

2019

## Bachelor of Science-Chemistry 2019-2020

Nova Southeastern University

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HALMOS COLLEGE OF NATURAL SCIENCES AND OCEANOGRAPHY  
 DEGREE CURRICULUM SHEET | 2019-2020 CATALOG  
 Bachelor of Science - Chemistry

**FIRST YEAR SEMINAR**

Course	Credits	Frequency
UNIV 1000: First Year Seminar	3	
<b>Total First Year Seminar Credits</b>	<b>3</b>	

**GENERAL EDUCATION REQUIREMENTS**

Area/Course	Credits	Frequency
<u>Written Composition</u>		
<i>6 credits at or above COMP 1500</i>		
Open Written Communication	3	
Open Written Communication	3	
<u>Mathematics</u>		
<i>6 credits at or above MATH 1040</i>		
Open Math	3	
Open Math	3	
<u>Arts &amp; Humanities</u>		
<i>6 credits in HIST, ARTS, PHIL, HUMN, LITR, THEA, FILM, MUSC, DANC, WRIT, foreign language</i>		
Open Arts & Humanities	3	
Open Arts & Humanities	3	
<u>Social &amp; Behavioral Sciences</u>		
<i>6 credits in PSYC, SOCL, ANTH, ECN, COMM, GEOG, GEST, INST, POLS</i>		
Open Social & Behavioral Sciences	3	
Open Social & Behavioral Sciences	3	
<u>Science</u>		
<i>6 credits in BIOL, MBIO, CHEM, SCIE, ENVS, PHYS</i>		
Open Science	3	FW
Open Science	3	FW
<b>Total General Education Credits</b>	<b>30</b>	

**OPEN ELECTIVES**

take 8-10 elective courses		
<b>Total Open Electives Credits</b>	<b>24-31</b>	

**TRACKS**

choose a track; see track sheet for details		17-24
<b>Total Track Credits</b>		<b>17-24</b>

Frequency Key: F-Every Fall; W-Every Winter; FO - Odd Year Fall; FE - Even Year Fall; WO - Odd Year Winter; WE - Even Year Winter

**REDITS 120**

**MAJOR**

Course	Credits	Frequency
BIOL 1500 Biology I Lab	4	FW
CHEM 1300 General Chemistry I Lab	4	FW
CHEM 1310 General Chemistry II/Lab	4	FW
CHEM 2400 Organic Chemistry I/Lab	4	FW
CHEM 2410 Organic Chemistry II/Lab	4	FW
CHEM 3050 Chemical Literature and Seminar	3	W
CHEM 3460 Quantitative Analysis /Lab	4	F
CHEM 3650 Biochemistry/Lab	4	FW
CHEM 4005 Inorganic Chemistry I	3	F
CHEM 4101 Senior Chemistry Seminar	1	W
MATH 2100 Calculus I	4	FW
MATH 2200 Calculus II	4	FW
PHYS 2400 Physics I/Lab	4	F
PHYS 2500 Physics II/Lab	4	W
<b>Total Major Credits</b>	<b>51</b>	

There are 2 tracks available; choose one of the following:

**AMERICAN CHEMICAL SOCIETY TRACK**

Course	Credits	Frequency
CHEM 3700 Physical Chemistry I/Lab	4	F
CHEM 3710 Physical Chemistry II/Lab	4	W
CHEM 4010 Inorganic Chemistry II/Lab	5	W
CHEM 4150 Chemical Instrumentation	4	W
CHEM 4990 Independent Study in Chemistry or	3	U
CHEM 4950 Internship in Chemistry	3	U
MATH 3200 Calculus III or	4	F
MATH 3400 Ordinary Differential Equations	3	W
<b>Total ACS TRACK Credits</b>	<b>23-24</b>	

**BIOCHEMISTRY TRACK**

Course	Credits	Frequency
BIOL 1510 Biology II/Lab	4	FW
CHEM 3405 Biophysical Chemistry/Lab	4	F
<u>Major Electives</u>		
<i>Select 3 courses from the following list</i>		
CHEM 3150 Environmental Chemistry	3	FO
CHEM 3215 Survey of Rational Drug Design	3	FO
CHEM 3650 Biochemistry/Lab	4	FW
CHEM 3800 Principles of Pharmaceutics	3	F
CHEM 3850 Principles of Pharmacology	3	F
CHEM 4010 Inorganic Chemistry II/Lab	5	W
CHEM 4150 Chemical Instrumentation	4	W
CHEM 4200 Plant Drug Analysis	3	WE
CHEM 4500 Principles of Pharmacokinetics	3	W
PHYS 3100 Introduction to Biophysics	3	WE
<i>*Only one of these courses can be used for a maximum of 3 credits.</i>		
CHEM 4900 Special Topics in Chemistry	3	U
CHEM 4990 Independent Study in Chemistry	3	U
CHEM 4950 Internship in Chemistry	3	U
<b>Total BIOCHEMISTRY TRACK Credits</b>	<b>17</b>	

