

## Bachelor of Science in Biotechnology (120 hours)

This is a recommended course sequence based on the UHD 2024-25 Undergraduate Catalog for a degree in biotechnology which equips students to pursue careers in lab research, with applied areas such as health, microbiology, and DNA technology. 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		BIOL 1302/1102* (General Biology I Lecture/Lab) <i>P: BIOL 1101, BIOL 1301 and enrollment in BIOL 1102</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		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	
UHD First-year Seminar* <i>Refer to catalog for approved options</i>	3		CS 1411 (Intro Introduction to Computer Science with Python) OR CS 1311 or CS 1408 <i>Refer to catalog for approved options</i>	4	
<b>Total Hours</b>	<b>14</b>		<b>Total Hours</b>	<b>15</b>	
Second Year					
Semester 1	Hours	Grade	Semester 2	Hours	Grade
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		MBIO 2305/2105 (General Microbiology Lecture/Lab) <i>P: BIOL 1302/BIOL 1102 and CHEM 1308/CHEM 1108 and credit or enrollment in MBIO 2105</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		PHYS 1308/1108 (General Physics II Lecture/Lab) <i>P: PHYS 1307 and credit or enrollment in PHYS 1108</i>	4	
POLS 2306* (Texas Government) (Summer Option) <i>P: Enrollment in or completion of ENG 1301 or 010 complete</i>	3		BIOL 2303/2103 (General Genetics Lecture/Lab) <i>P: BIOL 1302/BIOL 1102, CHEM 1308/CHEM 1108, and credit or enrollment in BIOL 2103.</i>	4	
Approved Language, Philosophy, and Culture course* (Summer Option) <i>Refer to catalog for approved options</i>	3		Approved Creative Arts course* (Summer Option) <i>Refer to catalog for approved options</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
BIOL 4220 (Introduction to Genomics and Bioinformatics) <i>P: BIOL 2303/BIOL 2103</i>	2		BIOL 3306 (Biological Evolution) <i>P: BIOL 2303</i>	3	
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 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) <i>P: A grade of C or better in MATH 1404 or MATH 1505.</i>	3		Focus Area 1 Course w/Lab <i>Refer to catalog for approved options</i>	4	
Approved UL Biology Course BIOL 3300, 4201, 4230, 4232, 4260, 4399	2-3		Approved American History Course* <i>Refer to catalog for approved options</i>	3	
POLS 2305* (Federal Government) (Summer Option) <i>P: Enrollment in or completion of ENG 1301 or 010 core complete.</i>	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>17</b>	

## Fourth Year

Semester 1	Hours	Grade	Semester 2	Hours	Grade
Focus Area Course 3 <i>Refer to catalog for approved options</i>	3		MBIO 4310 (Microbial Biotechnology) <i>P: A grade of C or better in MBIO 2305/MBIO 2105, BIOL 2303/BIOL 2103 and 8 additional hours of upper-level science</i>	3	
Approved American History Course* <i>Refer to catalog for approved options</i>	3		BIOL 4320 (Cellular Biology) or BIOL 4330 (Molecular Biology) <i>Refer to catalog for approved options</i>	3	
BIOL 4311 (Biology Seminar) or MBIO 4311 or SUST 4301 <i>P: Senior standing and majoring in an area of life science</i>	3		Focus Area 2 Course w/Lab <i>Refer to catalog for approved options</i>	4	
Approved Oral Communication Course* (Summer Option) <i>Refer to catalog for approved options</i>	3		Chemistry, Mathematics and Computer Science Content Course 2 <i>Refer to catalog for approved options</i>	3-4	
Chemistry, Mathematics and Computer Science Content Course 1 <i>Refer to catalog for approved options</i>	3-4		Choose one Technical Writing Course: TCOM 3302, 3325, 3326, 3329, 4306 (Summer Option) <i>Refer to catalog for approved options</i>	3	
<b>Total Hours</b>	<b>15-16</b>		<b>Total Hours</b>	<b>16-17</b>	

**15 to Finish**

Fall: 15 hours • Spring: 15 hours

**30 in 3**

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