

Bachelor of Science in Geosciences- Petroleum Geotechnology (120 hours)

This is a recommended course sequence based on the UHD 2024-25 Undergraduate Catalog for a degree in Geosciences, which equips students to obtain employment in the geochemical, environmental, and related research areas. 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 2411 or MATH 2401* (Calculus I for Natural Sciences or 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		GEOL 1306/1106* (Historical Geology w/Lab) <i>P: GEOL 1305/GEOL 1105 and credit or concurrent enrollment in GEOL 1106</i>	4	
GEOL 1305/1105* (Physical Geology w/Lab) <i>P: credit or enrollment in GEOL 1105</i>	4		CHEM 1307/1107 (General Chemistry I w/ 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	
UHD First-year Seminar* <i>See catalog for approved options</i>	3		MATH 2412 or MATH 2402 (Calculus II for Natural Sciences or Calculus II) <i>P: A grade of C or better in MATH 2411 or MATH 2401 (Can be substituted with CS1411 or CS1408)</i>	4	
Total Hours	14		Total Hours	15	
Second Year					
Semester 1	Hours	Grade	Semester 2	Hours	Grade
CHEM 1308/1108 (General Chemistry II w/ Lab) (Summer Option) <i>P: A grade of C or better in CHEM 1307 and credit or enrollment in CHEM 1108</i>	4		PHYS 1307/1107 (General Physics I w/ Lab) <i>P: Credit or enrollment in MATH 1302 or the equivalent, enrollment in PHYS 1107</i>	4	
GEOL 2301/2101 (Minerology Lecture/Lab) <i>P: GEOL 1305/GEOL 1105 and CHEM 1307/CHEM 1107; Credit or enrollment in GEOL 2101</i>	4		GEOL 3305/3105 (Petrology w/Lab) <i>P: Credit for GEOL 2301/GEOL 2101 and credit or enrollment in GEOL 3105</i>	4	
GEOL 3312/3112 (Structural Geology Lecture/Lab) <i>P: MATH 2401 or MATH 2411; credit or enrollment in GEOL 2301/ GEOL 2101 and credit or enrollment for GEOL 3112.</i>	4		Approved Creative Arts course* (Summer Option) <i>Refer to catalog for approved options</i>	3	
GEOL 3302/3102 (Sedimentology and Stratigraphy w/ Lab) <i>P: Credit or enrollment in GEOL 3102 and credit or enrollment in GEOL 2301/GEOL 2101</i>	4		Approved Language, Philosophy, and Culture course* (Summer Option) <i>Refer to catalog for approved options</i>	3	
Total Hours	16		Total Hours	14	

Third Year

Semester 1	Hours	Grade	Semester 2	Hours	Grade
Concentration elective <i>Refer to catalog for approved options</i>	3-4		Approved American History Course* (Summer Option) <i>Refer to catalog for approved options</i>	3	
CS 1411 (Introduction to Computer Science with Python) <i>P: Credit or enrollment in MATH 1404 or MATH 1505</i>	4		GEOL 3411 (Paleontology) <i>P: GEOL 1306/1106</i>	4	
GEOL 4302/4102 (Petroleum Geology/Lab) <i>P: Credit for GEOL 3312/ 3112, credit for GEOL 3302/3102, and credit or enrollment in GEOL 4102</i>	4		GEOL 4303 (Geologic Field Methods) <i>P: Credit for GEOL 3312 and GEOL 3112 with a grade of C or better, and credit for GEOL 3302 and GEOL 3102 with a grade of C or better, and credit or enrollment in GEOL 3305/GEOL 3105</i>	3	
Approved Social & Behavioral Sciences Course* (Summer Option) <i>P: Refer to catalog</i>	3		GEOL 3306 (Remote sensing) <i>P: Credit for CS 1311 or CS 1408 or CS 1411</i>	3	
POLS 2306* (Texas Government) (Summer Option) <i>P: Enrollment in or completion of ENG 1301 or 010 core complete</i>	3		GEOL 4304 (Field Geology) (Summer) <i>P: GEOL 4303</i>	3	
Total Hours	17-18		Total Hours	16	

Fourth Year

Semester 1	Hours	Grade	Semester 2	Hours	Grade
GEOL 4306 (Basin Analysis Seminar) <i>P: Credit for GEOL 3312/GEOL 3112, GEOL 3302/3102 with a grade of C or better in each</i>	3		Concentration elective <i>Refer to catalog for approved options</i>	3-4	
STAT 3311 (Statistical Analysis for Natural Sciences) <i>P: C or better in MATH 1404 or MATH 1505</i>	3		PHYS 1308/1108 (General Physics II Lecture/Lab) <i>P: PHYS 1307 and credit or enrollment in PHYS 1108</i>	4	
GEOL 4305 (Plate tectonics) <i>P: GEOL 3305/GEOL 3105 and GEOL 3312/GEOL 3112</i>	3		POLS 2305* (Federal Government) (Summer Option) <i>P: Enrollment in or completion of ENG 1301 or 010 core complete</i>	3	
Concentration elective <i>Refer to catalog for approved options</i>	3-4		Approved American History Course* (Summer Option) <i>Refer to catalog for approved options</i>	3	
Approved Oral Communication Course* (Summer Option)	3				
Total Hours	15-16		Total Hours	13-14	

15 to Finish

Fall: 15 hours • Spring: 15 hours

30 in 3

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