Frequency Key: F-Every Fall; W-Every Winter; FO - Odd Year Fall; FE - Even Year Fall; WO - Odd Year Winter; WE - Even Year Winter; U - Upon Contract

HALMOS COLLEGE OF NATURAL SCIENCES AND OCEANOGRAPHY  
 SAMPLE FOUR YEAR CURRICULUM | 2019-2020 CATALOG  
 Bachelor of Science - Chemistry: American Chemical Society Track

Freshman Year			
Fall		Winter	
Course	Credits	Course	Credits
UNIV 1000: First Year Seminar	3	Open Written Communication	3
Open Written Communication	3	Open Arts & Humanities	3
BIOL 1500 Biology I/Lab	4	CHEM 1310 General Chemistry II/Lab	4
CHEM 1300 General Chemistry I/Lab	4	MATH 2200 Calculus II	4
MATH 2100 Calculus I*	4		
<b>Total Credits</b>	<b>18</b>	<b>Total Credits</b>	<b>14</b>
Sophomore Year			
Fall		Winter	
Course	Credits	Course	Credits
Open Social & Behavioral Sciences	3	Open Social & Behavioral Sciences	3
CHEM 2400 Organic Chemistry I/Lab	4	Open Arts & Humanities	3
MATH 3200 Calculus III**	4	CHEM 2410 Organic Chemistry II/Lab	4
PHYS 2400 Physics I/Lab	4	PHYS 2500 Physics II/Lab	4
<b>Total Credits</b>	<b>15</b>	<b>Total Credits</b>	<b>14</b>
Junior Year			
Fall		Winter	
Course	Credits	Course	Credits
CHEM 3460 Quantitative Analysis /Lab	4	CHEM 3050 Chemical Literature and Seminar	3
CHEM 3700 Physical Chemistry I/Lab	4	CHEM 3710 Physical Chemistry II/Lab	4
CHEM 4990 Independent Study in Chemistry	3	CHEM 4150 Chemical Instrumentation	4
Open Elective	3	Open Elective	3
<b>Total Credits</b>	<b>14</b>	<b>Total Credits</b>	<b>14</b>
Senior Year			
Fall		Winter	
Course	Credits	Course	Credits
CHEM 4005 Inorganic Chemistry I	3	CHEM 4101 Senior Chemistry Seminar	1
CHEM 3650 Biochemistry/Lab	4	CHEM 4010 Inorganic Chemistry II/Lab	5
Open Elective	3	Open Elective	3
Open Elective	3	Open Elective	3
Open Elective	3	Open Elective	3
<b>Total Credits</b>	<b>16</b>	<b>Total Credits</b>	<b>15</b>
<b>TOTAL CREDITS 120</b>			

\*This sample plan is based on the student beginning at least at the level of MATH 2100: Calculus I.

\*\*NOTE: This requirement may also be fulfilled by completing MATH 3400: Ordinary Differential Equations, which is offered each Winter.

Freshman Year			
Fall		Winter	
Course	Credits	Course	Credits
UNIV 1000: First Year Seminar	3	Open Written Communication	3
Open Written Communication	3	BIOL 1510 Biology II/Lab	4
BIOL 1500 Biology I/Lab	4	CHEM 1310 General Chemistry II/Lab	4
CHEM 1300 General Chemistry I/Lab	4	MATH 2200 Calculus II	4
MATH 2100 Calculus I*	4		
<b>Total Credits</b>	<b>18</b>	<b>Total Credits</b>	<b>15</b>
Sophomore Year			
Fall		Winter	
Course	Credits	Course	Credits
Open Social & Behavioral Sciences	3	Open Social & Behavioral Sciences	3
Open Arts & Humanities	3	Open Arts & Humanities	3
CHEM 2400 Organic Chemistry I/Lab	4	CHEM 2410 Organic Chemistry II/Lab	4
PHYS 2400 Physics I/Lab	4	PHYS 2500 Physics II/Lab	4
<b>Total Credits</b>	<b>14</b>	<b>Total Credits</b>	<b>14</b>
Junior Year			
Fall		Winter	
Course	Credits	Course	Credits
CHEM 3460 Quantitative Analysis /Lab	4	CHEM 3050 Chemical Literature and Seminar	3
CHEM 3405 Biophysical Chemistry/Lab	4	CHEM 3650 Biochemistry/Lab	4
Open Elective	4	Major Elective	3
Open Elective	3	Open Elective	3
		Open Elective	3
<b>Total Credits</b>	<b>14</b>	<b>Total Credits</b>	<b>16</b>
Senior Year			
Fall		Winter	
Course	Credits	Course	Credits
CHEM 4005 Inorganic Chemistry I	3	CHEM 4101 Senior Chemistry Seminar	1
Major Elective	3	Major Elective	3
Open Elective	3	Open Elective	3
Open Elective	3	Open Elective	3
Open Elective	3	Open Elective	3
<b>Total Credits</b>	<b>15</b>	<b>Total Credits</b>	<b>13</b>
<b>TOTAL CREDITS 120</b>			

NOTES:

\*This sample plan is based on the student beginning at least at the level of MATH 2100: Calculus I.