P: CHEM 1308 and CHEM 1108 and credit or enrollment in CHEM 3110</i>	4		CHEM 4364/4164 (Polymer Chemistry/lab) <i>P: Credit for CHEM 2301/CHEM 2101; credit or enrollment in CHEM 4164</i>	4	
Approved American History Course* (Summer Option) <i>Refer to catalog for approved options</i>	3		CHEM 3320 (Environmental Chem) <i>P: BIOL 1302 and BIOL 1102; and CHEM 1308 and CHEM 1108</i>	3	
Choose one Technical Writing Course: TCOM 3302, 3325, 3326, 3329, 4306 (Summer Option) <i>Refer to catalog for approved options</i>	3		Approved Oral Communication Course* (Summer Option)	3	
			Free electives (if needed)	3	
<b>Total Hours</b>	<b>14</b>		<b>Total Hours</b>	<b>17</b>	

### 15 to Finish

Fall: 15 hours • Spring: 15 hours

### 30 in 3

Fall: 12 hours • Spring: 12 hours • Summer: 6 hours