

**Bachelor of Science - Chemistry with Concentration in Environmental Chemistry Major
(Four Year Plan)**

YEAR 1

Semester 1		Semester 2	
Course Number	Credit Hours	Course Number	Credit Hours
ENG 1301 (Composition I)[#] P: One of the following: (1) TSI ESSAY score of 4 and WRITING score of 340, (2) TSI ESSAY score of 5 and ABE WRITING diagnostic level 4, (3) TSI WRITING complete, OR (4) TSI WRITING exempt	3	ENG 1302 (Composition II) P: A grade of C or better in ENG 1301 or placement by examination	3
*CHEM 1307/1107 (General Chemistry I w/ Lab)^{&} P: Credit or enrollment in MATH 1301, ENG 1301 (or 010 core complete), and one year of HS chemistry OR CHEM 1305/1105	4	*CHEM 1308/1108 (General Chemistry II w/ Lab)^{&} P: Grade of C or better in CHEM 1307/1107	4
*MATH 2411 (Calculus I for NS)^{# &} P: C or better in MATH 1404 or MATH 1505 or placement by exam taken at UHD (can be substituted with MATH 2401)	4	*PHYS 1307/1107 (General Physics I w/ Lab) P: Credit or enrollment in MATH 1302 or the equivalent (can be substituted with PHYS 2401/2101)	4
UHD 1303 (Freshman Seminar – Life and Physical Sciences) Transfer students see advisor for options	3	*MATH 2412 (Calculus II for NS) P: C or better in MATH 2401 (can be substituted with MATH 2402)	4
Total Semester Hours	14	Total Semester Hours	15

YEAR 2

Semester 3		Semester 4	
Course Number	Credit Hours	Course Number	Credit Hours
*CHEM 2301/2101 (Organic Chemistry I w/ Lab) P: C or better in CHEM 1308/1108	4	*CHEM 2302/2102 (Organic Chemistry II w/ Lab) P: C or better in CHEM 2301/2101	4
*PHYS 1308/1108 (General Physics II w/ Lab) P: PHYS 1307/1107 (can be substituted with PHYS 2402/2102)	4	*BIOL 1301/1101 (General Biology I w/ Lab) P: Credit or enrollment in ENG 1301 (or 010 core complete) and MATH 1301	4
Approved Creative Arts course (p. 60) P: Refer to catalog	3	Approved Social and Behavioral Sciences course (p. 60) P: Refer to catalog	3
Approved Language, Philosophy, and Culture course (p. 60) P: Refer to catalog	3	POLS 2306 (Texas Government) P: Enrollment in or completion of ENG 1301 or 010 core complete	3
Total Semester Hours	14	Total Semester Hours	14

YEAR 3

Semester 5		Semester 6	
Course Number	Credit Hours	Course Number	Credit Hours
*CHEM 3330/3130 (Physical Chemistry I w/ Lab) P: CHEM 2301/2101, MATH 2402, one year of physics	4	*CHEM 3332/3132 (Physical Chemistry II w/ Lab) P: CHEM 3330/3130	4
*BIOL 1302/1102 (General Biology II w/ Lab) P: BIOL 1301 and BIOL 1101	4	CHEM 3320 (Environmental Chemistry) % P: BIOL 1302 and BIOL 1102; and CHEM 1308 and CHEM 1108	3
CHEM 3310/3110 (Quantitative Analysis w/ Lab) P: CHEM 1308/1108	4	CHEM 3300 (Undergraduate Research) P: Approval by the NS department, minimum GPA of 2.0, and permission of instructor	3
Approved American History course (p. 60) P: Enrollment in or completion of ENG 1301 or 010 core complete	3	*MBIO 2305/2105 (General Microbiology w/ Lab) P: BIOL 1302/1102 and CHEM 1308/1108 (can be substituted with GEOL 1305/1105)	4
		Technical Writing Course % TCOM 3302 or TCOM 4306 P: Refer to catalog	3
Total Semester Hours	15	Total Semester Hours	17

YEAR 4

Semester 7		Semester 8	
Course Number	Credit Hours	Course Number	Credit Hours
CHEM 4362/4162 (Advanced Inorganic Chemistry w/ Lab) % P: CHEM 3330/3130 and CHEM 3332/3132	4	CHEM 4410 (Instrumental Methods of Analysis) P: CHEM 33110/3110	4
CHEM 4340/4140 (Biochemistry I w/ Lab) % P: BIOL 1302/1102 and CHEM 2301/2101	4	CHEM 4364/4164 (Polymer Chemistry) % P: CHEM 2302/2102 (can be substituted with CHEM 4344 or CHEM 4360)	4
MBIO 3340 (Environmental Microbiology) P: Grade of C or better in MBIO 2305/2105 (can be substituted with BIOL 4360 or GEOL 3303)	3	Approved American History course (p. 60) P: Enrollment in or completion of ENG 1301 or 010 core complete	3
Approved Oral Communication course (p. 60) P: Refer to catalog	3	POLS 2305 (Federal Government) P: Enrollment in or completion of ENG 1301 or 010 core complete	3
STAT 3311 (Statistical Analysis for Natural Science) P: A grade of C or better in MATH 1404 or MATH 1505 (can be substituted with CS 1408 or CS 1410)	3		
Total Semester Hours	17	Total Semester Hours	14

Total Credit Hours Required 120

Updated: June 23, 2021

* Critical course required to stay on track within major and take subsequent courses

Students are expected to place into ENG 1301 and MATH 2401 via CLEP or Bypass exams – placement tests determine which english or math course students should start with and additional courses may be necessary

& Satisfies both common core and major requirement/prerequisite

% Satisfies both major requirement/prerequisite and integrated requirement course